Christopher O'neill - Troy Belting - IRM Work Plan for Test Pitting and SVI of Commercial Building (STERLING File #2011-31 (Task 710))

From: Catherine Contompasis <Catherine.Contompasis@sterlingenvironmental.com>
To: cxoneill@gw.dec.state.ny.us
Date: 4/18/2014 8:37 AM
Subject: Troy Belting - IRM Work Plan for Test Pitting and SVI of Commercial Building (STERLING File #2011-31 (Task 710))
CC: beverly.commerford@sterlingenvironmental.com; mark.williams@sterlingenvi...
Attachments: NYSDEC_IRM Work Plan for TestPitting & SVI of Commercial Building_ltr.pdf; IRM Work Plan_Test Pitting andSVI of Commercial Building_revApril2014_Final.pdf

Dear Mr. O'Neill,

Please find attached. A hard copy will be hand delivered to you today.

Thank you.

Cathy/Rodney

Catherine J. Contompasis
Administrative Assistant
Sterling Environmental Engineering, P.C.
24 Wade Road
Latham, New York 12110
Telephone: (518) 456-4900
Fax: (518) 456-3532
catherine.contompasis@sterlingenvironmental.com
www.sterlingenvironmental.com

STERLING
Sterling Environmental Engineering, P.C.

April 18, 2014

Mr. Christopher O'Neill, P.E.
NYSDEC Region 4
Office of Environmental Quality
1130 North Westcott Road
Schenectady, New York 12306-2014

Subject: Interim Remedial Measures (IRM) Work Plan for Test Pitting and Soil Vapor Investigation (SVI) of Commercial Building
Troy Belting & Supply Company, Colonie, New York
STERLING File #2011-31 (Task 710)

Dear Mr. O'Neill,

Enclosed please find the final Interim Remedial Measures (IRM) Work Plan for Test Pitting and Soil Vapor Investigation (SVI) of Commercial Building as approved by New York State Department of Environmental Conservation's letter dated April 17, 2014.

Please contact me should you have any questions.

Very truly yours,

STERLING ENVIRONMENTAL ENGINEERING, P.C.

Rodney L. Aldrich

Rodney L. Aldrich, P.E.
Director of Environmental Services
rod@sterlingenvironmental.com

RLA/bc
Email/Hand Delivery
Enclosure

cc: Jason Smith, Troy Belting & Supply Company
David Barcomb, Troy Belting & Supply Company (Email Only)
Ruth Leistensnider, Nixon Peabody, LLP
James Quinn, NYSDEC
Nathan Walz, NYSDOH (Email Only)
Deanna Ripstein, NYSDOH (Email Only)
Richard Ostrov, Esq., NYSDEC (Letter Only)

2011-31/Reports/IRM/NYSDEC_IRM Work Plan for Test Pitting & SVI of Commercial Building_ltr.doc

Sterling Environmental Engineering, P.C.

TROY BELTING AND SUPPLY COMPANY
SITE NO. C401067
70 COHOES ROAD
COLONIE, NY

INTERIM REMEDIAL MEASURES (IRM) WORK PLAN FOR TEST PITTING AND SOIL VAPOR INVESTIGATION (SVI) OF COMMERCIAL BUILDING

Prepared For:

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

Prepared by:

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

March 21, 2014
Revised April 9, 2014

"Serving our clients and the environment since 1993"

TROY BELTING AND SUPPLY COMPANY
SITE NO. C401067
70 COHOES ROAD
COLONIE, NY

INTERIM REMEDIAL MEASURES (IRM) WORK PLAN FOR TEST PITTING AND SOIL VAPOR INVESTIGATION (SVI) OF COMMERCIAL BUILDING

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CERTIFICATION

I, Rodney L. Aldrich, P.E., certify that I am a New York State registered professional engineer and that this Interim Remedial Measures (IRM) Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the Division of Environmental Remediation (DER) Technical Guidance for Site Investigation and Remediation (DER-10) and that all activities will be performed in accordance with the DER-approved work plan and any DER-approved modifications.

Rodney L. Aldrich, P.E.

4/9/2014
Date

1.0 INTRODUCTION AND PURPOSE

This Interim Remedial Measures (IRM) Work Plan was prepared for Troy Belting and Supply Company (Troy Belting), located at 70 Cohoes Road, Town of Colonie, Albany County, New York (Site). The Site has been accepted into the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) and is identified as Site #C401067. The site also has the Tax ID # 20.20-1-4. The property immediately west and northwest of the subject property is another parcel owned by Troy Belting which has the Tax ID # 20.20-1-5.1. Troy-Belting also has a building on this parcel. This parcel is not within the defined Brownfields site. A Site Location Map is provided as Figure 1.

This IRM Work Plan, prepared in accordance with NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation (May 2010), provides a description of the proposed IRMs to be completed to address apparent impacts from the intrusion of volatile organic compounds (VOCs) at the commercial building on the site located at 70 Cohoes Road and to investigate the suspected source area.

Since this IRM Work Plan will be implemented after the 2013-2014 heating season, the soil vapor intrusion sampling data will be evaluated as representing "current" conditions. The sampling results may not represent the "worst-case" conditions typical of the heating season; therefore, additional soil vapor intrusion sampling may be necessary during the next heating season. If the subslab vapor, indoor air, or the two considered simultaneously indicate actions are necessary, such as mitigation or any other actions, Troy Belting may choose to design those actions, obtain approval by the agencies, and implement those actions prior to the next heating season.

2.0 ONGOING SOIL VAPOR INVESTIGATIONS

An investigation into the actual/potential impacts to residential buildings offsite is ongoing and is the subject of an approved IRM Work Plan dated January 17, 2014.

As planned in the IRM Work Plan dated January 17, 2014, sampling has been conducted on residential properties in proximity to the site and results will be available in April 2014.

3.0 SOIL INVESTIGATION/TEST PITTING

A test pit/soil investigation is planned to investigate the suspected source area near SB-14, MW-5, and MW-2 on the north side of the existing onsite building. A test pit will be excavated outside the building near the suspected source area in the approximate location shown on Figure 2. Additional test pits may be installed to determine the extent of the source area.

3.1 Investigation and Sampling Design for Suspected Source Area

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

The initial approach will involve the test pit being excavated until the soil appears to be uncontaminated based on visual, olfactory and PID observations, or until the top of bedrock is reached. All source material

will be excavated to the degree possible. Ultimately, contaminated material above bedrock may not be removed if the contaminated material can be adequately addressed by in-situ techniques.

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

3.2 Interim Remedial Measures (IRMs) Related to Suspected Source Area

If the test pit installation indicates a discrete source area which is conducive to excavation and removal, this IRM program will be implemented. Following source excavation and removal, soil samples of the excavation sidewalls and bottom will be collected in accordance with DER-10 as described above. Excavated material will be characterized for disposal as described above and re-used onsite or transported to an approved disposal facility.

It is important to note that the investigative phase of test pitting excavation/stockpile/removal is not intended to reach the scope of a significant part of the final remedy.

4.0 SOIL VAPOR INTRUSION INVESTIGATION AT ONSITE BUILDING

A Soil Vapor Intrusion (SVI) investigation will be completed for the onsite building to determine whether additional actions are necessary to address vapors. The SVI investigation will follow the Final NYSDOH "Guidance for Evaluating Soil Vapor Intrusion in the State of New York", dated October 2006. Troy Belting will notify all employees to minimize the potential for analytical interferences/influences/impacts, due to freshly-dry cleaned clothing, strong perfumes, and solvents/adhesives, on the very low-level detection limits needed for the SVI sampling program. In addition, Troy Belting will minimize the opening and closing of exterior doors during this sampling event to ensure that the mixing is minimized of outdoor ambient air with the interior air of the onsite building.

4.1 Sampling Design for Onsite Building

Three (3) sub-slab vapor and indoor air sampling locations in the onsite building and one (1) outdoor air sampling location will be installed. The sub-slab vapor sampling locations will be selected to assess whether volatile gases are migrating through soils beneath the slab of the building. The indoor air sampling locations will be selected to determine the ambient air conditions inside the building on the ground floor and will be co-located with the sub-slab vapor sampling locations. The outdoor air sampling location will be selected to determine the ambient air conditions outside and upwind of the building and will be determined based on the wind direction on the day of sampling.

Given the dynamic weather patterns within the Project Area, the property perimeter sampling will be collected at two exterior locations. Following the completion of the indoor air sampling event, the central roof exhaust will also be sampled for TO-15 parameters.

One (1) sub-slab vapor sampling point/indoor air sampling point will be located below the office area and two (2) will be located below the main shop floor (Figure 3). One (1) sub-slab sampling point/indoor air sampling point will be located near the suspected source area within the building near the north wall in the area adjacent to the suspected source area outside the north wall (Figure 3). The remaining sub-slab sampling point/indoor air sampling point will be located towards the center of the shop floor.

Actual locations of the sampling points will be determined based on NYSDEC/NYSDOH and Troy Belting concurrence at the time of a pre-sampling visit (potentially during the building inventory) to

assure sample integrity and address other conflicts, such as the actual shop floor layout and traffic patterns. Wind direction and speed, barometric pressure, humidity, precipitation, and temperature will be recorded continuously during the sampling period.

4.2 Sub-Slab Vapor Sampling

4.2.1 Installation of Sampling Port

At the locations of the sub-slab vapor sampling points discussed above, Sterling Environmental Engineering, P.C. (STERLING) will advance a boring into the floor using a one-half (1/2) inch diameter hammer drill. The locations of the sampling ports will be at least five (5) feet from exterior walls. One-quarter (1/4) inch diameter teflon tubing will be connected to the sampling container and, on the other end, will be advanced to a depth no greater than two (2) inches below the bottom of the slab in the onsite building. The hole will be sealed using a non-volatile, non-shrinking putty to reduce the potential for infiltration of indoor air into the sub-slab during sampling.

4.2.2 Tracer Gas Leak Testing

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

4.2.3 Soil Vapor (Sub-Slab) Air Sampling

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

Following the collection of all sub-slab vapor samples, STERLING will cap and secure the sub-slab vapor sampling points flush with the floor surface, to remain as potential sampling/monitoring points for the future.

4.3 Indoor and Ambient Air Sampling

STERLING will collect three (3) indoor air samples in the onsite building. The location of indoor air samples will be collected in areas that will have minimal influence by ambient air (Figure 3). For example, the operation of vents such as the manual exhaust fan, located above IS-SV-2, should be limited to allow for worst-case conditions during the sampling event. Additionally, at least two (2) outdoor air samples will be collected during each sampling event over an 8-hour period concurrently with the sub-

slab vapor sampling event. Samples will be collected in the breathing space, approximately three (3) to five (5) feet above the floor. Prior to collecting the indoor air samples, STERLING will perform a detailed inventory of the building, and complete the "Indoor Air Quality Questionnaire and Building Inventory" provided as Appendix B. The inventory will include screening of volatile gases using a PID with an 11.7 eV lamp. The purpose of the inventory is to identify potential sources of volatile gases in the building other than intrusion of sub-slab soil vapor. The outdoor air samples will be collected from an upwind location with respect to the onsite building.

4.4 Sample Analysis and Reporting

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

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

The reporting limits for the sub-slab vapor sample will be 1 $\mu g/m^3$.

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

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

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

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

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

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

4.5 QA/QC Plan

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

- One (1) Duplicate sample will be collected at one of the sub-slab soil vapor sample locations.

5.0 INTERIM REMEDIAL MEASURES FOR ONSITE BUILDING

If monitoring indicates mitigation is appropriate pursuant to the October 2006 Soil Vapor Intrusion Guidance issued by the NYSDOH, appropriate mitigation measures will be implemented at 70 Cohoes Road. The Soil Vapor Intrusion Guidance states mitigation for buildings with concrete slab floors at which soil vapor intrusion is occurring should consist of an active sub-slab depressurization (SSD) system.

Any design of such systems requires further investigations and facility design prior to any structure receiving a mitigation system. Such investigations and design must include:

- Assessment of Existing HVAC and Foundation Evaluation
- Evaluation of Options for Mitigation
- Design Calculations and System Layout
- Plans/Specifications
- Operation & Maintenance Plan for System
- Implementation Schedule

The selected IRM mitigation system will be installed upon NYSDEC and NYSDOH approval, obtaining permission of the owners, and obtaining requisite local approvals.

6.0 POST-MITIGATION TESTING AFTER INTERIM REMEDIAL MEASURES

Once mitigation systems are designed and installed, the effectiveness of the systems will be confirmed by post-mitigation indoor air sampling using the same methods and procedures provided in Section 4.0.

7.0 CONSTRUCTION COMPLETION REPORT AND INTERIM SITE MANAGEMENT PLAN

If a Sub-Slab Depressurization (SSD) system is deemed to be necessary, once the SSD system's effectiveness is demonstrated satisfactorily, a Construction Completion Report (CCR) and Interim Site Management Plan (Interim SMP) will be developed. The CCR will provide, in detail, the design and installation activities required for the SSD system, including "As-Built" drawings. The Interim SMP will provide, in detail, the necessary operation, maintenance, and monitoring activities for the operating SSD system.

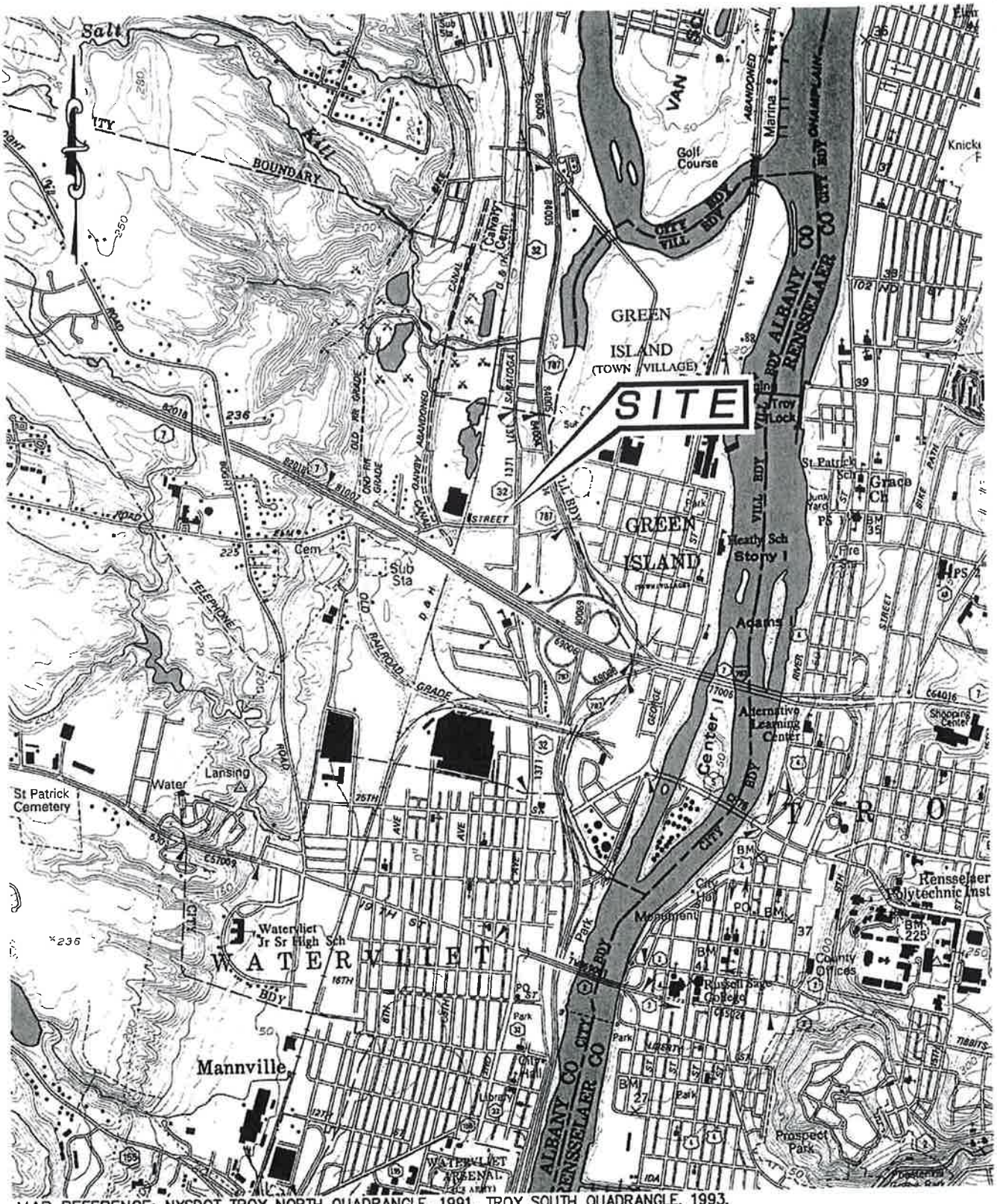
8.0 PROPOSED IRM SCHEDULE

The tasks required to complete the IRM are summarized below:

Tasks	Estimated Schedule
Submit Proposed IRM Work Plan for NYSDEC Review	March 21, 2014
Address NYSDEC Review Comments, Resubmit IRM Work Plan for Approval	April 9, 2014
Site Visit	April 17, 2014
Implement IRM Test Pitting and Air Sampling at Site	April 23, 2014
Submit IRM Test Pitting and Air Sampling Report	May 23, 2014
Submit Mitigation Design (if applicable)	May 30, 2014

2011-31/Reports/IRM Work Plan_Test Pitting and SVI of Commercial Building_txt.docx

FIGURES



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

STERLING

Sterling Environmental Engineering, P.C.

24 Wade Road ♦ Latham, New York 12110

SITE LOCATION MAP

TROY BELTING & SUPPLY CO.

70 COHOES ROAD

TOWN OF COLONIE — ALBANY CO., N.Y.

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

LEGEND:

PROPOSED TEST PIT LOCATION

MW-1 APPROXIMATE MONITORING WELL

0 10 20 40

(IN FEET)

1 inch = 20 ft.

MAP REFERENCES:

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

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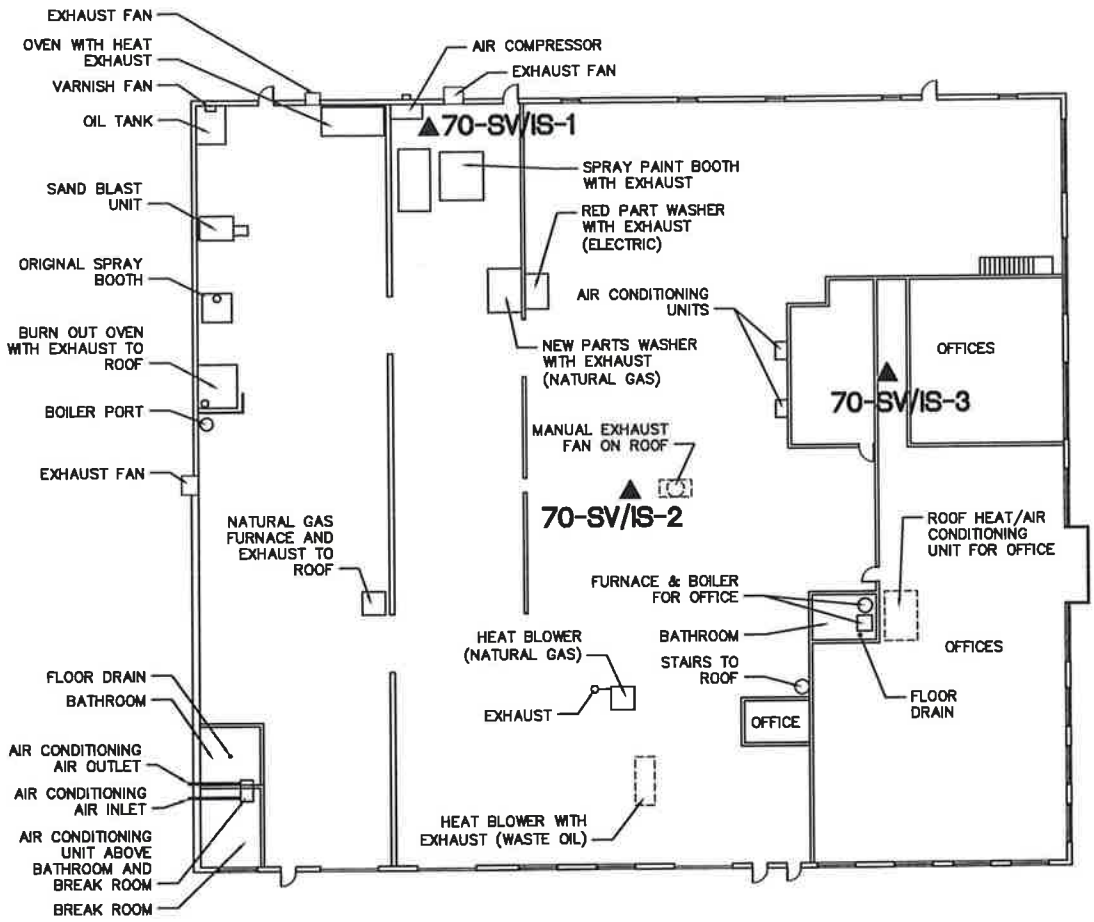
PROPOSED TEST PIT LOCATION

TROY BELTING & SUPPLY CO.

70 COHOES ROAD

TOWN OF COLONIE ALBANY CO., N.Y.

PROJ. No.: 2011-31	DATE: 3-19-14	SCALE: 1" = 20'	DWG. NO. 2011-31031	FIGURE 2



LEGEND:

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

0 20 40 80

(IN FEET)

1 inch = 40 ft.

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24 Wade Road ♦ Latham, New York 12110

PROPOSED SOIL VAPOR SAMPLING POINTS

TROY BELTING & SUPPLY CO.

70 COHOES ROAD

TOWN OF COLONIE ALBANY CO., N.Y.

PROJ. No.: 2011-31	DATE: 3/19/14	SCALE: 1" = 40'	DWG. NO. 2011-31032	FIGURE 3

APPENDIX A

SOIL VAPOR SAMPLE COLLECTION FORM

RECORD OF VAPOR SAMPLING

Date_____ **Project Number**_____

Project Name_____ **Field Personnel**_____

Probe ID_____ **Probe Depth**_____

Drilling Contractor_____ **Weather**_____

HELIUM TRACER TEST (Shroud)

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

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

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

VAPOR PURGING

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

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

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

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

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

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

H – Length of vapor point (inches)

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

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

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

VAPOR SAMPLING

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

Start Time_____ **Initial Vacuum Pressure in Sample Canister**_____ In Hg

Stop Time_____ **Final Vacuum Pressure in Sample Canister**_____ In Hg

Sample I.D._____ **Laboratory**_____

APPENDIX B

INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY

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

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

Preparer's Name _____ Date/Time Prepared _____

Preparer's Affiliation _____ Phone No._____

Purpose of Investigation_____

1. OCCUPANT:

Interviewed: Y / N

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

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

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

Interviewed: Y / N

Last Name: _____First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

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

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

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

If multiple units, how many? _____

If the property is commercial, type?

Business Type(s) _____

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

Other characteristics:

Number of floors_____ Building age_____

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

4. AIRFLOW

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

Airflow between floors

_____

_____

_____

Airflow near source

_____

_____

_____

Outdoor air infiltration

_____

_____

_____

Infiltration into air ducts

_____

_____

_____

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

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

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

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

_____

_____

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

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

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

The primary type of fuel used is:

Natural Gas	Fuel Oil	Kerosene
Electric	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by: _____

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

Are there air distribution ducts present? Y / N

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

_____

_____

_____

_____

7. OCCUPANCY

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

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

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? Y / N

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

If yes, what types of solvents are used? _____

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

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

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

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

9. WATER AND SEWAGE

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

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: _____

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

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

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

11. FLOOR PLANS

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

Basement:

First Floor:

12. OUTDOOR PLOT

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

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

13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: _____

List specific products found in the buildinge that has the potential to affect indoor air quality.

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

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