O'neill, Christopher (DEC)

From: Beverly Commerford <beverly.commerford@sterlingenvironmental.com>
Sent: Wednesday, August 13, 2014 11:16 AM
To: O'neill, Christopher (DEC)
Cc: Quinn, James A (DEC); Ripstein, Deanna (HEALTH); Ostrov, Rich (DEC); Freeman, Nathan T (HEALTH); RLeistensnider@nixonpeabody.com; jsmith@troybelting.com; David Barcomb (dbarcomb@troybelting.com); Mark Millspaugh; Rod Aldrich; Mark Williams
Subject: RE: C401067 Troy Belting & Supply Company - Approval of NYSDEC/NYSDOH Comments on Remedial Investigation Work Plan (STERLING File #2011-31)
Attachments: Final Approved RI Work Plan_revJune2014.pdf

Attached is the final approved Remedial Investigation Work Plan. Hard copies will also be provided to NYSDEC (Chris O'Neill and James Quinn) and NYSDOH (Nathan Freeman and Deanna Ripstein) unless otherwise advised. In addition, a copy will be submitted to the document repository.

Thank you!
Beverly

Beverly A. Commerford
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-----Original Message-----
From: O'neill, Christopher (DEC) [mailto:christopher.oneill@dec.ny.gov]
Sent: August 13, 2014 10:43 AM
To: Beverly Commerford
Cc: Quinn, James A (DEC); Ripstein, Deanna (HEALTH); Ostrov, Rich (DEC); Freeman, Nathan T (HEALTH); RLeistensnider@nixonpeabody.com; jsmith@troybelting.com; David Barcomb (dbarcomb@troybelting.com); Mark Millspaugh; Rod Aldrich; Mark Williams
Subject: RE: C401067 Troy Belting & Supply Company - Approval of NYSDEC/NYSDOH Comments on Remedial Investigation Work Plan (STERLING File #2011-31)

Thank you for providing us with the final text revisions for the Remedial Investigation Work Plan (RIWP), as submitted via email on August 7, 2014.
The 8/7/2014 Revised Version of the RIWP is acceptable and approved.

Please finalize the hard copies and electronic versions full document of the RIWP for submittal to NYSDEC and NYSDOH, and the document repository.
In accordance with my telephone conversation with Mark Williams (Sterling Environmental), Troy Belting and Sterling should now move forward with implementing the RIWP.

A formal approval letter will be issued in the very near future to memorialize this email.

I can be reached at 518-357-2394 if there are any questions.

-----Original Message-----
From: Beverly Commerford [mailto:beverly.commerford@sterlingenvironmental.com]
Sent: Thursday, August 07, 2014 11:33 AM
To: O'neill, Christopher (DEC)
Cc: Quinn, James A (DEC); Ripstein, Deanna (HEALTH); Ostrov, Rich (DEC); Freeman, Nathan T (HEALTH); RLeistensnider@nixonpeabody.com; jsmith@troybelting.com; David Barcomb (dbarcomb@troybelting.com); Mark Millspaugh; Rod Aldrich; Mark Williams
Subject: Troy Belting & Supply Company - Approval of NYSDEC/NYSDOH Comments on Remedial Investigation Work Plan (STERLING File #2011-31)

Dear Mr. O'Neill,

Please find the attached in response to NYSDEC/NYSDOH comments received by 7/25/14 letter on the Remedial Investigation Work Plan. Hard copy will follow via First Class Mail.

Thank you!
Beverly

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TROY BELTING AND SUPPLY COMPANY
C401067
70 COHOES ROAD
COLONIE, NY

REMEDIAL INVESTIGATION (RI) WORK PLAN

Prepared For:

Troy Belting and Supply Company
70 Cohoes Road
Watervliet, New York 12189

Prepared by:

Sterling Environmental Engineering, P.C.
24 Wade Road
Latham, New York 12110

November 26, 2013
Revised February 24, 2014
Revised June 30, 2014

"Serving our clients and the environment since 1993"

TROY BELTING AND SUPPLY COMPANY
C401067
70 COHOES ROAD
COLONIE, NY

REMEDIAL INVESTIGATION (RI) WORK PLAN

Table of Contents

Figures

Tables

Appendices

S:\Sterling\Projects\2011 Projects\Troy Belting and Supply Co - 2011-31\Reports\RI Work Plan\RI Work Plan_toc_rev_063014.doc

CERTIFICATION

I, Rodney L. Aldrich, P.E., certify that I am currently a New York State registered professional engineer and that this Remedial Investigation (RI) Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the Division of Environmental Remediation (DER) Technical Guidance for Site Investigation and Remediation (DER-10).

Rodney L. Aldrich, P.E. — Date: 6/30/2014

1.0 INTRODUCTION AND PURPOSE

This Remedial Investigation (RI) Work Plan has been prepared for Troy Belting and Supply Company (Troy Belting), located at 70 Cohoes Road, Town of Colonie, Albany County, New York (Site). The Site has been accepted by the New York State Department of Environmental Conservation (NYSDEC) into the New York State Brownfield Cleanup Program (BCP) and is identified as Site #C401067.

The Brownfield Site Cleanup Agreement (BCA) between Troy Belting and the NYSDEC was signed July 12, 2013 for the Site. This RI Work Plan, prepared in accordance with NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation (May 2010), provides a detailed description of the proposed remedial investigations for the Site and will be incorporated into the BCA. A Site Location Map is presented as Figure 1.

1.1 Site History and Description

A summary of investigations of the Site are presented below, based on the Phase I Environmental Site Assessment (ESA) prepared by HRP Associates, Inc. dated August 12, 2011, Phase II ESA by RJS Environmental dated September 28, 2011, and the Supplemental Phase II Environmental Site Investigation (ESI) and Further Supplemental Phase II ESI by Sterling Environmental Engineering, P.C. (STERLING), issued September 20, 2012 and February 8, 2013, respectively.

The 2.4-acre property currently contains an approximate 25,000 square-foot one-story commercial building utilized by Troy Belting for electric motor repair. The current building was reportedly constructed in 1965. The building contains a used oil aboveground storage tank (AST), a degreaser, a varnish tank, ovens and driers. The Site also contains paved parking lots and loading docks. Surrounding properties are developed as residential, with the exception of the property to the west which was historically used as a foundry.

1.2 Proposed Future Use of Property

Troy Belting initiated plans to expand the building to enhance operations by engaging an architect and surveyor to prepare preliminary plans. Subsequent to the proposed remedial measures, the Troy Belting building will be altered. The existing building height limits the size of the motors which can be repaired, disassembled, rewound, and reassembled. With higher entrance doors and ceilings, Troy Belting will have the ability to compete in the marketplace to service these larger motors. Also, Troy Belting will increase the floor space of the building to allow more motors of all sizes to be serviced. The expanded footprint for the building will require the parking area to be relocated and the increased number of employees will require the parking area to be increased. Expanded stormwater management facilities are anticipated to support the Site improvements.

The proposed building expansion will result in increased employment and benefit the local government with increased tax revenues.

It is anticipated that it will take three (3) months to obtain necessary local Site Plan approval, and 15 months to reconstruct and expand the building, the parking area, and stormwater management facilities.

1.3 Project Contacts

Inquiries and comments regarding the RI Work Plan for the Site should be directed towards the project contacts presented in Appendix A.

1.4 Objectives, Scope and Rationale

The objectives of an RI under the BCP program are to define the nature and extent of contamination, identify contaminant source areas, and produce data of sufficient quantity and quality to support the development of a Remedial Work Plan. This RI Work Plan summarizes previous investigations completed at the Site, describes proposed additional investigative activities including Quality Assurance/Quality Control (QA/QC) sampling and the Health and Safety Plan (HASP), and provides a proposed schedule for completion of all activities.

2.0 PREVIOUS SITE INVESTIGATIONS

2.1 Summary of Investigations

A Phase II ESA was conducted in 2011, which consisted of soil borings and one overburden groundwater well to address concerns regarding current and historic operations, a varnish underground storage tank (UST), the former foundry to the west, and an onsite degreaser. Trichloroethene (TCE) was detected above the Soil Cleanup Objectives, and non-aqueous phase liquid (NAPL) was observed in one boring (SB-14, shown on Figure 2). SB-14 is proximate to historic location of piping associated with the degreaser. Three metals exceeded applicable SCOs. Nine volatile organic compounds (VOCs), including tetrachloroethene (PCE) and TCE, exceeded groundwater quality standards.

A Supplemental Phase II ESI was conducted in 2012 to more fully assess the extent of impacted soil and groundwater. Three shallow bedrock monitoring wells were installed, and soil and groundwater samples were collected. One soil sample was collected from MW-2, which contained four compounds exceeding unrestricted use SCOs. No compounds in this sample exceeded commercial use SCOs. Groundwater samples contained several metals, VOCs and SVOCs above NYSDEC TOGS 1.1.1 Groundwater Standards and Guidance Values.

As part of the Further Supplemental Phase II ESI conducted in 2013, two additional shallow bedrock monitoring wells were installed on the subject property. One soil sample was collected from MW-5, near the previously identified impacted area, which contained eight compounds exceeding unrestricted use SCOs. No compounds exceeded commercial use SCOs. Several compounds in the groundwater samples exceeded NYSDEC TOGS 1.1.1 Groundwater Standards and Guidance Values.

Groundwater monitoring at the Site indicates the presence of impacted groundwater to the north of the building, which is potentially migrating from the property towards the northeast. Soil and groundwater data suggest the source area may extend beneath the northern portion of the building.

2.2 Bedrock Characteristics and Groundwater Flow Direction

The encountered bedrock is a highly fractured shale with a weathered surface ranging from 0.1 to 1.5 feet in thickness. Depth to top of bedrock ranges from 4.0 feet below ground surface (bgs) at MW-3 to 8.5 feet bgs at MW-2 (see Figures 2 and 3). All site monitoring wells (MW-1, MW-2, MW-3, MW-4, and MW-5) were established in the upper portion of shale bedrock.

Groundwater levels in the wells screened within the bedrock were measured on December 26, 2012 and ranged from 2.88 feet bgs at MW-1 to 7.94 feet bgs at MW-3. The groundwater surface level at MW-3 was measured below the top of bedrock while the other four (4) monitoring wells exhibited groundwater that was higher than the top of bedrock. The groundwater elevations at MW-1, MW-2, MW-4, and MW-5 were all higher than their respective top of screen elevations, ranging from 2.12 feet to 6.15 feet at MW-4 and MW-2, respectively. As opposed to shallow bedrock monitoring wells MW-1, MW-2, MW-4, and

MW-5, the groundwater elevation at MW-3 is 1.11 feet lower than the top of screen elevation. All site monitoring wells (MW-1, MW-2, MW-3, MW-4, and MW-5) were established in the upper portion of shale bedrock.

Groundwater flow direction in the upper bedrock hydrogeologic unit is to the northeast with a moderate hydraulic gradient of 0.045 ft/ft that is likely influenced by the bedrock dropping at 50 to 60 degrees toward the northeast in the vicinity of the site.

2.3 Analytical Results for Groundwater Samples

For the Supplemental Phase II ESI conducted in 2012, three (3) groundwater samples (one (1) per well), one (1) duplicate from MW-2, one (1) matrix spike/matrix spike duplicate (MS/MSD) and one (1) trip blank were analyzed for the following parameters:

- USEPA Target Compound List (TCL) Volatile Organic Compounds (VOCs) and Semi-Volatile Compounds (SVOCs) plus 30 Tentatively Identified Compounds (TICs).
- USEPA Target Analyte List (TAL) Metals.

Reported parameter concentrations exceeding the NYSDEC TOGS 1.1.1 groundwater standard/guidance value were as follows:

MW-1: Aluminum, Iron, Manganese, and Thallium.

MW-2: 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2,4-Trimethylbenzene, 1,2-Dichloroethane, 1,3,5-Trimethylbenzene, Acetone, Antimony, Barium, Benzene, Bis(2-ethylhexyl)phthalate, cis-1,2-Dichloroethene, Ethylbenzene, Isopropylbenzene, Magnesium, Manganese, Methylene chloride, Naphthalene, n-Butylbenzene, n-Propylbenzene, Phenol, sec-Butylbenzene, Sodium, Tetrachloroethene, Toluene, trans-1,2-Dichloroethene, Trichloroethene, Vinyl chloride, and Xylene (Total).

Results for the duplicate sample collected at MW-2 (DUP-1) are consistent with the MW-2 results.

MW-3: Magnesium, Manganese, Sodium, Bis(2-ethylhexyl)phthalate, and Trichloroethene.

For the Further Supplemental Phase II ESI conducted in 2013, reported parameter concentrations exceeding the NYSDEC TOGS 1.1.1 groundwater standard/guidance value are as follows:

MW-1: Aluminum, Barium, Copper, Iron, Manganese, and Bis(2ethylhexyl)phthalate.

MW-2: 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,2,4-Trimethylbenzene, 1,2-Dichloroethane, 1,3,5-Trimethylbenzene, Acetone, Aluminum, Barium, Benzene, Bis(2-ethylhexyl)phthalate, Copper, cis-1,2-Dichloroethene, Ethylbenzene, Iron, Isopropylbenzene, Manganese, Methylene chloride, Naphthalene, n-Butylbenzene, n-Propylbenzene, Phenol, sec-Butylbenzene, Sodium, Tetrachloroethene, Toluene, trans-1,2-Dichloroethene, Trichloroethene, and Xylene (Total).

MW-3: Aluminum, Bis(2-ethylhexyl)phthalate, Copper, Iron, Manganese, and Sodium.

MW-4: 1,1-Dichloroethane, 1,1-Dichloroethene, Aluminum, Arsenic, Barium, Beryllium, Bis(2-ethylhexyl)phthalate, Chromium, cis-1,2-Dichloroethene, Cobalt, Copper, Iron, Lead Magnesium, Manganese, Nickel, Selenium, Sodium, trans-1,2-Dichloroethene, Trichloroethene, Vanadium, Zinc, and Vinyl chloride.

MW-5: 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 1,2,4-Trimethylbenzene, 1,2-Dichloroethane, 1,3,5-Trimethylbenzene, Acetone, Aluminum, Barium, Benzene, Bis(2-ethylhexyl)phthalate, Cobalt, Copper, cis-1,2-Dichloroethene, Ethylbenzene, Iron, Isopropylbenzene, Lead, Magnesium, Manganese, Naphthalene, n-Butylbenzene, n-Propylbenzene, Phenol, Sodium, Tetrachloroethene, Trichloroethene, Vanadium, Vinyl chloride, Xylene (Total), and Zinc.

Results for the duplicate sample collected at MW-5 (DUP-1) are consistent with the MW-5 results except for DUP-1 results also exceeded for 4-Isopropyltoluene, sec-Butylbenzene and Selenium.

Results of the groundwater sampling analyses for both events are summarized on Table 1 and the isoconcentration maps presented on Figures 4 through 9.

2.4 Analytical Results for Soil Samples

For the Supplemental Phase II conducted in 2012, one (1) soil sample was collected from MW-2. Reported concentrations exceeding the soil cleanup objectives (SCOs) in 6 NYCRR Subpart 375-6.8(a), Unrestricted Use consisted of: Vinyl Chloride, cis-1,2-Dichloroethene, Trichloroethene and Tetrachloroethene. The reported concentrations for these four (4) parameters do not exceed the Restricted SCOs for Industrial or Commercial Use listed in 6 NYCRR Subpart 375-6.8.

For the Further Supplemental Phase II ESI conducted in 2013, one (1) soil sample and one (1) duplicate were obtained from the soil boring at groundwater monitoring well MW-5. Reported concentrations exceeding the Unrestricted Use SCO consisted of: Vinyl chloride, cis-1,2-Dichloroethene, Trichloroethene, Tetrachloroethene, Xylene (total), m,p-Xylene, o-Xylene, and 1,2,4-Trimethylbenzene. There were no exceedances of the Restricted SCOs for Industrial or Commercial Use listed in 6 NYCRR Subpart 375-6.8(b).

Results for the Duplicate sample collected at MW-5 are consistent with the S01-MW5 sample except the DUP1 result for trans-1,2-Dichloroethene exceeded Unrestricted Use SCO, but not the Restricted SCOs for Industrial or Commercial Use.

Results of the soil analyses are summarized in Table 2.

3.0 REMEDIAL INVESTIGATION – FIELD ACTIVITIES PLAN

Details of the Remedial Investigation (RI) field activities are described in the sections below. All environmental media samples will be collected by qualified personnel in accordance with applicable standards, guidelines, and protocols, including proper Chain of Custody procedures and holding times. All environmental media samples requiring laboratory analysis will be analyzed following New York State Analytical Services Protocol (ASP) Category B deliverables, in accordance with DER-10 by an ELAP-certified laboratory. All environmental media laboratory results will be evaluated by a qualified third party data validator, and will be presented in the data validator's Data Usability Summary Report (DUSR).

3.1 Fracture Trace Analysis

A fracture trace analysis will be completed at the site. The results will be used to update the conceptual site model and assist in the placement of monitoring wells at the site and the surrounding area.

Groundwater wells indicate that groundwater in the site area is within bedrock. Groundwater flow through fractured shale bedrock is predominately along bedrock fractures, which can be oriented parallel to bedding planes or at some angle relative to the bedding planes. Fractures can be measured directly in bedrock outcrops at, or nearby, the site, if not covered by soil or fill. Fracture patterns can also be detected indirectly through the use of aerial photographs and topographic maps. Aerial photographs and topographic maps can be used to document photo-linears, or lineaments, which may reflect underlying bedrock structure (such as faults). This type of "remote sensing" concentrates on linear features that are hundreds to thousands of feet in length that can be extended or projected onto a site. It is along these features that groundwater in bedrock will preferentially flow.

A site visit is proposed to inspect bedrock outcrops in the area and measure orientations of bedrock fractures and bedding planes. The site visit will also be used to verify the interpretations from the aerial photographs. Historical aerial photographs, topographic maps, and published geological literature of the area will be examined to develop an understanding of the likely bedrock fracture pattern at the site. Historical topographic maps are available online, as well as recent aerial imagery, which can be incorporated into Graphical Information System (GIS) format files. A letter report will be prepared to document the findings of the site visit and the fracture trace analysis. The report will include maps with annotations to reflect the fractures and fracture trends for the site and region.

3.2 Surface Soil Investigation

To investigate surface soil conditions on the property, surface soil samples will be collected in the grassed areas, from below the root zone of the vegetative cover. As shown on Figure 10, four (4) samples will be collected of the surface soil. The vegetative cover including root zone will be removed and a soil sample will be collected from the remaining top 2 inches. These samples will be analyzed for the full Target Compound List/Target Analyte List (TCL/TAL) suite of compounds. At two locations, the surface soil sample will be collected as part of the installation of deep monitoring wells MW-1D and MW-6D.

Surface soil will be sampled from the following locations as part of the Remedial Investigation (RI) at the Site:

Surface Soil Sampling Table

Location	Parameters to be Analyzed
Midwestern site perimeter, southeast of MW-1	Full TCL/TAL*
Northwestern quadrant of site, south of creek	Full TCL/TAL*
Northeastern corner of site, south of creek	Full TCL/TAL*
Mideastern site perimeter	Full TCL/TAL*

* Target Compound List/Target Analyte List (TCL/TAL) Analytical Parameters, including VOCS, SVOCs, Metals, PCBS, and Pesticides

3.3 Soil Investigation/Test Pitting

A test pit/soil investigation was performed on April 23, 2014 as part of the approved IRM onsite investigation work plan, expediting the source area investigation (near SB-14, MW-5, and MW-2 on the north side of the existing onsite building) including how the source area potentially relates to soil vapor intrusion into the onsite building. Seven (7) test pits were excavated outside the building near the suspected source area at the approximate location shown on Figure 10. Additional test pits may be installed to further determine the extent of the source area. If additional test pitting is performed, it will be done consistent with the April 23, 2014 procedures described below.

Soils in the test pit excavation were inspected for potential contamination using visual and olfactory observations and screened with a photoionization detector (PID). The soils were segregated into separate stockpiles (impacted soils and non-impacted soils) based on the observations made. Based on the volume of excavated soil, composite soil samples will be collected and analyzed for Part 375 parameters (excluding VOCs) and grab samples will be collected and analyzed for VOCs. The number of composite and grab samples of the impacted soil stockpile will be in accordance with the NYSDEC DER-10 Table 5.4(e)10. Re-use of the soil and/or disposal at a permitted facility will be completed in accordance with 6 NYCRR Part 371 (Identification and Listing of Hazardous Waste), 6 NYCRR Part 376 (Land Disposal Restrictions), and NYSDEC DER-10 Table 5.4(e)4.

A grab soil sample was collected and analyzed for VOCs from the transition zone between the basal portion of fill (fine sand) and the weathered shale bedrock at test pits TP-14-1, TP-14-2, TP-14-3, TP-14-4, TP-14-6, and TP-14-7. A complete summary of work performed, onsite IRM investigation results, findings, and recommendations will be provided.

The initial approach involved the test pit being excavated until the soil appeared to be uncontaminated based on visual, olfactory and PID observations, or until the top of competent bedrock is reached. All source material was excavated to the degree possible. Ultimately, contaminated material above bedrock may not be removed if the contaminated material can be adequately addressed by in situ techniques.

Upon completion of the excavation(s), sidewall samples and bottom soil sample(s) will be collected in accordance with DER-10. Excavation samples will be analyzed for 6 NYCRR Part 375 TCL VOCs by USEPA Method 8260B and TCL SVOCs by USEPA Method 8270C.

3.4 Interim Remedial Measures (IRMs)

3.4.1 Suspected Source Area(s)

If the test pit installation indicates a discrete source area which is conducive to excavation and removal, an Interim Remedial Measures (IRMs) program will be considered. Following source excavation and removal, soil samples of the excavation sidewalls and bottom will be collected in accordance with DER-10.

Soils in the excavations will be inspected and monitored for potential contamination and sidewall and bottom soils samples will be collected and analyzed for 6 NYCRR Part 375 TCL VOCs by USEPA Method 8260B and TCL SVOCs by USEPA Method 8270C.

Excavated material will be characterized for disposal as described above and re-used onsite or transported to an approved disposal facility.

3.4.2 Offsite Soil Vapor Intrusion (SVI) Investigation

An investigation of the actual/potential impacts to residential buildings offsite is ongoing and is the subject of an IRM Work Plan currently being developed. As described in the Draft IRM Work Plan, sampling has been conducted on the residential property located at 72 Cohoes Road.

The IRM Work Plan describes additional sampling and mitigation measures to be completed at 72 Cohoes Road, and addresses potential impacts to other residential buildings in proximity to the site.

3.5 Groundwater Investigation

Additional groundwater monitoring wells are proposed to determine the extent of impacted groundwater within the unconsolidated soil zone above bedrock (i.e., overburden) and within the bedrock. Proposed monitoring well locations are shown on Figure 10. The exact location and vertical placement of the well screen interval will be determined upon completion of the fracture trace analysis described in Section 3.1. At three (3) locations, MW-6, MW-7, and MW-8, one (1) deep and one (1) shallow well will be installed. Additionally, at existing well location MW-1, a deeper well will be installed adjacent to the existing well.

At each shallow monitoring well location, 4¼-inch Inside Diameter (I.D.) hollow stem auger casing will be utilized for drilling and sampling of the overburden. Continuous soil sampling for observation and PID screening will be performed from ground surface to the bedrock surface at each location. Upon encountering the bedrock at each location, 4-inch flush joint casing will be installed and seated within the bedrock to provide an adequate seal prior to commencing bedrock coring activities. Each borehole will be advanced approximately 10 feet into the bedrock at each location using an HQ size core barrel (hole diameter 3.782 inches and core diameter is 2.406 inches) to facilitate the collection of bedrock core samples for characterizing the bedrock and identifying fractures, joints, and water-bearing zones. Upon reaching the termination depth at each location, a 2-inch inside diameter PVC monitoring well will be installed, which will be constructed of 2-inch inside diameter PVC screen (ten foot length of machine-slotted 0.010 slot screen) and riser pipe. The well screens for the wells are to be installed such that each screen will straddle the interface between the overburden and the bedrock. A clean silica sand filter pack will be placed within the annular space across the entire screen length and extend approximately one (1) foot above the screen followed by the installation of a two (2) foot bentonite seal above the sand pack and cement-bentonite grout above the seal to approximately one (1) foot below existing grade. Shallow and deep monitoring wells are proposed at MW-6, MW-7, and MW-8 while only a shallow bedrock monitoring well will be installed at MW-9 (Figure 10). Monitoring wells at MW-6, MW-8, and MW-9 will be finished at grade with the installation of an 8-inch diameter secured flush-mount curb box set within a concrete pad. The shallow and deep monitoring wells at MW-7 may be completed with a protective standpipe or secured flush-mount cover but its location and surroundings have yet to be determined.

At each deeper bedrock monitoring well location (MW-1, MW-6, MW-7, and MW-8), 6¼-inch I.D. hollow stem auger casing will be utilized for drilling of the overburden. Upon encountering the bedrock at each location, 6-inch ID flush joint casing will be installed and seated within the bedrock to provide an adequate seal prior to commencing with bedrock coring activities. Each borehole will be advanced approximately 10 feet into the bedrock using a 5⅞-inch roller bit. At this point an HQ size core barrel will be used to drill an additional 15 feet to facilitate the collection of core samples of the bedrock for characterizing the bedrock and identifying water-bearing zones as well as to establish a rock socket. Upon reaching this depth at each location, a cement bentonite grout mixture will be tremied into the 4-inch ID PVC casing, sufficient to leave approximately two feet of stick-up. Also the 4-inch PVC casing will be inserted into the borehole and seated into the bedrock. The grout mixture will be removed from within the PVC pipe by tremie grouting bentonite slurry into the pipe, thus displacing the cement-

bentonite mixture. After allowing the grout to set over a 24 to 48 hour period the remainder of the test hole will be advanced with the HX method. Bedrock wells will be constructed of 2-inch, Teflon taped, flush threaded joint, Schedule 40 PVC riser pipe, screen, bottom plug and cap. Ten to fifteen foot screens will be 0.010-inch slotted and installed following procedures similar to the shallower monitoring wells.

Soil samples will be collected continuously at each boring location and logged using the Unified Soil Classification System by STERLING. Background and headspace PID readings for VOCs will be recorded on boring logs. Soil cuttings generated by boring activities will be drummed for characterization and disposal. Soil Samples will be collected from MW-1D, MW-6D, 7D, 8D and 9 to characterize the full depth of soil onsite. Soil boring samples will be collected continuously in four (4) foot intervals. A composite sample will be collected from each four (4) foot boring section and analyzed for full TCL/TAL parameters. Additionally, grab samples will be collected from depths which show elevated PID readings (with a minimum of one soil sample each from the groundwater table zone and top of bedrock from each newly installed well location) and analyzed for full TCL/TAL parameters.

Subsurface drilling equipment will be decontaminated prior to drilling, between drilling of the boreholes and following completion of the monitoring wells. Water used for decontaminating (decon) equipment will be from a potable water source. A decon pad will be constructed by the drilling company to contain decon water. Water used to decontaminate drilling equipment will be drummed and sampled. Drums will be protected from freezing. If analytical results indicate the decontamination water is not contaminated above the Contained-In levels for environmental media as determined by the NYSDEC, the drummed decontamination water will be discharged to the municipal stormwater sewer system upon approval by the appropriate municipality. If results indicate the decontamination water is contaminated, the decontamination water drums will be transported to a designated disposal facility.

Well development will be conducted for the new wells approximately 2 days after installation to remove sediment introduced during drilling and to allow formation water to flow freely into the well screen. Well development will be continued until recorded turbidity readings are < 50 NTUs or until the turbidity readings stabilize. All development water will be contained and properly managed. For water volumes removed during pumping, turbidity readings and visual observations will be recorded on Well Development Logs.

Upon completion of the additional monitoring wells, two (2) rounds of groundwater monitoring approximately three months apart will be completed for the pre-existing and newly installed additional wells. The parameters to be analyzed are listed in the table below. Metals samples will be both filtered and unfiltered.

3.5.1 Monitoring Well Locations / Analytical Parameter List

Groundwater will be sampled from the following monitoring wells as part of the Remedial Investigation (RI) at the Site:

Monitoring Well ID	Location	Parameters to be Analyzed
MW-1*	Upgradient Well on Site Property, shallow bedrock	Full TCL/TAL**
MW-1D	Upgradient Well on Site Property	Full TCL/TAL
MW-2*	Near Impacted Area, shallow bedrock	VOCs, SVOCs, Metals, PCBs
MW-3*	Downgradient Well on Site Property, shallow bedrock	VOCs, SVOCs, Metals, PCBs
MW-4*	Downgradient Well on Site Property, shallow bedrock	Full TCL/TAL
MW-5*	Near Impacted Area, shallow bedrock	Full TCL/TAL

MW-6	Downgradient Well in Northeastern Corner of Site	Full TCL/TAL
MW-6D	Downgradient Well in Northeastern Corner of Site	Full TCL/TAL
MW-7	Downgradient Well Offsite	VOCs, SVOCs, Metals
MW-7D	Downgradient Well Offsite	VOCs, SVOCs, Metals
MW-8	Downgradient Well Offsite	VOCs, SVOCs, Metals
MW-8D	Downgradient Well Offsite	VOCs, SVOCs, Metals
MW-9	Loading Dock Area Onsite	Full TCL/TAL

* Existing well.

** Target Compound List/Target Analyte List (TCL/TAL) Analytical Parameters, including VOCs, SVOCs, Metals, PCBs, and Pesticides.

Proposed groundwater sample locations are provided on Figure 10.

3.5.2 Groundwater Sampling Methodology

Groundwater samples will be collected from monitoring wells using low-flow purging and sampling techniques as specified in United States Environmental Protection Agency (USEPA) Ground Water Issue EPA/540/S-95/504, Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures (USEPA, April 1996). Low-flow purging and sampling techniques are designed to provide samples representative of groundwater quality in the aquifer formation being sampled and involves the purging and collection of samples from the screened interval of the monitoring well at a low rate of flow through the sampling device. Flow should be between 0.1 and 0.5 liter per minute, with the goal being to sample at the lowest sustainable rate. During purging, water quality is monitored using in-line real-time field monitoring equipment (flow cell). Parameters to be monitored include pH, temperature, specific conductance, oxidation reduction potential (ORP), dissolved oxygen (DO), and turbidity. The water level is also monitored during purging and the sampling rate can be adjusted to minimize drawdown (< 0.1 meter), to the extent possible based on rate of recharge to the monitoring well. Readings for real-time parameters and water level are recorded every three to five (3 to 5) minutes during well purging. Wells are purged until parameters stabilize, indicating that flow patterns have been established, bringing water from the sampled formation through the well screen and into the sampling inlet. In order to be considered stabilized, parameters must fall within the following guidance ranges for three (3) consecutive readings:

pH	± 0.1
Conductivity	± 3%
ORP	± 10mv
Turbidity	± 10%
Temp (°C)	± 3%
DO	± 10%

Following stabilization of the field parameters, the tubing will be disconnected from the flow cell and the groundwater sample will be collected. Prior to sampling, the depth to water, depth to bedrock, and depth to product (NAPL, if applicable) will be measured and recorded for each well. For overburden wells, samples will be collected at the mid-point of the well screen if the water level at the time of sampling exceeds the top of the well screen, or the mid-point of the water level at the time of sampling and the bottom of the well screen, if the water level at the time of sampling is within the well screen. For bedrock wells, samples will be collected from the mid-point of the well screen.

Samples will be placed in appropriate containers prepared by the laboratory, placed in coolers and preserved on ice.

3.6 Surface Water and Sediments Investigation

Surface water and sediments in the intermittent stream west and north of the parking lot will be sampled, if possible, to determine if impacted by site operations. The portion of the stream which is near the northern boundary of the site that is adjacent to 72 Cohoes Road receives rainwater and snowmelt and flows intermittently from west to east. Bedrock is exposed along the channel within the site boundary. At points east of Cohoes Road the typically intermittent creek becomes a low-flow minor tributary to the Salt Kill (Water Index Number H-239), discharging into an unnamed pond approximately 0.45 mile north-northeast of the site.

> All surface water and sediment samples collected will be submitted to a certified laboratory and analyzed for VOCs by EPA Method 8260, SVOCs by EPA Method 8270, and polychlorinated biphenyls (PCBs) by EPA Method 8082 following New York State ASP Category B deliverables, in accordance with DER-10. A DUSR will be prepared.

Proposed surface water and sediment sample locations are provided on Figure 10.

3.7 Soil Vapor Intrusion Investigation

A Soil Vapor Intrusion (SVI) investigation will be completed for the onsite building and nearby buildings. The SVI investigation will follow the Final NYSDOH "Guidance for Evaluating Soil Vapor Intrusion in the State of New York", dated October 2006. The investigation will determine whether additional actions are necessary to address vapors.

The multi-family residential building immediately to the north of the Troy Belting property has undergone some SVI sampling on two dates, which indicates mitigation may be appropriate. An Interim Remedial Measures (IRM) Work Plan has been implemented to address the actual/potential impacts to residential buildings offsite in an expedited timeframe.

3.7.1 Onsite Building

A Soil Vapor Intrusion (SVI) investigation at the onsite building was completed in June 2014 in partial fulfillment of a NYSDEC/NYSDOH-approved Interim Remedial Measures (IRM) Work Plan to expedite potential mitigation decisions for the onsite building. The SVI investigation has been and will follow the Final NYSDOH "Guidance for Evaluating Soil Vapor Intrusion in the State of New York", dated October 2006. Three (3) sub-slab vapor and indoor air sampling locations in the onsite building and two (2) outdoor air sampling location were established on June 3, 2014 (Figure 11). The sub-slab vapor sampling locations were selected to assess whether volatile gases are migrating through soils beneath the slab of the building. The indoor air sampling locations were selected to determine the ambient air conditions inside the building on the ground floor and were co-located with the sub-slab vapor sampling locations. The outdoor air sampling locations were selected to determine the ambient air conditions outside and upwind of the building on the day of sampling.

3.7.2 Offsite Buildings

Consistent with the above-referenced existing NYSDOH SVI guidance, an offsite IRM Work Plan has been implemented to expedite potential mitigation decisions for the nearby offsite residences. Investigation activities at 67, 72, 73, 74, and 76 Cohoes Road included an offsite SVI Investigation,

which consisted of completing building inventories and collection of offsite sub-slab vapor, indoor air, and outdoor air samples, and select groundwater sampling. The residences sampled were selected by the NYSDOH based on known groundwater concentrations, groundwater flow direction, and site conditions. The SVI investigations were completed between March 10 and 13, 2014 and included the collection of four (4) sub-slab soil vapor samples, twelve (12) indoor air samples, and five (5) outdoor air samples (Figure 12). In accordance with NYSDOH directive, no sub-soil vapor samples were collected at 72 Cohoes Road as there is no slab floor in the basement or crawlspaces of this residence. One (1) sub-slab soil vapor sample and two (2) indoor air samples (basement and first floor living area) were collected from each of the residences, except at 72 Cohoes Road where four (4) indoor air samples were collected from the basement, crawlspace, and each of the two first floor apartments.

Based on the evaluation of the data compared to NYSDOH's decision matrices for indoor air and sub-slab vapor and upon consultation with the NYSDOH, it is concluded that no further action, such as monitoring or mitigation is warranted at 67, 72, 73, 74, and 76 Cohoes Road. It should be recognized that SVI-related follow up actions for the sampled residences is determined by the NYSDOH/NYSDEC, with their official review and approval. If further offsite SVI work becomes necessary, it will be addressed as part of this RI Work Plan. The analytical results (March 2014 sample collected from 69 Cohoes Road basement sump) and historic groundwater results from monitoring well MW-3 were non detect for VOCs and suggest that there are no groundwater impacts east of the site. A complete summary of work performed, offsite SVI investigation results, findings, and recommendations will be provided.

If further offsite SVI work becomes necessary, the offsite building sampling will include at least one (1) outdoor air sample of the ambient air on the upwind side of the building(s) being sampled. At least one (1) indoor air sample and sub-floor sample will be collected from the basement/crawl space of each building, depending upon the size of the space and the presence of a competent concrete slab. If a competent slab floor exists in the basement/crawl space then visible cracks will be sealed with suitable caulking or cementitious materials, and sub-slab and indoor air sampling will be completed within the basement/crawl space.

If the floor of basement/crawl space is not concrete, then a sub-floor vapor sample and indoor air sample will be collected in the basement/crawl space as described below.

- An indoor air sample will be collected in the first floor living space(s).
- One (1) soil vapor sample will be obtained from a temporary hole drilled into the soil in the basement of the residential building. The surface of the soil will be covered with plastic sheeting extending at least five (5) feet in each direction from the soil vapor sampling point, to minimize the possibility of air within the basement following a short circuit into the sample.
- One (1) air sample will also be obtained of the indoor air in the basement.

3.7.3 Sub-Slab / Floor Vapor Sampling

Installation of Temporary Sampling Port

At the locations of the sub-slab and sub-floor vapor sampling points discussed above, STERLING will advance a temporary boring into the floor using a one-half (1/2) inch diameter hammer drill. The locations of the sampling ports will be towards the center of the basement, at least five (5) feet from exterior walls. One-quarter (1/4) inch diameter polyethylene tubing will be advanced to a depth no greater than two (2) inches below the bottom of the slab or 6 inches to 1 foot below the floor, as appropriate, and the hole will be sealed using a non-volatile, non-shrinking putty. For sub-floor sampling

points, a twenty-five (25) square foot sheet of polyethylene sheeting will be applied over the immediate area surrounding the sampling port to reduce the potential for infiltration of indoor air into the sub-floor soils during sampling. The tubing will puncture the polyethylene sheeting and connect to the sampling container.

Tracer Gas Leak Testing

STERLING will use helium gas for a tracer test in order to confirm the seal for the sampling port is adequate. A structurally competent dome/container will be placed over the sampling port to create a confined air space in the immediate vicinity surrounding the port. The dome will be equipped with one input connection through which helium gas will be injected into the confined area and one output connection into which the sampling port tubing will be connected. One (1) tube will be attached to a helium tank and helium gas will be released into the immediate area surrounding the sampling port. The second tube (the sampling tube) will be connected to the sampling port on one end and to a helium gas detection device on the other end. Helium gas concentrations will be monitored. If helium is detected by the device, STERLING will repair the seal on the sampling port and repeat the tracer gas leak test until no helium gas is detected.

Soil Vapor (Sub-Floor) Air Sampling

Prior to sampling, the sample port will be purged at a flow rate of less than 0.2 liter per minute using a syringe. After three to five (3 to 5) volumes of the sampling tubing have been purged, the tubing will be attached directly to a certified clean Summa canister. For the onsite building, the Summa canisters will have an eight (8) hour flow regulator. For residential buildings, the canister will have a 24-hour flow regulator. At one of the sub-slab soil vapor sample locations in the onsite building, one (1) duplicate sample will be collected. The sub-slab sample and the duplicate sample will be collected from the same sampling port by using a T-connector that will attach to the sampling tubing and will connect to two (2) Summa canisters. A sample collection form will be completed for each sub-slab soil vapor sample (see Appendix B).

Following the collection of all sub-slab/sub-floor vapor samples, STERLING will remove the sampling tubing and putty, and will seal the borings with quick drying concrete or other suitable material.

3.7.4 Indoor and Outdoor Air Sampling

STERLING will collect two (2) indoor air samples in the onsite building. Nearby buildings will have at least one (1) indoor air sample, depending on the basement/crawl space flooring and living space usage above the basement/crawl space. Additionally, at least one (1) outdoor air sample will be collected during each sampling event over an 8-hour (onsite building) or 24-hour (residence) period concurrently with the sub slab/sub-floor vapor sampling event. Samples will be collected in the breathing space, approximately three (3) to five (5) feet above the floor. Prior to collecting the indoor air samples, STERLING will perform a detailed inventory of each building, and complete the "Indoor Air Quality Questionnaire and Building Inventory" provided as Appendix C. The inventory will include screening of volatile gases using a photoionization detector (PID) with an 11.7 eV lamp. The purpose of the inventory is to identify potential sources of volatile gases in the building other than intrusion of sub slab/sub-floor soil vapor. The outdoor air samples will be collected from an upwind location with respect to the building being sampled.

3.7.5 Sample Analysis and Reporting

The Summa canister samples will be submitted to a NYSDOH Environmental Laboratory Approval Program (ELAP) certified analytical laboratory for analysis of volatile organic compounds (VOCs) by EPA Method TO-15. The following reporting limits will be achieved for the indoor and outdoor air samples:

- TCE, VC and carbon tetrachloride: 0.25 micrograms per cubic meter ($\mu g/m^3$)
- All other compounds: 1 $\mu g/m^3$

To assess analytical quality and the usability of the data, a qualified third-party will review the analytical data package and all associated laboratory QA/QC information to determine the following:

- The data package is complete;
- Holding times have been met;
- The Quality Control (QC) data fall within the protocol limits and specifications;
- The data have been generated using established and agreed upon analytical protocols;
- The raw data confirm the results provided in the data summary sheets and QC verification forms; and
- Correct data qualifiers have been used.

A DUSR will be prepared in accordance with Appendix 2B, "Guidance for the Development of Data Usability Summary Reports" of DER-10 by a party independent from the laboratory performing the analysis, to determine whether the analytical data for all samples, as presented, meets the project's criteria for data quality and data use, and will be submitted for regulatory review and approval.

Specific conclusions and recommendations will be provided by STERLING that will address the following:

- Does data indicate vapors are being emitted from contaminated soil and groundwater into soils beneath the sampled building(s)?
- Does data indicate vapors are entering the ambient air inside the sampled building(s)?
- Does data indicate that preferential pathways exist for soil vapor migration into the sampled building(s)?
- Should vapor intrusion monitoring or mitigation be performed for the sampled building(s)?

A summary report that includes data laboratory reports will be provided to the NYSDEC.

3.7.6 Soil Vapor Sampling

Soil vapor samples will also be collected in the sewer pipe bedding onsite, in the approximate location shown on Figure 10. The soil vapor sample in the sewer pipe bedding will be collected to evaluate offsite preferential migration pathways. Prior to installing the soil vapor probe, the depth of the sewer pipe bedding will be determined. A soil vapor probe will be installed using a direct-push drill rig into the bedding material. A Summa canister, provided by the laboratory, will be used to collect the soil vapor sample. The air sample will be analyzed by an ELAP-certified laboratory for VOCs. The sampling probe will be abandoned in place by cutting and plugging the tubing and covering the surface with native soil.

If additional soil vapor sampling is required, as determined by the NYSDOH/NYSDEC, their official review and approval will be needed.

3.8 QA/QC Plan

All QA/QC samples will be collected in accordance with the NYSDEC Division of Environmental Remediation DER-10 – Technical Guidance for Site Investigation and Remediation (May 2010), as follows:

- Duplicate and Matrix/Matrix Spike Duplicate samples will be collected at a frequency of one (1) per 20 samples.
- Monitoring wells to be sampled in duplicate will be selected randomly at the time of sampling.
- Aqueous trip blanks will be collected for samples that are to be analyzed for volatiles at a frequency of one (1) per 20 samples.

3.9 Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP)

A Health and Safety Plan (HASP) for this site is included as Appendix D. A copy of the HASP will be available at the Site during the conduct of all investigation and remediation activities. Additionally, a Community Air Monitoring Plan (CAMP), provided as Appendix E, will be in place during all ground intrusive activities.

3.10 Investigation Derived Waste (IDW)

Investigation Derived Waste (IDW) includes excavation soils, drill cuttings, well development water, decontamination water, and personal protective equipment (PPE). IDW will be secured, labeled and stored onsite until properly managed. IDW will be managed following all applicable local, State and Federal statutes, regulations and guidance.

IDW will be labeled as waste 'under testing' for those wastes that are reasonably likely to satisfy Contained-In limits. NYSDEC will determine whether the waste meets Contained-In limits after reviewing the laboratory data. If the waste is granted Contained-In status, it will be managed as a non-hazardous waste.

4.0 QUALITATIVE EXPOSURE ASSESSMENT

As required by DER-10, a Qualitative Exposure Assessment will be completed. This assessment will: qualitatively evaluate actual or potential exposures to Site contaminants; describe the nature and size of the population exposed or potentially exposed to Site contaminants; and characterize the exposure setting, identify exposure pathways, and evaluate contaminant fate and transport.

5.0 REPORTING AND NOTIFICATION

STERLING will notify the NYSDEC at least seven (7) days prior to initiating any RI activities. Any changes to the RI Work Plan activities due to field conditions or other circumstances will be approved by NYSDEC.

The RI Report will be submitted to the NYSDEC in electronic (pdf) format and hard copy. All generated data will be submitted in NYSDEC's Electronic Data Deliverable (EDD) format, using the software application EQuIS.

6.0 PROPOSED SITE DEVELOPMENT

6.1 Local Government Permit Requirements

Troy Belting is proposing to modify the onsite building by increasing the height of the entrance doors and ceilings. Also, the floor space of the building will be increased to allow more motors of all sizes to be serviced. The expanded footprint for the building will require the parking area to be relocated and increased. Expanded stormwater management facilities are anticipated to support the Site improvements.

It is anticipated that it will take three (3) months to obtain necessary local Site Plan approval, and 15 months to reconstruct and expand the building, and to relocate and expand the parking area and stormwater management facilities.

6.2 State Government Permit Requirements

The total disturbed area that will be affected on the site is less than one (1) acre. Therefore, a State Pollutant Discharge Elimination System (SPDES) Permit for Stormwater Discharges is not required.

7.0 RI AND PROJECT DEVELOPMENT EVENTS: SEQUENCE AND SCHEDULE

The tasks required to complete the RI and subsequent development of the Site are summarized below:

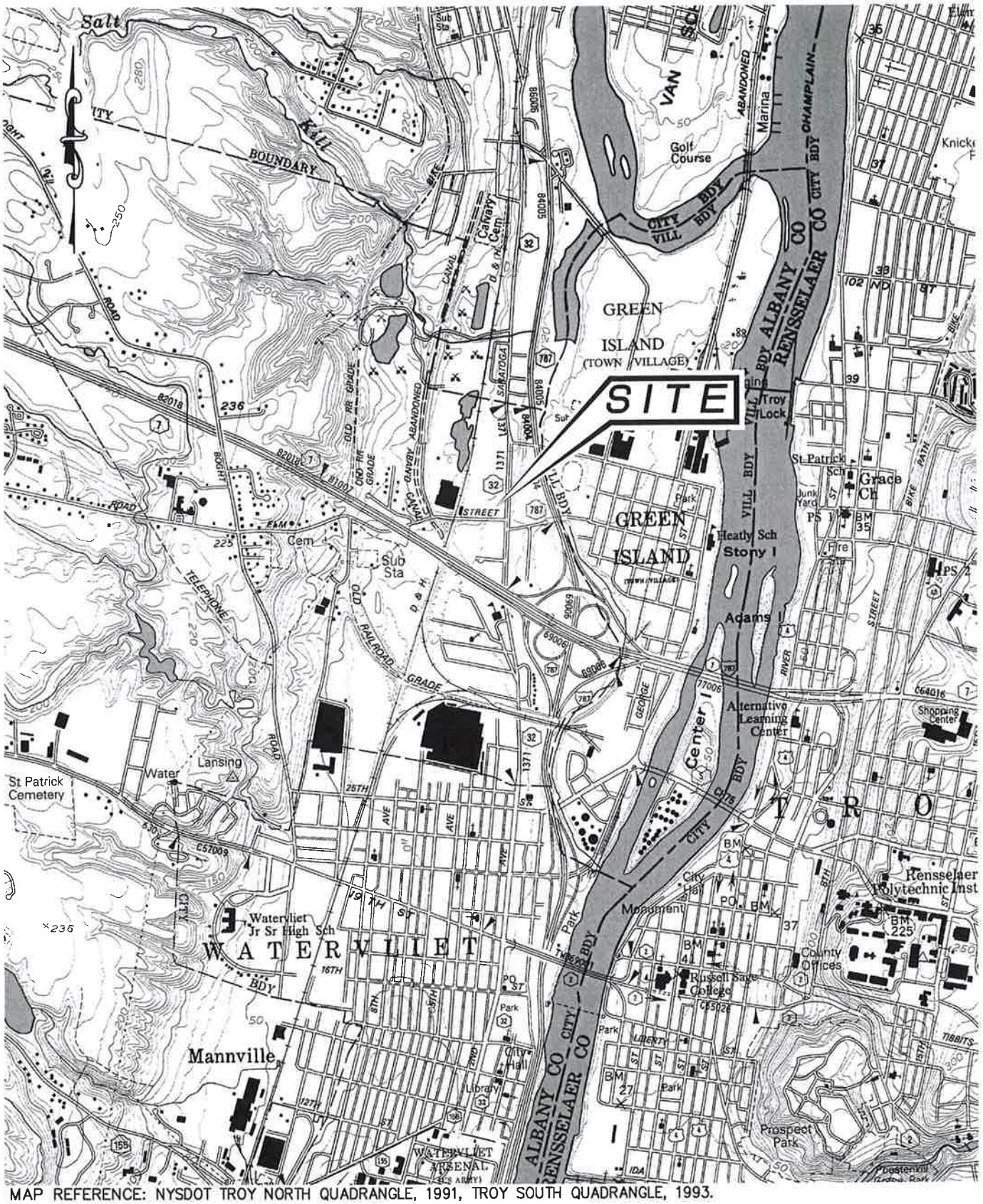
Tasks	Estimated Schedule
Submit Proposed RI Work Plan for NYSDEC Review	November 26, 2013*
NYSDEC Review Response Due for Proposed RI Work Plan (will approve, modify or reject)	January 10, 2014*
Address NYSDEC Review Comments, Resubmit RI Work Plan for Approval	February 25, 2014
RI Work Plan is Placed in document repositories for 30-day Public Comment Review Period, Notice and Fact Sheet are submitted to BCA Contact List.	March - April 2014
Implement RI at Site (Following Approval of RI Work Plan): **RI**: • Soil Investigation/Test Pitting • Groundwater Investigation • Sediment/Surface Water Investigation • Soil Vapor Intrusion Investigation	August - September 2014
Submit RI Report	October 2014

Tasks	Estimated Schedule
NYSDEC Reviews RI Report Send Notice and Fact Sheet Describing RI Report to Contact List	October 2014
Prepare Alternatives Analysis Report and Remedial Work Plan (RWP) Public Comment Period Final Decision Document Issued	December 2014 45-day
If the NYSDEC determines Remedial Action(s) for the Site is required, Prepare Remedial Design 45-day public comment period Approval of RWP	March 2015 May 2015
Conduct Remedial Action	June - August 2015
Prepare Site Management Plan	September 2015
Prepare Final Engineering Report	October 2015
Certificate of Completion	December 2015
Acquire Local and State Permits and Site Plan Approval	October – December 2015

*Completed

2011-31/Reports/RI Work Plan_063014_fnl.docx

FIGURES



MAP REFERENCE: NYSDOT TROY NORTH QUADRANGLE, 1991, TROY SOUTH QUADRANGLE, 1993.

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SITE LOCATION MAP

TROY BELTING & SUPPLY CO.

70 COHOES ROAD

TOWN OF COLONIE — ALBANY CO., N.Y.

PROJ. No.:	DATE:	SCALE:	DWG. NO.	FIGURE
2011-31	2/21/14	1" = 2000'	2011-31019	1

NOTE: SEE FIGURE 3 FOR CROSS SECTION

LEGEND:

MW-1	EXISTING MONITORING WELL
SB-1	EXISTING SOIL BORING LOCATION
— — —	APPROXIMATE PROPERTY LINE

MAP REFERENCES:

1. BASE MAP: (INCLUDING EXISTING MONITORING WELL LOCATIONS & APPROXIMATE PROPERTY LINE), IS FROM DRAWING ENTITLED "MONITORING WELL SURVEY," BY CORNERSTONE SURVEYING & MAPPING, DECEMBER 17, 2012.
2. EXISTING SOIL BORING LOCATIONS FROM DRAWING ENTITLED "BORING LOCATION MAP" (WITHIN PHASE II REPORT), BY RJS ENVIRONMENTAL, SEPTEMBER 28, 2011.
3. AERIAL IMAGE FROM NEW YORK STATEWIDE DIGITAL ORTHOIMAGERY PROGRAM, PHOTOGRAPHY CIRCA 2011

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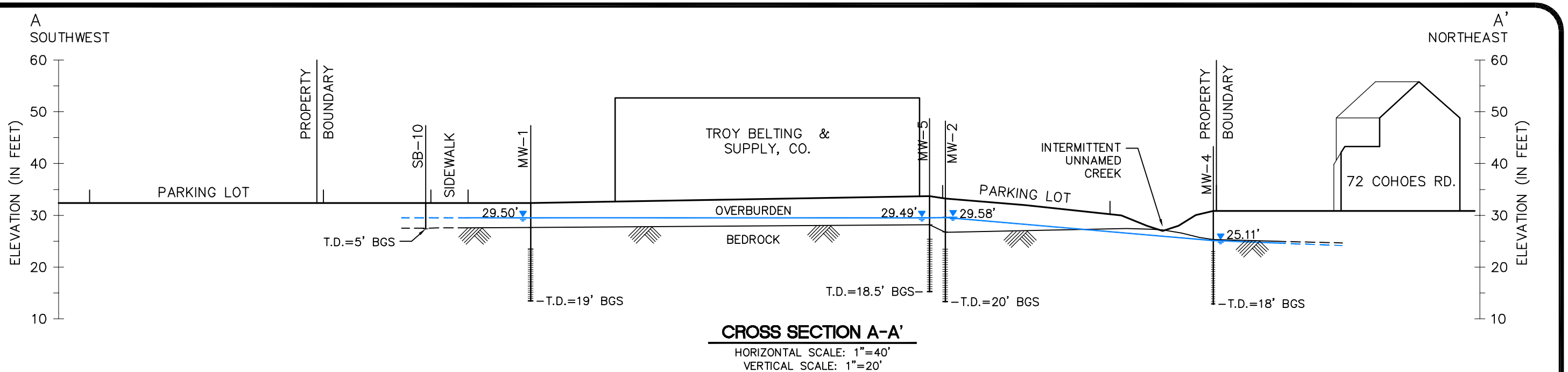
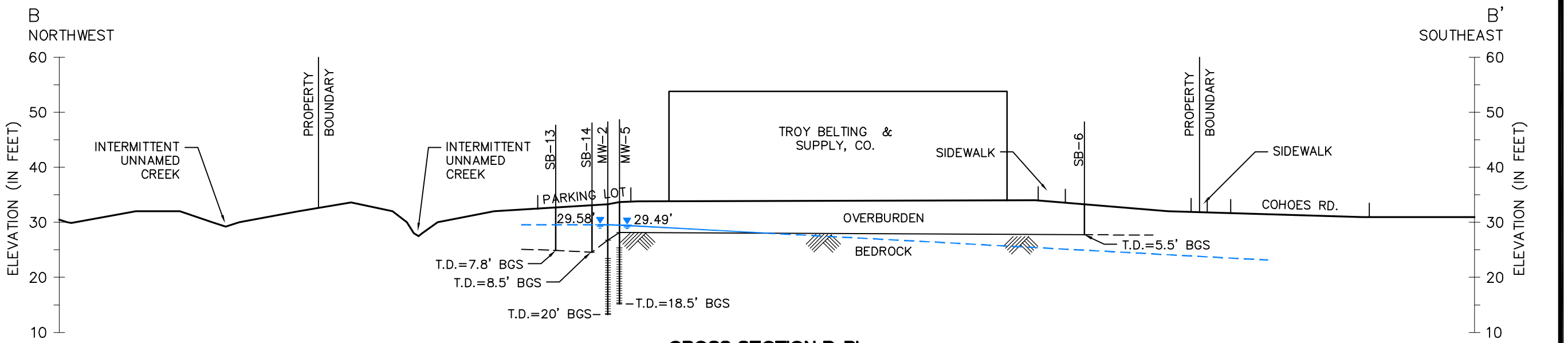
EXISTING BORING AND MONITORING WELL LOCATIONS WITH LOCATION OF CROSS SECTIONS A–A' & B–B'
TROY BELTING & SUPPLY CO.
70 COHOES ROAD
TOWN OF COLONIE ALBANY CO., N,Y,

PROJ. No.:	DATE:	SCALE:	DWG. NO.	FIGURE
2011–31	6/20/14	1" = 60'	2011–31020	2



CROSS SECTION A-A'

HORIZONTAL SCALE: 1"=40'
VERTICAL SCALE: 1"=20'

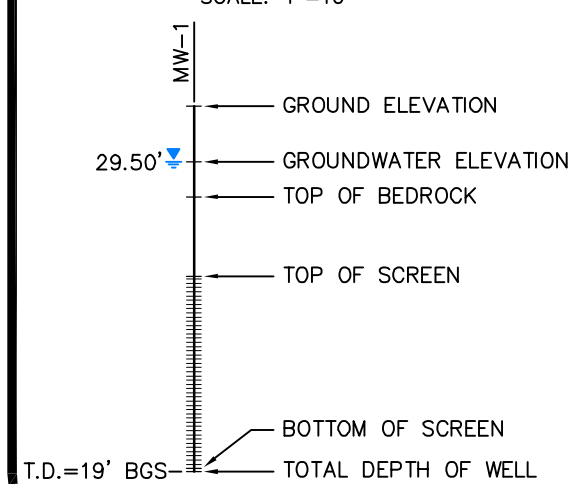


CROSS SECTION B-B'

HORIZONTAL SCALE: 1"=40'
VERTICAL SCALE: 1"=20'

TYPICAL WELL DETAIL

SCALE: 1"=10'



MAP REFERENCES:

1. GROUND ELEVATIONS BASED ON DRAWING ENTITLED "MAP SHOWING A PORTION OF LANDS N/F OF TROY BELTING SUPPLY COMPANY, INC.," BY ABD ENGINEERS & SURVEYORS, APRIL 2010.
2. EXISTING MONITORING WELL LOCATIONS & APPROXIMATE PROPERTY BOUNDARY IS FROM DRAWING ENTITLED "MONITORING WELL SURVEY," BY CORNERSTONE SURVEYING & MAPPING, DECEMBER 17, 2012.
3. EXISTING SOIL BORING LOCATIONS FROM DRAWING ENTITLED "BORING LOCATION MAP"(WITHIN PHASE II REPORT), BY RJS ENVIRONMENTAL, SEPTEMBER 28, 2011.
4. GROUNDWATER ELEVATIONS FROM DECEMBER 26, 2012 GROUNDWATER SAMPLING EVENT.

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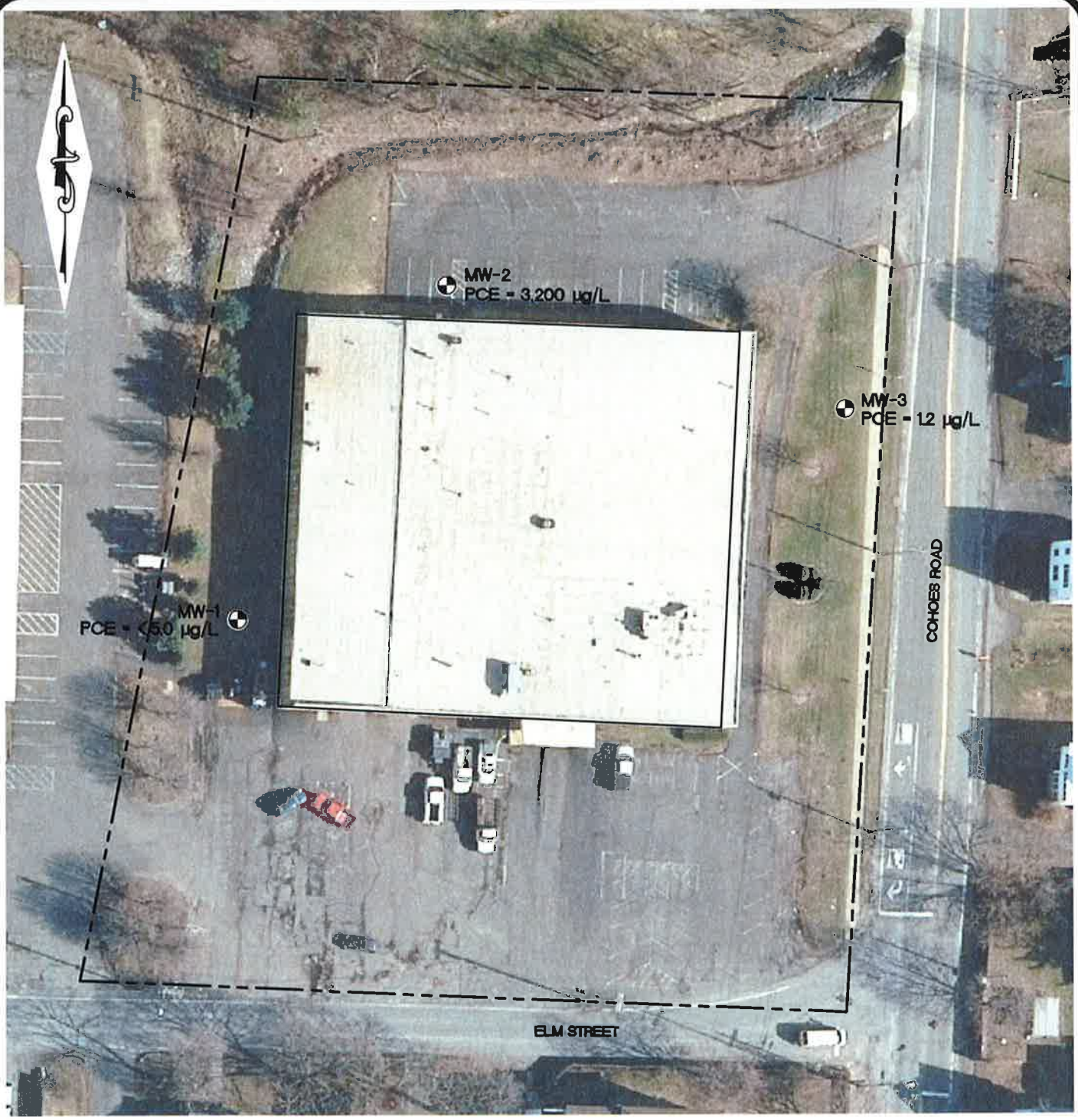
CROSS SECTIONS
A–A' AND B–B'
TROY BELTING & SUPPLY CO.
70 COHOES ROAD
TOWN OF COLONIE ALBANY CO., N,Y,

PROJ. No.:	2011–31	DATE:	6/20/14	SCALE:	AS NOTED	DWG. NO.	2011–31021	FIGURE	3



LEGEND:

MW-1 EXISTING MONITORING WELL

APPROXIMATE PROPERTY LINE

0 30 60 120

(IN FEET)

1 inch = 60 ft.

MAP REFERENCES:

1. BASE MAP: (INCLUDING EXISTING MONITORING WELL LOCATIONS & APPROXIMATE PROPERTY LINE), IS FROM DRAWING ENTITLED "MONITORING WELL SURVEY," BY CORNERSTONE SURVEYING & MAPPING, DECEMBER 17, 2012.
2. AERIAL IMAGE FROM NEW YORK STATEWIDE DIGITAL ORTHOIMAGERY PROGRAM, PHOTOGRAPHY CIRCA 2011

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TETRACHLOROETHENE (PCE) GROUNDWATER CONCENTRATION MAP – MAY 4, 2012

TROY BELTING & SUPPLY CO.

70 COHOES ROAD

TOWN OF COLONIE ALBANY CO., N.Y.

PROJ. No.:	DATE:	SCALE:	DWG. NO.	FIGURE
2011-31	2/21/14	1" = 60'	2011-31022	4

LEGEND:

MW-1 EXISTING MONITORING WELL

APPROXIMATE PROPERTY LINE

0 30 60 120

(IN FEET)

1 inch = 60 ft.

MAP REFERENCES:

1. BASE MAP: (INCLUDING EXISTING MONITORING WELL LOCATIONS & APPROXIMATE PROPERTY LINE), IS FROM DRAWING ENTITLED "MONITORING WELL SURVEY," BY CORNERSTONE SURVEYING & MAPPING, DECEMBER 17, 2012.
2. AERIAL IMAGE FROM NEW YORK STATEWIDE DIGITAL ORTHOIMAGERY PROGRAM, PHOTOGRAPHY CIRCA 2011

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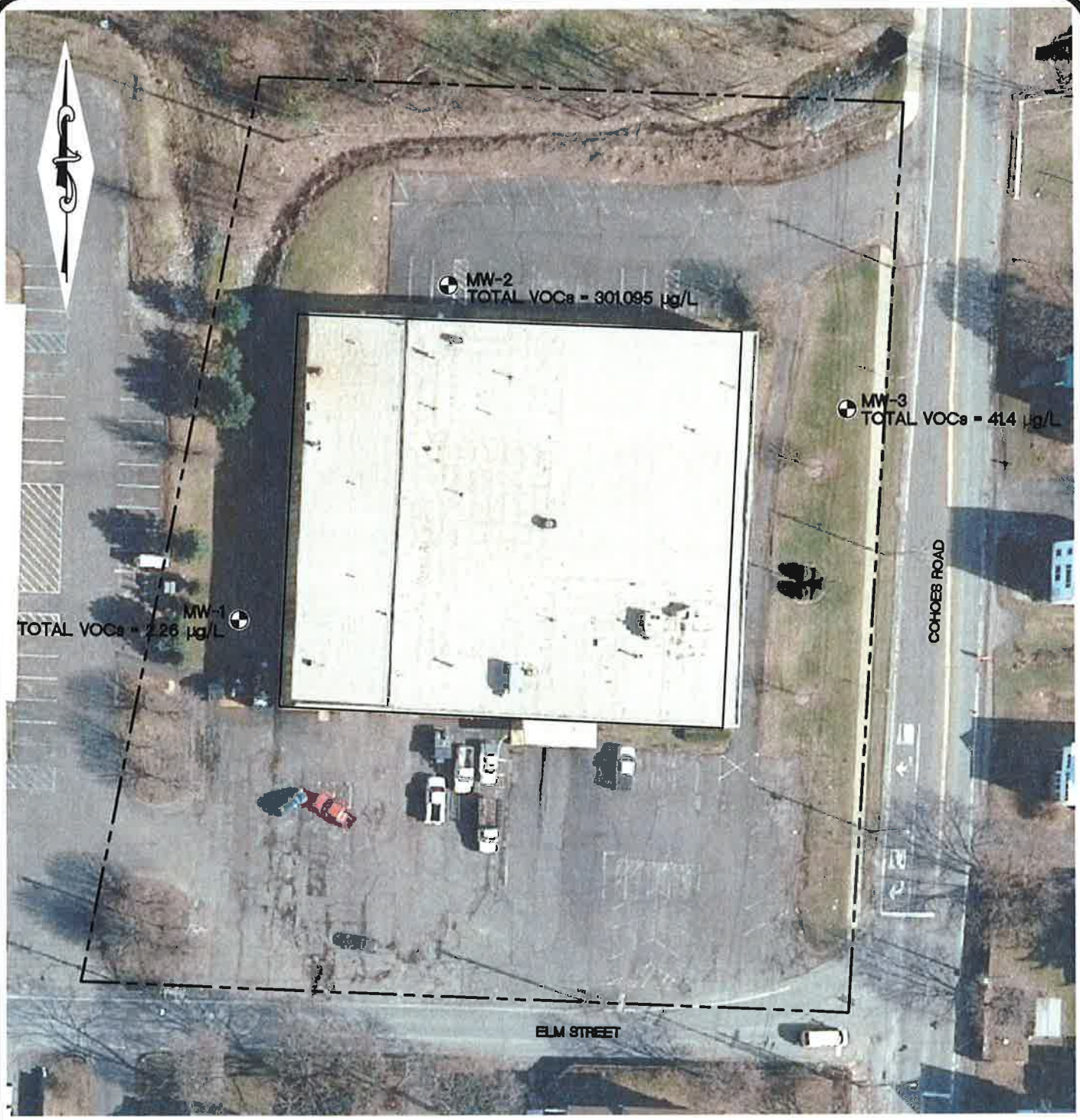
TRICHLOROETHENE (TCE) GROUNDWATER CONCENTRATION MAP – MAY 4, 2012

TROY BELTING & SUPPLY CO.

70 COHOES ROAD

TOWN OF COLONIE ALBANY CO., N.Y.

PROJ. No.:	DATE:	SCALE:	DWG. NO.	FIGURE
2011-31	2/21/14	1" = 60'	2011-31023	5



LEGEND:

MW-1 EXISTING MONITORING WELL

APPROXIMATE PROPERTY LINE

0 30 60 120

(IN FEET)

1 inch = 60 ft.

MAP REFERENCES:

1. BASE MAP: (INCLUDING EXISTING MONITORING WELL LOCATIONS & APPROXIMATE PROPERTY LINE), IS FROM DRAWING ENTITLED "MONITORING WELL SURVEY," BY CORNERSTONE SURVEYING & MAPPING, DECEMBER 17, 2012.
2. AERIAL IMAGE FROM NEW YORK STATEWIDE DIGITAL ORTHOIMAGERY PROGRAM, PHOTOGRAPHY CIRCA 2011

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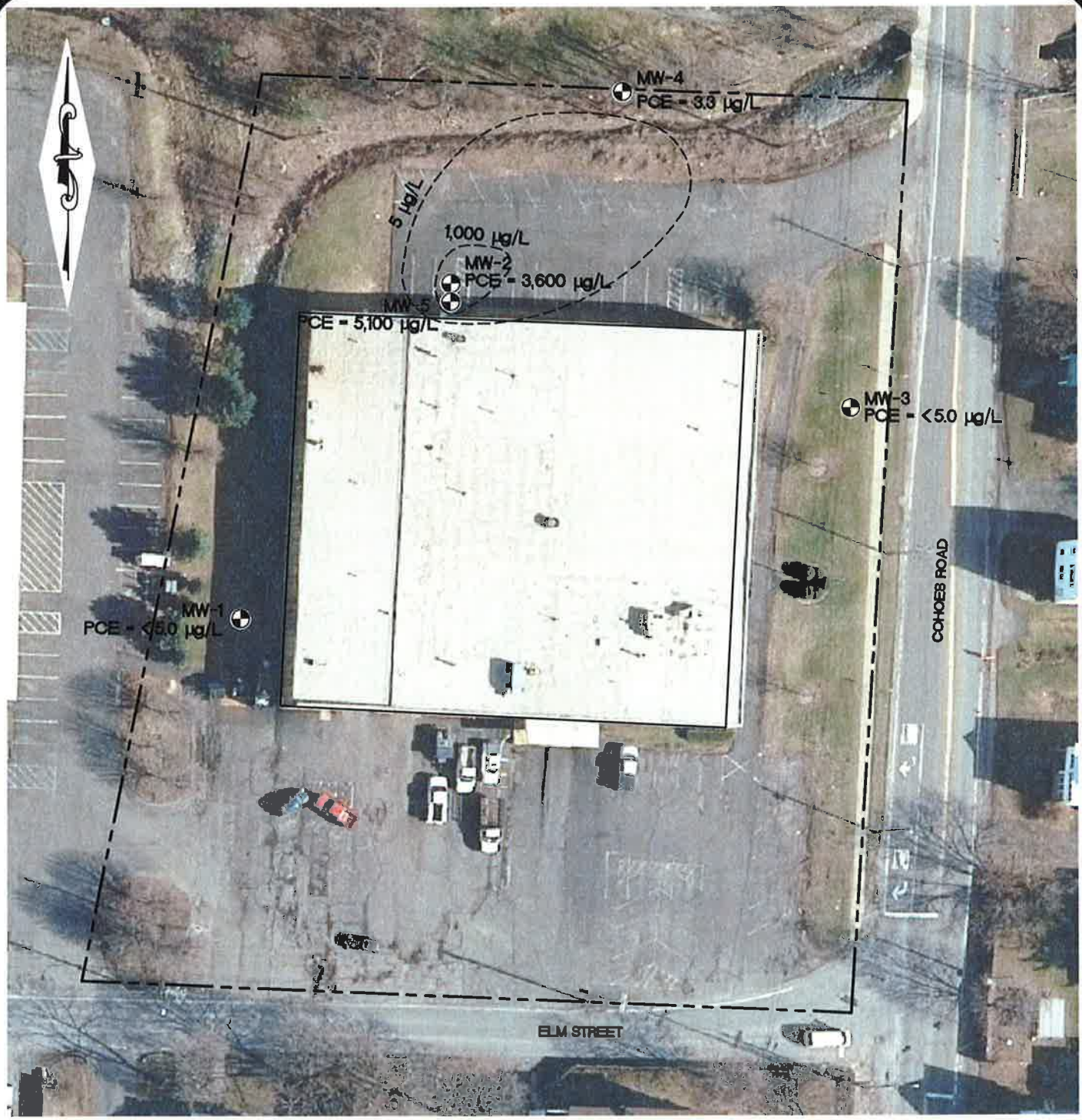
TOTAL VOLATILE ORGANIC COMPOUNDS (TOTAL VOCs) GROUNDWATER CONCENTRATION MAP – MAY 4, 2012

TROY BELTING & SUPPLY CO.

70 COHOES ROAD

TOWN OF COLONIE ALBANY CO., N.Y.

PROJ. No.:	DATE:	SCALE:	DWG. NO.	FIGURE
2011-31	2/21/14	1" = 60'	2011-31024	6



LEGEND:

MW-1	EXISTING MONITORING WELL
— — —	APPROXIMATE PROPERTY LINE

0 30 60 120

(IN FEET)
1 inch = 60 ft.

MAP REFERENCES:

1. BASE MAP: (INCLUDING EXISTING MONITORING WELL LOCATIONS & APPROXIMATE PROPERTY LINE), IS FROM DRAWING ENTITLED "MONITORING WELL SURVEY," BY CORNERSTONE SURVEYING & MAPPING, DECEMBER 17, 2012.
2. AERIAL IMAGE FROM NEW YORK STATEWIDE DIGITAL ORTHOIMAGERY PROGRAM, PHOTOGRAPHY CIRCA 2011

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TETRACHLOROETHENE (PCE) GROUNDWATER
ISO-CONCENTRATION MAP – DECEMBER 20, 2012
TROY BELTING & SUPPLY CO.
70 COHOES ROAD
TOWN OF COLONIE ALBANY CO., N.Y.

PROJ. No.:	DATE:	SCALE:	DWG. NO.	FIGURE
2011-31	2/21/14	1" = 60'	2011-31025	7

LEGEND:

MW-1 EXISTING MONITORING WELL

APPROXIMATE PROPERTY LINE

0 30 60 120

(IN FEET)

1 inch = 60 ft.

MAP REFERENCES:

1. BASE MAP: (INCLUDING EXISTING MONITORING WELL LOCATIONS & APPROXIMATE PROPERTY LINE), IS FROM DRAWING ENTITLED "MONITORING WELL SURVEY," BY CORNERSTONE SURVEYING & MAPPING, DECEMBER 17, 2012.
2. AERIAL IMAGE FROM NEW YORK STATEWIDE DIGITAL ORTHOIMAGERY PROGRAM, PHOTOGRAPHY CIRCA 2011

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TRICHLOROETHENE (TCE) GROUNDWATER ISO-CONCENTRATION MAP – DECEMBER 20, 2012

TROY BELTING & SUPPLY CO.

70 COHOES ROAD

TOWN OF COLONIE ALBANY CO., N.Y.

PROJ. No.:	DATE:	SCALE:	DWG. NO.	FIGURE
2011-31	2/21/14	1" = 60'	2011-31026	8

LEGEND:

MW-1 EXISTING MONITORING WELL

APPROXIMATE PROPERTY LINE

0 30 60 120

(IN FEET)

1 inch = 60 ft.

MAP REFERENCES:

1. BASE MAP: (INCLUDING EXISTING MONITORING WELL LOCATIONS & APPROXIMATE PROPERTY LINE), IS FROM DRAWING ENTITLED "MONITORING WELL SURVEY," BY CORNERSTONE SURVEYING & MAPPING, DECEMBER 17, 2012.
2. AERIAL IMAGE FROM NEW YORK STATEWIDE DIGITAL ORTHOIMAGERY PROGRAM, PHOTOGRAPHY CIRCA 2011

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TOTAL VOLATILE ORGANIC COMPOUNDS (TOTAL VOCs) GROUNDWATER ISO-CONCENTRATION MAP – DECEMBER 20, 2012

TROY BELTING & SUPPLY CO.

70 COHOES ROAD

TOWN OF COLONIE ALBANY CO., N.Y.

PROJ. No.: 2011-31	DATE: 2/21/14	SCALE: 1" = 60'	DWG. NO. 2011-31027	FIGURE 9

(IN FEET)
1 inch = 60 ft.

LEGEND:

MW-6	PROPOSED MONITORING WELL LOCATION
■	PROPOSED SURFACE SOIL SAMPLE LOCATION
◒	PROPOSED SEDIMENT/SURFACE WATER LOCATION
▲	PROPOSED SOIL VAPOR SAMPLE LOCATION
TP-14-1	EXISTING TEST PIT LOCATION (APRIL 23, 2014)
MW-1	EXISTING MONITORING WELL
SB-1	EXISTING SOIL BORING LOCATION
— — —	APPROXIMATE PROPERTY LINE

✱ – ACTUAL LOCATION TO BE DETERMINED AT A LATER DATE.

MAP REFERENCES:

1. BASE MAP: (INCLUDING EXISTING MONITORING WELL LOCATIONS & APPROXIMATE PROPERTY LINE), IS FROM DRAWING ENTITLED "MONITORING WELL SURVEY," BY CORNERSTONE SURVEYING & MAPPING, DECEMBER 17, 2012.
2. EXISTING SOIL BORING LOCATIONS FROM DRAWING ENTITLED "BORING LOCATION MAP" (WITHIN PHASE II REPORT), BY RJS ENVIRONMENTAL, SEPTEMBER 28, 2011.
3. AERIAL IMAGE FROM NEW YORK STATEWIDE DIGITAL ORTHOIMAGERY PROGRAM, PHOTOGRAPHY CIRCA 2011

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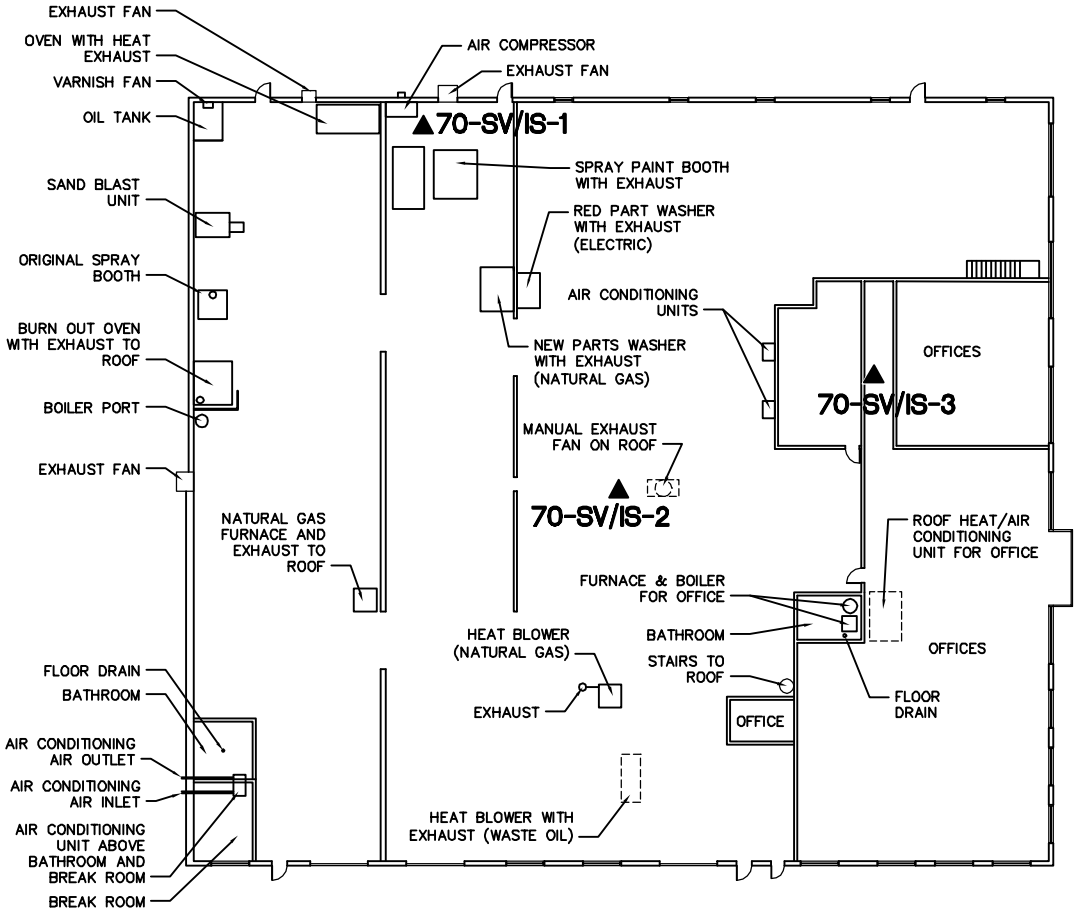
PROPOSED SAMPLE AND WELL LOCATIONS MAP
TROY BELTING & SUPPLY CO.
70 COHOES ROAD
TOWN OF COLONIE ALBANY CO., N,Y,

PROJ. No.:	DATE:	SCALE:	DWG. NO.	FIGURE
2011-31	6/20/14	1" = 60'	2011-31028	10



LEGEND:

▲70-SV/IS-1 PROPOSED SOIL VAPOR SAMPLING POINTS

0 20 40 80

(IN FEET)

1 inch = 40 ft.

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ONSITE SOIL VAPOR SAMPLING POINTS
(JUNE 3, 2014)

TROY BELTING & SUPPLY CO.

70 COHOES ROAD

TOWN OF COLONIE ALBANY CO., N.Y.

PROJ. No.: 2011-31	DATE: 6/20/14	SCALE: 1" = 40'	DWG. NO. 2011-31032	FIGURE 11

LEGEND:

OA = OUTDOOR AIR
IA = INDOOR AIR
SV = SUB-SLAB SOIL VAPOR
— - - — APPROXIMATE PROPERTY LINE

0 30 60 120

(IN FEET)
1 inch = 60 ft.

MAP REFERENCES:

1. BASE MAP (INCLUDING PROPERTY LINE BOUNDARY) IS FROM DRAWING ENTITLED "MONITORING WELL SURVEY," BY CORNERSTONE SURVEYING & MAPPING, DECEMBER 17, 2012.
2. AERIAL IMAGE FROM NEW YORK STATEWIDE DIGITAL ORTHOIMAGERY PROGRAM, PHOTOGRAPHY CIRCA 2011.

STERLING
Sterling Environmental Engineering, P.C.
24 Wade Road ♦ Latham, New York 12110

OFFSITE SOIL VAPOR/INDOOR AIR/
OUTDOOR AIR SAMPLING LOCATIONS (MARCH 10–13, 2014)
TROY BELTING & SUPPLY CO.
70 COHOES ROAD
TOWN OF COLONIE ALBANY CO., N.Y.

PROJ. No.:	2011–31	DATE:	4/10/14	SCALE:	1" = 60'	DWG. NO.	2011–31035	FIGURE	12

TABLES

TABLE 1
Summary of Historical Analytical Results - Groundwater
Troy Belting & Supply Company, 70 Cohoes Road, Colonie, New York

Parameter	Reg 1	Reg 2	Unit	MW-1	MW-1	MW-2	MW-2	MW-3	MW-3	MW-4	MW-5	DUP-1	DUP-1
Date Sampled				5/4/2012	12/20/2012	5/4/2012	12/20/2012	5/4/2012	12/20/2012	12/20/2012	12/20/2012	5/4/2012	12/20/2012
Aluminum	100	---	µg/L	**465**	**882**	ND	**388**	ND	**1,890**	**82,500**	**9,890**	ND	**3,230**
Antimony	3	---	µg/L	ND	ND	**12**	ND	ND	ND	ND	**11.0** BN	ND	**14.8** BN
Arsenic	25	---	µg/L	7.6	ND	5.2	ND	6.3	ND	**42.7**	9.1 B	ND	ND
Barium	1,000	---	µg/L	889	**1,050**	**5,460**	**7,130**	732	322	**6,690**	**1,680**	**5,570**	971
Beryllium	---	3	µg/L	ND	ND	ND	ND	ND	ND	**4.0** B	0.50 B	ND	ND
Cadmium	5	---	µg/L	ND	ND	ND	ND	ND	ND	1.7 B	1.7 B	ND	1.3 B
Calcium	---	---	µg/L	48,600	53,600	135,000	111,000	159,000	102,000	142,000	131,000	139,000	122,000
Chromium	50	---	µg/L	ND	1.5 B	ND	2.1 B	ND	3.2 B	**116**	18.6 B	ND	6.5 B
Cobalt	---	---	µg/L	ND	ND	ND	ND	ND	1.4 B	**74.6**	**12.7** B	ND	**6.5** B
Copper	200	---	µg/L	ND	5.3 B	ND	6.8 B	ND	7.7 B	**201**	67.8	ND	29.2 B
Iron	300**	---	µg/L	**13,100**	**12,000**	**128****	**2,250**	**77.8****	**3,510**	**167,000**	**19,800**	**58.2****	**6,420**
Lead	25	---	µg/L	ND	ND	ND	ND	ND	ND	**121**	**31.8**	ND	**9.7** B
Magnesium	---	35,000	µg/L	12,600	14,400	**42,800**	32,900	**43,700**	29,500	**78,700**	**57,200**	**43,600**	**52,100**
Manganese	300**	---	µg/L	**1,710**	**1,810**	**1,270**	**841**	**1,090**	**747**	**5,090**	**3,540**	**1,300**	**3,560**
Nickel	100	---	µg/L	1.2	1.5 B	2.7	5.0 B	1.2	3.6 B	**169**	31.0 B	2.3	15.4 B
Potassium	---	---	µg/L	4,790	5,380	11,700	13,100	6,530	5,760	21,400	32,600	11,900	31,600
Selenium	10	---	µg/L	ND	ND	ND	ND	ND	ND	**13.4** B	ND	ND	**15.2** B
Sodium	20,000	---	µg/L	6,400	7,030	**79,200**	**124,000**	**102,000**	**86,000**	**153,000**	**68,300**	**80,100**	**66,200**
Thallium	---	0.5	µg/L	**10.7**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	---	---	µg/L	ND	1.4 B	ND	ND	ND	3.6 B	**135**	**18.2** B	ND	6.4 B
Zinc	---	2,000	µg/L	8.1	11.6 B	6.0	12.1 B	35.6	10.8 B	363	84.5	5.4	33.8 B
Mercury	0.7	---	µg/L	ND	ND	ND	ND	ND	ND	0.10 B	ND	ND	ND
1,1,1-Trichloroethane	5	---	µg/L	ND	ND	**2,800***	**2,500** DJ	ND	ND	0.53 J	**6,700** DJ	**3,000***	**7,400** DJ
1,1,2-Trichloroethane	1	---	µg/L	ND	ND	**9.9**	**7.7**	ND	ND	ND	**8.1**	ND	**6.9**
1,1-Dichloroethane	5	---	µg/L	ND	ND	**4,300***	**3,600** DJ	ND	ND	**93**	ND	**4,700***	ND
1,1-Dichloroethene	5	---	µg/L	ND	ND	**1,300**	ND	ND	ND	**15**	ND	**1,000***	ND
1,2,3-Trichlorobenzene	5	---	µg/L	ND	ND	0.82	ND	ND	ND	ND	0.78 J	ND	0.75 J
1,2,4-Trichlorobenzene	5	---	µg/L	ND	ND	ND	0.64 J	ND	ND	ND	1.2 J	ND	1.2 J
1,2,4-Trimethylbenzene	5	---	µg/L	ND	ND	**98**	**110**	ND	ND	ND	**91**	**140**	**110**
1,2-Dichloroethane	0.6	---	µg/L	ND	ND	**3.8**	**2.9** J	ND	ND	ND	**8.0**	ND	**7.2**
1,3,5-Trimethylbenzene	5	---	µg/L	ND	ND	**35**	**37**	ND	ND	ND	**26**	ND	**32**
1,4-Dichlorobenzene	3	---	µg/L	ND	ND	ND	ND	ND	ND	ND	0.52 J	ND	0.54 J
4-Isopropyltoluene	5	---	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	**7.4**
4-Methyl-2-pentanone	---	---	µg/L	ND	ND	14	17	ND	ND	ND	23	ND	22
Acetone	---	50	µg/L	ND	ND	**130**	**120**	ND	ND	ND	**130**	ND	**150**
Benzene	1	---	µg/L	ND	ND	**8.4**	**6.2**	ND	ND	ND	**8.2**	ND	**8.4**
Carbon disulfide	---	---	µg/L	ND	ND	2.1	0.77 J	ND	ND	ND	3.5 J	ND	4.1 J
Chlorobenzene	5	---	µg/L	ND	ND	ND	ND	ND	ND	ND	0.60 J	ND	0.63 J
Chloroethane	5	---	µg/L	ND	ND	2.0	1.8 J	ND	ND	ND	ND	ND	1.6 J
Chloroform	7	---	µg/L	ND	ND	5.1	3.6 J	ND	ND	ND	3.5 J	ND	3.3 J
cis-1,2-Dichloroethene	5	---	µg/L	0.76	0.79 J	**28,000***	**27,000** D	1.2	ND	**8,300** D	**63,000** D	**33,000***	**58,000** D
Ethylbenzene	5	---	µg/L	ND	ND	**32**	**27**	ND	ND	ND	**48**	ND	**52**
Isopropylbenzene	5	---	µg/L	ND	ND	**7.5**	**7.4**	ND	ND	ND	**6.3**	ND	**7.5**
m,p-Xylene	5	---	µg/L	ND	ND	**76**	**67**	ND	ND	ND	**130**	**79**	**140**
Methylene chloride	5	---	µg/L	ND	ND	**520**	**1,200** DJ	ND	0.60 J	ND	ND	**380**	ND
n-Butylbenzene	5	---	µg/L	ND	ND	**11**	**8.2**	ND	ND	ND	**8.6**	ND	**11**
n-Propylbenzene	5	---	µg/L	ND	ND	**12**	**13**	ND	ND	ND	**11**	ND	**13**
Naphthalene	---	10	µg/L	ND	ND	**13**	**12**	ND	ND	ND	**20**	7.8	**25**
o-Xylene	5	---	µg/L	ND	ND	**44**	**39**	ND	ND	ND	**72**	ND	**80**
sec-Butylbenzene	5	---	µg/L	ND	ND	**5.4**	**6.5**	ND	ND	ND	4.0 J	ND	**5.1**
Tetrachloroethene	5	---	µg/L	ND	ND	**3,200***	**3,600** DJ	1.2	ND	3.3 J	**5,100** DJ	**4,200***	**4,400** DJ
Toluene	5	---	µg/L	ND	ND	**210**	**170**	ND	ND	ND	ND	**210**	ND
trans-1,2-Dichloroethene	5	---	µg/L	ND	ND	**260**	**110**	ND	ND	**34**	ND	**70**	ND
Trichloroethene	5	---	µg/L	ND	0.76 J	**260,000***	**210,000** D	**39**	ND	**230** DJ	**410,000** D	**280,000***	**390,000** D
Vinyl chloride	2	---	µg/L	1.5	1.9 J	**290**	ND	ND	ND	**320** DJ	**7,500** DJ	**170**	**7,200** DJ
Xylene (Total)	5	---	µg/L	ND	ND	**120**	**110**	ND	ND	ND	**200**	**79**	**220**
4-Methylphenol	---	---	µg/L	ND	ND	ND	1.6 J	ND	ND	ND	2.5 J	ND	2.2 J
Bis(2-ethylhexyl)phthalate	5	---	µg/L	ND	1.6 J	4.4	2.5 J	2.0	1.6 J	1.7 J	1.9 J	4.4	2.0 J
Butylbenzylphthalate	---	50	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4 J
Di-n-butylphthalate	50	---	µg/L	1.1	4.3 J	2.0	4.4 J	1.3	4.1 J	4.0 J	4.0 J	1.8	4.4 J
Diethylphthalate	---	50	µg/L	ND	ND	16	31	ND	ND	ND	1.4 J	40	1.7 J
Dimethylphthalate	---	50	µg/L	ND	ND	ND	ND	ND	ND	ND	10	ND	10 J
Naphthalene	---	10	µg/L	ND	ND	8.7	5.7 J	ND	ND	ND	10	ND	10
Phenol	1	---	µg/L	ND	ND	**13**	**12**	ND	ND	ND	**5.2** J	**15**	**4.5** J

Reg 1 NYSDEC TOGs 1.1.1: Ambient Water Quality Standards: GA Water Class for Standard Values; Eff. June 1998
Reg 2 NYSDEC TOGs 1.1.1: Ambient Water Quality Guidance Values: GA Water Class for Guidance Values; Eff. June 1998
Bold Bold values indicate exceedances relative to Reg 1 and/or Reg 2.
--- No value provided.
ND No detection.
D Obtained from a secondary dilution analysis.
J Detected below the reporting limit or estimated concentration for Tentatively Identified Compound (TIC).
B Compound was also detected in the associated Method Blank.
N Volatile and Semi-Volatile Organics analysis TIC where an analyte has passed the identification criteria, and is considered to be positively identified, Inorganics analysis indicates the matrix spike recovery falls outside the control limit.
* Results achieved through dilution.
** Groundwater standard for sum of iron and manganese is 500 µg/L.

TABLE 2

Comparison of Soil Sample Results for Volatile Organic Compounds (VOCs) to 6 NYCRR Part 375 Unrestricted and Restricted, Commercial and Industrial Soil Cleanup Objectives

Troy Belting & Supply Company, 70 Cohoes Road, Colonie, NY

Parameter	CAS#	Unrestricted SCO [1] (mg/Kg)	Restricted Industrial SCO[2] (mg/Kg)	Restricted Commercial SCO [2] (mg/Kg)	SO4 - MW2 (mg/Kg) Sampled 4/18/2012		S01-MW5 (mg/Kg) Sampled 12/10/2012		DUP1 (mg/Kg) Sampled 12/10/2012	
Vinyl chloride	75-01-4	0.02	27	13	**0.034**		**0.610**		**0.780**	D
1,1-Dichloroethene	75-35-4	0.33	1,000	500	0.0051		ND	U	ND	U
Acetone	67-64-1	0.05	1,000	500	0.019		ND	U	ND	U
Methylene chloride	75-09-2	0.05	1,000	500	0.0029	J	ND	U	ND	U
trans-1,2-Dichloroethene	156-60-5	0.19	1,000	500	0.02		0.150	J	**0.210**	J
1,1-Dichloroethane	75-34-3	0.27	480	240	0.004	J	ND	U	ND	U
cis -1,2-Dichloroethene	156-59-2	0.25	1,000	500	**5.2**		**7.1**		**12.0**	D
1,1,1-Trichloroethane	71-55-6	0.68	1,000	500	0.053		ND	U	ND	U
Trichloroethene	79-01-6	0.47	400	200	**25**		**1.5**		**0.560**	
Toluene	108-88-3	0.7	1,000	500	0.012		0.180	J	0.310	
Tetrachloroethene	127-18-4	1.3	300	150	**6.9**		**5.1**		**2.1**	
Ethylbenzene	100-41-4	1	780	390	0.0028	J	0.360		0.560	
Xylene (total)(mixed)	1330-20-7	0.26	1,000	500	0.012		**1.5**		**2.3**	
m, p-Xylene *	179601-23-1	0.26	1,000	500	0.007		**0.990**		**1.5**	
o-Xylene *	95-47-6	0.26	1,000	500	0.0055		**0.540**		**0.820**	
n - Propylbenzene	103-65-1	3.9	1,000	500	0.0015	J	0.750		1.000	
1,3,5-Trimethylbenzene	108-67-8	8.4	380	190	0.005		2.8		3.5	
1,2,4-Trimethylbenzene	95-63-6	3.6	380	190	0.013		**6.8**		**8.8**	
sec-Butylbenzene	135-98-8	11	1,000	500	0.0011	J	1.2		1.3	
4-Isopropyltoluene	99-87-6	---	---	---	0.0018	J	1.5		ND	U
n-Butylbenzene	104-51-8	12	1,000	500	0.002	J	3.2		3.3	
Naphthalene	91-20-3	12	1,000	500	0.0014	J	0.880		0.850	

Notes:

[1] Soil Cleanup Objectives (SCOs) from 6 NYCRR Subpart 375-6.8(a), Unrestricted Use.

[2] Soil Cleanup Objectives are from 6 NYCRR Subpart 375-6.8(b), Restricted, Commercial, and Industrial Use, Protection of Public Health.

Values in **BOLD** indicate an exceedance of Unrestricted SCOs. No exceedances of Restricted Industrial or Commercial SCOs are reported.

* SCO based on Xylene (mixed).

Laboratory Qualifiers:

J Indicates an estimated value because the parameter was detected below the reporting limit.

U - Undetected

ND - Not detected at reporting limit.

D - Value achieved through dilution.

APPENDIX A

CONTACT LIST

APPENDIX A
PROJECT CONTACTS

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APPENDIX B

SOIL VAPOR SAMPLE COLLECTION FORM

TRC
A Joint Venture

RECORD OF VAPOR SAMPLING

Date_____ Project Number_____

Project Name_____ Field Personnel_____

Probe ID_____ Probe Depth_____

Drilling Contractor_____ Weather_____

HELIUM TRACER TEST (Shroud)

Test	Time	Helium Concentration	Units (% or ppm $_v$)	Notes
Shroud Atmosphere				
Sampling Train				

Helium concentration within sampling train should be less than 5% of shroud atmosphere concentration.
If seal or probe needs to be reset then record 2nd attempt below.

Retest (if applicable)	Time	Helium Concentration	Units (% or ppm $_v$)	Notes
Shroud Atmosphere				
Sampling Train				

VAPOR PURGING

ONE PURGE VOLUME (ML) = $V_T + V_P$

WHERE V_T = TUBING LENGTH (FT) * 5.4 ML/FT

AND $V_P = (3.14 * R^2 * H) * 16.387$ ML/IN^3

V_T – Total tubing volume in mL (1/4-inch OD, 3/16-inch ID tubing)

V_P – Volume of air in entire length of vapor point in mL

R – Radius of inner diameter of vapor point (inches)

H – Length of vapor point (inches)

Purge Rate (mL/min):_____ One Purge Volume (mL):_____

Purge Time (min):_____ Total Volume Purged (mL):_____

Purging two to five purge volumes while collecting inert gas readings prior to sample collection is ideal.

VAPOR SAMPLING

Canister I.D._____ Flow Controller I.D._____

Start Time_____ Initial Vacuum Pressure in Sample Canister_____ in Hg

Stop Time_____ Final Vacuum Pressure in Sample Canister_____ in Hg

Sample I.D._____ Laboratory_____

APPENDIX C

INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each building involved in indoor air testing.

Preparer's Name _____ Date/Time Prepared _____

Preparer's Affiliation _____ Phone No._____

Purpose of Investigation_____

1. OCCUPANT:

Interviewed: Y / N

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

Number of Occupants/persons at this location _____ Age of Occupants _____

2. OWNER OR LANDLORD: (Check if same as occupant ___)

Interviewed: Y / N

Last Name: _____First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

Residential	School	Commercial/Multi-use
Industrial	Church	Other: _____

If the property is residential, type? (Circle appropriate response)

Ranch	2-Family	3-Family
Raised Ranch	Split Level	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	Townhouses/Condos
Modular	Log Home	Other:_____

If multiple units, how many? _____

If the property is commercial, type?

Business Type(s) _____

Does it include residences (i.e., multi-use)? Y / N If yes, how many? _____

Other characteristics:

Number of floors_____ Building age_____

Is the building insulated? Y / N How air tight? Tight / Average / Not Tight

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

_____

_____

_____

Airflow near source

_____

_____

_____

Outdoor air infiltration

_____

_____

_____

Infiltration into air ducts

_____

_____

_____

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a. Above grade construction:	wood frame	concrete	stone	brick
b. Basement type:	full	crawlspace	slab	other _____
c. Basement floor:	concrete	dirt	stone	other _____
d. Basement floor:	uncovered	covered	covered with _____	
e. Concrete floor:	unsealed	sealed	sealed with _____	
f. Foundation walls:	poured	block	stone	other _____
g. Foundation walls:	unsealed	sealed	sealed with _____	
h. The basement is:	wet	damp	dry	moldy
i. The basement is:	finished	unfinished	partially finished	
j. Sump present?	Y / N			
k. Water in sump?	Y / N / not applicable			

Basement/Lowest level depth below grade: _____(feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

_____

_____

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation	Heat pump	Hot water baseboard	
Space Heaters	Stream radiation	Radiant floor	
Electric baseboard	Wood stove	Outdoor wood boiler	Other _____

The primary type of fuel used is:

Natural Gas	Fuel Oil	Kerosene
Electric	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by: _____

Boiler/furnace located in:	Basement	Outdoors	Main Floor	Other_____
Air conditioning:	Central Air	Window units	Open Windows	None

Are there air distribution ducts present? Y / N

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

_____

_____

_____

_____

7. OCCUPANCY

Is basement/lowest level occupied? Full-time Occasionally Seldom Almost Never

Level	**General Use of Each Floor (e.g., family room, bedroom, laundry, workshop, storage)**
Basement	_____
1st Floor	_____
2nd Floor	_____
3rd Floor	_____
4th Floor	_____

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? Y / N

b. Does the garage have a separate heating unit? Y / N / NA

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car) Y / N / NA Please specify_____

d. Has the building ever had a fire? Y / N When?_____

e. Is a kerosene or unvented gas space heater present? Y / N Where? _____

f. Is there a workshop or hobby/craft area? Y / N Where & Type? _____

g. Is there smoking in the building? Y / N How frequently? _____

h. Have cleaning products been used recently? Y / N When & Type? _____

i. Have cosmetic products been used recently? Y / N When & Type? _____

j. Has painting/staining been done in the last 6 months? Y / N Where & When? _____

k. Is there new carpet, drapes or other textiles? Y / N Where & When? _____

l. Have air fresheners been used recently? Y / N When & Type? _____

m. Is there a kitchen exhaust fan? Y / N If yes, where vented?_____

n. Is there a bathroom exhaust fan? Y / N If yes, where vented?_____

o. Is there a clothes dryer? Y / N If yes, is it vented outside? Y / N

p. Has there been a pesticide application? Y / N When & Type?_____

Are there odors in the building? Y / N
If yes, please describe: _____

Do any of the building occupants use solvents at work? Y / N
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? _____

If yes, are their clothes washed at work? Y / N

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly) No
Yes, use dry-cleaning infrequently (monthly or less) Unknown
Yes, work at a dry-cleaning service

Is there a radon mitigation system for the building/structure? Y / N Date of Installation: _____
Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply:	Public Water	Drilled Well	Driven Well	Dug Well	Other: _____
Sewage Disposal:	Public Sewer	Septic Tank	Leach Field	Dry Well	Other: _____

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: _____

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

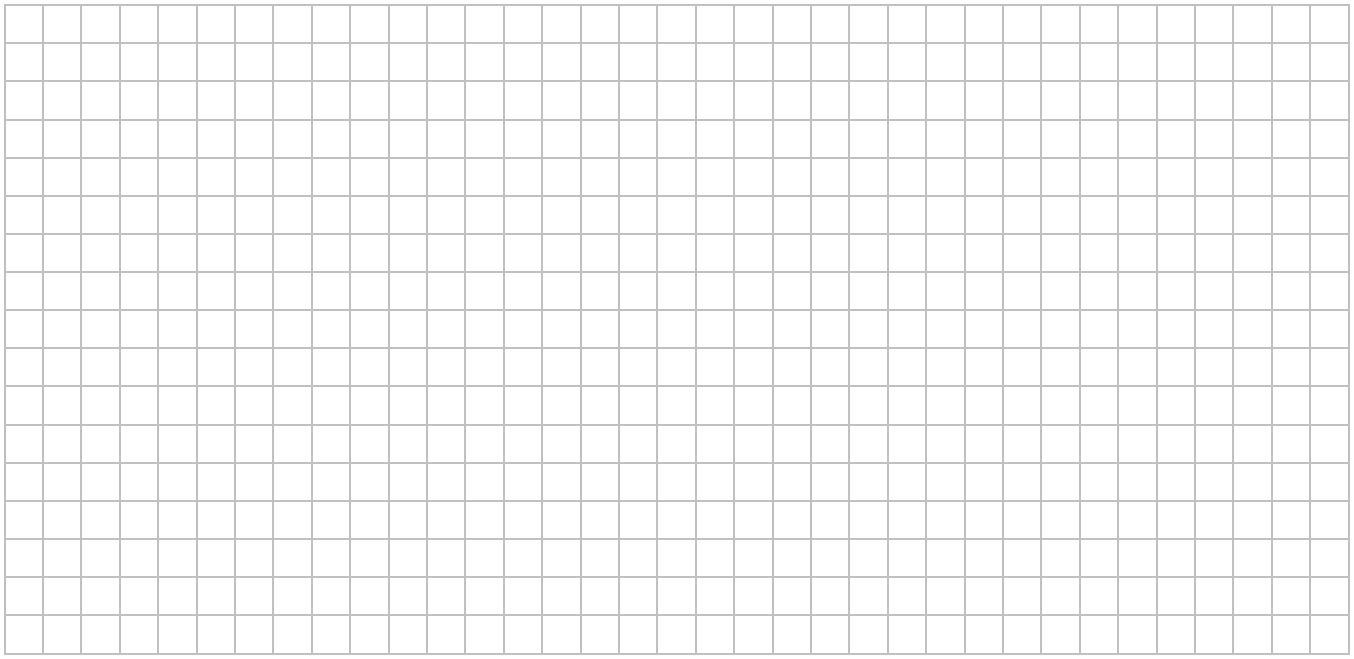
c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

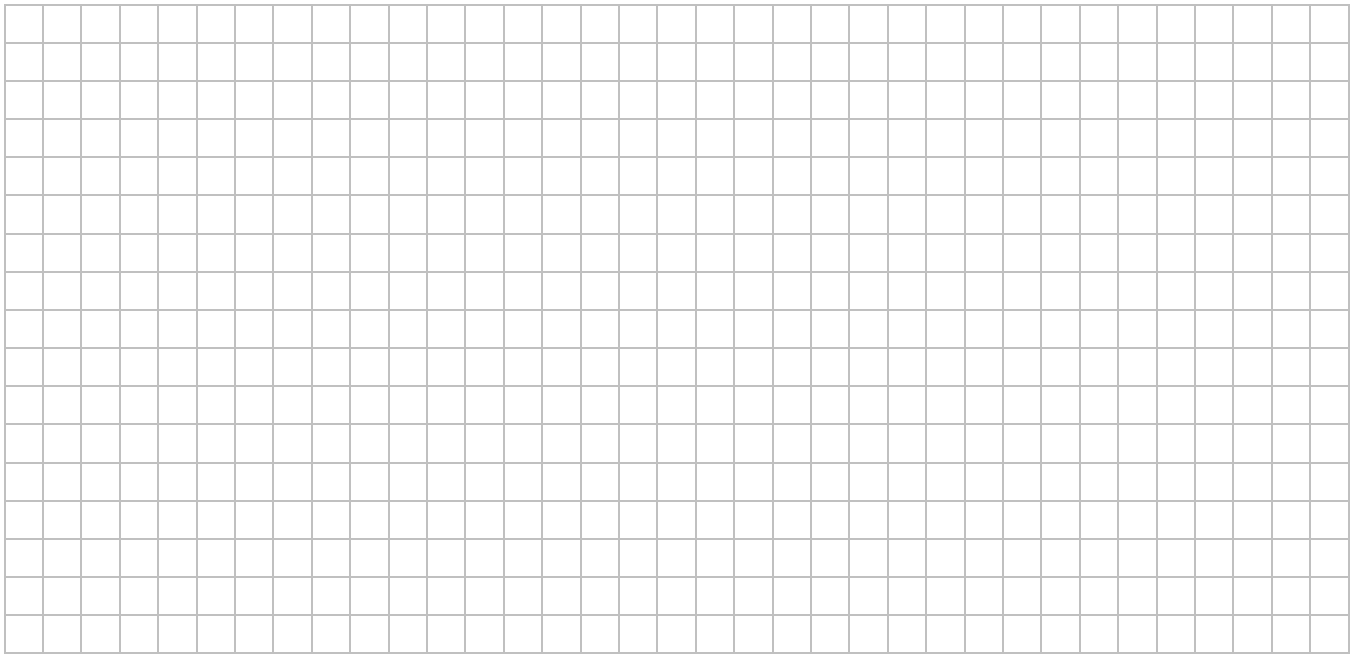
11. FLOOR PLANS

Draw a plan view sketch of the first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement:



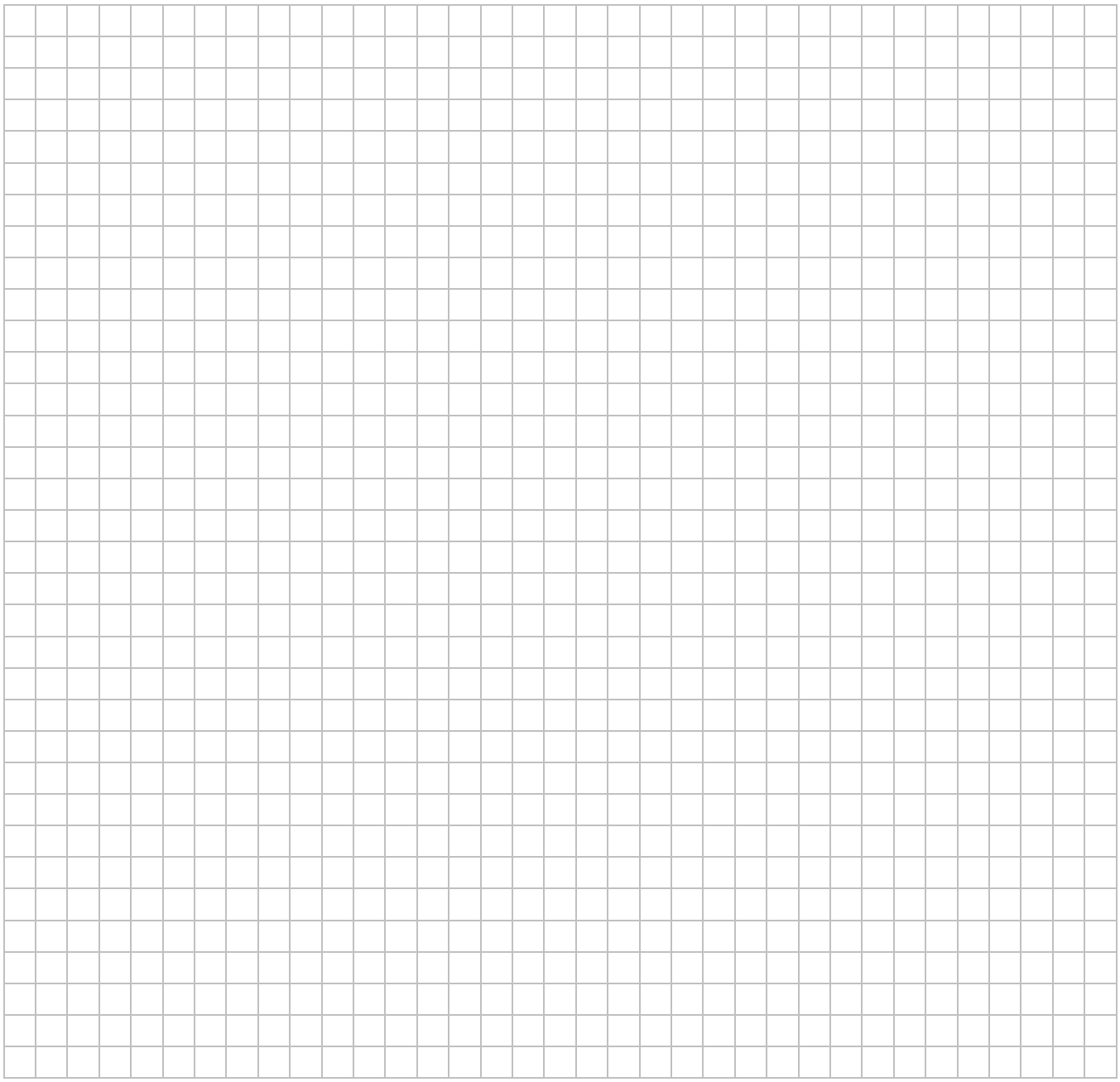
First Floor:



12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: _____

List specific products found in the building that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y / N

* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**
** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

APPENDIX D

HEALTH AND SAFETY PLAN (HASP)

HEALTH AND SAFETY PLAN (HASP)

1.0 GENERAL INFORMATION

The Health and Safety Plan (HASP) identifies specific measures to be taken to ensure that hazardous substances or conditions do not adversely impact the health and safety of personnel and the general community (public) for Site operations. The HASP is intended to identify potential hazards and appropriate precautions as defined by OSHA 29 CFR 1910.120 (Hazardous Waste Operations and Emergency Response).

All personnel working on this project must read this HASP, acknowledge understanding of this plan, and abide by its requirements.

In general, personnel are responsible for complying with all regulations and policies applicable to the work they are performing. The Project Manager is authorized to stop work if any personnel/subcontractor fails to adhere to the required health and safety procedures.

In addition to this HASP, each contractor must provide a HASP that addresses minimum training requirements for activities specific to the project and identified potential hazards specific to the project that are not discussed herein.

2.0 DESIGNATION OF RESPONSIBILITIES

Implementing this HASP is the responsibility of the Project Manager. The Project Manager will be designated prior to any Site activities and can be the contractor hired for a particular project, or an independent consultant hired by the Owner.

The Project Manager is responsible for:

- Ensuring the availability, use, and proper maintenance of specified personal protective equipment, decontamination, and other health or safety equipment.
- Maintaining a high level of safety awareness among personnel/subcontractors and communicating pertinent matters to them promptly.
- Ensuring all field activities are performed in a manner consistent with this HASP.
- Monitoring for dangerous conditions during field activities.
- Ensuring proper decontamination of personnel and equipment.
- Coordinating with emergency response personnel and medical support facilities.
- Initiating immediate corrective actions in the event of an emergency or unsafe condition.
- Notifying the NYSDEC and project owner of any emergency, unsafe condition, problem encountered, or exception to the requirements of this HASP.
- Recommending improved health and safety measures to the NYSDEC.

The Project Manager must be present for all intrusive investigative activities. However, the presence of the Project Manager shall in no way relieve any person or company of its obligations to comply with the requirements of the HASP and all applicable Federal, State and local laws and regulations.

All personnel involved in the project must be familiar with and conform to the safety protocols prescribed in this HASP, and communicate any relevant experience or observations to the Project Manager to ensure that these valuable inputs improve overall safety. Individual project members are the key elements in ensuring health and safety compliance. Every project member is considered responsible for implementing and following this HASP.

3.0 SITE PROPERTY SPECIFIC HEALTH AND SAFETY CONCERNS

Airborne Exposure Limits

Table D-1 lists the published airborne exposure limits for those substances that are known or suspected to be present at the Troy Belting and Supply Company (Troy Belting) property.

Unknown or unexpected materials of a hazardous nature may be encountered during ground intrusive activities. No work will be conducted if field measurements or observations indicate that there is potential uncontrolled exposure to undefined hazards, or that exposures may exceed protection afforded by the requirements in this HASP.

Explosive Gas

Explosive gas, including hydrogen sulfide (H_2S), may be present in the subsurface pore spaces and therefore any major ground intrusive activity must be monitored with a gas unit that measures the Lower Explosive Limit (LEL) in percent and H_2S in parts per million (ppm). Action levels for explosive gas and H_2S are provided in Table D-2. If the measured LEL and H_2S levels are between 10-20% and 5-10 ppm, respectively, and any nearby building is occupied, work will halt and the area will be allowed to ventilate until levels are less than 10% LEL and 5 ppm H_2S. If LEL and H_2S levels are between 10-20% and 5-10 ppm, respectively, and nearby buildings are unoccupied, a warning will be issued and work will continue with continuous monitoring.

Personal Protective Equipment (PPE)

Table D-1 provides a summary of potential airborne hazards that may be encountered by workers during ground intrusive and construction activities, action levels and corresponding required actions and the PPE level required for workers. Specific types of PPE for levels C and D are also listed on Table D-2.

No work is anticipated requiring Levels B or A PPE and very limited work in Level C. If air monitoring results require PPE upgrades from Level D, then only medically qualified, trained personnel experienced in the use and limitations of air purifying or supplied air respirators will be used. Air purifying respirators with High-Efficiency Particulate Air (HEPA) filters, capable of removing particles of 0.3 micron or larger from air at 99.97% or greater efficiency, should be used when exposure to dust is a potential risk.

Unless the Project Manager directs otherwise, respirators used for organic vapors or particulates should have cartridges changed after eight (8) hours of use, or at the end of each shift, or when any indication of breakthrough or excessive resistance to breathing is detected. OSHA regulations require a Respiratory Protection Program for companies that require employees to enter areas where respirators are required and such Respiratory Protection Programs must address the requirements for replacement of cartridges.

Suspected Safety Hazards

Suspected safety hazards include those inherent with the operation of heavy equipment such as drilling rigs or excavators, and proximity to excavations. Inspections to ensure appropriate safety measures are in place and the use of lockout and tagout procedures during maintenance of this equipment will control these inherent hazards. Personal protective equipment (PPE) including hard hats, safety shoes and eye protection will be worn to augment other safety precautions.

Drilling rigs and excavators must not operate closer than thirty (30) feet to any overhead lines, measured directly between any part of the equipment and the lines themselves except where electrical distribution and transmission lines have been de-energized and visibly grounded at the point of work, or where insulating barriers have been erected to prevent physical contact with the lines. If drilling or excavating is required within thirty (30) feet of any overhead lines, a written work plan must be provided by the contractor or other equipment operator that includes special measures designed to mitigate the risks and is in accordance with 29 CFR 1926.550(a)(15). The work plan must be reviewed and approved by written signature by the Project Manager.

Care must be taken to ensure loose clothing does not get tangled in any moving equipment associated with drilling rigs or excavators.

There may be slip or trip hazards associated with rough, slippery or elevated work surfaces.

There is also the possibility of organic vapors being encountered during ground intrusive activities due to the presence of volatile organic compounds (VOCs) in soils and groundwater. The Project Manager will use continuous monitoring instruments that measure total VOCs while each task is being conducted to determine ambient levels of contaminants. Procedures for monitoring VOCs and air-borne particulates are provided in the Community Air Monitoring Plan (CAMP) provided in Appendix E of the RI Work Plan.

All excavations will be maintained to prevent access by unauthorized persons and will be filled or fenced off by the end of the workday. Absolutely no one will be permitted in the excavations, except the operator of equipment where the operator is always located above ground level. If equipment breaks down within the excavation, the equipment will have to be towed out of the excavation for repair. All subsurface samples will be obtained by operation of the excavating equipment and will be collected from the excavator bucket.

Excavator and Drill Rig Operations

Excavation will be performed with a track-mounted excavator or backhoe. To conduct soil borings, a hollow-stem auger or direct push drilling rig will be used. Working with or near this equipment poses potential hazards, including being struck by or pinched/caught by equipment, potentially resulting in serious physical bodily harm or inhaling dust from concrete coring.

In particular, the following precautions will be used to reduce the potential for injuries and accidents:

The inspection of excavator and drill rig brakes, hydraulic lines, light signals, fire extinguishers, fluid levels, steering, tires, horn, and other safety devices will be conducted prior to the initial mobilization and checked routinely throughout the project.

Excavator and drill rig cabs will be kept free of all non-essential items and all loose items will be secured.

Excavators and drill rigs will be provided with necessary safety equipment, including seat belts.

Drill rig cables and auger flight connections will be checked for evidence of wear. Frayed or broken cables or defective connections will be replaced immediately.

Parking brakes will be set before shutting off any heavy equipment or vehicle.

All employees will be briefed on the potential hazards prior to the start of each excavation or drilling project.

Adverse Weather

Drilling or excavating is dangerous during electrical storms. All field activity must terminate during thunderstorms. Extreme heat and cold, ice and heavy rain can produce unsafe conditions for drilling work. Such conditions, when present, will be evaluated on a case-by-case basis to determine if work shall terminate.

Fire and Explosion

Use of gasoline or diesel powered equipment increases the risk of fire and explosion hazards. Contractors will be required to store diesel fuel and gasoline in metal cans with self-closing lids and flash arrestors.

Requirement to Conduct Utility Mark Out

Prior to the start of any subsurface work, underground utilities and piping that may pose a potential hazard will be identified and located. DigSafely.NewYork or equivalent service will be called and underground utilities will be located and marked. Also, the location of privately owned utility lines will be determined.

In the event a pipe or line is struck, work will stop and the Emergency Action Plan will be implemented (see Section 5.0).

Confined Space Entry

Confined space entry is not anticipated for excavating and sampling activities. If a project requires confined space entry, a specific HASP will be implemented.

"Confined Space" is defined as a space that:

1. *"is large enough and so configured that an employee can bodily enter and perform assigned work;*
2. *has limited or restricted means for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry); and*
3. *is not designed for continuous employee occupancy."*

Excavation and Sampling Work Zones

One of the basic elements of an effective HASP is the delineation of work zones for each ground intrusive location. The purpose of establishing work zones is to:

- Reduce the accidental spread of hazardous substances by workers or equipment from the contaminated areas to the clean areas;
- Confine work activities to the appropriate areas, thereby minimizing the likelihood of accidental exposures;
- Facilitate the location and evacuation of personnel in case of an emergency; and
- Prevent unauthorized personnel from entering controlled areas.

Although a work site may be divided into as many zones as necessary to ensure minimal employee exposure to hazardous substances, this HASP uses the three (3) most frequently identified zones: the Exclusion Zone, Decontamination Zone, and Support Zone. Movement of personnel and equipment between these zones should be minimized and restricted to specific access control points to minimize the spreading of contamination.

- Exclusion Zone

  During investigative work, the Exclusion Zone is the immediate excavation, test pit, borehole, or other area where contamination is either known or expected to occur and where the greatest potential for exposure exists. The following protective measures will be taken in the Exclusion Zone.

  Unprotected onlookers will be restricted from the excavation location so that they are at least twenty-five (25) feet upwind or fifty (50) feet downwind of excavation or drilling activities.

  Workers conducting activities and sampling in the Exclusion Zone will wear the applicable PPE. The actions to be taken and PPE to be worn in the Exclusion Zone if VOCs are above background levels are described in Table D-2.

- Decontamination Zone

  During investigative work, a Decontamination Zone will be established at the perimeter of the Exclusion Zone, and will include the personnel, equipment and supplies that are needed to decontaminate equipment. The size will be selected by the Project Manager to conduct the necessary decontamination activities. Personnel and equipment in the Exclusion Zone must pass through this zone before leaving or entering the Support Zone. The necessary decontamination must be completed in this zone and the requirements are described in Section 6.0. This zone should always be established and maintained upwind of the Exclusion Zone.

- Support Zone

  During investigative work, the areas located beyond the Decontamination Zone will be considered the Support Zone. Break areas, operational direction and support facilities will be located in this area. Eating and drinking will be allowed only in the Support Zone.

Natural Hazards

Work that takes place in the natural environment may be affected by plants and animals that are known to be hazardous to humans. Spiders, bees, wasps, hornets, ticks, poison oak and poison ivy are only some of the hazards that may be encountered. Individuals who may potentially be exposed to these hazards should be made aware of their existence and instructed in their identification. Emergencies resulting from contact with a natural hazard should be handled through the normal medical emergency channels. Individuals who are sensitive or allergic to these types of natural hazards should indicate their susceptibility to the Project Manager.

Heat and Cold Stress Hazards

If work is to be conducted during the winter, cold stress is a concern to the health and safety of personnel. Because disposable clothing such as Tyvek does not "breathe", perspiration does not evaporate and the suits can become wet. Wet clothes combined with cold temperatures can lead to hypothermia. If the air temperature is less than 40 degrees Fahrenheit (°F) and a worker's clothes become wet due to perspiration, the worker must change to dry clothes.

Signs and Symptoms of Cold Stress

- **Incipient frostbite**: is a mild form of cold stress characterized by sudden blanching or whitening of the skin.

- **Chilblain:** is an inflammation of the hands and feet caused by exposure to cold moisture. It is characterized by a recurrent localized itching, swelling, and painful inflammation of the fingers, toes, or ears. Such a sequence produces severe spasms, accompanied by pain.

- **Second-degree frostbite** is manifested by skin which has a white, waxy appearance and is firm to the touch. Individuals with this condition are generally not aware of its seriousness, because the underlying nerves are frozen and unable to transmit signals to warm the body. Immediate first aid and medical treatment are required.

- **Third-degree frostbite** will appear as blue, blotchy skin. This tissue is cold, pale and solid. Immediate medical attention is required.

- **Hypothermia** develops when body temperature falls below a critical level. In extreme cases, cardiac failure and death may occur. Immediate medical attention is warranted when the following symptoms are observed:

    - Involuntary shivering;
    - Irrational behavior;
    - Slurred speech;
    - Sluggishness; and
    - Loss of consciousness.

Preventing Cold Related Illness/Injury

- Train personnel to identify the signs and symptoms of cold stress. Require field personnel to wear proper clothing for cold, wet and windy conditions, including layers that can be adjusted to changing weather conditions. It is important to keep hands and feet dry.

- Field personnel working in extremely cold conditions must take frequent short breaks in warm, dry shelters to allow their body temperature to increase. If possible, field work should be scheduled during the warmest part of the day. The buddy system should be used so that personnel can assist each other in recognizing signs of cold stress.

- Drink warm, sweet beverages and avoid drinks with caffeine and alcohol. Eat warm, high-calorie foods.

- Personnel with medical conditions such as diabetes, hypertension or cardiovascular disease or who take certain medications, may be at increased risk for cold stress.

Treatment of Cold Related Injuries

If cold stress symptoms are evident, the affected person must move into a warm, dry sheltered area and all wet clothing should be removed and replaced with dry clothing. If frostbite is suspected, the affected person should be treated by trained medical personnel.

Signs and Symptoms of Heat Stress

Wearing PPE also puts a worker at a considerable risk for developing heat stress. This can result in health effects ranging from heat fatigue to serious illness or death. Consequently, regular monitoring, remaining hydrated and other precautions are vital.

- **Heat Rash** may result from continuous exposure to heat and humid air.

- **Heat Cramps** are caused by heavy sweating with inadequate electrolyte replacement. Signs and symptoms include:

    - Muscle spasms; and
    - Pain in the hands, feet and abdomen.

- **Heat Exhaustion** occurs from increased stress on various body organs, including inadequate blood circulation due to cardiovascular insufficiency or dehydration. Signs and symptoms include:

    - Pale, cool, and moist skin;
    - Heavy sweating; and
    - Dizziness, fainting, and nausea.

- **Heat Stroke** is the most serious form of heat stress. Temperature regulation fails, and the body temperature rises to critical levels. Immediate action must be taken to cool the body before serious injury or death occurs. Competent medical help must be obtained. Signs and symptoms are:

- Red, hot, and unusually dry skin;
- Lack of or reduced perspiration;
- Dizziness and confusion;
- Strong, rapid pulse; and
- Loss of consciousness.

Preventing Heat Related Illness/Injury

Proper training and preventive measures will help avert serious illness and loss of work productivity. Preventing heat stress is particularly important because once someone suffers from heat stroke or heat exhaustion that person may be predisposed to additional heat injuries. To avoid heat stress, the following steps should be taken:

- Have workers drink sixteen (16) oz. (0.5 liter) of fluid (preferably water or diluted drinks) before beginning work. Urge workers to drink a cup or two every fifteen (15) to twenty (20) minutes, or at each monitoring break. A total of 1 to 1.6 gallons (four (4) to six (6) liters) of fluid per day are recommended, but more may be necessary to maintain body weight.

- If possible, adjust work schedules to avoid the hottest parts of the day.

- Encourage workers to maintain an optimal level of physical fitness.

- Shelter (air-conditioned, if possible) or shaded areas should be provided to protect personnel during rest periods.

- Train workers to recognize, identify, and treat heat stress.

For workers wearing standard work clothes, recommendations for monitoring and work/rest schedules are those approved by American Conference of Governmental Industrial Hygienists (ACGIH) and National Institute of Occupational Safety and Health (NIOSH). Workers wearing semi-permeable PPE or impermeable PPE should be monitored when the temperature in the work area is above 70°F.

Noise Hazards

Work that involves the use of heavy equipment such as a drill rig or excavator can expose workers to noise during field activities that can result in noise-induced hearing loss. The Project Manager will monitor the noise exposure and will determine whether noise protection is warranted for each of the workers. The Project Manager will ensure that either ear muffs or disposable foam earplugs are available and are used by the workers in the immediate vicinity of the field operation as required.

Slip, Trip and Fall Hazards

Ground intrusive locations can contain a number of slip, trip and fall hazards for workers, such as:

- Holes, pits, or ditches
- Excavation faces
- Slippery surfaces
- Steep grades
- Uneven grades

- Snow and ice
- Sharp objects

All workers must be instructed to keep back three (3) feet from the top edge of excavation faces.

Drill auger sections will be stored on the transport vehicle as long as possible to avoid creating a trip hazard. Drill auger sections and other tools will be stored in neat arrangements convenient to the driller, but sufficiently distant from the immediate area around the drill rig to minimize trip hazards.

Workers will be instructed to look for potential safety hazards and immediately inform the Project Manager regarding any new hazards. If the hazard cannot be immediately removed, actions must be taken to warn workers about the hazard.

Modifications to this Plan

Requirements and guidelines in this HASP are subject to modification by the Project Manager in response to additional information obtained during field work regarding the potential for exposure to hazards.

4.0 MEDICAL SURVEILLANCE PROGRAM

General

Workers who participate in field activities that meet the following criteria will be included in the Medical Surveillance Program:

- All who may be exposed to hazardous substances or health hazards at or above permissible exposure limits, without regard to the use of respirators, for thirty (30) days or more per year, as required by 1926.65(f)(2)(i-iv).

- All who wear a respirator for thirty (30) days or more every year as required by 1926.62(f)(2)(i-iv).

- All who are injured because of overexposure from an incident involving hazardous substances or health hazards.

Frequency of Medical Exams

Medical examinations and consultations will be provided on the following schedule to the workers who meet the above listed general qualifications:

- Prior to assignment to a work site, if any of the criteria noted above are anticipated.

- At least once every twelve (12) months, unless the physician believes a longer interval (not greater than two (2) years) is appropriate.

- As soon as possible upon notification that a worker has developed signs or symptoms indicating possible overexposure to hazardous materials.

5.0 EMERGENCY ACTION PLAN

Workers will use the following standard emergency procedures. The Project Manager will be notified of any emergency and be responsible for ensuring that the appropriate procedures are followed and that the Project Manager is notified. A first aid kit, an eye wash unit that can provide a minimum flow rate of 0.4 GPM for fifteen (15) minutes, and a fire extinguisher rated 20A-B-C (or higher) will be readily available to workers. All workers will be trained in use of emergency supplies. Questions regarding procedures and practices described in the HASP should be directed to the Project Manager.

Notification

Any symptoms of adverse health, regardless of the suspected cause, are to be immediately reported to the Project Manager.

Upon the occurrence of an emergency, including an unplanned chemical release, fire or explosion, workers will be alerted and the area evacuated immediately. The Project Manager will notify the ambulance service, fire department and/or police department, as required. Emergency contact telephone numbers are provided below. Re-entry to the work area will be limited to those required to assist injured workers or for firefighting or spill control. Anyone entering the work area following an emergency incident must wear appropriate protective equipment.

Emergency Services

Emergency Services	Telephone Number
Owner: Troy Belting & Supply Company	(518) 272-4920
Colonie Fire Department	911 or (518) 869-9306
Town of Colonie Police Department	911 or (518) 783-2744
Ambulance	911
Hospital: Samaritan Hospital	(518) 271-3300
Poison Control Center	(800) 222-1222
NYSDEC Spills Emergency Response Program	(800) 457-7362

A map showing the preferred route to the hospital with written directions is presented in Figure D-1; and written directions are also included on the map.

The following alarm systems will be utilized to alert workers to evacuate the restricted area:

- Direct Verbal Communication
- Radio Communication or Equivalent
- Portable or Fixed Telephone

The following standard hand signals will also be used as necessary:

Hand Signal	Message
Hand gripping throat	Can't breathe/out of air
Grip co-worker's wrist	Leave area immediately, no debate!
Hands on top of head	Need assistance

Hand Signal	Message
Thumbs up	Yes/O.K.
Thumbs down	No/Problem

Upon activation of an alarm, workers will proceed to a designated assembly area. The designated assembly area will be determined on a daily basis by the Project Manager and updated as necessary depending upon work conditions, weather, air monitoring, etc. The location of the designated assembly area will be clearly marked and communicated to employees daily or upon relocation of the area. Workers gathered in the designated assembly area will remain there until their presence has been noted. A tally of workers on the daily restricted area access roster will be made as necessary to ensure all workers have been properly evacuated and accounted for.

Workers may return to the designated work area following authorization by the Project Manager.

Personal Injury

If anyone within a work area is injured and cannot leave the restricted area without assistance, emergency medical services will be notified (see Section 5.0) and appropriate first aid will be administered by certified Emergency Medical Technicians (EMTs).

Fire/Explosion

Upon the occurrence of a fire beyond the incipient stage or an explosion anywhere on the worksite property, the fire department will be alerted and all personnel moved to a safe distance from the involved area.

Equipment Failure

If any equipment fails to operate properly, the Project Manager will determine the effect of this failure on continuing operations. If the failure affects the safety of workers (e.g., failure of monitoring equipment) or prevents completion of the planned tasks, all workers will leave the work area until appropriate corrective actions have been taken.

Record Keeping

The Project Manager will maintain records of reports concerning occupational injuries and illnesses in accordance with 29 CFR 1904.

6.0 DECONTAMINATION METHODS

Contamination Prevention Methods

The Project Manager will make all workers aware of the potential for contamination. The following procedures will be established to minimize contact with waste:

- Workers will not walk through areas obvious of contamination;
- Workers will not directly touch potentially hazardous substances;
- Workers will wear gloves when touching soil or waste;
- Workers will wear disposable outer garments where appropriate; and

- Excavated soils will be placed on plastic sheeting and covered with plastic sheeting at the end of the workday.

Decontamination Methods

All workers, clothing, and equipment leaving designated contaminated areas must be decontaminated, as presented in Appendix D-1, Equipment Cleaning and Decontamination Procedures. Decontamination of equipment will be the responsibility of the Project Manager.

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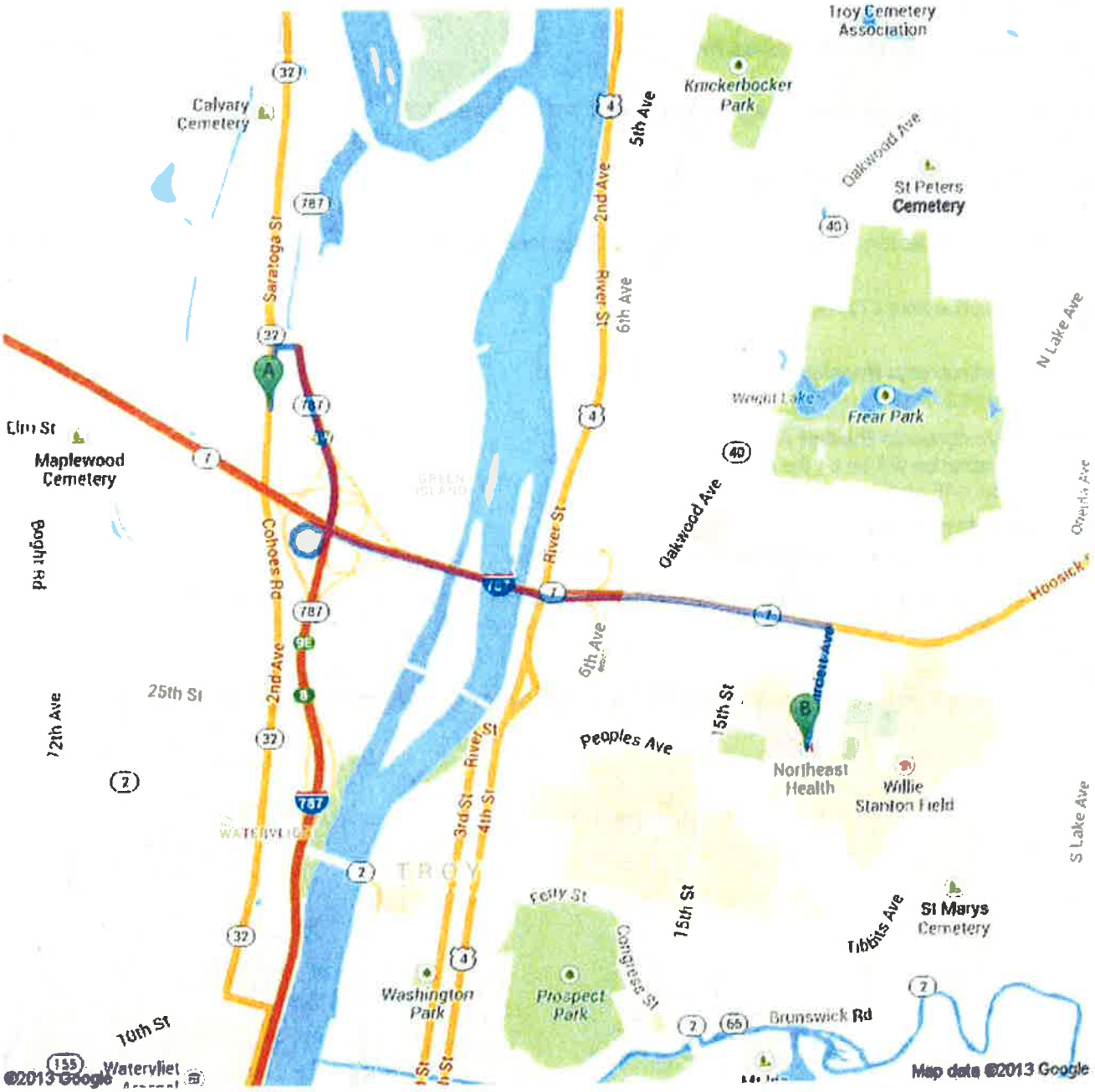
FIGURE D-1

Google

Directions to Samaritan Hospital
2215 Burdett Ave, Troy, NY 12180
2.9 mi – about 6 mins



70 Cohoes Rd, Watervliet, NY 12189

1.	Head **north** on **NY-32 N/Rte 32 N/State 32 N/State Route 32 N/Cohoes Rd** toward **Tibbits Ave**	go 0.2 mi total 0.2 mi
2.	Take the 1st right onto **Tibbits Ave**	go 338 ft total 0.2 mi
3.	Turn right onto **NY-787 S** (signs for **New York 787 S/New York 7**) About 52 secs	go 0.3 mi total 0.5 mi
4.	Continue onto **I-787 S/NY-787 S**	go 0.3 mi total 0.8 mi
5.	Take exit **9E** to merge onto **NY-7 E** toward **Troy/Bennington**	go 0.5 mi total 1.3 mi
6.	Continue onto **I-787/NY-7 E**	go 0.6 mi total 1.9 mi
7.	Continue onto **Hoosick St** (signs for **New York 7 E**) About 2 mins	go 0.6 mi total 2.5 mi
8.	Turn right onto **Burdett Ave** Destination will be on the right About 49 secs	go 0.3 mi total 2.9 mi

Samaritan Hospital
2215 Burdett Ave, Troy, NY 12180

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route

Directions weren't right? Please find your route on maps.google.com and click "Report a problem" at the bottom left.

TABLES

Table D-1
Published Airborne Exposure Limits or Odor Thresholds in Parts Per Million (PPM) in Air for Substances that Exceed Applicable Standards in Soil and Groundwater

Substance	OSHA PEL/STEL/C	NIOSH REL/STEL	ACGIH TLV/STEL	IDLH	Cancer Causing	Range of Odor Thresholds
Groundwater - VOCs:						
Benzene	10/5/25	0.1/1	0.5/2.5	500	Y	1.5
n-Butylbenzene	NA	NA	NA	NA	NA	NA
sec- Butylbenzene	NA	NA	NA	NA	NA	NA
Cis-1,2-Dichloroethene (cis-1,2-DCE)	200/-/-	200/-	200/-	1000	N	19.1
1,1 Dichloroethane	100/-/-	100/-	100/-	3000	N	120
1,2 Dichloroethane	50/-/100	1/2	10/-	50	Y	6-10
Trans 1,2 Dichloroethene	200					
Ethylbenzene	100/-/-	100/125	100/125	800	N	2.3
Isopropylbenzene	50/-/-	50/-	50/-	900	N	
Naphthalene	10/-/-	10/15	10/15	250	N	0.084
N-Propylbenzene	NA	NA	NA	NA	NA	NA
Tetrachloroethene	100/-/200	NA	25/100	150	Y	1
Trichloroethene	100/-/200	25/-	50/100	1000	Y	28
Vinyl Chloride	1/-/5	NA	1/-		Y	3,000
Groundwater - SVOCs:						
Naphthalene	10/-/-	10/15	10/15	250	N	0.084

NA = Not Available
Definitions of PEL, REL, STEL, TLV, C and IDLH are provided below:

PEL The Occupational Safety and Health Administration's (OSHA) Permissible Exposure Limit for airborne contaminants as a time-weighted average for an eight (8) hour work shift, as listed in 29 CFR 1910.1000.

REL The National Institute for Occupational Safety and Health's (NIOSH) Recommended Exposure Level for a work shift.

STEL A Short Term Exposure Limit as a 15-minute time-weighted average (No more than four (4) exposures per shift).

TLV The American Conference of Governmental Industrial Hygienists' (ACGIH) Threshold Limit Value for airborne concentrations to which it is believed that nearly all workers may be repeatedly exposed day after day without adverse effects.

C Ceiling Concentration – The concentration that should not be exceeded during any part of the working exposure.

IDLH The Immediately Dangerous to Life and Health maximum concentration from which one could escape within 30 minutes without experiencing any escape–impairing or irreversible health effects. (Note: Level C air-purifying respirators do not adequately protect an individual exposed to these concentrations.) These IDLH values were established by NIOSH and have not been peer reviewed. Caution is recommended with their application.

TABLE D-2

AIR MONITORING METHODS, ACTION LEVELS, AND PROTECTIVE LEVELS FOR PERSONNEL

Hazard	Monitoring Unit	Action Level	Protective Levels/Action	Monitoring Schedule
Organic Vapors (2)	PID	0-10 ppm above background in the breathing zone	Level D-Continue Work (3)	Continuous for ground intrusive activities.
		10-100 ppm above background in the breathing zone	Level C-Continue Work	
		> 100 ppm above background in the breathing zone	STOP WORK EVACUATE AREA (1)	
Oxygen-Deficient Atmosphere	Q-RAE 4-Gas Meter or Equivalent	19.5-23.5%	Level D-Continue Work	Continuous for ground intrusive activities.
		< 19.5%	Do not enter Confined Space, STOP WORK EVACUATE AREA (1)	
		> 23.5%	Fire explosion hazard; EVACUATE AREA (1)	
Explosive Gas (LEL)	Q-RAE 4-Gas Meter or Equivalent	< 10% LEL	Level D-Continue Work	Continuous for ground intrusive activities.
		10-20% LEL	Issue Warning	
		> 20% LEL	EVACUATE AREA (1)	
Hydrogen Sulfide (H_2S) (2)	Q-RAE 4-Gas Meter or Equivalent	< 5 ppm	Level D-Continue Work	Continuous for ground intrusive activities.
		5-10 ppm	Issue Warning	
		> 10 ppm	STOP WORK EVACUATE AREA (1)	
Dust	Particulate Monitor Miniram or Equivalent	< 5 mg/m^3 above background in the breathing zone.	Level D-Continue Work	Continuous for ground intrusive activities.
		5-10 mg/m^3 above background in the breathing zone.	Level C-Continue Work	
		> 10 mg/m^3 above background in the breathing zone.	STOP WORK EVACUATE AREA (1)	

Protection Levels:

Level C - Required Personal Protective Equipment (PPE): Half or full face, air purifying respirator, chemical resistant clothing, inner and outer chemica resistant gloves, safety boots (steel toe/shank with chemical resistant overboots), hard hat and hearing protection (if warranted).

Level D - Required PPE: Safety goggles, hard hat, safety boots (steel toe/shank) and work clothes or coveralls.

Notes:

LEL - Lower Explosive Limit
ppm= parts per million

(1) For all circumstances where work is stopped, the New York State Department of Environmental Conservation (NYSDEC) must be notified.
(2) Action levels provided represent fifteen (15) minute average values.
"Continuous" monitoring indicates the monitoring unit will collect readings and a fifteen (15) minute average will be calculated for the general breathing space/work area.
(3) Test breathing space for Benzene concentration with Drager tube, if concentration is two (2) ppm or greater, move to Level C PPE.

APPENDIX D-1

STANDARD OPERATING PROCEDURES

EQUIPMENT CLEANING AND DECONTAMINATION PROCEDURES

Summary

Equipment, tools, materials, etc. used in the investigation and collection of soil samples at field investigation sites must be properly prepared and cleaned/decontaminated during and after each sampling event. The degree of cleaning/decontamination will be dependent upon site conditions and the nature and type of contamination, if present, the intent and goal(s) of the investigation, and data quality objectives, as well as other site-specific requirements.

Procedure

1. **Heavy Equipment Decontamination**

   All equipment, tools and materials associated with sampling events must be cleaned or decontaminated prior to usage. Items such as drill rigs, auger flights, trackhoes, and backhoes all present potential sources of contamination to environmental samples. Therefore, all heavy equipment utilized at a site must undergo the following decontamination procedures:

   - the equipment will first be high pressure, hot washed or steam-cleaned with potable water; and,
   - the equipment will be rinsed thoroughly with potable water.

   Contain, collect and dispose of all decontamination fluids in accordance with site/project-specific requirements. The bucket of trackhoes and backhoes may be cleaned over the excavation allowing high pressure decontamination washwater to return to the excavation.

2. **Cleaning of Field Sampling Equipment**

   All equipment and tools used to collect samples for chemical analyses, including spatulas, spoons, scoops, trowels, split-spoons, augers, etc. will be decontaminated using the following procedures:

   - non-phosphate detergent wash;
   - potable water or distilled/deionized water rinse; and
   - air or oven-dry.

   If the equipment is to be stored for future use, allow to dry and then wrap in aluminum foil (shiny-side out) or seal in plastic bags.

   Collect or dispose of all decontamination fluids in accordance with site/project-specific requirements.

3. Personal Clothing Decontamination

All footwear worn in and around the contamination area will be washed down using soap and water to remove soil or oily residue remnants. If disposable gloves, boots or suits (such as Tyvek® suits) are worn, such are to be removed and disposed in a designated 55-gallon drum or garbage bag onsite for future disposal. Any other clothing that comes in contact with the potentially contaminated material should not be worn more than 24-hours and should be washed prior to wearing again.

APPENDIX E

COMMUNITY AIR MONITORING PLAN (CAMP)

COMMUNITY AIR MONITORING PLAN

The Community Air Monitoring Plan (CAMP) provides for real-time monitoring of Volatile Organic Compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when ground-intrusive activities are implemented. The CAMP was developed from the New York State Department of Health (NYSDOH) Generic CAMP that is provided in the DER-10 Technical Guidance for Site Investigation and Remediation (May 2010). The CAMP provides a measure of protection for the downwind community (potential receptors include residences, businesses, and workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The CAMP also addresses ground intrusive activities within twenty (20) feet of a potentially exposed population or occupied structure and for indoor air monitoring activities. Contractors should employ Best Management Practices (BMPs) and common sense measures to minimize VOCs, dust, and odors around work areas.

Table E-1 provides action levels and corresponding required actions for VOCs and particulate monitoring that include increased monitoring, corrective actions to abate emissions, and/or work shutdown.

1.0 VOLATILE ORGANIC COMPOUND (VOC) MONITORING, RESPONSE LEVELS AND ACTIONS

Real time air monitoring for VOCs and/or particulate levels is required at the perimeter of the Exclusion Zone.

Periodic monitoring for VOCs will be required during non-intrusive activities, such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. Periodic VOC monitoring of the breathing space area during a sample collection event will occur upon arrival at a sample location, while opening a well cap or overturning soil, during well bailing/purging, and prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring will be required during sampling activities. Examples of such situations include groundwater sampling adjacent to or within twenty (20) feet of structures.

Continuous monitoring for VOCs will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

VOCs will be monitored at the downwind perimeter of the immediate work area on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions. The monitoring equipment must be appropriate to measure the types of contaminants known or suspected to be present. The equipment must be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment must be capable of calculating fifteen (15) minute running average concentrations, which will be compared to the following levels:

- If the ambient air concentration of total VOCs at the downwind perimeter of the work area exceeds five (5) parts per million (ppm) above the determined background level for the fifteen (15) minute average, work activities must be temporarily halted and monitoring continued. If the total VOC level decreases rapidly to less than five (5) ppm over background, work activities can resume with continued monitoring.

- If total VOC levels at the downwind perimeter of the work area persist at levels in excess of five (5) ppm over background but less than twenty-five (25) ppm, work activities must be halted, the source of vapors investigated, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the Exclusion Zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than twenty (20) feet, is below five (5) ppm over background for the fifteen (15) minute average.

- If the organic vapor level is above twenty-five (25) ppm at the perimeter of the Exclusion Zone, activities must be halted.

- All fifteen (15) minute readings must be recorded and should be available for review by the NYSDOH, New York State Department of Environmental Conservation (NYSDEC) and Albany County Health Department, if requested. Instantaneous readings, if any, used for decision purposes should also be recorded.

2.0 PARTICULATE MONITORING, RESPONSE LEVELS AND ACTIONS

Particulate concentrations must be monitored continuously for all ground intrusive activities at the upwind and downwind perimeters of the work area at temporary particulate monitoring stations. The particulate monitoring must use real time monitoring equipment capable of measuring particulate matter that are less than ten (10) micrometers in size (PM-10) and is capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (ug/m^3) greater than background (upwind perimeter) for the fifteen (15) minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with the implemented dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 ug/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 ug/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 ug/m^3 of the upwind level and in preventing visible dust migration.

- All readings must be recorded and be available for review by the NYSDOH, NYSDEC and Albany County Health Department, if requested.

3.0 GENERAL RECOMMENDATIONS FOR WORK AREAS WITHIN 20 FEET OF POTENTIALLY EXPOSED POPULATIONS OR OCCUPIED STRUCTURES

When work areas are within twenty (20) feet of potentially exposed populations or occupied structures, the continuous monitoring locations for VOCs and particulates must be based on the nearest potentially exposed individuals and the location of ventilation system intakes for nearby structures. The use of engineering controls such as vapor/dust barriers, temporary negative-pressure enclosures, or special ventilation devices will be considered to prevent exposures related to the work activities and to control dust and odors. Consideration will be given to implementing the planned activities when potentially exposed populations are at a minimum, such as during weekends or evening hours.

- If total VOC readings exceed one (1) ppm at locations that are next to the walls of occupied rooms or next to intake vents, monitoring will also occur within the adjacent occupied room(s). Depending upon the nature of contamination, chemical-specific colorimetric tubes of sufficient sensitivity may be necessary for comparing the exposure point concentrations with appropriate pre-determined response levels and response actions. Background readings in the occupied rooms must be measured prior to commencement of the planned work. Any background readings that are greater than one (1) ppm should be discussed with the NYSDEC prior to commencement of the work.

- If total particulate readings exceed 150 ug/m^3 next to the walls of adjacent occupied room(s) or next to intake vents, work activities should be suspended until controls are implemented and are successful in reducing the total particulate concentration to 150 ug/m^3 or less at the monitoring point. Depending upon the nature of contamination and remedial activities, other parameters (e.g., explosivity, oxygen, hydrogen sulfide, carbon monoxide) may also need to be monitored. Particulate response levels and actions should be pre-determined.

2011-31/Reports/CAMP_revFeb2014.doc

TABLE E-1

Table E-1 Air Monitoring Action Levels at Downwind Perimeter of Exclusion Zone		
Parameter/ Instrument	**Action Level**	**Action**
VOCs/PID	The 15-minute average of continuous readings for Total VOCs at downwind perimeter of Exclusion Zone exceeds 5 ppm above the determined background level.	Work activities are temporarily halted and VOCs monitoring continued. If downwind Exclusion Zone VOC readings decrease to < 5 ppm above background level, work can resume with continuous monitoring.
VOCs/PID	The 15-minute average of continuous readings is greater than 5 ppm but less than 25 ppm over the background level at the downwind perimeter of the Exclusion Zone.	Work activities must be halted, the source of vapors must be identified and corrective actions taken to abate emissions. Following these steps, work may continue if air monitoring readings indicate the Total VOCs level is 5 ppm or less over background for the 15-minute average at 200 feet downwind of the Exclusion Zone, or at half the distance to the nearest potential receptor or building, whichever is less (but in no case less than 20 feet).
VOCs/PID	Continuous reading of 25 ppm or greater over the background level at the downwind perimeter of the Exclusion Zone.	Stop Work. Reevaluate work conditions and procedures. Contact NYSDEC for authorization prior to resuming work.
Particulates/ Monitor Unit and Direct Observation	PM-10 particulate level is 100 micrograms per cubic meter (ug/m3) or greater than the background level for the 15-minute period at the downwind edge of the Exclusion Zone or visible dust is leaving the Exclusion Zone.	Suppress particulates by spraying the dusty area with water, work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 ug/m^3 above the upwind level and provided that no visible dust is migrating from the Exclusion Zone.
Particulates/ Monitor Unit and Direct Observation	After implementation of dust suppression techniques, downwind PM-10 particulate levels at the downwind edge of the exclusion zone are greater than 150 ug/m^3 above the upwind level.	Work must be stopped and the NYSDEC must be notified. Re-evaluate dust suppression techniques. Workers are required to use full face respirators with NIOSH approved P100 cartridges or combination cartridges. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 ug/m^3 of the upwind level and in preventing visible dust migration.

References:

DER-10 Technical Guidance for Site Investigation and Remediation, NYSDOH Generic Community Air Monitoring Plan