



**SOURCE AREA EXCAVATION
INTERIM REMEDIAL MEASURES WORK PLAN**

**TROY BELTING AND SUPPLY COMPANY
70 COHOES ROAD, COLONIE, NEW YORK
BCP SITE #C401067**

Prepared for:

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November 21, 2019

“Serving our clients and the environment since 1993”

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CERTIFICATION

I, Andrew Millspaugh, P.E., certify that I am a New York State registered professional engineer and that this Source Area Excavation Interim Remedial Measures Work Plan was prepared in accordance with all applicable statutes and regulations and is in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

Professional Seal:



A handwritten signature in black ink, appearing to read "Andrew M. Millspaugh".

Andrew M. Millspaugh, P.E.
NY PE 094708

LIST OF ACRONYMS

Acronym	Definition
ACGIH	American Conference of Governmental Industrial Hygienists
amsl	above mean sea level
ARAR	applicable or relevant and appropriate requirements
AST	aboveground storage tank
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
bgs	below ground surface
CAMP	Community Air Monitoring Plan
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COC	contaminant of concern
cVOC	chlorinated volatile organic compounds
CY	cubic yard
DER-10	Division of Environmental Remediation/Technical Guidance for Site Investigation and Remediation
ESA	Environmental Site Assessment
ESI	Environmental Site Investigation
FEMP	Fugitive Emission Management Plan
HASP	Health and Safety Plan
IDLH	immediately dangerous to life or health
IRM	Interim Remedial Measures
LDR	land disposal restrictions
MCL	maximum contaminant levels
NAPL	non-aqueous phase liquid
NIOSH	National Institute for Occupational Safety and Health
NYCRR	New York Codes, Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
OMM	Operations, Monitoring, and Maintenance
OSHA	Occupational Safety and Health Administration
PBS	Petroleum Bulk Storage
PCE	tetrachloroethene
PEL	permissible exposure limit
PID	photoionization detector
ppm	parts per million
RAO	remedial action objective
RCRA	Resource Conservation and Recovery Act

LIST OF ACRONYMS
(Continued)

Acronym	Definition
REL	recommended exposure limit
RI	Remedial Investigation
SCG	standards, criteria, and guidance
SCO	Soil Cleanup Objectives
SVI	soil vapor intrusion
SVOC	semi-volatile organic compound
TCE	trichloroethene
TCLP	Toxicity Characteristic Leaching Procedure
TLV	threshold limit value
TOGS	Technical and Operational Guidance Series
TWA	time-weighted average
USEPA	United States Environmental Protection Agency
UST	underground storage tank
VMS	vapor mitigation system
VOC	volatile organic compound

1.0 INTRODUCTION AND PURPOSE

On behalf of Troy Belting and Supply Company (Troy Belting), Sterling Environmental Engineering, P.C. (STERLING) has prepared this non-emergency Interim Remedial Measures (IRM) Work Plan for the Source Area Excavation (Source Area IRM Work Plan) for Brownfield Cleanup Program (BCP) Site #C401067 located at 70 Cohoes Road (Tax Parcel I.D. # 20.20-1-4), Town of Colonie, Albany County, New York (hereinafter the “Site”). A location map is presented on Figure 1 and an aerial map of the Site and surrounding area is presented on Figure 2.

The Remedial Investigation (RI) Report dated May 22, 2019, characterized the nature and extent of contaminants of concern (COC) consisting of chlorinated volatile organic compounds (cVOC) in onsite soil and groundwater. This Source Area IRM Work Plan provides a summary of Site conditions and a recommended IRM to address readily accessible contaminated soil exceeding standards, including suspected source areas contributing to groundwater impacts. This Source Area IRM Work Plan is prepared in accordance with the New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation (DER) Technical Guidance for Site Investigation and Remediation (DER-10).

1.1 Project Description

Environmental assessments and an RI were conducted at the Site between 2011 and early 2018 in support of a planned expansion of the existing Site building to the north. Site groundwater monitoring indicates the presence of cVOCs to the north of the Site building that have migrated towards the east and northeast as shown on Figure 3. Based upon early investigative findings, Troy Belting submitted an application to the NYSDEC BCP in 2013. The Site was accepted into the BCP and is identified as Site #C401067. The Brownfield Cleanup Agreement (BCA) between Troy Belting and the NYSDEC was signed on July 12, 2013 and a Remedial Investigation Work Plan was prepared by STERLING to determine the nature and extent of contamination at the Site and surrounding area. The Remedial Investigation (RI) was performed from 2014 to 2015, and supplemented in 2018; periodic groundwater monitoring and onsite vapor mitigation are ongoing.

Troy Belting currently intends to expand the existing building to create additional operating space to provide additional services and remain competitive. The planned expansion will be constructed north of the existing facility after remediation is completed, and will include the following elements.

- Site grading and drainage improvements.
- Construction of a new concrete slab-on-grade building foundation with vapor barrier and/or sub-slab depressurization system directly north of the existing building.
- Paving areas beyond the building expansion.

1.2 Site Description

The Site is located approximately 1.2 miles north of the City of Watervliet on an Industrial zoned parcel and has the following surrounding area as shown on Figure 2:

- To the north: an unnamed tributary to the Mohawk River and residential properties.
- To the east: Cohoes Road and residential properties.
- To the south: Elm Street and residential properties.
- To the west: Commercial and industrial properties.

The Site totals approximately 2.4 acres and includes one building (25,000 square feet) that previously contained a degreaser unit and a varnish underground storage tank (UST). An aboveground storage tank (AST) is present that stores waste oil to supplement the natural gas heating system. The Site is a registered Petroleum Bulk Storage (PBS) facility identified as site 4-601456.

Troy Belting has operated on the Site as an electric motor repair facility since 1965 when the first building was constructed. Motor repairs include cleaning motor parts with solvents, that historically included tetrachloroethene (PCE) and trichloroethene (TCE), although these chlorinated solvents have not been used for decades except in small quantities from spray cans. The depth to shale bedrock ranges from 4 to 8.5 feet below ground surface (bgs). Overburden soils consist of sand, gravel, sandy clay, and gravelly clay. Groundwater flow occurs primarily in bedrock to the east / east-northeast.

The Site is served with all major public and private utilities, including potable water, sanitary sewer, electric, and natural gas. Groundwater at the Site is assigned Class "GA" as defined by 6 NYCRR Part 701.15. Currently, there are no known deed restrictions on the use of groundwater at the Site, and there are no groundwater supply wells on the property. Groundwater has not been developed for industrial, agriculture, or public supply purposes at or in the vicinity of the Site. Municipal potable water service is provided to the Site and surrounding area by the Maplewood Water District with water distribution by the Village of Green Island (Community Water Supply System ID#: NY0100195).

1.2.1 Land Use

The Site is zoned as an Industrial District and the current and planned future use is industrial. This intended future use aligns with the visions of the 2019 Town of Colonie Comprehensive Plan.

1.2.2 Topography

The Site topography is primarily flat at an elevation of approximately 30 feet above mean sea level (amsl). Gentle slopes occur to the northeast and southeast. The ground surface is covered with an asphalt parking lot north and south of the existing Site building. A landscaped lawn covers remaining ground surface not covered by the existing Site building or parking lot. The surrounding topography located within one-half mile to the north, south, and east is relatively flat at an elevation between 30 to 50 feet amsl. The area located within one-half mile to the west is at an elevation of approximately 200 feet amsl and slopes east towards the Site.

1.2.3 Surface Water, Wetlands, and Floodplains

A man-made drainage feature is located along the north property line and a portion of the west property line. This feature is a replacement for the former unnamed brook that historically bisected the Site prior to construction of the existing building. Stormwater runoff that enters the drainage feature is directed to the unnamed Class D tributary of the 4.1 square mile Salt Kill watershed located east of Cohoes Road. The Salt Kill discharges into the Fifth Branch of the Mohawk River near Dyke Avenue in the City of Cohoes, which is approximately ¾-mile northeast of the Site. Catch basins located within the southern parking lot near Elm Street and west of Cohoes Road near the northeastern corner of the Site collect stormwater into storm sewers. Precipitation that does not become stormwater runoff enters the subsurface via infiltration within landscaped areas. Shallow bedrock groundwater flow is affected by the existing drainage collection system and former brook, as well as underground utility lines and the building foundation.

Federal and State regulated wetlands (Wetland No. TN-6) are located approximately 1,500 feet northeast of the Site.

The Site is not located within the 100-year floodplain. The northern portion of the Site beyond the existing Site building is located within the 500-year floodplain.

1.2.4 Geology and Hydrogeology

Contaminant mobility is dependent on the Site geological and hydrogeological conditions. These conditions are taken into consideration when developing and evaluating remedial alternatives.

Native overburden soils consist of recent channery silt loam till alluvium. Bedrock is encountered at 4 to 8.5 feet bgs and is a highly fractured shale with a weathered surface ranging from 0.1 to 1.5 feet in thickness. Two geologic cross sections are provided on Figure 4. The top of bedrock surface elevation slopes towards the former brook.

Ten monitoring wells are installed in the upper shale bedrock unit in a shallow (S) groundwater flow zone, generally 21 feet bgs or less. Six monitoring wells are screened in the deep (D) groundwater flow zone between 30 and 40 feet bgs. One monitoring well (MW-6D') is installed in bedrock at a depth of 60 to 70 feet bgs within a slightly deeper (D') groundwater flow zone.

Shallow Zone bedrock groundwater flow in the central and southern portion of the Site is consistently to the east towards Cohoes Road. Groundwater flow in the northeastern portion of the Site is to the east-southeast towards the former brook. The former brook may act as a preferential groundwater flow path, and the confluence of the former brook and the unnamed tributary may represent a local groundwater discharge feature, but the tributary sampling results do not indicate impacts from the site's contaminants of concern. The groundwater flow direction in the onsite Deep Zone is towards the east / southeast at locations north of the former brook and to the east / northeast at locations south of the former brook. Upward vertical gradients were observed in well pairs from the Deep Zone to the Shallow Zone, except at upgradient well pair MW-1/MW-1D, likely reflecting the higher permeability of the Shallow Zone compared to the Deep Zone and an upward groundwater flow regime.

Information obtained from the NYSDEC Environmental Mapper indicates the Site is not located over, or immediately adjoining, a primary, principal, or sole source aquifer. No sand or gravel water-bearing units were encountered in the soil borings drilled at the Site.

2.0 SUMMARY OF SITE CONDITIONS

2.1 Previous Investigations

The following site assessments and investigations have been performed:

- August 12, 2011 Phase I Environmental Site Assessment (ESA) prepared by HRP Associates, Inc.
- September 28, 2011 Phase II ESA prepared by RJS Environmental.
- September 20, 2012 Supplemental Phase II Environmental Site Investigation (ESI) prepared by STERLING.
- February 8, 2013 Supplemental Phase II ESI prepared by STERLING.
- May 22, 2019 Remedial Investigation Report prepared by STERLING.

The 2011 Phase II ESA included 14 soil borings and 1 temporary overburden groundwater well to evaluate concerns regarding current and historic operations, the varnish UST, the former foundry to the

west, and an onsite degreaser. Seven subsurface soil samples were collected at varying depths and submitted for laboratory analysis of TCL-volatile organic compounds (VOC), TCL-semi-volatile organic compounds (SVOC), and RCRA 8 Metals. TCE was detected at 1,490 milligrams per kilogram (mg/kg) at boring SB-14 from a sample interval at 8 to 8.5 feet bgs, which is above the 6 NYCRR Part 375-6.8 Industrial Soil Cleanup Objective (SCO). This sample also exhibited the presence of non-aqueous phase liquid (NAPL). Soil boring SB-14 is proximate to the historic location of overflow piping associated with the degreaser that removed overflow liquids from the building interior.

The 2012 Supplemental Phase II ESI was conducted to more fully assess the extent of impacted subsurface soil and shallow bedrock groundwater. Three shallow bedrock monitoring wells were installed (MW-1S, MW-2S, and MW-3S) and subsurface soil and groundwater samples were collected. One subsurface soil sample was collected from MW-2S, which contained VOCs exceeding Unrestricted Use and Protection of Groundwater SCOs. No VOCs in this sample exceeded Commercial or Industrial SCOs. Groundwater samples contained VOCs, SVOCs, and several metals that were above NYSDEC groundwater standards with the CVOC trichloroethene (TCE) present at greater than 250,000 ug/L in the MW-2S groundwater sample.

During a separate mobilization for the 2012 Supplemental Phase II ESI, two additional shallow bedrock borings/monitoring wells were installed (MW-4S and MW-5S). Soil samples were not collected from MW-4S based on no elevated headspace screening results with a photoionization detector (PID). One subsurface soil sample was collected from MW-5S and contained VOCs exceeding Unrestricted Use and Protection of Groundwater SCOs. No VOCs exceeded Commercial SCOs. Several VOCs in the groundwater samples from MW-4S and MW-5S exceeded NYSDEC groundwater standards with TCE present at estimated concentration of 11,000 ug/L in the MW-5S groundwater sample. Groundwater monitoring indicated the presence of impacted groundwater north of the Site building, which is migrating east and east-northeast towards the former brook. Soil and groundwater analytical results suggest impacts may extend beneath the northern portion of the existing building.

2.2 Remedial Investigation and Quarterly Groundwater Monitoring

2.2.1 Subsurface Soil Quality

A summary of soil quality data is provided in Table 1. The contaminants of concern (COC) in subsurface soil are the following chlorinated chemicals:

COC	Maximum Detected Concentration (mg/kg)	Unrestricted Use and Protection of Groundwater SCOs (mg/kg)	Commercial SCO (mg/kg)
1,1,1-TCA	26.4	0.68	500
PCE	96.9	1.3	150
TCE	1,490	0.47	200
cis-1,2-DCE	22.3	0.25	500
Vinyl chloride (VC)	1.61	0.02	13

During the 2011 Phase II ESA, RJS Environmental selected seven subsurface soil samples for laboratory analysis based on the following rationale:

- Elevated PID readings and suspect solvent odors were noted at six boring locations (SB-1, SB-2, SB-3, SB-4, SB-13, and SB-14) located north of the existing Site building (north of the varnish UST and degreaser). The highest PID readings, above 9,999 ppm, were noted at two locations

(SB-4 and SB-14) at intervals on top of bedrock. Suspect product globules and sheen were also noted on top of bedrock at SB-14.

- The subsurface soil sample collected from SB-14 at a depth of 8 to 8.5 feet bgs reported multiple VOC, SVOC, and metal concentrations above laboratory detection limits. TCE, a degradation compound of PCE, was detected at a concentration 1,490 mg/kg, significantly above Commercial SCOs. This sample reportedly exhibited the presence of NAPL. Due to the significant TCE concentration, detection limits on other VOCs were elevated and may be present at concentrations above applicable SCOs but below method detection limits.
- Subsurface soil samples collected from SB-3, SB-4, and SB-13 reported concentrations of COCs exceeding Unrestricted Use and Protection of Groundwater SCOs but less than Commercial SCOs.
- Solvent-impacted subsurface soil and groundwater was identified north of the existing Site building. The greatest concentrations were found on top of bedrock at SB-14 suggesting that underlying bedrock groundwater had likely been impacted. SB-14 is proximate to the historic location of overflow piping for the removed overflow from the former onsite facility degreaser.

Subsurface soil samples collected during the 2012 Supplemental Phase II ESI revealed the presence of the following cVOCs exceeding Unrestricted Use and Protection of Groundwater SCOs in a composite sample collected from MW-2 at a depth of 4 to 8 feet bgs (sample S04-MW2).

Soil Sample S04-MW2			
Contaminant of Concern	Detected Concentration (mg/kg)	Unrestricted Use and Protection of Groundwater SCOs (mg/kg)	Commercial SCO (mg/kg)
1,1,1-TCA	0.053	0.68	500
PCE	6.9	1.3	150
TCE	25	0.47	200
cis-1,2-DCE	5.2	0.25	500
VC	0.034	0.02	13

A second subsurface soil sample was collected from MW-5S at a depth of 0 to 2 feet bgs, which reported the following cVOCs exceeding Unrestricted Use and Protection of Groundwater SCOs:

Soil Sample S01-MW5			
Contaminant of Concern	Detected Concentration (mg/kg)	Unrestricted Use and Protection of Groundwater SCOs (mg/kg)	Commercial SCO (mg/kg)
1,1,1-TCA	0.31 U	0.68	500
PCE	5.1 J	1.3	150
TCE	1.5 J	0.47	200
cis-1,2-DCE	7.1 J	0.25	500
VC	0.61	0.02	13

U = Not Detected.

J = Estimated.

A soil test pit IRM was performed on April 23, 2014 (Test Pit IRM) on the north side of the existing Site building (near SB-14, MW-5S, and MW-2S) to assess how soil contamination potentially relates to soil vapor intrusion into the Site building. Seven test pits (TP-14-1 through TP-14-7) were excavated outside the building in the locations shown on Figure 2. The soil thickness ranged from 1.5 feet (TP-14-5) to 8.5 feet (TP-14-2). The top of bedrock surface elevation slopes to the south-southeast towards the existing

Site building and former brook location (Figures 4 and 5). The upward bedrock slope to the north likely inhibits transport of non-aqueous phase COCs.

Six subsurface soil samples collected from the transition zone between soil and weathered bedrock were submitted for VOC and SVOC laboratory analysis as part of the test pit investigation. No subsurface soil sample was submitted from TP-14-5 because the media was entirely rock fragments at or near ground surface. The following cVOCs, except 1,1,1-TCA, were detected exceeding Unrestricted Use and Protection of Groundwater SCOs but below Commercial SCOs:

Test Pit IRM Samples					
Contaminant of Concern	Test Pit ID	Sample Depth (feet bgs)	Detected Concentration (mg/kg)	Unrestricted Use and Protection of Groundwater SCOs (mg/kg)	Commercial SCO (mg/kg)
1,1,1-TCA	TP-14-7	4 - 5	0.055	0.68	500
PCE	TP-14-2	6 - 6.5	79	1.3	150
TCE	TP-14-2	6 - 6.5	60	0.47	200
cis-1,2-DCE	TP-14-7	4 - 5	3.0	0.25	500
	TP-14-6	3 - 4	0.92		
VC	TP-14-7	4 - 5	0.11	0.02	13
	TP-14-6	3 - 4	0.19		

Test Pit IRM provided a better understanding of the lateral and vertical distribution of contaminant mass within soil. Data and observations from the IRM supplemented existing Site information to further develop a detailed conceptual Site model. Based on Test Pit IRM, the objective of the RI was amended to: 1) Determine lateral and vertical extent of impacted groundwater within the shallow flow zone of the shale bedrock; 2) Identify preferential groundwater flow paths such as fractures, weathered bedding planes and joints in the bedrock; and, 3) Evaluate the connectivity of bedrock fractures and flow paths.

2.2.2 Contaminant Source Area

Soil data for site COCs suggests a suspected source area in the vicinity of MW-2S, MW-5S, SB-14, and TP-14-2. Exceedances of Unrestricted Use and Protection of Groundwater SCOs extend to SB-13, TP-14-7, and TP-14-6. The estimated extent of soil exceeding Unrestricted Use and Protection of Groundwater SCOs is shown on Figure 3.

2.2.3 Groundwater Quality

A summary of groundwater quality data is provided in Table 2. The COCs in groundwater are the following chemicals:

COC	Maximum Detected Concentration (µg/L)	Groundwater Standard (µg/L)
1,1,1-TCA	8,400	5
1,1-DCA	4,300	5
1,1-DCE	3,000	5
PCE	11,000	5
TCE	400,000	5
1,4-Dioxane	34.4	---
cis-1,2-DCE	33,000	5
VC	1,830	2

The existing groundwater quality is summarized for the following three zones:

Shallow Zone: Soil data and groundwater monitoring indicates a suspected source area directly north of the existing building around the location of MW-2S, MW-5S, SB-14, and TP-14-2 that is affecting Shallow Zone groundwater. The plume extends to the east-northeast towards MW-6S at the plume fringe. Surrounding wells delineate areas outside of the plume at MW-1S, MW-3S, MW-7S, MW-9S, and MW-11S. Concentrations of 1,4-Dioxane in Shallow Zone groundwater are variable ranging from non-detect at several locations to 45.7 µg/L (April 2019) along the plume fringe (MW-6S) with no apparent trend. Concentrations of 1,4-Dioxane in Shallow Zone groundwater at the source area (MW-5S) ranges from non-detect (September 2018) to 17.8 µg/L (December 2017) with a decreasing average of 13.3 µg/L.

The plume extents for COCs exceeding applicable groundwater standards are shown on Figure 3. Representative concentrations of Total cVOCs, PCE, and TCE for the plume areas are listed below:

Plume Zone	Representative Well	Total cVOC Range (µg/L)	PCE Range (µg/L)	TCE Range (µg/L)
Source Area	MW-2S	25,485 - 445,200	2,000 - 2,600	6,500 - 330,000
	MW-5S	39,832 - 524,700	1,700 - 11,000	11,000 - 400,000
Plume Fringe	MW-4S	259 - 8,107	ND - 3.3J	3.0 - 460
	MW-6S	85 - 4,260	ND	0.18 - 7.4
Outside of Plume	MW-1S	1.6 - 6.7	ND	ND
	MW-3S	0.0 - 41.4	ND - 1.2	ND - 39
	MW-7S	2.1 - 6.7	ND	0.18 - 0.43
	MW-8S	3.9 - 66.0	ND	ND
	MW-9S	0.0	ND	ND
	MW-11S	0.0	ND	ND

ND - No laboratory detection above the reporting limit.

Deep Zone: Groundwater monitoring of Deep Zone wells indicates limited contaminant migration from the Shallow Zone, which is likely due to the observed upward gradient from the Deep Zone to the Shallow Zone. There are no COC exceedances of the NYSDEC groundwater standards at MW-1D located upgradient of the source area and MW-10D located cross-gradient of the source area. Slight COC exceedances were detected at MW-4D for cis-1,2-DCE and vinyl chloride in 2015. TCE was detected at

MW-6D over a range of 0.3 to 170 µg/L with a decreasing below average data trend. Total cVOCs at the plume fringe has ranged from 8.0 to 31.5 µg/L at MW-4D with an average of 19.8 µg/L and from 29.6 to 4,800 µg/L at MW-6D with an average of 2,491 µg/L. Concentrations of 1,4-Dioxane in Deep Zone groundwater are variable, ranging from non-detect at MW-7D to a high of 36.4 µg/L (December 2017) at MW-6D with no apparent trend.

Deeper Zone: Groundwater monitoring of the Deeper Zone well MW-6D' indicates total cVOCs ranging from 3.3 µg/L (December 2018) to 1,065 µg/L (June 2018) with an average of 288.8 µg/L. Comparison of concentration versus time trends indicates associated degradation products (i.e., cis-1,2-DCE) and Total cVOCs are stable to decreasing. Concentrations of 1,4-Dioxane in Deeper Zone groundwater are variable, ranging from non-detect to 1.13 µg/L (June 2018) with no apparent trend.

2.2.4 Soil Vapor Quality / Indoor Air Quality

Soil vapor intrusion (SVI) sampling results for the offsite residential buildings indicate that no monitoring or mitigation is necessary at this time. A Vapor Mitigation System (VMS) was installed and made operational on October 30, 2015 at the existing Site building to mitigate potential exposure to indoor workers or visitors. Sub-slab soil vapor and indoor air quality are monitored regularly in accordance with the VMS Operations, Monitoring, and Maintenance (OMM) Manual. The VMS will continue to operate as a component of the Site remedy, and monitoring reports for the system will be prepared and submitted in accordance with the OMM (or subsequent Site Management Plan) schedule.

2.3 Contaminant Mobility

Contaminant mobility at the Site is limited based on data evaluated during the RI. Most of the impacted soil is below asphalt pavement. A small unpaved area is located along the northern perimeter of the existing Site building between the building and the asphalt parking lot, and between the existing site building and the unnamed tributary. The existing pavement and building footprint limits stormwater infiltration and the potential contribution to contaminant mobility in soil.

The operating VMS currently reduces vapor phase contaminant migration and has effectively reduced and contained sub-slab vapor concentrations. There are no shallow or deep bedrock groundwater pumping wells that affect the groundwater flow directions in the immediate vicinity; therefore, natural groundwater flow patterns control contaminated groundwater migration.

Bedrock groundwater elevations measured throughout the RI and the ongoing periodic groundwater monitoring program indicate the presence of an upward hydraulic gradient from deep to shallow monitored zones. An upward hydraulic gradient, in conjunction with low soil permeability and low bedrock transmissivity, and analytical results of Shallow Zone, Deep Zone, and Deeper Zone groundwater samples over seasonally variable conditions, indicate stable plume conditions within the source area and along plume fringes to the north, northeast, and east-northeast.

2.4 Exposure Assessment

A qualitative Exposure Assessment was completed in accordance with DER-10 to evaluate actual or potential exposure to Site COCs. Direct contact with contaminated soil is unlikely because the majority of the Site is covered with buildings and pavement. Groundwater is not consumed because the area is served by a public water supply and because the impacted upper bedrock is not a viable aquifer due to its low transmissivity. COCs in the groundwater have the potential to migrate into soil vapor and into overlying buildings affecting indoor air quality. This process is referred to as soil vapor intrusion. Soil vapor and indoor air sampling identified impacts to the indoor air and sub-slab soil vapor for the existing site

building. The potential for inhalation of Site contaminants within the Site building has been mitigated by operation of a VMS. Sampling indicates that soil vapor intrusion is not a concern for offsite buildings.

The human health risk associated with Site COCs depends on exposure potential to subsurface soil, Shallow Zone bedrock groundwater, or offsite surface water containing Site-related cVOCs. Exposure occurs when a complete exposure pathway exists.

The following are exposure pathways for the current and anticipated future use conditions and the potentially exposed population:

- Indoor Worker or Visitor - inhalation of volatile organics via indoor air migration. This exposure pathway is mitigated by operation of the VMS.
- Construction and Outdoor Worker or Visitor - direct contact, incidental ingestion, and inhalation of COCs during ground-intrusive activities, and inhalation of COCs via outdoor air migration.
- Visitor/Passerby/Fish & Wildlife - direct contact, incidental ingestion, and inhalation of COCs in offsite surface water due to groundwater migration into surface water.

These exposure pathways can be mitigated by implementing proven remedial measures and engineering controls, and with maintenance and proper operation of existing VMS; proper soil/fill management during intrusive activities; engineering controls including placement of asphalt or landscape cover; and construction of vapor barriers in future building construction.

3.0 INTERIM REMEDIAL MEASURES OBJECTIVES

The objective of this Source Area IRM is to mitigate potential environmental and human exposure to site contaminants through the excavation and offsite disposal of readily accessible contaminated soil exceeding standards, including suspected source areas contributing to groundwater impacts. Soil excavation will allow the bedrock surface to be evaluated for the presence of NAPL product and the excavation of loose and/or fractured rock containing impacts, if present. Soil excavation adjacent to the existing building will allow for evaluation beneath the foundation for the presence of contaminated media.

The Source Area IRM will be performed with the objective of achieving a BCP Track 2-type cleanup by removing all accessible impacted soil exceeding standards to the bedrock surface. If the Source Area IRM determines that impacted soil extends beneath the existing building or other non-accessible areas, then additional evaluation will be necessary in furtherance of satisfactory site cleanup. In accordance with 6 NYCRR Part 375, NYSDEC is responsible for selecting the remedy and BCP cleanup track for a site where the BCP participant is also the potentially responsible party.

4.0 REMEDIAL MEASURES APPROACH

In accordance with DER-10, the Source Area IRM will be implemented to address readily accessible contaminated soil exceeding standards, including suspected source areas contributing to groundwater impacts. The Source Area IRM will consist of excavation of impacted soil exceeding Unrestricted Use and Protection of Groundwater SCOs above the top of bedrock for offsite disposal. The top of bedrock will be evaluated for competency and the presence of NAPL. Loose and/or fractured bedrock containing impacts, if present, will be excavated to the extent feasible. If practicable, the competent bedrock surface (top 3 to 18 inches) will be sampled as a core or chips to evaluate the presence of NAPL/COCs within the bedrock structure. Post-excavation soil samples will be collected from the excavation sidewalls at various

locations based on field screening, visual, and/or olfactory observations. The Source Area IRM approach and sequence are shown on Figures 5 and 6, respectively.

An estimated 375 CY of soil with COCs exceeding Unrestricted Use and Protection of Groundwater SCOs will be excavated, stockpiled, and characterized for offsite disposal. This soil volume is based on the extent of impacts described in section 2.2.2 and shown on Figure 3, and assumes a certain thickness of non-impacted surface soil that can be reused as onsite backfill. The actual excavated soil quantity may be more or less based on field screening and characterization sampling. The source of soil impacts are spent solvents used in degreasing, which is an F-listed hazardous waste. Soil contaminated with a listed hazardous waste will be managed as a hazardous waste. Site soils have previously received a “Contained-In Determination”, dated November 30, 2015, allowing management as a non-hazardous waste based on laboratory analysis indicating concentrations less than soil action levels, land disposal restriction concentrations, and characteristic TCLP regulatory levels. Excavated soil that is tested and determined to contain COCs but is non-hazardous will be disposed of as non-hazardous waste in accordance with the Contained-In Determination issued by the NYSDEC.

4.1 General Description of Construction Activity

Due to the shallow soil depth to bedrock, the IRM will remove impacted soil through excavation and offsite disposal. The general construction approach and sequence to implement the IRM are shown in Figures 5 and 6 and consist of the following elements:

- Establishing perimeter erosion and sediment controls.
- Implementing Community Air Monitoring and Fugitive Emission Management Programs.
- Removing and disposing of asphalt pavement above the soil excavation area.
- Excavating and stockpiling clean soil for reuse. Soil will be field screened with a photoionization detector (PID) for segregation. Stockpiled soil will be tested for Part 375 parameters to determine if reuse is feasible.
- Excavating contaminated soil for disposal characterization. Excavated contaminated soil will be temporarily stockpiled and covered on plastic sheeting pending analytical results.
- Waste characterization according to the frequency and parameter list required by the receiving disposal facility.
- Excavating bedrock, if weathered.
- Evaluating the surface of competent bedrock for possible rock coring/sampling and collecting a bedrock core/chip samples if practicable.
- Evaluating the presence and condition of the building foundation adjacent to the Source Area.
- Collecting documentation samples of excavation sidewalls prior to backfill.
- Backfill of the excavation using suitable onsite soil and imported clean fill, as necessary.

4.2 Final IRM Design

Final Design of the IRM will include preparation of plans, engineering drawings, and construction specifications necessary to procure a qualified environmental contractor to implement the IRM. The following project plans will be prepared prior to mobilization for construction:

Construction Plans and Specifications

Final construction plans and specifications will be prepared to procure a qualified environmental contractor to implement this IRM Work Plan.

Construction plans will include the following:

- Site preparation locations for temporary fencing and erosion controls.
- Lateral and vertical extents of the IRM area.
- Sequencing layout.
- Site restoration requirements.

Construction specifications will include requirements for the following:

- Work sequence.
- Health and safety.
- Quality control and recordkeeping.
- Site preparation.
- Fugitive emission control.
- Remedy implementation, including post-excavation sampling and excavation backfill pre-approval requirements.

Health and Safety Plan

A Health and Safety Plan (HASP) was prepared in accordance with 40 CFR 1910 and 1926. The Site HASP addresses general construction health and safety issues and potential health and safety concerns associated with exposure to airborne dust and site-specific COCs. The site-specific HASP is provided in Appendix A.

Community Air Monitoring Plan

A Community Air Monitoring Plan (CAMP) was developed for the remediation project based on NYSDOH guidelines provided in NYSDEC DER-10. The CAMP will provide for real-time air monitoring at the upwind and downwind perimeter of the work area during active construction. CAMP data will be provided to NYSDEC and NYSDOH at least weekly. Also, NYSDEC and NYSDOH will be notified of all CAMP exceedances within 24 hours of occurrence. The site-specific CAMP is provided in Appendix B.

Fugitive Emission Management Plan

A Fugitive Emission Management Plan (FEMP) was developed to monitor and manage fugitive emissions that may occur during active site work (e.g., odor, noise, and dust). Proper implementation of a FEMP is essential due to the proximity of adjacent residences. The FEMP is provided in Appendix C and includes one or more of the following measures during remedial construction:

- Installation and maintenance of a visual barrier or temporary perimeter construction fence for offsite dust mitigation.
- Active dust suppression as necessary through water application to the construction area (by hose, water cannon, or water truck).
- Covering inactive work areas, including stockpiles, with plastic sheeting.
- Application of odor suppressant foam, as necessary, to exposed surfaces of soil during excavation.

4.2.1 Well Abandonment and Fill Pre-Approval

At least two weeks prior to beginning soil excavation, monitoring wells within the IRM area will be abandoned in accordance with CP-43: Groundwater Monitoring Well Decommissioning Policy for bedrock wells with contaminated overburden. Over-drilling with a temporary casing is the preferred method of abandonment.

Prior to beginning soil excavation, at least one backfill source must be submitted for NYSDEC approval in accordance with DER-10 subdivision 5.4(e). A Request to Import/Reuse Fill or Soil form will be submitted to NYSDEC for each proposed backfill source that describes the material gradation and analytical testing for comparison to DER-10 requirements. At least one backfill source must be approved by NYSDEC prior to beginning soil excavation to ensure availability of backfill during construction.

4.2.2 Site Work Preparation

Site work preparation will consist of establishing security measures and installing perimeter erosion and sediment controls. Temporary fencing will be installed surrounding the IRM area to restrict access to authorized personnel only. A visual barrier will be installed on the fence to screen construction activities from neighboring residences. Silt fence will be installed along the north and west side of work area adjacent to existing asphalt. Compost filter socks will be installed along the east side of the work area directly on the existing asphalt.

Once erosion and sediment controls are established, the existing asphalt parking area will be removed from the west edge to at least five feet beyond the east limit of the IRM area. Removed asphalt will be transported offsite for disposal or recycling at a properly permitted or registered facility. Clean soil will be excavated and stockpiled onsite for use during site restoration.

4.2.3 Soil Excavation

As described in Section 4.2.1, monitoring wells within the IRM area will be properly abandoned prior to the start of soil excavation. An excavator will be used to remove soil for onsite staging, sampling, and characterization prior to reuse as backfill or offsite disposal. Excavated soil will be continuously screened with a PID to segregate soil based on anticipated level of contamination. Soil stockpiles will be formed based on PID measurements and/or visual and olfactory indications of contamination for sampling and

laboratory analysis for reuse as backfill or disposal characterization. Soil stockpiles will be on plastic sheeting and covered with plastic to mitigate fugitive emissions of odor and dust. Odor suppressant foam will be available to use on stockpiles and excavation surfaces to mitigate odors, if needed. The excavation will extend vertically to the bedrock surface and laterally to the defined limits of the IRM area. Additional excavation may be performed beyond the limits of the IRM area if PID field screening and/or visual and olfactory observations indicate impacted soil remains that likely exceeds the remedial objectives.

4.2.4 Soil Characterization Sampling

Soil segregated for potential reuse as backfill will be sampled and analyzed for parameters listed in 6 NYCRR Part 375 and compared to applicable Protection of Groundwater and Restricted Residential SCOs at the frequency specified in DER-10 Table 5.4(e)(10). Soil with concentrations less than the applicable Protection of Groundwater and Restricted Residential SCOs will be used to backfill the excavation.

Waste characterization will be performed according to the frequency required by the selected disposal facility. Samples will be analyzed as required by the receiving disposal facility for VOCs using EPA Method 8260, and for TCLP results for site CVOCs. Excavated soil will be managed possibly as non-hazardous waste, subject to a “Contained-In Determination” from NYSDEC.

4.2.5 Bedrock Excavation and Sampling

When the bedrock surface is reached following soil excavation, the surface will be assessed for competency to determine whether contaminants have infiltrated the bedrock surface by attempting to scrape/rip the surface with a toothed excavator bucket. If bedrock has been impacted and fragments are easily removed, loose, impacted material will continue to be scraped for removal. Up to two feet of loose bedrock is estimated to be removed. Excavation of the bedrock surface will not continue below the groundwater table, if encountered. Removed bedrock fragments will be screened with a PID for segregation and characterization. Particular attention will be directed to the bedrock surface directly adjacent (north) to the existing building to assess if suspected source material may be present beneath the building.

Following removal of the loose bedrock surface, at least one location of competent bedrock will be sampled by coring the surface to a depth of 3 to 18 inches. The location of the bedrock core will be determined in consultation with NYSDEC for the purpose of assessing the presence of NAPL.

4.2.6 Monitoring

Following excavation and backfill, groundwater monitoring will be performed on a quarterly monitoring schedule for at least one year to evaluate effectiveness of the IRM. The groundwater monitoring program will be assessed after one year to determine which wells should be sampled, the sampling frequency, and/or whether on-going groundwater monitoring is necessary.

4.2.7 Stormwater Management

The IRM is not subject to a State Pollutant Discharge Elimination System General Permit for Stormwater Associated with a Construction Activity due to soil disturbance being confined to less than one acre. Conventional erosion and sediment control practices will be implemented such as silt fence, filter sock, and covering exposed soil with plastic sheeting.

4.2.8 Offsite Disposal Loading

Excavated soil will be loaded into dump trailers with required Part 364 waste transporter permits. Disposal trucks will be loaded by an excavator from stockpiled excavated soil in the area identified on Figure 6. Loading will occur on the asphalt paved parking lot to facilitate sweeping and cleanup of any spillage. Loaded trucks will be properly tarped and inspected for any loose soil that may have been deposited on the outside of the trailer during loading. The remedial contractor will be responsible for providing personnel to inspect each loaded truck and brush off any identified loose soil. Disposal trucks will not enter the active excavation area to prevent soil tracking on the truck wheels.

4.2.9 Post-Excavation Sidewall Sampling

Following excavation, confirmation soil samples will be collected from the excavation sidewalls and analyzed for Part 375 parameters. Particular attention will be directed to the sidewall directly beneath the existing building to assess if suspected source material extends beneath the building.

Post-excavation sidewall sampling will be performed in accordance with the sampling frequency described in DER-10. The IRM area has an excavation perimeter of approximately 250 feet; therefore, one sidewall sample will be collected for every 30 feet of excavation perimeter corresponding to at least 9 post-excavation sidewall samples. Sample collection will be biased to areas of greatest suspected contamination based on field screening, visual, or olfactory observations.

5.0 EFFECTIVENESS AND POTENTIAL IMPACTS

The IRM is protective of public health and the environment through excavation and offsite disposal of impacted soil exceeding Unrestricted Use and Protection of Groundwater SCOs. This eliminates impacted soil as a potential source of groundwater contamination. The IRM is readily implementable through the use of conventional excavation equipment. The IRM is expected to achieve all chemical-specific soil SCGs and site-specific cleanup levels for the designated work area and provides long-term effectiveness and permanence by physically removing contaminants. Decreased contaminant concentrations and mass will reduce chemical toxicity and mobility.

Implementation will have the potential for short-term exposure to impacted soil by remediation personnel via ingestion and inhalation of airborne dust and emissions during construction. Conventional measures are effective and readily implementable to mitigate fugitive dust and emissions during remediation construction. Remediation personnel will use personal protective equipment, as specified in the health and safety plan to minimize or eliminate exposure. The potential will exist also during construction to generate fugitive dust and emissions that may impact the surrounding community. Conventional measures and implementation of the CAMP are effective at mitigating fugitive dust and emissions and will be implemented, as necessary to minimize or eliminate exposure of the surrounding community.

6.0 IMPLEMENTATION SCHEDULE

The expected duration to perform the IRM construction is approximately 6 to 8 weeks. Tasks required to complete the IRM are provided in the Project Schedule in Appendix D.

6.1 Reporting

Written progress reports will continue to be submitted to the NYSDEC on the 10th day of each month. An IRM Construction Completion Report will be prepared and submitted to the NYSDEC at the conclusion of all activities required by this IRM Work Plan.

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TABLES

Table 1

Summary of Analytical Results - Subsurface Soil (Source Area)
Troy Belting and Supply Company, 70 Cohoes Road, Colonie, New York

Analyte	Unrestricted SCOs ¹	Restricted - Residential SCOs ²	Commercial SCOs ³	Industrial SCOs ⁴	Protection of Groundwater SCOs ⁵	SB-2 (2'-4')	SB-3 (4'-5')	SB-4 (6'-8')	SB-13 (4'-6')	SB-14 (8'-8.5')	SO4-MW2 (4'-8')	SO1-MW-5 (0'-2')	TP-14-2 (E) (6-6.5')	TP-14-4 (E) (6-6.8')	TP-14-6 (3-4')	TP-14-7 (4-5')
						RJS Environmental					Sterling					
						9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	4/18/2012	12/10/2012	4/23/2014	4/23/2014	4/23/2014	4/23/2014
Volatile Organic Compounds, mg/kg																
1,1,1-Trichloroethane	0.68	100	500	1,000	0.68	0.24 U	0.274	0.345	0.12 U	26.4	0.053	0.31 U	0.71 U	0.00038 U	0.00038 U	0.055
1,1,2,2-Tetrachloroethane	---	---	---	---	(0.6)	0.24 U	0.1 U	2.5	0.532 U	96.9 U	0.0049 U	0.31 U	0.42 U	0.00084 U	0.00085 U	0.00087 U
1,1,2-Trichloroethane	---	---	---	---	---	NA	NA	NA	NA	NA	NA	0.31 U	NA	NA	NA	NA
1,1-Dichloroethane	0.27	26	240	480	0.27	0.24 U	0.1 U	0.11 U	0.12 U	0.63	0.004 J	0.31 U	0.79 U	0.002 J	0.0048 J	0.0084
1,1-Dichloroethene	0.33	100	500	1,000	0.33	0.24 U	0.1 U	0.11 U	0.12 U	0.903	0.0051	0.31 U	0.89 U	0.00064 U	0.0036 J	0.022
1,2,4-Trimethylbenzene	3.6	52	190	380	3.6	NA	NA	NA	NA	NA	0.013	6.8	NA	NA	NA	NA
1,2-Dibromoethane	---	---	---	---	---	NA	NA	NA	NA	NA	0.0049 U	0.31 U	0.45 U	0.00067 U	0.00067 U	0.00069 U
1,2-Dichloroethane	0.02	3.1	30	60	0.02	0.24 U	0.1 U	0.11 U	0.12 U	0.14 U	0.0049 U	0.31 U	1.0 U	0.00026 U	0.00026 U	0.00027 U
1,2-Dichloropropane	---	---	---	---	---	0.24 U	0.1 U	0.11 U	0.12 U	0.14 U	0.0049 U	0.31 U	0.41 U	0.0026 U	0.0026 U	0.0027 U
1,3,5-Trimethylbenzene	8.4	52	190	380	8.4	NA	NA	NA	NA	NA	0.005	2.8	NA	NA	NA	NA
2-Butanone (MEK)	0.12	100	500	1,000	0.12	0.59 U	0.25 U	0.28 U	0.29 U	0.35 U	0.0049 U	0.31 U	7.6 U	0.035	0.0019 U	0.002 U
4-Isopropyltoluene (Cymene)	---	---	---	---	(10)	NA	NA	NA	NA	NA	0.0018 J	1.5	NA	NA	NA	NA
Acetone	0.05	100	500	1,000	0.05	0.59 U	0.25 U	0.28 U	0.29 U	0.35 U	2.5	0.31 U	11 U *	0.15	0.0091 J	0.018 J
Benzene	0.06	4.8	44	89	0.06	0.059 U	0.025 U	0.028 U	0.029 U	0.035 U	0.0049 U	0.31 U	0.49 U	0.00025 U	0.00026 U	0.00026 U
Carbon tetrachloride	0.76	2.4	22	44	0.76	0.24 U	0.1 U	0.11 U	0.12 U	0.14 U	0.0049 U	0.31 U	0.65 U	0.0005 U	0.00051 U	0.00052 U
Chloroform	0.37	49	350	700	0.37	0.24 U	0.1 U	0.11 U	0.12 U	0.14 U	0.0049 U	0.31 U	1.8 U	0.00032 U	0.00032 U	0.00033 U
Chloromethane	---	---	---	---	---	0.59 U	0.25 U	0.28 U	0.29 U	0.35 U	0.0049 U	0.31 U	0.61 U	0.00031 U	0.00032 U	0.00032 U
cis-1,2-Dichloroethene	0.25	100	500	1,000	0.25	0.24 U	1.1	0.477	2.82	22.3	5.2	7.1 J	12	0.01	0.92 E	3.0 E
cis-1,3-Dichloropropene	---	---	---	---	---	0.24 U	0.1 U	0.11 U	0.12 U	0.14 U	0.0049 U	0.31 U	0.61 U	0.00075 U	0.00076 U	0.00077 U
Dichlorodifluoromethane	---	---	---	---	---	NA	NA	NA	NA	NA	0.0049 U	0.31 U	1.1 U	0.00043 U	0.00043 U	0.00044 U
Ethylbenzene	1.0	41	390	780	1.0	0.24 U	0.1 U	0.11 U	0.12 U	0.966	0.0028 J	0.36 J	0.74 U	0.00036 U	0.00036 U	0.0044 J
Isopropylbenzene	---	---	---	---	(2.3)	NA	NA	NA	NA	NA	0.0049 U	0.32	0.38 U	0.00078 U	0.00079 U	0.0016 J
Methylene Chloride	0.05	100	500	1,000	0.05	0.24 U	0.1 U	0.11 U	0.12 U	0.14 U	0.0029 J	0.31 U	0.51 U	0.0024 U	0.0024 U	0.0025 U
n-Butylbenzene	12	100	500	1,000	12	NA	NA	NA	NA	NA	0.15 J	3.2	NA	NA	NA	NA
n-Propylbenzene	3.9	100	500	1,000	3.9	NA	NA	NA	NA	NA	0.0015 J	0.75	NA	NA	NA	NA
sec-Butylbenzene	11	100	500	1,000	11	NA	NA	NA	NA	NA	0.0011 J	1.2	NA	NA	NA	NA
Tetrachloroethene	1.3	19	150	300	1.3	0.24 U	0.1 U	2.54	0.532	96.9	6.9	5.1 J	79	0.0007 U	0.0064	1.2 E
Toluene	0.7	100	500	1,000	0.7	0.59 U	0.25 U	0.28 U	0.29 U	1.58	0.012	0.18 J	0.69 U	0.00039 U	0.0004 U	0.014
trans-1,2-Dichloroethene	0.19	100	500	1,000	0.19	0.24 U	0.1 U	0.11 U	0.12 U	0.254	0.02	0.15 J	0.6 U	0.00054 U	0.014	0.036
Trichloroethene	0.47	21	200	400	0.47	0.24 U	5.1	102	2.85	1,490	25.0	1.5 J	60	0.0018 J	0.34 E	0.0012 U
Trichlorofluoromethane	---	---	---	---	---	NA	NA	NA	NA	NA	0.0049 U	0.31 U	1.2 U	0.00049 U	0.0005 U	0.00051 U
Vinyl chloride	0.02	0.9	13	27	0.02	0.24 U	0.1 U	0.11 U	0.12 U	1.61	0.034	0.61	0.86 U	0.0011 J	0.19	0.11
Xylenes, Total	1.6	100	500	1,000	1.6	0.24 U	0.1 U	0.11 U	0.12 U	3.59	0.012	1.5 J	2.9 J	0.00087 U	0.00088 U	0.024

Notes:

U = The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

E = Result exceeded calibration range.

DL = Dilution was performed during analysis

NA = Not Analyzed.

N = Matrix spike recovery falls outside of the control limit range

B = Analyses report values below the reporting limit and equal to or above the detection limit.

* = LCS or LCS D Exceeds the Laboratory Control Limits

--- = No regulatory standard or guidance value exists for this analyte.

¹ = Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives (UUSCO)² = Table 375-6.8(b): Restricted Use Soil Cleanup Objectives for Restricted - Residential Use (RRSCO)³ = Table 375-6.8(b): Restricted Use Soil Cleanup Objectives for Commercial Use (CSCO)⁴ = Table 375-6.8(b): Restricted Use Soil Cleanup Objectives for Industrial Use (ISCO)⁵ = Table 375-6.8(b): Protection of Groundwater.

() = CP-51 Table 1 Supplemental Soil Cleanup Objectives: Protection of Groundwater.

Bold value indicates exceedance of Unrestricted Use SCO.***Bold/Italicized value indicates exceedance of Commercial SCOs.******Bold/Italicized/Underlined value indicates exceedance of Industrial SCOs.***

Analytical result in red font reflects a reanalysis by the analytical laboratory as the original sample exceeded the laboratory's highest calibration standard.

Table 1 (Continued)

Summary of Analytical Results - Subsurface Soil (Source Area)
Troy Belting and Supply Company, 70 Cohoes Road, Colonic, New York

Analyte	Unrestricted Use SCO ¹ (mg/kg)	Restricted - Residential SCO ² (mg/kg)	Commercial SCO ³ (mg/kg)	Industrial SCO ⁴ (mg/kg)	Protection of Groundwater ⁵ (mg/kg)	SB-2 (2'-4')	SB-3 (4'-5')	SB-4 (6'-8')	SB-13 (4'-6')	SB-14 (8'-8.5')	SO4-MW2 (4'-8')	SO1-MW-5 (0'-2')	TP-14-2 (E) (6-6.5')	TP-14-4 (E) (6-6.8')	TP-14-6 (3-4')	TP-14-7 (4-5')	STP-1	
						RJS Environmental					Sterling							
						9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	4/18/2012	12/10/2012	4/23/2014	4/23/2014	4/23/2014	4/23/2014	4/23/2014	4/23/2014
Semi Volatile Organic Compounds, mg/kg																		
Acenaphthene	20	100	500	1,000	98	0.26 U	0.26 U	0.26 U	0.27 U	0.28 U	0.35 U	0.35 J	NA	NA	NA	NA	0.0072 J	
Acenaphthylene	100	100	500	1,000	107	0.26 U	0.26 U	0.26 U	0.27 U	0.28 U	0.35 U	0.44 U	NA	NA	NA	NA	0.0054 J	
Anthracene	100	100	500	1,000	1,000	0.26 U	0.26 U	0.26 U	0.27 U	0.28 U	NA	1.0	NA	NA	NA	NA	0.02	
Benzo(a)anthracene	1	1	5.6	11	1.0	0.26 U	0.26 U	0.26 U	0.27 U	0.28 U	NA	5.5 J	NA	NA	NA	NA	0.12	
Benzo(a)pyrene	1	1.0	1.0	1.1	22	0.26 U	0.26 U	0.26 U	0.27 U	0.28 U	NA	<u>5.6</u> J	NA	NA	NA	NA	0.14	
Benzo(b)fluoranthene	1	1	5.6	11	1.7	0.26 U	0.26 U	0.26 U	0.27 U	0.28 U	NA	7.9 E J	NA	NA	NA	NA	0.22	
Benzo(g,h,i)perylene	100	100	500	1,000	1,000	0.26 U	0.26 U	0.26 U	0.27 U	0.28 U	0.35 U	4.0 J	NA	NA	NA	NA	0.12	
Benzo(k)fluoranthene	0.8	3.9	56	110	1.7	0.26 U	0.26 U	0.26 U	0.27 U	0.28 U	NA	3.7 J	NA	NA	NA	NA	0.071	
Butyl benzyl phthalate	---	---	---	---	(122)	0.26 U	0.26 U	0.26 U	0.27 U	0.465	NA	NA	NA	NA	NA	NA	0.025 J	
Carbazole	---	---	---	---	---	0.26 U	0.26 U	0.26 U	0.27 U	0.28 U	0.35 U	0.69	NA	NA	NA	NA	0.032 J	
Chrysene	1	3.9	56	110	1.0	0.26 U	0.26 U	0.26 U	0.27 U	0.316	NA	6.4 J	NA	NA	NA	NA	0.18	
bis(2-ethylhexyl)phthalate	---	---	---	---	(435)	0.309	0.26 U	0.687	0.548	9.84	0.73	1.5 J	NA	NA	NA	NA	0.28	
Dibenzo(a,h)anthracene	0.33	0.33	0.56	1.1	1,000	0.26 U	0.26 U	0.26 U	0.27 U	0.28 U	0.35 U	0.98	NA	NA	NA	NA	0.03	
Dibenzofuran	---	---	---	---	---	0.26 U	0.26 U	0.26 U	0.27 U	0.28 U	NA	0.15 J	NA	NA	NA	NA	0.00073 U	
Di-n-butyl phthalate	---	---	---	---	---	0.26 U	0.26 U	0.26 U	0.27 U	0.524	NA	0.3 J	NA	NA	NA	NA	0.024 J	
Fluoranthene	100	100	500	1,000	1,000	0.26 U	0.26 U	0.26 U	0.27 U	0.606	NA	14.0 E J	NA	NA	NA	NA	0.37	
Fluorene	30	100	500	1,000	386	0.26 U	0.26 U	0.26 U	0.27 U	0.28 U	0.35 U	0.37 J	NA	NA	NA	NA	0.0088	
Indeno(1,2,3-cd)pyrene	0.5	0.5	5.6	11	8.2	0.26 U	0.26 U	0.26 U	0.27 U	0.28 U	0.35 U	3.5 J	NA	NA	NA	NA	0.1	
2-Methylnaphthalene	---	---	---	---	(36.4)	0.26 U	0.26 U	0.26 U	0.27 U	0.336	NA	NA	NA	NA	NA	NA	0.03	
Naphthalene	12	100	500	1,000	12	0.26 U	0.26 U	0.28	0.27 U	0.971	NA	0.11 J	NA	NA	NA	NA	0.024	
Phenanthrene	100	100	500	1,000	1,000	0.26 U	0.26 U	0.26 U	0.27 U	0.326	NA	6.9 J	NA	NA	NA	NA	0.19	
Pyrene	100	100	500	1,000	1,000	0.26 U	0.26 U	0.26 U	0.27 U	0.67	NA	11.0 E J	NA	NA	NA	NA	0.31	

Notes:

U = The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

E = Result exceeded calibration range.

DL = Dilution was performed during analysis

NA = Not Analyzed.

N = Matrix spike recovery falls outside of the control limit range

B = Analyses report values below the reporting limit and equal to or above the detection limit.

* = LCS or LCSD Exceeds the Laboratory Control Limits

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¹ = Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives (UUSCO)² = Table 375-6.8(b): Restricted Use Soil Cleanup Objectives for Restricted Residential Use (RRSCO)³ = Table 375-6.8(b): Restricted Use Soil Cleanup Objectives for Commercial Use (CSCO)⁴ = Table 375-6.8(b): Restricted Use Soil Cleanup Objectives for Industrial Use (ISCO)⁵ = Table 375-6.8(b): Protection of Groundwater.

() = CP-51 Table 1 Supplemental Soil Cleanup Objectives: Protection of Groundwater.

Bold value indicates exceedance of Unrestricted Use SCO.***Bold/Italicized value indicates exceedance of Commercial SCOs.******Bold/Italicized/Underlined value indicates exceedance of Industrial SCOs.***

Table 1 (Continued)

Summary of Analytical Results - Subsurface Soil (Source Area)
Troy Belting and Supply Company, 70 Cohoes Road, Colonie, New York

Analyte	Unrestricted Use SCO ¹ (mg/kg)	Restricted - Residential SCO ² (mg/kg)	Commercial SCO ³ (mg/kg)	Industrial SCO ⁴ (mg/kg)	Protection of Groundwater ⁵ (mg/kg)	SB-2	SB-3	SB-4	SB-13	SB-14	SO4-MW2	SO1-MW-5	TP-14-2 (E)	TP-14-4 (E)	TP-14-6	TP-14-7	STP-1
						(2'-4')	(4'-5')	(6'-8')	(4'-6')	(8'-8.5')	(4'-8')	(0'-2')	(6-6.5')	(6-6.8')	(3-4')	(4-5')	
						RJS Environmental					Sterling						
						9/14/2011	9/14/2011	9/14/2011	9/14/2011	9/14/2011	4/18/2012	12/10/2012	4/23/2014	4/23/2014	4/23/2014	4/23/2014	7/1/2014
Metals, mg/kg																	
Aluminum	---	---	---	---	---	NA	NA	NA	NA	NA	15,800	16,400	NA	NA	NA	NA	NA
Antimony	---	---	---	---	---	NA	NA	NA	NA	NA	1.0	2.4 NJ	NA	NA	NA	NA	0.51 J
Arsenic	13	16	16	16	16	7.5	7.2	9.7	8.3	7.8	12.7	10.4 *	NA	NA	NA	NA	9.6
Barium	350	400	400	10,000	820	75.0	393	151	87.4	140	347	184	NA	NA	NA	NA	98.3
Beryllium	7.2	72	590	2,700	47	NA	NA	NA	NA	NA	0.76	0.79 J	NA	NA	NA	NA	0.69
Cadmium	2.5	4.3	9.3	60	7.5	0.33 U	0.32 U	0.33 U	0.34 U	0.36 U	0.24	5.0	NA	NA	NA	NA	0.44
Calcium	---	---	---	---	---	NA	NA	NA	NA	NA	2,380	2,500	NA	NA	NA	NA	NA
Chromium	30 (Cr+3)	180 (Cr+3)	1,500 (Cr+3)	6,800 (Cr+3)	---	21.9	22.2	21.0	20.7	21.8	23.4	82.3 N*J	NA	NA	NA	NA	18.8
Cobalt	---	---	---	---	---	NA	NA	NA	NA	NA	19.2	17.7	NA	NA	NA	NA	NA
Copper	50	270	270	10,000	1,720	NA	NA	NA	NA	NA	50.2	299 *J	NA	NA	NA	NA	NA
Iron	---	---	---	---	---	NA	NA	NA	NA	NA	40,200	39,700	NA	NA	NA	NA	NA
Lead	63	400	1,000	3,900	450	23.3	15.9	16.4	16.8	44.6	18.6	135	NA	NA	NA	NA	62.4
Magnesium	---	---	---	---	---	NA	NA	NA	NA	NA	7,630	6,640 *	NA	NA	NA	NA	NA
Manganese	1,600	2,000	10,000	10,000	2,000	NA	NA	NA	NA	NA	1,740	814	NA	NA	NA	NA	NA
Mercury	0.18	0.81	2.8	5.7	0.73	0.098	0.035 U	0.052	0.067	0.13	0.027	0.22 *J	NA	NA	NA	NA	0.00012 U
Nickel	30	310	310	10,000	130	NA	NA	NA	NA	NA	37.1	67.4 *	NA	NA	NA	NA	28.2
Potassium	---	---	---	---	---	NA	NA	NA	NA	NA	1,390	1,660	NA	NA	NA	NA	NA
Selenium	3.9	180	1,500	6,800	4.0	0.82 U	0.81 U	0.83 U	0.84 U	0.90 U	2.8	2.4	NA	NA	NA	NA	0.49 U
Silver	2	180	1,500	6,800	8.3	0.41 U	0.41 U	0.41 U	0.42 U	0.45 U	0.06 U	1.1	NA	NA	NA	NA	0.51 J
Sodium	---	---	---	---	---	NA	NA	NA	NA	NA	86.5	166	NA	NA	NA	NA	NA
Thallium	---	---	---	---	---	NA	NA	NA	NA	NA	2.2	0.38	NA	NA	NA	NA	0.37 U
Vanadium	---	---	---	---	---	NA	NA	NA	NA	NA	23.6	32.0	NA	NA	NA	NA	23.7
Zinc	109	10,000	10,000	10,000	2,480	NA	NA	NA	NA	NA	83.2	303	NA	NA	NA	NA	83.1 B

Notes:

U = The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

E = Result exceeded calibration range.

DL = Dilution was performed during analysis

NA = Not Analyzed.

N = Matrix spike recovery falls outside of the control limit range

B = Analyses report values below the reporting limit and equal to or above the detection limit.

* = LCS or LCSD Exceeds the Laboratory Control Limits

--- = No regulatory standard or guidance value exists for this analyte.

¹ = Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives (UUSCO)² = Table 375-6.8(b): Restricted Use Soil Cleanup Objectives for Restricted Residential Use (RRSCO)³ = Table 375-6.8(b): Restricted Use Soil Cleanup Objectives for Commercial Use (CSCO)⁴ = Table 375-6.8(b): Restricted Use Soil Cleanup Objectives for Industrial Use (ISCO)⁵ = Table 375-6.8(b): Protection of Groundwater.

() = CP-51 Table 1 Supplemental Soil Cleanup Objectives: Protection of Groundwater.

Bold value indicates exceedance of Unrestricted Use SCO.***Bold/Italicized/Underlined value indicates exceedance of Industrial SCOs.***

Table 2

**Summary of Analytical Results - Groundwater (VOCs, 1,4-Dioxane, and PFAAS)
Troy Belting and Supply Company, Colonie, New York**

Analyte	NYSDEC TOGs 1.1.1 Standards and Guidance Values	MW-2S							
		5/4/2012	12/20/2012	10/30/2014	11/19/2015	MIN	MAX	AVERAGE	Trend
Volatile Organic Compounds, µg/L									
1,1,1,2-Tetrachloroethane*	5	5.0 U	5.0 U	NA	1,000 U				
1,1,1-Trichloroethane*	5	2,800 E	2,100	2,700 E	5,300	2,100	5,300	3,225	>
1,1,2,2-Tetrachloroethane*	5	5.0 U	5.0 U	1.1 U	NA				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113) *	5	5.0 U	5.0 U	1.6 U	5,000 U				
1,1,2-Trichloroethane*	1	9.9	7.7	2.5 J	3,000 U	7.7	9.9	8.8	<
1,1-Dichloroethane*	5	4,300 J DL	3,100 E	2,900 J DL	2,100 J	2,100	4,300	3,100	<
1,1-Dichloroethene*	5	3,000 J DL	1,600 E	1,200 J DL	1,700	1,200	3,000	1,875	<
1,1-Dichloropropane	5	5.0 U	5.0 U	NA	NA				
1,2,3-Trichlorobenzene	5	0.82 J	5.0 U	NA	NA				
1,2,3-Trichloropropane	0.04	5.0 U	5.0 U	NA	NA				
1,2,4-Trichlorobenzene	5	5.0 U	0.64 J	2.1 U	5,000 U				
1,2,4-Trimethylbenzene	5	98	110	NA	5,000 U				
1,2-Dibromo-3-Chloropropane	0.04	5.0 U	5.0 U	2.0 U	5,000 U				
1,2-Dibromoethane*	0.0006	5.0 U	5.0 U	3.7 U	4,000 U				
1,2-Dichlorobenzene	3	5.0 U	5.0 U	4.0 U	5,000 U				
1,2-Dichloroethane	1	3.8 J	2.9	2.4 J	1,000 U				
1,2-Dichloropropane*	1	5.0 U	5.0 U	3.6 U	2,000 U				
1,3,5-Trimethylbenzene	5	35	37	NA	NA				
1,3-Dichlorobenzene	3	5.0 U	5.0 U	3.9 U	5,000 U				
1,3-Dichloropropane	5	5.0 U	5.0 U	NA	NA				
1,4-Dichlorobenzene	3	5.0 U	5.0 U	4.2 U	5,000 U				
1,4-Dioxane	---	NA	NA	NA	500,000 U				
2,2 Dichloropropane	5	5.0 U	5.0 U	NA	NA				
2-Butanone (MEK)	50	5.0 U	5.0 U	6.6 U	10,000 U				
2-Chlorotoluene	5	5.0 U	5.0 U	NA	NA				
2-Hexanone	50	5.0 U	5.0 U	6.2 U	10,000 U				
4-Chlorotoluene	5	5.0 U	5.0 U	NA	NA				
4-Isopropyltoluene (Cymene)	5	5.0 U	5.0 U	NA	NA				
4-Methyl-2-pentanone (MIBK)	---	14	17	11 U	10,000 U				
Acetone	50	130	120	51	10,000 U				
Benzene	1	8.4	6.2	6.2	1,000 U				
Bromobenzene	5	5.0 U	5.0 U	NA	NA				
Bromochloromethane*	5	5.0 U	5.0 U	NA	5,000 U				
Bromodichloromethane*	50	5.0 U	5.0 U	2.0 U	1,000 U				
Bromoform	50	5.0 U	5.0 U	1.3 U	4,000 U				
Bromomethane	5	5.0 U	5.0 U	3.5 U	5,000 U				
Carbon disulfide	60	2.1 J	0.77 J	2.2 J	10,000 U				
Carbon tetrachloride*	5	5.0 U	5.0 U	1.4 U	1,000 U				
Chlorobenzene	5	5.0 U	5.0 U	3.8 U	5,000 U				
Chloroethane*	5	2.0 J	1.8	1.6 U	5,000 U				
Chloroform*	7	5.1	3.6	3.4 J	5,000 U				
Chloromethane*	5	5.0 U	5.0 U	1.8 U	5,000 U				
cis-1,2-Dichloroethene*	5	5,200 DL	7,200 E	78,000 DL	100,000	5,200	100,000	47,600	>
cis-1,3-Dichloropropene	0.40 ⁽²⁾	5.0 U	5.0 U	1.8 U	1,000 U				
Cyclohexane	---	NA	NA	0.90 U	20,000 U				
Dibromochloromethane*	50	5.0 U	5.0 U	1.6 U	1,000 U				
Dibromomethane	5	NA	5.0 U	NA	NA				
Dichlorodifluoromethane*	5	5.0 U	5.0 U	3.4 U	10,000 U				
Ethylbenzene	5	32	27	15	5,000 U				
Hexachlorobutadiene	1	5.0 U	5.0 U	NA	NA				
Iodomethane	5	5.0 U	5.0 U	NA	NA				
Isopropylbenzene	5	7.5	7.4	5.3	5,000 U				
Methyl acetate	---	NA	NA	2.5 U	4,000 U				
Methyl tert-butyl ether	10	NA	NA	1.1 J	20,000 U				
Methylcyclohexane	---	5.0 U	5.0 U	0.80 U	5,000 U				
Methylene Chloride*	5	520 E	390	300	5,000 U				
Napthalene	10	8.7	12	NA	NA				
n-Butylbenzene	5	11	8.2	NA	NA				
n-Propylbenzene	5	12	13	NA	NA				
o-Xylene	5	44	39	NA	5,000 U				
p,m-Xylene	5	76	67	NA	5,000 U				
sec-Butylbenzene	5	5.4	6.5	NA	NA				
Styrene	5	5.0 U	5.0 U	3.7 U	5,000 U				
tert-Butylbenzene	5	5.0 U	5.0 U	NA	NA				
Tetrachloroethene*	5	2,600 E	2,400 E	2,100 J DL	2,000	2,000	2,600	2,275.0	
Toluene	5	210 E	170	100	5,000 U				
trans-1,2-Dichloroethene*	5	260 E	110	280	5,000 U				
trans-1,3-Dichloropropene	0.40 ⁽²⁾	5.0 U	5.0 U	1.9 U	1,000 U				
Trichloroethene*	5	6,500 E	10,000 E	220,000 DL	330,000	6,500	330,000	141,625	>
Trichlorofluoromethane*	5	5.0 U	5.0 U	4.4 U	5,000 U				
Vinyl Acetate	---	5.0 U	5.0 U	NA	NA				
Vinyl chloride*	2	290 E	390 E	1,500 E	4,100 J	290	4,100	1,963.3	>
Xylenes, Total	---	120	110	44	NA				
Total Chlorinated Solvents, µg/L									
Total Chlorinated Solvents		25,485	27,301	308,986	445,200	25,485	445,200	201,743	N/A
TCE+PCE/Total Chlorinated Solvents (%)		36%	45%	72%	75%	36%	75%	57%	N/A
Semivolatile Organic Compounds, ng/L									
1,4-Dioxane	---	NA	NA	NA	NA	N/A	N/A	N/A	N/A

Notes:

Values in **BOLD and highlighted** indicate exceedance of applicable groundwater quality standard.

U = Not Detected. The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J = Result is less than the reporting limit (RL) but greater than or equal to the method detection limit (MDL), for instance, the result may be uncertain.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

J- = Analyte is present, Reported value may be biased high and associated with a higher level of uncertainty than is normally expected with the analytical method.

J+ = Analyte is present, Reported value may be biased high and associated with a higher level of uncertainty than is normally expected with the analytical method.

E = Result exceeded calibration range.

DL = Indicates a dilution of the sample was required for analysis.

R = Unreliable result; data is rejected or unusable. Analyte may or may not be present in the sample. Supporting data or information necessary to confirm the result.

--- = No applicable groundwater standard or guidance value exists.

NA = Not analyzed.

N/A = Not applicable.

* = VOC is a chlorinated solvent.

⁽¹⁾ = 1,4 Dioxane has a USEPA Health Advisory Level (HAL) for drinking water of 35 µg/L.

⁽²⁾ = The groundwater standard is 0.4 µg/L for the sum of cis-1,3-Dichloropropene and trans-1,3-Dichloropropene.

⁽³⁾ = The sample specific detection limit does not support the regulatory requirement.

Qualifiers in **Red** were modified based on Data Validation Review performed by Alpha Geoscience.

> = Data trend analysis indicates increasing concentration.

< = Data trend analysis indicates decreasing concentration.

Table 2

**Summary of Analytical Results - Groundwater (VOCs, 1,4-Dioxane, and PFAAS)
Troy Belting and Supply Company, Colonie, New York**

ANALYTE	NYSDEC T.O.G.S. 1.1.1 Standards and Guidance Values (ng/L)	MW-3S	MW-4S		MW-5S	MW-6S		MW-6D		MW-6D'	
		9/26/2018	9/27/2018	10/10/2019	9/27/2018	9/27/2018	10/10/2019	9/27/2018	10/10/2019*	9/27/2018	10/10/2019
Perfluorinated Alkyl Acids, ng/L											
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	NA	0.254 U	0.259 U	1.15 U	2.94	0.266 U	1.08 U	0.263 U	1.1 U	0.818 J	1.26
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	NA	1.67 J	0.172 U	1.27 U	1.04 U	3.08 U	1.18 U	0.176 U	1.21 U	0.668 U	1.39 U
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	NA	0.326 U	0.332 U	0.764 U	14	0.341 U	0.715 U	0.338 U	0.731 U	0.34 U	0.838 U
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	NA	0.219 U	0.223 U	0.616 U	0.232 U	0.229 U	0.576 U	0.227 U	0.589 U	0.228 U	0.675 U
Perfluorobutanesulfonic Acid (PFBS)	NA	0.096 U	0.098 U	0.646 J	14.5	12.2	4.14	3.88	5.4	2.92	1.5 U
Perfluorobutanoic Acid (PFBA)	NA	2.54	2.13	1.86 J	12.8	2.06 J	3.21	4.89	4.0	0.12 U	2.81 J
Perfluorodecanesulfonic Acid (PFDS)	NA	0.194 U	0.198 U	0.932 U	0.206 U	0.204 U	0.872 U	0.201 U	0.891 U	0.203 U	1.02
Perfluorodecanoic Acid (PFDA)	NA	0.166 UJ	0.169 U	0.289 U	11.8	0.89 J	0.27 U	0.172 U	0.56 J	0.675 J	0.317 U
Perfluorododecanoic Acid (PFDoA)	NA	0.08 U	0.082 U	0.354 U	0.085 U	0.568 J	0.331 U	0.148 J	0.338 U	0.084 U	0.388 U
Perfluoroheptanesulfonic Acid (PFHpS)	NA	0.136 U	0.138 U	0.654 U	0.144 U	0.142 U	0.612 U	0.14 U	0.625 U	0.142 U	0.717 U
Perfluoroheptanoic Acid (PFHpA)	NA	0.081 U	0.694 J	0.909 J	15.1	1.55 J	2.08	2.63	2.92	0.084 U	0.638 U
Perfluorohexanesulfonic Acid (PFHxS)	NA	0.801 J	0.096 U	0.357 U	3.71	0.099 U	0.334 U	0.098 U	0.342 U	0.098 U	0.392 J
Perfluorohexanoic Acid (PFHxA)	NA	1.77	1.07 J	1.6 J	13.4	2.15	2.49	3.44	2.44	1.82	1.1 U
Perfluorononanoic Acid (PFNA)	NA	0.088 UJ	0.278 J	0.296 U	17.9	0.092 U	0.384 J	1.51 J	2.18	1.28 J	0.325 J
Perfluorooctanesulfonamide (FOSA)	NA	0.198 U	0.202 U	0.551 U	0.21 U	0.208 U	0.516 U	0.205 U	0.527 U	0.207 U	0.604 U
Perfluorooctanesulfonic Acid (PFOS)	NA	0.472 J	0.285 U	0.479 U	66.8	6.46	1.73 J	3.87	4.54	0.102 U	1.15 U
Perfluorooctanoic Acid (PFOA)	NA	0.769 UJ	1.09 J	1.19 J	39.5	1.94 J	2.75	5.46	5.16	0.046 U	1.06 J
Perfluoropentanoic Acid (PFPeA)	NA	3.25	2.1	2.22	14.9	0.078 U	3.34	4.34	4.01	1.81 J	1.7 J
Perfluorotetradecanoic Acid (PFTA)	NA	0.063 U	0.128 J	0.236 U	0.067 U	0.066 U	0.221 U	0.156 J	0.225 U	0.066 U	0.258 J
Perfluorotridecanoic Acid (PFTrDA)	NA	0.079 U	0.08 U	0.311 U	0.084 U	0.083 U	0.291 U	0.082 U	0.297 U	0.083 U	0.341 U
Perfluoroundecanoic Acid (PFUnA)	NA	0.167 UJ	0.17 U	0.247 U	0.177 U	0.175 U	0.231 U	0.173 U	0.236 U	0.174 U	0.271 U
Total PFOS and PFOA, ng/L	70 ⁽¹⁾	0.472 J	1.09 J	1.19 J	106.3	8.4 J	4.48 J	9.33	9.7	ND	1.06 J

Notes:

ng/L = nanograms per Liter

NY-AWQS: New York T.O.G.S. 1.1.1. Ambient Water Quality Standards criteria reflects all addendum to criteria through June 2004.

⁽¹⁾ = EPA PFOS and PFAS Drinking Water Health Advisories Fact Sheet, November 2016.

U = Concentration is less than laboratory Method Detection Limit (MDL).

J = Result is less than the Reporting Limit but greater than or equal to the Method Detection Limit and the concentration is an approximate value.

UJ = Not Detected, quantitation limit may be inaccurate or imprecise.

NA = Not available.

ND = PFOA and PFOS were both less than the laboratory specified Method Detection Limit.

Qualifiers in Red were modified based on Data Validation Review performed by Alpha Geoscience.

*Data Validator determined sample quality was unusable because extraction holding times exceeded 14 days.

Table 2

**Summary of Analytical Results - Groundwater (VOCs, 1,4-Dioxane, and PFAAS)
Troy Belting and Supply Company, Colonie, New York**

ANALYTE	NYSDEC T.O.G.S. 1.1.1 Standards and Guidance Values (ng/L)	MW-7S		MW-7D		MW-8S		MW-10D
		9/26/2018	10/9/2019	9/26/2018	10/9/2019	9/26/2018	10/9/2019	9/26/2018
Perfluorinated Alkyl Acids, ng/L								
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	NA	0.26 U	1.05 U	0.253 U	1.03 U	0.251 U	1.15 U	0.275 U
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	NA	0.174 U	1.16 U	0.169 U	1.13 U	1.16 J	1.27 U	0.184 U
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	NA	0.334 U	0.698 U	0.325 U	0.684 U	0.321 U	0.764 U	0.353 U
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	NA	0.224 U	0.562 U	0.218 U	0.551 U	0.216 U	0.616 U	0.237 U
Perfluorobutanesulfonic Acid (PFBS)	NA	3.96	7.81	0.096 U	1.36 J	0.095 U	0.226 U	0.104 U
Perfluorobutanoic Acid (PFBA)	NA	4.63	3.74	0.114 U	0.347 U	0.783 J	0.399 J	0.591 J
Perfluorodecanesulfonic Acid (PFDS)	NA	0.199 U	0.851 U	0.194 U	0.833 U	0.192 U	0.932 U	0.211 U
Perfluorodecanoic Acid (PFDA)	NA	0.171 U	0.264 U	0.166 U	0.258 U	0.164 U	0.289 U	0.18 U
Perfluorododecanoic Acid (PFDoA)	NA	0.082 U	0.323 U	0.08 U	0.316 U	0.079 U	0.354 U	0.087 U
Perfluoroheptanesulfonic Acid (PFHpS)	NA	0.139 U	0.597 U	0.135 U	0.585 U	0.134 U	0.654 U	0.147 U
Perfluoroheptanoic Acid (PFHpA)	NA	1.45 J	1.61 J	0.081 U	0.191 U	0.08 U	0.214 U	0.088 U
Perfluorohexanesulfonic Acid (PFHxS)	NA	1.87	1.44 J	0.094 U	0.32 U	0.11 J	0.357 U	0.481 J
Perfluorohexanoic Acid (PFHxA)	NA	1.57 J	2	0.11 U	0.415 J	0.109 U	0.411 J	0.12 U
Perfluorononanoic Acid (PFNA)	NA	0.09 U	0.271 U	0.088 U	0.265 U	0.087 U	0.296 U	0.095 U
Perfluorooctanesulfonamide (FOSA)	NA	0.203 U	0.503 U	0.198 U	0.493 U	0.196 U	0.551 U	0.215 U
Perfluorooctanesulfonic Acid (PFOS)	NA	2.74	3.48	0.097 U	0.428 U	0.907 J	0.479 U	0.92 J
Perfluorooctanoic Acid (PFOA)	NA	2.51	3.35	0.07 J	0.201 U	0.586 J	0.224 U	0.67 J
Perfluoropentanoic Acid (PFPeA)	NA	2.7	2.84	0.075 U	0.337 U	0.074 U	0.589 J	0.081 U
Perfluorotetradecanoic Acid (PFTA)	NA	0.065 U	0.215 U	0.063 U	0.211 U	0.062 U	0.236 U	0.068 U
Perfluorotridecanoic Acid (PFTrDA)	NA	0.081 U	0.284 U	0.079 U	0.278 U	0.078 U	0.311 U	0.086 U
Perfluoroundecanoic Acid (PFUnA)	NA	0.171 U	0.226 U	0.166 U	0.221 U	0.165 U	0.247 U	0.181 U
Total PFOS and PFOA, ng/L	70 ⁽¹⁾	5.25	6.83	0.07 J	ND	1.493 J	ND	1.59 J

Notes:

ng/L = nanograms per Liter

NY-AWQS: New York T.O.G.S. 1.1.1. Ambient Water Quality Standards criteria reflects all addendum to criteria through June 2004.

⁽¹⁾ = EPA PFOS and PFAS Drinking Water Health Advisories Fact Sheet, November 2016.

U = Concentration is less than laboratory Method Detection Limit (MDL).

J = Result is less than the Reporting Limit but greater than or equal to the Method Detection Limit and the concentration is an approximate value.

UJ = Not Detected, quantitation limit may be inaccurate or imprecise.

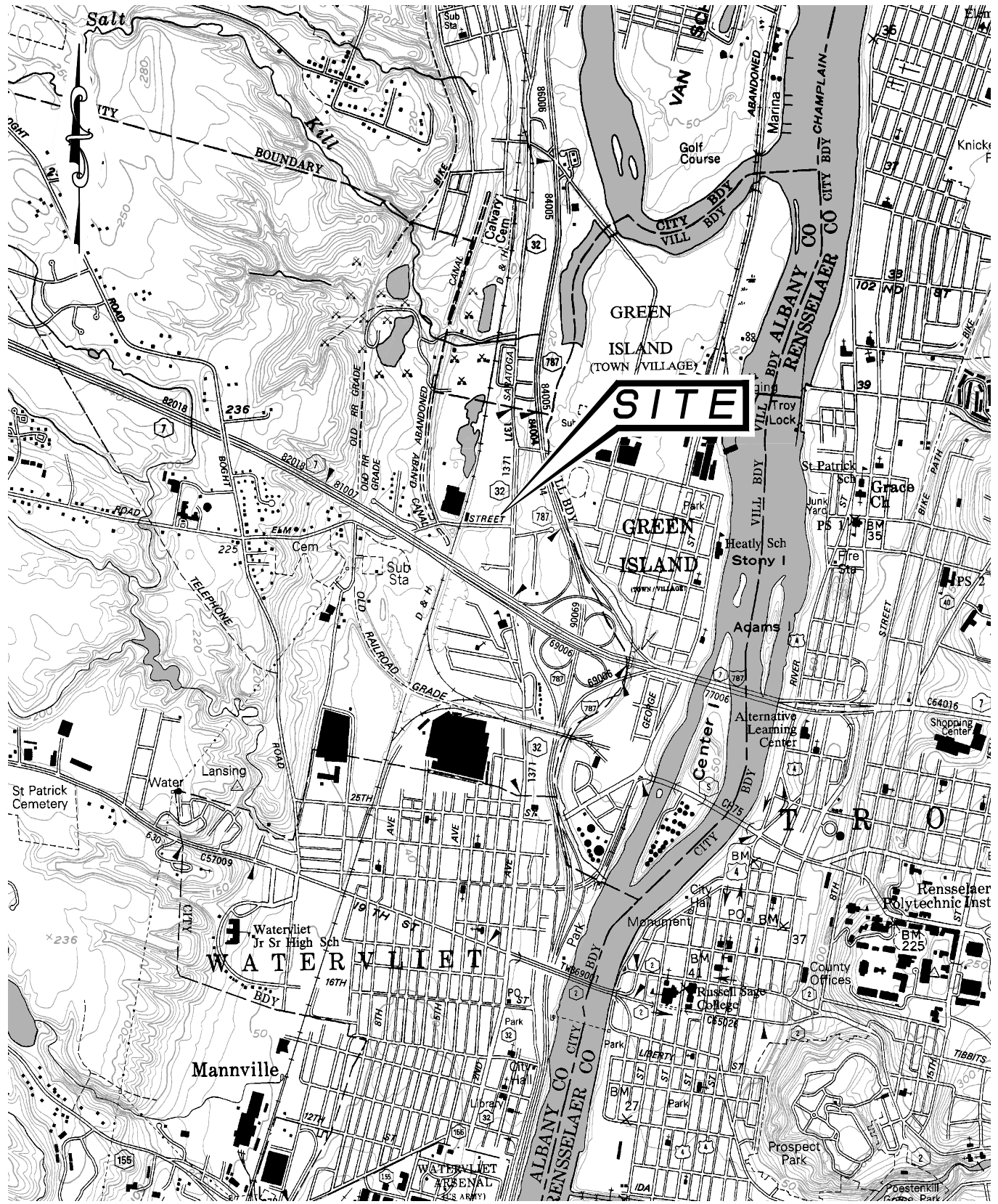
NA = Not available.

ND = PFOA and PFOS were both less than the laboratory specified Method Detection Limit.

Qualifiers in **Red** were modified based on Data Validation Review performed by Alpha Geoscience.

*Data Validator determined sample quality was unusable because extraction holding times exceeded 14 days.

FIGURES



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

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SITE LOCATION MAP
 TROY BELTING AND SUPPLY COMPANY
 70 COHOES ROAD
 TOWN OF COLONIE ALBANY CO., N.Y.

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LEGEND:

- SB-9 SOIL BORING (RJS ENVIRONMENTAL, 2011)
- ┌ TP-14-5 TEST PIT (STERLING, 2014)
- SW-4 SURFACE WATER/SEDIMENT SAMPLE (STERLING, 2014)
- MW-6 RI MONITORING WELL (STERLING 2014/2015)
- ▲ 7-SV-IA-OA SUB-SLAB/INDOOR/OUTDOOR AIR SAMPLE - OFFSITE (STERLING 2014-2018)
- SS-2 SURFACE SOIL SAMPLE (STERLING 2014)
- APPROXIMATE PROPERTY BOUNDARY

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. FORMER BROOK LOCATION FROM DRAWING ENTITLED "SURVEY OF PARCEL OF LAND," BY KING & DANSKIN, ENGINEERING & SURVEYING, JUNE 3, 1964.
3. EXISTING SOIL BORING LOCATIONS FROM DRAWING ENTITLED "BORING LOCATION MAP" (WITHIN PHASE II REPORT), BY RJS ENVIRONMENTAL, SEPTEMBER 28, 2011.
4. AERIAL IMAGE FROM NEW YORK STATEWIDE DIGITAL ORTHOIMAGERY PROGRAM, PHOTOGRAPHY CIRCA 2011

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SITE PLAN WITH HISTORICAL SAMPLE LOCATIONS
TROY BELTING AND SUPPLY COMPANY
 70 COHOES ROAD

TOWN OF COLONIE

ALBANY CO., N.Y.

PROJ. No.: 2011-31 | DATE: 3/18/2019 | SCALE: 1" = 60' | DWG. NO. 2011-31187 | FIGURE 2

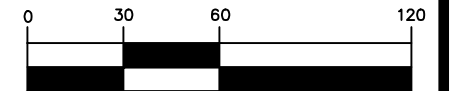


LEGEND:

- SB-9 SOIL BORING (RJS ENVIRONMENTAL, 2011)
- ┌ TP-14-5 TEST PIT (STERLING, 2014)
- SW-4 SURFACE WATER/SEDIMENT SAMPLE (STERLING, 2014)
- ⊕ MW-6 RI MONITORING WELL (STERLING 2014/2015)
- ▲ 7-SV-1A-0A SUB-SLAB/INDOOR/OUTDOOR AIR SAMPLE - OFFSITE (STERLING 2014-2018)
- SS-2 SURFACE SOIL SAMPLE (STERLING 2014)
- APPROXIMATE PROPERTY BOUNDARY
- - - 5 µg/L ISOCONCENTRATION (NOVEMBER 2015)
- ▨ ESTIMATED EXTENT OF SOIL EXCEEDING UNRESTRICTED USE AND PROTECTION OF GROUNDWATER SCOs.
- INFERRED GROUNDWATER FLOW DIRECTION (SHALLOW ZONE)

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. FORMER BROOK LOCATION FROM DRAWING ENTITLED "SURVEY OF PARCEL OF LAND," BY KING & DANSKIN, ENGINEERING & SURVEYING, JUNE 3, 1964.
3. EXISTING SOIL BORING LOCATIONS FROM DRAWING ENTITLED "BORING LOCATION MAP" (WITHIN PHASE II REPORT), BY RJS ENVIRONMENTAL, SEPTEMBER 28, 2011.
4. AERIAL IMAGE FROM NEW YORK STATEWIDE DIGITAL ORTHOIMAGERY PROGRAM, PHOTOGRAPHY CIRCA 2011



(IN FEET)
1 inch = 60 ft.

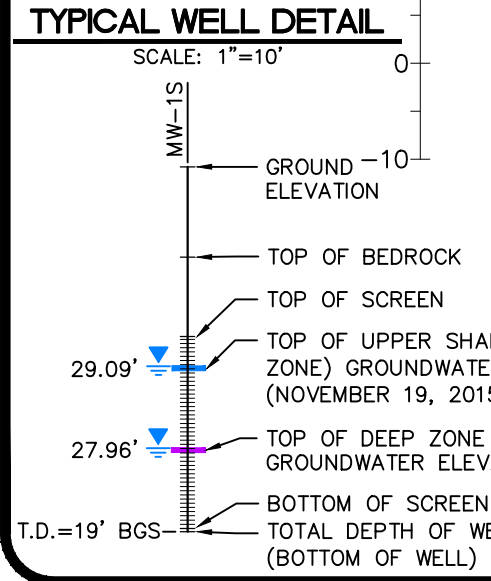
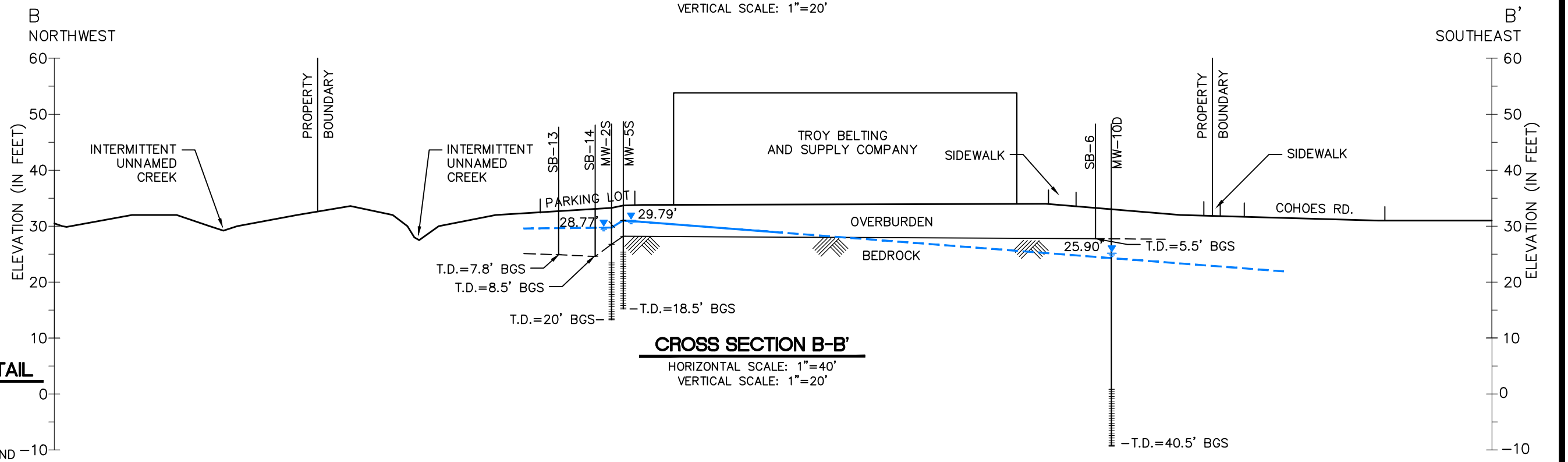
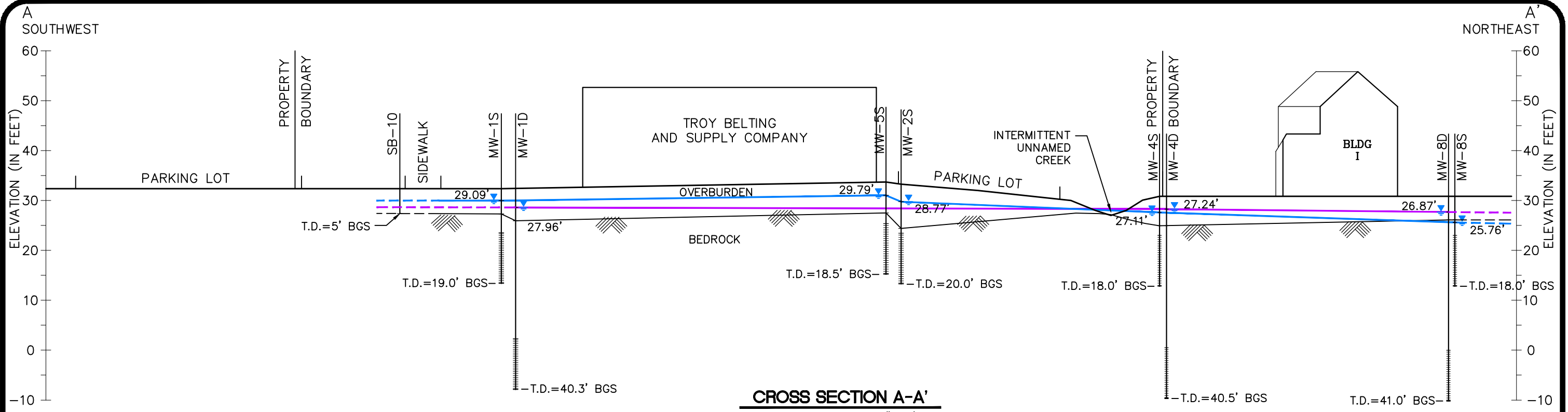
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SUMMARY OF SITE IMPACTS
TROY BELTING AND SUPPLY COMPANY
70 COHOES ROAD

TOWN OF COLONIE ALBANY CO., N.Y.



- 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 NOVEMBER 19, 2015 GROUNDWATER SAMPLING EVENT.

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GEOLOGICAL CROSS SECTIONS
 A-A' AND B-B'
 TROY BELTING AND SUPPLY COMPANY
 70 COHOES ROAD

PROJ. No.: 2011-31

DATE: 3/15/2019

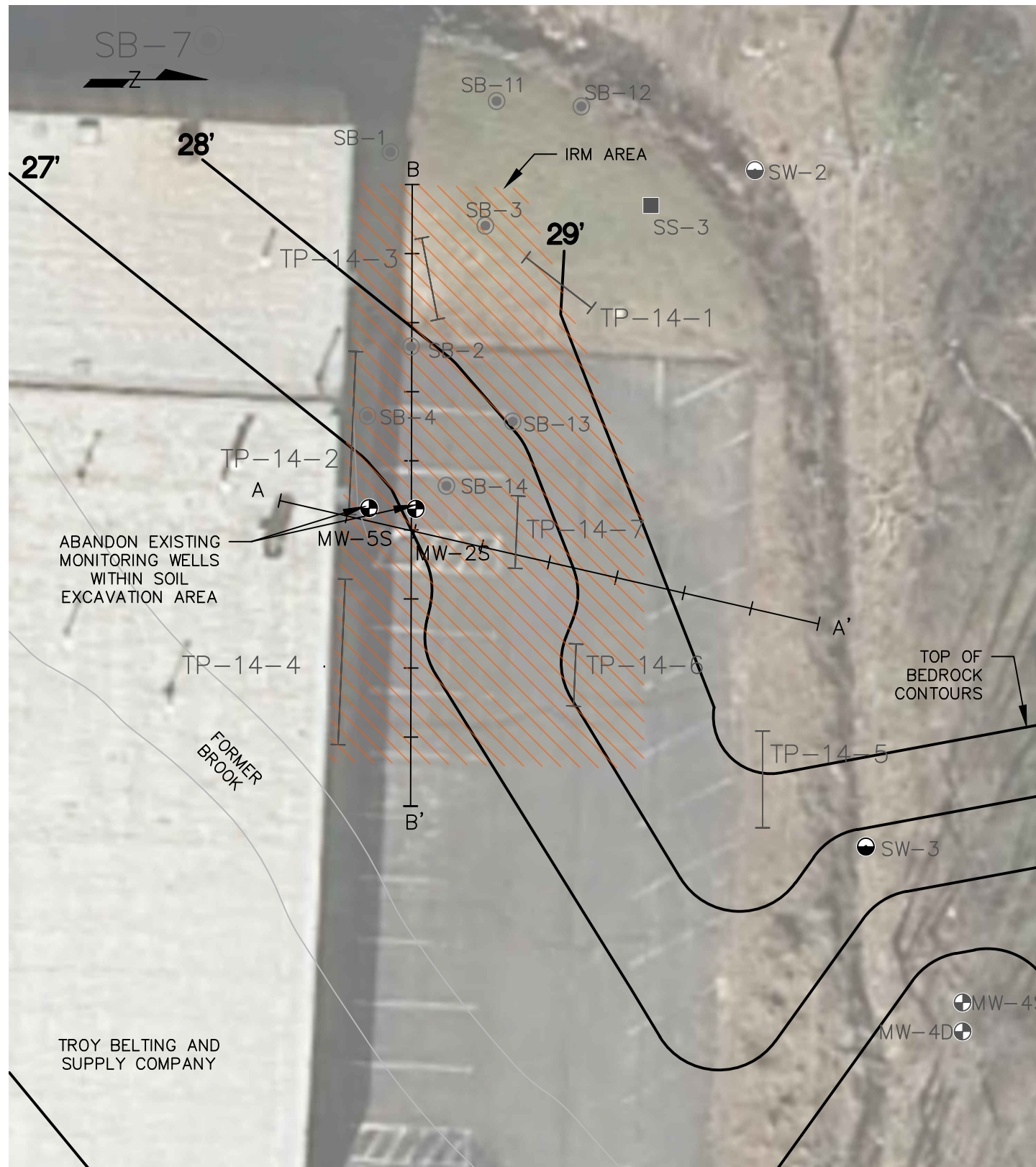
SCALE: AS NOTED

DWG. NO. 2011-31021

FIGURE 4

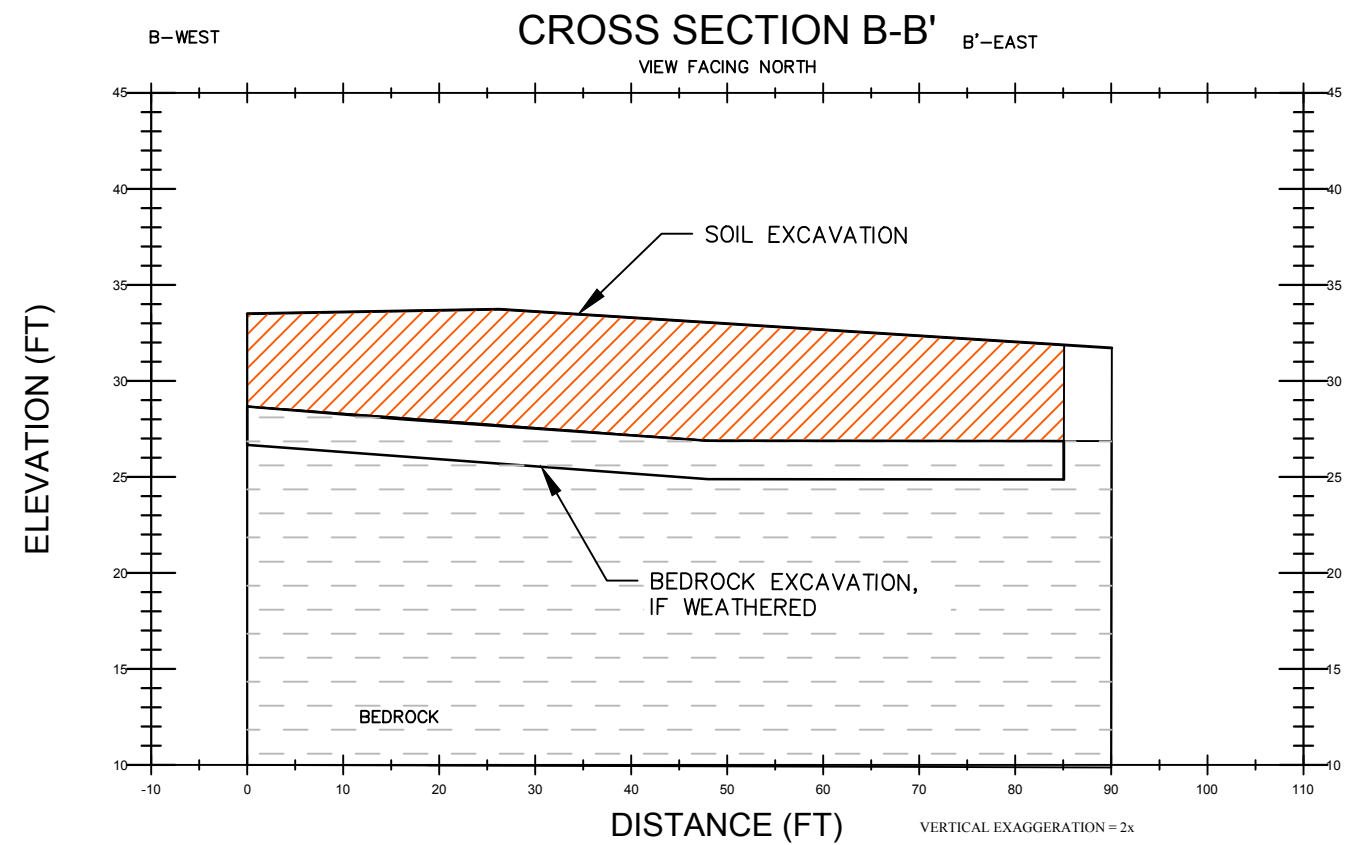
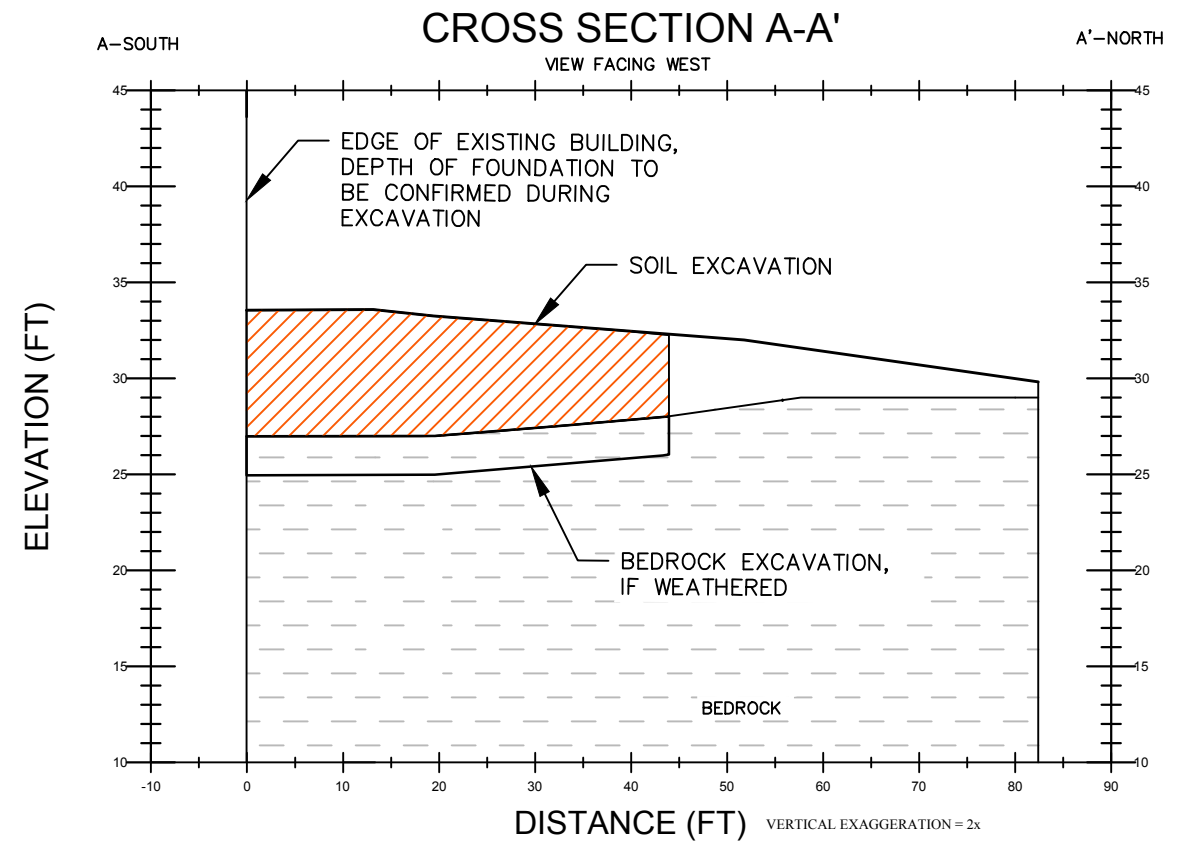
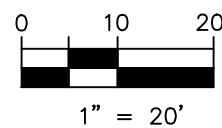
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MAP REFERENCES:

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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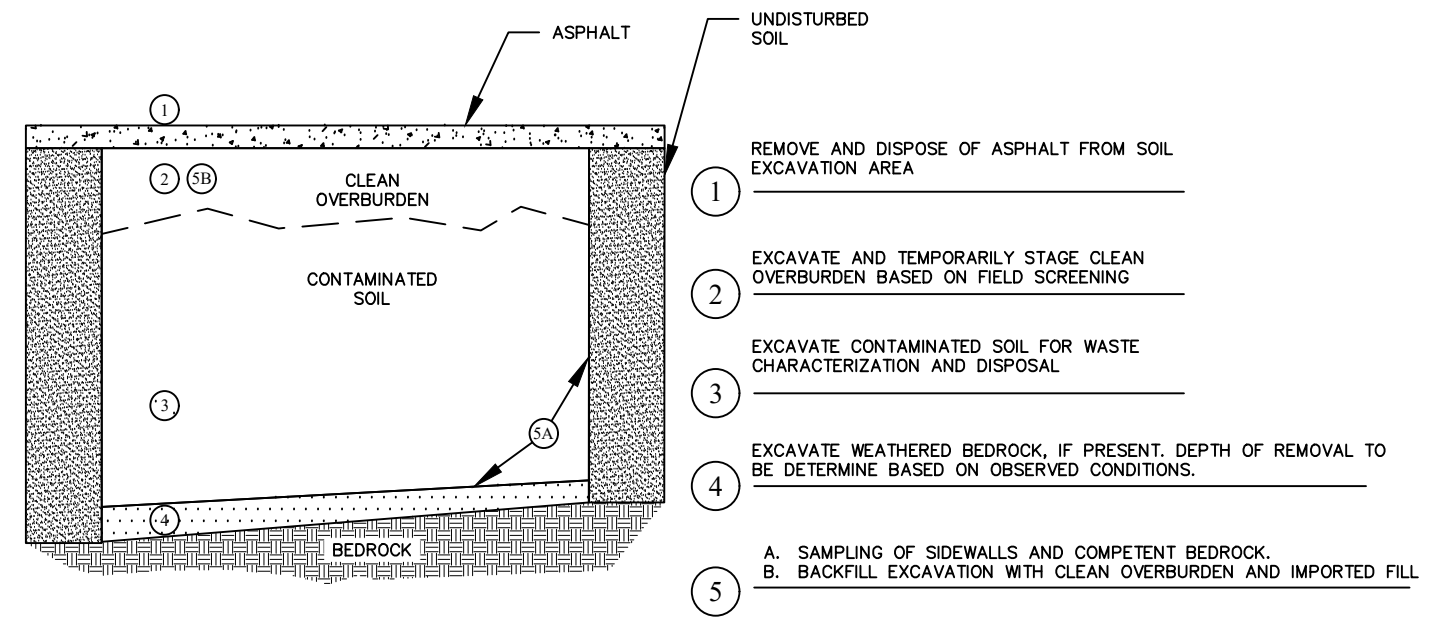
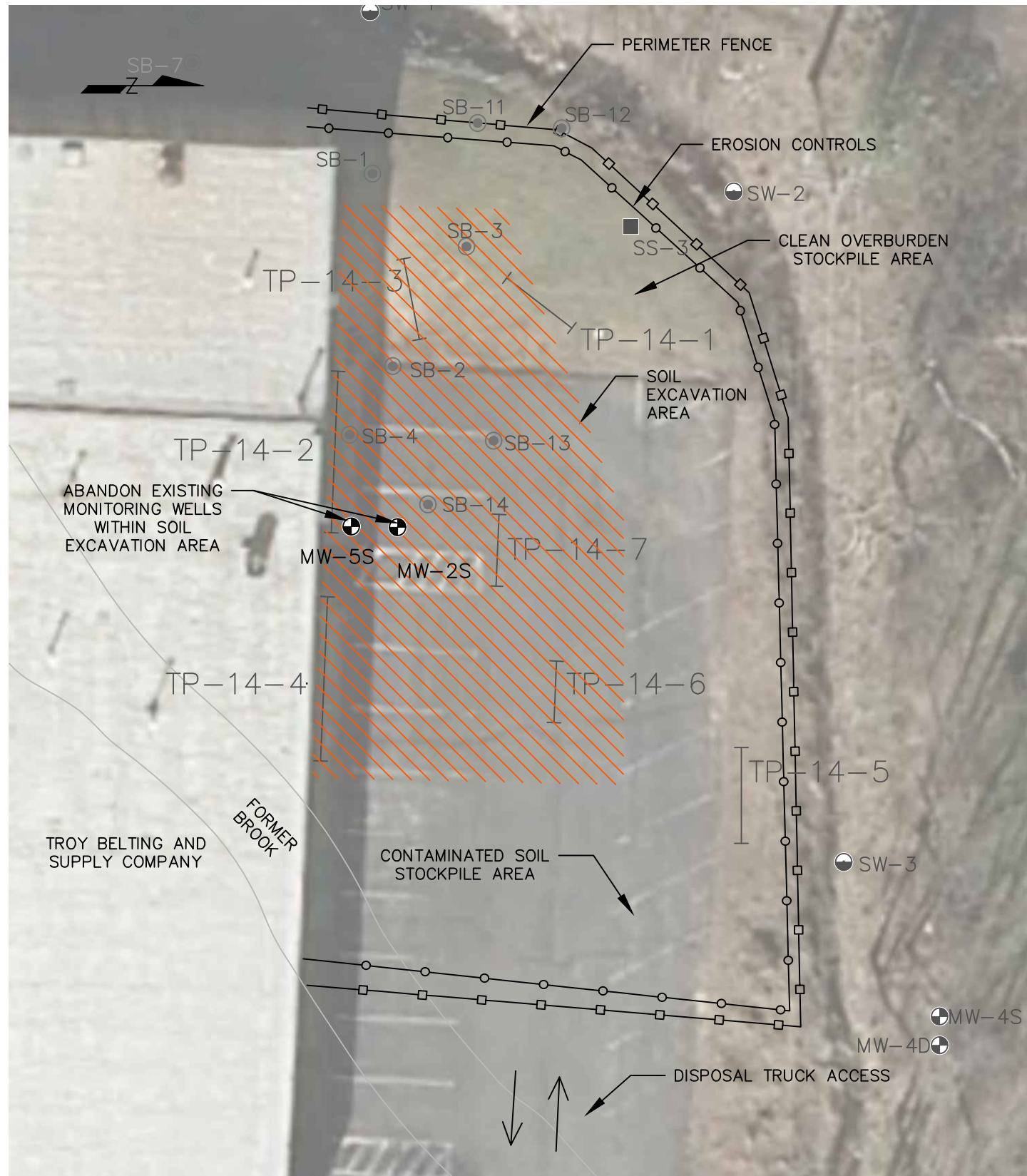
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IRM APPROACH
TROY BELTING AND SUPPLY COMPANY
70 COHOES ROAD

TOWN OF COLONIE

ALBANY CO., NY

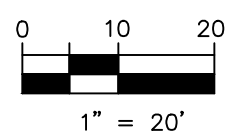
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IRM SEQUENCE DETAIL
NOT TO SCALE

NOTES:
 1. ODORS TO BE CONTROLLED WITH ODOR SUPPRESSING FOAM (RUSMAR® OR SIMILAR) AND PLASTIC SHEETING DURING EXCAVATION AND STOCKPILING.
 2. EXCAVATION DIRECTLY ADJACENT TO EXISTING BUILDING TO BE COMPLETED IN SEQUENCED SLOTS USING A TRENCH BOX TO LIMIT THE UNSUPPORTED AREA ALONG THE BUILDING FOUNDATION. SLOT SIZING AND SEQUENCE TO BE DETERMINED DURING FINAL DESIGN.

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



 Sterling Environmental Engineering, P.C. 24 Wade Road • Latham, New York 12110	IRM SEQUENCE DETAIL TROY BELTING AND SUPPLY COMPANY 70 COHOES ROAD	
	TOWN OF COLONIE	ALBANY CO., NY
PROJ. No.: 2011-31 DATE: 9/11/19 SCALE: 1" = 20' DWG. NO. 2011-31207 FIGURE 6		

APPENDIX A
HEALTH AND SAFETY PLAN
(HASP)

HEALTH AND SAFETY PLAN (HASP)

**TROY BELTING AND SUPPLY CO.
70 COHOES ROAD, COLONIE, NEW YORK
BCP # C401067**

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. All personnel will 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.

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 include the following:

Personal Protective Equipment		
Item	Required	Have Available
High-Visibility Shirt	D	
Reflective Vest		D
Hard Hat	D	
Safety Shoes	D	
Hearing Protection		D
Safety Glasses	D	
Respirator (air purifying)	C	

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 B of the IRM 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.

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 New York 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.”*

In accordance with 29 CFR 1926.1201(b), excavations are not governed by confined space regulations.

Excavation Safety

Excavations pose a significant hazard if not carefully controlled. Sidewall collapse is possible if an excavation is not properly sloped, benched, or shored as required by 29 CFR 1926. Only necessary personnel will enter an excavation following evaluation of the excavation by a competent person. Reasons for entering the excavation are for the collection of confirmation sidewall samples and collection of bedrock samples.

Any excavation deeper than four (4) feet must have a stairway, ladder, ramp, or other safe means of egress for every 25 feet of lateral travel. During excavation, the excavation contractor must provide a competent person to evaluate excavation soils to determine appropriate sloping, benching, or shoring requirements in accordance with 29 CFR 1926. Evaluations will be reviewed by the Project Manager prior to personnel entering the excavation.

Work zone air monitoring must be performed while personnel are within an excavation.

Designated 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 earmuffs 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 the 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

<u>Emergency Services</u>	<u>Telephone Number</u>
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
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.

**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
VOCs:						
Benzene	1/5/25	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
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.

APPENDIX B
COMMUNITY AIR MONITORING PLAN
(CAMP)

COMMUNITY AIR MONITORING PLAN (CAMP)

TROY BELTING AND SUPPLY COMPANY 70 COHOES ROAD, COLONIE, NEW YORK BCP # C401067

1.0 INTRODUCTION

This Community Air Monitoring Plan (CAMP) has been prepared for Troy Belting and Supply Company of Watervliet, New York (Troy Belting) site located at 70 Cohoes Road, in the Town of Colonie, Albany County, New York. This CAMP applies to remedial activities associated with the Brownfield Cleanup Program (BCP) Site #C401067. This CAMP provides methods and procedures for real-time air monitoring during soil disturbance with implementation of the selected remedial approach. This CAMP is to be used in coordination with the site-specific Health and Safety Plan (HASP). Actions and requirements to protect the health and safety of onsite workers from airborne contaminants are addressed in the HASP.

This CAMP provides for real-time air monitoring of particulates at the downwind perimeter of each designated work area when remediation-related ground-intrusive activities are implemented at the Site, such as excavation or drilling. The CAMP was developed from the New York State Department of Health (NYSDOH) Generic CAMP provided in the DER-10 Technical Guidance for Site Investigation and Remediation. This CAMP provides a measure of protection for the downwind community of potential receptors (including residences, businesses, and personnel not directly involved with work activities) from potential airborne contaminant releases as a direct result ground intrusive activities. Contractors should employ Best Management Practices (BMP) and common-sense measures to minimize dust and odors around work areas.

Analytical results of previous subsurface investigations indicated concentrations of organic compounds (VOC) above New York State Department of Environmental Conservation (NYSDEC) unrestricted use soil cleanup objectives (SCO) in samples collected during the Remedial Investigation and subsequent supplemental sampling events. As such, particulate and VOC monitoring are warranted and will be conducted.

2.0 PARTICULATE MONITORING

Particulates will be monitored during remediation-related ground intrusive activities within the work zone and at the upwind and downwind perimeter of the work zone. Particulate monitoring must use real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level.

As outlined in NYSDEC DER-10 Appendix 1B: Fugitive Dust & Particulate Monitoring, the monitoring equipment must meet, at a minimum, the following performance standards:

- (a) Objects to be measured: Dust, mists, or aerosols.
- (b) Measurement Ranges: 0.001 to 400 mg/m³ (1 to 400,000 :ug/m³).
- (c) Precision (2-sigma) at constant temperature: +/- 10 µg/m³ for one second averaging; and +/- 1.5 g/m³ for sixty second averaging.
- (d) Accuracy: +/- 5% of reading +/- precision (Referred to gravimetric calibration with SAE fine test dust (mmd = 2 to 3 mm, sg= 2.5, as aerosolized).
- (e) Resolution: 0.1% of reading or 1 g/m³, whichever is larger.
- (f) Particle Size Range of Maximum Response: 0.1-10.
- (g) Total Number of Data Points in Memory: 10,000.
- (h) Logged Data: Each data point with average concentration, time/date and data point number.
- (i) Run Summary: overall average, maximum concentrations, time/date of maximum, total number of logged points, start time/date, total elapsed time (run duration), STEL concentration and time/date occurrence, averaging (logging) period, calibration factor, and tag number.
- (j) Alarm Averaging Time (user selectable): real-time (1-60 seconds) or STEL (15 minutes), alarms required.
- (k) Operating Time: 48 hours (fully charged NiCd battery); continuously with charger.
- (l) Operating Temperature: -10 to 50°C (14 to 122°F).
- (m) Particulate levels will be monitored upwind and immediately downwind at the working site and integrated over a period not to exceed 15 minutes

The equipment will be equipped with audible and visual alarms to indicate exceedance of the action level of 150 µg/m³ (15 minutes average). In addition, fugitive dust migration will be visually assessed during all work activities. Calibration will be in accordance with the instrument manufacturer's recommendations.

The upwind monitoring station will be situated upwind of the perimeter of the work zone. Similarly, the downwind sampling station will be directly downwind of the work zone perimeter of the most prominent dust producing activity. The work zone monitoring station will be within the work zone in the breathing zone. The height of the air monitoring stations will be adjusted to the breathing zone.

The 15-minute monitoring interval will provide a real-time assessment of onsite air quality to assure both health and safety. If particulate levels are detected in excess of the Action Level, the upwind background level must be confirmed immediately. If the work zone particulate measurement is greater than 100 µg/m³ above the background level, additional dust suppression techniques must be implemented to reduce the generation of fugitive dust and corrective action taken to reduce offsite contaminant migration. Corrective measures may include increasing the level of personal protection for onsite personnel and implementing additional dust suppression techniques. Should the action level of 150 ug/m³ continue to be exceeded work must stop and DER must be notified. The notification shall include a description of the control measures implemented to prevent further exceedances.

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

The sampling locations will be periodically adjusted to account for observed changes in wind direction.

3.0 VOC MONITORING

As outlined in NYSDEC DER-10, VOCs will be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis, or as otherwise specified, with a photoionization

detector (PID). Upwind concentrations will be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The PID will be calibrated at least daily according to the manufacturer instructions for the contaminant(s) of concern or for an appropriate surrogate. The equipment will be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.
- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, 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 20 feet, is below 5 ppm over background for the 15-minute average.
- If the organic vapor level is sustained above 25 ppm at the perimeter of the work area, activities must be shutdown.
- All 15-minute readings must be recorded and be available for State (NYSDEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded

4.0 FORMS FOR MONITORING AND RESPONSE

Air monitoring will be documented using the air monitoring form provided in Appendix 1. This form is to be completed daily and must be made available for NYSDEC, NYSDOH, and the local Health Department review upon request.

In addition, the CAMP data will be provided to NYSDEC and NYSDOH at least weekly.

Response actions to observed exceedances will be documented using the form provided in Appendix 2. This form must also be made available for NYSDEC, NYSDOH, and the local Health Department review upon request.

In addition, NYSDEC and NYSDOH will be notified of all CAMP exceedances within 24 hours of occurrence.

**TROY BELTING AND SUPPLY COMPANY
70 COHOES ROAD
COLONIE, NEW YORK**

NYSDEC SITE NO: C401067

AIR MONITORING FORM

Name: _____

Weather Conditions: _____

Date: _____

Wind Direction: _____

Time	UPWIND		WORK AREA		DOWNWIND	
	VOC	PM-10	VOC	PM-10	VOC	PM-10
	(ppm)	(mg/m ³)	(ppm)	(mg/m ³)	(ppm)	(mg/m ³)

VOC Monitoring Equipment: _____
 PM-10 Monitoring Equipment: _____

**TROY BELTING AND SUPPLY COMPANY
70 COHOES ROAD
COLONIE, NEW YORK**

NYSDEC SITE NO: C401067

EXCEEDANCES AND ACTIONS TAKEN

Name _____ **Date** _____

Time _____ **Weather Conditions** _____

Location of Exceedance _____ **Wind Direction** _____

Type of Exceedance:

Action Taken:

APPENDIX C

**FUGITIVE EMISSION MANAGEMENT PLAN
(FEMP)**

FUGITIVE EMISSION MANAGEMENT PLAN (FEMP)

**TROY BELTING AND SUPPLY COMPANY
70 COHOES ROAD, COLONIE, NEW YORK
BCP #C401067**

1.0 INTRODUCTION

This Fugitive Emission Management Plan (FEMP) sets forth control methods that will be implemented for remedial activities including the excavation, handling, and loading of impacted soils at the Troy Belting and Supply Company (Troy Belting) site (Site) in the Town of Colonie, Albany County, New York. The FEMP follows guidelines provided in the New York State Department of Environmental Conservation (NYSDEC) DER-10 Technical Guidance for Site Investigation and Remediation and the New York State Department of Health (NYSDOH) Generic Community Air Monitoring Plan (CAMP).

1.1 Site Description & Background

The Site totals approximately 2.4 acres and is located approximately 1.2 miles north of the City of Watervliet on an industrial zoned parcel. This FEMP applies to construction to be performed by a selected remedial contractor to implement a remedial action addressing contaminated soil and groundwater. The Site contains soil and groundwater impacted chlorinated volatile organic compounds (cVOC) at concentrations above NYSDEC Soil Cleanup Objectives and Groundwater Standards from operation of historic degreasing operations using chlorinated solvents.

2.0 SCOPE OF WORK TO COMPLETE SOURCE AREA IRM

The scope of work to complete the Source Area IRM for the Site will include the following tasks:

- Establishing perimeter erosion and sediment controls.
- Excavation and disposal of asphalt pavement.
- Excavation, handling, and loading impacted soil for offsite disposal.
- Importing, handling, and placing excavation backfill.

3.0 POTENTIAL FUGITIVE DUST EMISSION SOURCES AND CONTROL METHODS PLAN

This FEMP will be implemented during excavation, backfill, and handling of soils with potential to generate fugitive dust and odors. Fugitive dust and VOC levels will be monitored in accordance with the site-specific CAMP. Table 1 describes potential dust sources and control methods to be used to suppress dust emissions onsite or offsite.

TABLE 1		
Potential Emission Source	Control Method ^[1]	Frequency of Application ^[2]
Excavation Areas	Pre-moisten area (if dry) before excavating. Apply odor suppressing foam.	As needed. Apply odor suppressing foam at end of each workday.
Stockpile Clean Fill	Moisten stockpile by misting. Cover with plastic sheeting.	As needed. Apply plastic sheeting at end of each workday.
Stockpile Contaminated Soil	Moisten stockpile by misting. Cover with plastic sheeting. Apply odor suppressing foam.	As needed. Apply plastic sheeting at end of each workday.
Paved Roads (on-site and public roads)	Street sweeper.	As needed.
Soil Transport Vehicles.	Properly Tarp Hauling vehicles.	Each vehicle.

^[1] An Inspection Checklist for each Potential Dust Source will be maintained to record the type of control method used, the frequency of application and comments with regards to the method's effectiveness (see Attachment 1).

^[2] The Frequency of Application for those methods that specify a daily application may be increased based on CAMP monitoring results.

APPENDIX D
PROJECT SCHEDULE

Project Schedule
 Troy Belting and Supply Company, 70 Cohoes Road, Colonie, New York
 BCP # C401067

As of November 2019					2020											
	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Task Name																
Interim Remedial Measures (IRM)																
Prepare and Submit Interim Remedial Measures Work Plan	█	█	█													
NYSDEC/NYSDOH Review IRM Work Plan; Receive Agency Comments		█	█													
Revise and Submit Final IRM			█	█	█											
Mail IRM fact sheet to site contact and conduct 45-day public comment period				█	█											
Implement Remedial Measures																
Prepare Bid Documents, Solicit Bids, Select Remediation Contractors					█	█	█	█								
Implement IRM					█	█	█	█								
Perform Post-Remediation Monitoring								█	█	█	█	█	█	█	█	█
Reporting																
Prepare and Submit Draft IRM Construction Completion Report (CCR)										█	█	█	█			
NYSDEC/NYSDOH Review CCR; Receive Agency Comments												█	█			
Revise and Submit Final CCR													█	█		
NYSDEC/NYSDOH Approval of CCR															█	