



DAY ENGINEERING, P.C.

ENVIRONMENTAL ENGINEERING CONSULTANTS
AN AFFILIATE OF DAY ENVIRONMENTAL, INC.

May 29, 2018

Ms. Danielle Miles, EIT
Division of Environmental Remediation, Region 8
New York State Department of Environmental Conservation
6274 East Avon-Lima Road
Avon, New York 14414-9519

RE: NYSDEC Site #B00131 (Frederick Property)
147 State Street, Manchester New York
Investigation Work Plan, April 2018

Dear Ms. Miles:

Attached is one copy of the final Investigation Work Plan (IWP) dated April 2018 for the above-referenced property (Site). Also included is a copy of a letter dated May 21, 2018 from the New York State Department of Environmental Conservation (the Department) to the Village of Manchester, and the email correspondence between DAY and the Department that clarifies several details regarding the Departments' modifications.

If there are questions, please contact this office.

Very truly yours,
Day Engineering, P.C.

Raymond L. Kampff
Principal

Enclosure

cc.: Steven Berninger (NYSDOH)
Nancy W. Johnsen (Village of Manchester)
Rita Gurewitch (Village of Manchester)

CAH1165/5474s-18

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Region 8
6274 East Avon-Lima Road, Avon, NY 14414-9516
P: (585) 226-5353 | F: (585) 226-8139
www.dec.ny.gov

May 21, 2018

Mayor Nancy W. Johnsen
Village of Manchester
P.O. Box 188
Manchester, NY 14504

**Re: Frederick Property (#B00131)
147 State Street, Village of Manchester
Investigation Work Plan, April 2018**

Dear Mayor Johnsen:

The New York State Departments of Environmental Conservation (NYSDEC) and Health (NYSDOH; collectively referred to as the Departments) have reviewed the *Investigation Work Plan* (IWP) dated April 2018 and prepared by Day Engineering, P.C. for the Frederick Property located in the Village of Manchester, Ontario County. In accordance with 6 NYCRR 375-1.6, the Departments have determined that the IWP, with the following modifications, substantially addresses the requirements of the Environmental Restoration Program:

1. According to the Record of Decision and Easement, the applicable Soil Cleanup Objectives (SCOs) for the site are restricted residential.
2. Appendix B: NYSDOH Generic Community Air Monitoring Plan (CAMP) notes that "special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures." Therefore, in addition to the monitoring associated with the generic CAMP, please include the following provisions:
 - a. Continuous air monitoring in the direction of the residents regardless of wind direction;
 - b. Planned work should be implemented during hours when building occupancy is at a minimum;
 - c. Continuous monitoring must reflect any exposed individuals and/or locations of ventilation intakes, window/door openings or conduits;
 - d. Background readings should be taken prior to planned work commencement and if total particulate concentrations next to intake vents, windows, doors, etc. exceed 150 mcg/m³, work activities should be suspended until controls are implemented and successful in reducing total particulate concentrations.
3. Section 2.2, page 5: If grossly contaminated media is not identified in test borings TB-201 through TB-205, but is observed at MW-A, additional borings will be advanced between the test borings, TB-201 through TB-205, and MW-A (i.e. 5 to 10 feet away from SB-3) to further delineate the grossly contaminated material.
4. A meeting will be scheduled once field work is completed and analytical results are received to discuss the next actions and reporting.

With the understanding that the modified Work Plan is agreed to, the Investigation Work Plan is hereby approved. By **June 5, 2018** and before field work begins, please sign the IWP and attach a copy of this letter to the Final IWP. Please distribute the IWP as follows:

- Danielle Miles (NYSDEC – Avon, 1 bound hard copy); and,
- Steven Berninger (NYSDOH – Albany, electronic file).

Please notify the Departments at least 7 days in advance to the start of field activities. If you have questions or concerns, please contact me at 585-226-5349.

Sincerely,



Danielle Miles, EIT
Assistant Engineer

ec.: Rita Gurewitch, Village of Manchester
Charles Hampton, Day Environmental
Ray Kampff, Day Environmental
Bernette Schilling, NYSDEC

Frank Sowers, NYSDEC
Steven Berninger, NYSDOH
Justin Deming, NYSDOH
Dusty Tinsley, NYSDEC

From: Miles, Danielle J (DEC) <Danielle.Miles@dec.ny.gov>
Sent: Tuesday, May 29, 2018 9:31 AM
To: Charles Hampton
Cc: rjg@rochester.rr.com; Schilling, Bernette (DEC); Sowers, Frank (DEC); Tinsley, Dusty R (DEC); Berninger, Steven G (HEALTH); Deming, Justin H (HEALTH); Ray Kampff; villman@rochester.rr.com; cjohnsen@rochester.rr.com
Subject: RE: Frederick Property B00131 - Investigation Work Plan

Good morning Charles,

In regards to your questions, the Departments still want an air monitor between work and the residence as an extra precaution due to the proximity of the structure to the site boundary line. In addition, if grossly contaminated media is not identified in the proposed test borings TB-201 through TB-205, samples from the new closer test borings would be submitted for testing.

Please let me know if you have any more questions.

Regards,

Danielle Miles

Assistant Engineer, Division of Environmental Remediation
New York State Department of Environmental Conservation
6274 East Avon-Lima Rd, Avon, NY 14414
P: (585) 226-5349 | F: (585) 226-8139 | danielle.miles@dec.ny.gov

www.dec.ny.gov |  | 

From: Charles Hampton [mailto:champton@daymail.net]
Sent: Wednesday, May 23, 2018 12:13 PM
To: Miles, Danielle J (DEC) <Danielle.Miles@dec.ny.gov>
Cc: rjg@rochester.rr.com; Schilling, Bernette (DEC) <bernette.schilling@dec.ny.gov>; Sowers, Frank (DEC) <frank.sowers@dec.ny.gov>; Tinsley, Dusty R (DEC) <Dusty.Tinsley@dec.ny.gov>; Berninger, Steven G (HEALTH) <Steven.Berninger@health.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Ray Kampff <RKampff@daymail.net>; villman@rochester.rr.com; cjohnsen@rochester.rr.com
Subject: RE: Frederick Property B00131 - Investigation Work Plan

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Danielle,

DAY requests clarification on several of the modifications to the Investigation Work Plan (IWP) for the above referenced site, that were included in the Department's letter to the Village of Manchester dated May 21, 2018. Specifically:

- 2. Appendix B: NYSDOH Generic Community Air Monitoring Plan (CAMP) notes that special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures." Therefore, in addition to the monitoring associated with the generic CAMP, please include the following provisions:**
- a. Continuous air monitoring in the direction of the residents regardless of wind direction;**
 - b. Planned work should be implemented during hours when building occupancy is at a minimum;**

c. Continuous monitoring must reflect any exposed individuals and/or locations of ventilation intakes, window/door openings or conduits;

d. Background readings should be taken prior to planned work commencement and if total particulate concentrations next to intake vents, windows, doors, etc. exceed 150 mcg/m³, work activities should be suspended until controls are implemented and successful in reducing total particulate concentrations.

Since the work proposed in the IWP does not include test borings within 20 feet of potentially exposed individuals or structures (i.e., the nearest proposed boring TB-202 is located approximately 40 feet from the nearest structure), can the Department please confirm that the above 'special requirements' do not apply to locations TB-201 through TB-205 and MW-A (refer to Figure 2 in the IWP). However, if additional test borings are required that are within 20 feet of potentially exposed individuals or structures the special conditions will be implemented.

3. Section 2.2, page 5: If grossly contaminated media is not identified in test borings TB-201 through TB-205, but is observed at MW-A, additional borings will be advanced between the test borings, TB-201 through TB-205, and MW-A (i.e. 5 to 10 feet away from SB-3) to further delineate the grossly contaminated material.

If grossly contaminated media is not identified in test borings TB-201 through TB-205 but observed in MW-A, additional test borings will be advanced within 5 to 10 feet of MW-A to evaluate the extent of the grossly contaminated material. It is assumed that samples from TB-201 through TB-205 would not be submitted for analytical laboratory testing, rather samples from the 'new' (closer) test borings would be submitted for testing. Can you confirm that this approach is acceptable, or will the Department also require testing of samples from test borings TB-201 through TB-205?

Thanks,

Charles A. Hampton
Day Environmental, Inc.
1563 Lyell Avenue
Rochester, New York 14606
Phone: (585) 454-0210 ext:125
Fax: (585) 454-0825

From: Miles, Danielle J (DEC) [<mailto:Danielle.Miles@dec.ny.gov>]

Sent: Monday, May 21, 2018 3:13 PM

To: villman@rochester.rr.com; cjohnsen@rochester.rr.com

Cc: rjg@rochester.rr.com; Schilling, Bernette (DEC); Sowers, Frank (DEC); Tinsley, Dusty R (DEC); Berninger, Steven G (HEALTH); Deming, Justin H (HEALTH); Charles Hampton; Ray Kampff

Subject: [SPAM] Frederick Property B00131 - Investigation Work Plan

Importance: Low

Good afternoon,

This e-mail copies you on correspondence from the New York State Department of Environmental Conservation, Division of Environmental Remediation. An electronic file is attached. A hard copy version will follow in the mail. All those on the cc list will only receive this electronic copy.

Please contact Danielle Miles at (585) 226-5349 if you experience problems with this transmission.

Regards,

Danielle Miles

Assistant Engineer, Division of Environmental Remediation
New York State Department of Environmental Conservation

6274 East Avon-Lima Rd, Avon, NY 14414

P: (585) 226-5349 | F: (585) 226-8139 | danielle.miles@dec.ny.gov

**INVESTIGATION WORK PLAN
147 STATE STREET
MANCHESTER, NEW YORK

NYSDEC ERP SITE #B00131**

Prepared for: Village of Manchester
Nancy W. Johansen - Mayor
Manchester, New York

Prepared by: Day Engineering, P. C.
1563 Lyell Avenue
Rochester, New York

Project No.: 5474S-18

Date: April 2018

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FIGURES

Figure 1: Project Locus Map

Figure 2: Existing and Proposed Test Location Plan

ATTACHMENTS

Attachment A – Updated 2017 Site Specific Health and Safety Plan

INVESTIGATION WORK PLAN

**147 STATE STREET
MANCHESTER, NEW YORK**

NYSDEC ERP SITE #B00131

I Raymond L. Kampff, certify that I am currently a Qualified Environmental Professional as defined in 6 NYCRR Part 375 and that this Investigation Work Plan was prepared in accordance with applicable statutes and regulations and is in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).



Raymond L. Kampff
Day Engineering, P.C.

1.0 INTRODUCTION

This Investigation Work Plan (IWP), prepared by Day Engineering, P. C. (DAY) on behalf of the Village of Manchester (Village), describes the proposed activities to investigate residual petroleum-impacted subsurface media at 147 Street, Manchester, New York (Site) that was identified during supplemental work conducted at the Site in 2017. The Site is a NYSDEC Environmental Restoration Program (ERP) site (ERP Site #B00131), and it is also identified by the NYSDEC as the “Frederick Property Site”. The location of the Site is shown on a Project Locus Map included as Figure 1.

1.1 Background

As indicted on the NYSDEC’s ERP website, *“The Frederick Property Site is located in a mixed residential/light industrial area of the Village of Manchester, Ontario County. The site contains a former garage building with a footprint of 1,200 square feet. The surrounding parcels include a combination of commercial, industrial and residential uses. The site was previously operated as a gasoline filling station and automobile repair facility from approximately 1930 until the 1960s. The Village of Manchester obtained ownership of the property in 1967 and has used it for general storage purposes. The site investigation identified limited petroleum contamination in the vicinity of former underground storage tanks and filling areas. Groundwater is also contaminated by chlorinated solvent contamination at low levels from an off-site source which has not yet been identified. A Record of Decision (ROD) issued in March 2004 called for building demolition, removal of a dry well, subsurface hydraulic lift units, and contaminated soils, as well as long-term O&M and institutional controls in the form of an environmental easement. The Department approved a remedial design for building demolition and the removal of the dry well, lift units, and contaminated soils. The demolition was completed in 2005 and subsurface removal work was completed in 2006. The Site Management Plan (SMP) was approved and the environmental easement was filed in 2009. The Final Engineering Report (FER) is pending approval prior to the issuance of the Certificate of Completion.”*

At the request of the NYSDEC, a supplemental work plan was prepared on behalf of the Village for the purpose of addressing data gaps in the site record, pursuant to finalizing the FER. The work plan, titled *2017 Supplemental Work Plan, Fredrick Property Environmental Restoration Project, 147 State Street, NYSDEC Site B00131-8*, dated February 2017 (Revised May2017) (herein referred to as the supplemental work plan).

The field work identified in the supplemental work plan was completed at the Site between August 30, 2017 and September 5, 2017, and it consisted of the advancement of seven test borings (i.e., designated SB-1 through SB-7) using rotary drilling methods, and the testing of select soil samples collected from the test borings. The approximate locations of SB-1 through SB-7 are depicted on the Site Plan included as Figure 2.

The supplemental field work was completed by EmpireGeo Services, Inc. of Hamburg, New York (EmpireGeo), and the findings of the work completed are documented in a report prepared by EmpireGeo titled, *Fredrick Property Environmental Restoration Project NYSDEC Site B00131-8, Manchester, New York*, dated October 3, 2017. According to the EmpireGeo report, test borings

SB-1, SB-2, SB-3, SB-5, SB-6 and SB-7 were advanced to equipment refusal depths between 5.9 feet (ft.) below ground surface (bgs) (i.e., SB-6) and 12.1 ft. bgs (i.e., SB-3); and that test boring SB-4 was terminated at 10 ft. bgs. During the advancement of test borings SB-2 and SB-3, apparent environmental impacts [i.e., staining, gasoline-type odors, elevated photoionization detector (PID) readings over soil samples screened, etc.] were noted in samples of apparent native soil that were collected from depths between 8 ft. and 10 ft. bgs in test boring SB-2 and depths between 6 ft. and 12 ft. bgs in test boring SB-3. In addition, free petroleum product was recovered from standing groundwater within the open borehole of test boring SB-3 at the time of drilling. The apparent environmental impacts were more significant in the samples collected from test boring SB-3 than the samples collected from test boring SB-2. One soil sample collected from test boring SB-3 was tested by an analytical laboratory, and this sample contained concentrations of ethylbenzene, xylenes and isopropylbenzene which exceed Soil Cleanup Levels (refer to Section 1.3), but the detected concentrations were below applicable restricted Commercial Use Soil Cleanup Objectives. The sample from SB-3 that was tested contained a total tentatively identified volatile organic compound (VOC) concentration of 306 parts per million (ppm). [Note: Based on a review of historic documents, the reported location of soil boring SB-3 is between the gasoline underground storage tanks (USTs) and the gasoline pump island that were formerly located at the Site.]

On November 16, 2017, the NYSDEC requested that the Village prepare and submit a work plan pursuant to completing an investigation at the Site for the purposes of defining the extent of the ‘grossly contaminated media’ identified in test boring SB-3 and to determine whether additional remediation and/or monitoring is warranted. As defined in DER-10 1.3(b) (23), grossly contaminated media is generally described as soil, backfill material or groundwater which contains sources or substantial quantities of mobile contamination in the form of free petroleum product that is identifiable either visually, through strong odor, by elevated contaminant vapor levels or is otherwise readily detectable without laboratory analysis.

1.2 Objective

The objective of the scope of work outlined herein is to investigate overburden subsurface materials in proximity to the location of test boring SB-3, in order to delineate the extent of the grossly contaminated media (i.e., soil, backfill and groundwater) that remain at the Site in the vicinity this test boring.

1.3 Applicable Project SCGs

Applicable standards, criteria and guidance (SCGs) that may be used for this project are outlined below:

- Appropriate SCOs and other guidance as set forth in 6 NYCRR Part 375-4 Environmental Restoration Program dated December 14, 2006.
- Appropriate Soil Cleanup Levels (SCL) and other guidance as set forth in NYSDEC Policy CP-51/Soil Cleanup Guidance dated October 21, 2010.

- Guidelines referenced in the NYSDEC document titled “DER-10 Technical Guidance for Site Investigation and Remediation”, May 2010.
- Appropriate water quality standards and guidance values (WQS/GV) as set forth in NYSDEC Division of Water Technical and Operational Guidance Series (1.1.1) document titled “Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations”, June 1998 and amended by a January 1999 Errata Sheet, an April 2000 Addendum and a June 2004 Addendum.

1.4 Health and Safety Plan

The field work described herein will be completed in accordance with the “Site Specific Health and Safety Plan, Fredrick Site, Manchester, NY” (HASP) dated February 2017 (revised April 2018). A copy of this document is included as Appendix A. In addition, the Community Air Monitoring Program (CAMP) as presented in Appendix 1A of the NYSDEC DER-10 guidance document, and included in Appendix B of the 2017 supplemental work plan, will be implemented during intrusive activities conducted as part of the proposed investigation work.

2.0 SCOPE OF WORK

The following section describes the scope of work that will be implemented to fulfill the objective of the study described in Section 1.2.

2.1 Test Borings/Monitoring Well Installation

The Village will retain Nothnagle Drilling, Inc. to advance six test borings at the Site using a rotary drill-rig. The tentative locations of these test borings (designated as TB-201 through TB-205 and MW-A) are shown on Figure 2. These locations may be modified based on findings at the time of drilling; and the location of monitoring well MW-A could vary depending on the findings of the work completed, so as to install the monitoring well to assess ‘worst case’ conditions. Based on historic subsurface information, it is anticipated that each test boring will be drilled through approximately 6 to 12 feet of overburden materials before encountering equipment refusal (i.e., apparent top of bedrock).

Prior to conducting intrusive work, a utility stakeout will be completed for the Site. During drilling, continuous soil samples will be collected in consecutive intervals using acetate liners via direct push methods ahead of the hollow stem augers. The soil samples collected will be observed and documented in order to develop a stratigraphic description of the subsurface conditions encountered, including evidence of suspect contamination (e.g., staining, unusual odors, etc.). Portions of each recovered soil sample will be screened with a PID for field evidence of VOC impact. In addition, portions of each recovered soil sample will be placed in a closed container, the container and contents will be agitated for at least 30 seconds then allowed to equilibrate, and subsequently the headspace in the container will be screened with a PID for evidence of VOC impact. A test boring log summarizing the subsurface conditions encountered (e.g., stratigraphic conditions, evidence of contamination, PID readings, etc.) will be prepared. Select soil samples, representing the “worst case” evidence of environmental impact from each location, will be retained for testing by an analytical laboratory. Refer to Section 2.4 for a summary of the proposed laboratory testing.

Re-usable drilling equipment will be decontaminated prior to use at each location and decontamination water will be placed in New York State Department of Transportation (NYSDOT) approved 55-gallon drums and left on Site for pending disposal by the Village and/or DAY. Drill cuttings exhibiting evidence of petroleum impact (i.e., staining, petroleum type odors, elevated PID readings, free petroleum product, etc.) will be segregated and placed in separate NYSDOT approved 55-gallon drums for future characterization and disposal. Drill cuttings that do not exhibit evidence of petroleum impact will be used to backfill the respective test boring from which it was removed, and the remainder of the annulus will be backfilled to the level of the ground surface with a Portland cement/bentonite grout using tremie methods.

Depending upon the conditions encountered in subsurface media, the advancement of additional test borings may be warranted in order to delineate the extent of impact. Specifically, if grossly contaminated media is encountered in one or more test borings TB-201 through TB-205; additional test borings will be advanced to assess the extent of impact. It is assumed that these test borings will be advanced at approximately 15 ft. to 20 ft. away from the impacted test boring, until grossly contaminated media is no longer encountered in the subsurface. The methods for advancement,

sampling and backfill of these additional test borings will be as described in this section. In the event grossly contaminated media is not identified in test borings TB-201 through TB-205 (i.e., positioned distances of about 15 ft. to 20 ft. from SB-3), no additional test borings are proposed.

Test boring MW-A will be converted to a groundwater monitoring well, which will be constructed with a 2-inch inner diameter Schedule 40 polyvinyl chloride (PVC) screen attached to solid riser piping of the same material. It is anticipated that the well screen will be placed to intercept the top of the uppermost water-bearing zone as determined at the time of drilling. The annulus around the well screen and at least one foot above the well screen will be backfilled with a sand pack. A minimum two-foot thick bentonite seal will be placed in the annulus above the sand pack. The remaining annulus will be backfilled with a Portland cement/bentonite grout. A J-plug or cap will be installed on the top of the PVC riser, and a flush-mount curb box with a concrete pad will be installed over each well at the ground surface. Drill cuttings from Test Boring MW-A will be placed in NYSDOT approved 55-gallon drums for future characterization and disposal.

The location of each test boring and the groundwater monitoring well will be surveyed using a hand-held GPS unit or tape measured relative to existing Site features. Also, the top of the groundwater monitoring well casing will be surveyed relative to the existing monitoring wells.

2.3 Monitoring Well Development and Groundwater Sampling

Groundwater monitoring well MW-A will be developed prior to sampling. Well development will be done a minimum of 48 hours after installation.

Prior to development, the groundwater monitoring well will be evaluated for the presence of free petroleum product using an oil/water interface probe. Free petroleum product (if detected) will be removed to the extent practicable and containerized for subsequent disposal in accordance with applicable regulations. During development, the purge water will also be observed for the presence of free petroleum product.

Well development will be performed utilizing either a new disposable bailer with dedicated cord, or a pump and dedicated tubing. No fluids will be added to the well during development. The well development procedure will be as follows:

- Obtain a pre-development static water level reading.
- Calculate the water/sediment volume in the well.
- Obtain a groundwater sample for field analysis using a bailer.
- Select a development method and set up equipment depending on method used.
- Begin pumping or bailing.
- Obtain initial field water quality measurements (e.g., conductance, temperature, and PID readings). Record water quantities and rates removed.
- Obtain additional field water quality measurements as water removal progresses.
- Stop development when water quality criteria are met.
- Obtain post-development water level readings.
- Document development procedures, measurements, quantities, etc.

Development will continue until the following criteria are achieved:

- pH, specific conductance, turbidity, and temperature are relatively stable for three consecutive measurements and/or,
- a minimum of three well volumes has been removed.

The results of the well development activities will be documented on a well development log. Groundwater purged from the monitoring well during development will be placed in a NYSDOT-approved 55-gallon drum and left on-site for pending disposal by the Village or DAY.

At least five days following development, DAY will obtain water level measurements and check for the presence of free petroleum product in groundwater monitoring well MW-A and the existing overburden groundwater monitoring wells (i.e., MW-1 through MW-7) using an oil/water interface probe. Free petroleum product detected will be removed to the extent practicable, and, a sample of the free product will be retained for testing by an analytical laboratory (i.e., if a sufficient quantity of free product is obtained). Prior to sampling, MW-A will be purged of three well volumes, or until dry, and allowed to recover and a sample will be collected for testing by an analytical laboratory (refer to Section 2.4). Water quality measurements will also be collected during the sampling. Water purged from the groundwater monitoring well MW-A will be placed in a NYSDOT-approved 55-gallon drum and left on-site for pending disposal by the Village or DAY. [Note: A groundwater sample may not be collected from MW-A depending on the amount of free product encountered. In the event ¼-inch, or more, of free product is detected a groundwater sample will not be collected for testing.]

The surveyed elevations and static water level measurements from the wells will be used to calculate groundwater elevations. A potentiometric groundwater contour map will be developed using the groundwater elevation data for the eight overburden groundwater monitoring wells.

2.4 Analytical Laboratory Testing

Samples of soil/fill, and groundwater will be submitted to euorfins Spectrum Analytical Laboratories (eurofins Spectrum) for analysis of selected parameters. Eurofins Spectrum is NYSDOH Environmental Laboratory Approval Program (ELAP)-certified. The following sections summarize the proposed environmental analytical laboratory testing program.

Soil/Fill

One sample from each test boring that exhibits the greatest apparent field evidence of petroleum-related impact (e.g., elevated PID readings above ambient air background conditions, staining, odors, etc.) will be selected for analytical laboratory testing. If evidence of impact is not encountered at a test boring, one sample collected from immediately above the water table, immediately above bedrock, or near the bottom of the test boring may be submitted for analytical laboratory testing. [Note: A soil/fill sample from test boring MW-A will not be submitted for testing. In addition, if grossly contaminated media is identified in any of the initial test borings (i.e., TB-201 through TB-205), and an additional test boring is required to delineate the extent of

impact a sample will not be collected for analytical laboratory testing. Rather the sample will be collected from the test boring advanced to assess the extent of impact.]

This Work Plan assumes that the following number of soil/fill samples will be relinquished for testing of the parameters listed below using a ten-business day laboratory turnaround time:

- Five soil/fill samples for United States Environmental Protection Agency (USEPA) Target Compound List (TCL) and New York State Department of Environmental Conservation (NYSDEC) Commissioner's Policy (CP)-51 list VOCs plus tentatively identified compounds (TICs) using USEPA Method 8260;
- Five soil/fill samples for USEPA TCL and NYSDEC CP-51 list semi-volatile organic compounds (SVOCs) plus TICs using USEPA Method 8270;

Groundwater

A groundwater sample from groundwater monitoring well MW-A will be relinquished for testing of the parameters listed below using a ten-business day laboratory turnaround time:

- USEPA TCL and NYSDEC CP-51 list VOCs plus TICs using USEPA Method 8260; and
- USEPA TCL and NYSDEC CP-51 list SVOCs plus TICs using USEPA Method 8270.

Free Petroleum Product

If encountered at the time of groundwater sample collection, a sample of free petroleum product collected from groundwater monitoring well MW-A will be relinquished for testing of the parameters listed below using a ten-business day laboratory turnaround time:

- Total petroleum hydrocarbons by gas chromatography using modified USEPA Method 8100.

Quality Control Samples

A trip blank will accompany soil samples from the test borings that are submitted for testing. In addition, a trip blank will accompany the groundwater sample collected from MW-A (if submitted for testing). The trip blanks will be analyzed for USEPA TCL and NYSDEC CP-51 list VOCs using USEPA Method 8260. Matrix spike and matrix spike duplicates (MS/MSD) will be performed on one of the soil samples submitted for testing.

2.5 Analytical Laboratory Data Deliverables and Validation

Analytical laboratory test results will be reported in NYSDEC Analytical Services Protocol (ASP) Category B deliverable reports. In addition, analytical laboratory results will be provided to the NYSDEC using the NYSDEC's Equis Format.

A NYSDEC approved data validator (currently anticipated to be Vali-Data of WNY, LLC) will independently prepare a Data Usability Summary Report (DUSR) in accordance with the provisions set forth in Appendix 2B of the DER-10. The findings of the DUSR(s) will be incorporated into the EQUIS electronic data deliverable (EDD) and the analytical laboratory summary tables that will be provided the NYSDEC and subsequently incorporated into the FER.

[Note: the DUSR will be prepared for the soil sample results only, and will not include the groundwater sample results or free product sample results, if tested.]

2.6 Investigation Derived Wastes Management and Disposal

It is anticipated that solid and liquid study-derived wastes will be generated during the investigation field work. IDW will be managed in general accordance with the applicable provisions set forth of DER-10 Section 3.3(e). The anticipated proposed method for handling, characterization and disposal of IDW is described below.

Potentially contaminated liquid wastes will likely include: drilling decontamination water, well development water, and purge water. Liquid IDW will be collected in 55-gallon drums, which will be stored on the Site in a secure location. Liquids that are grossly contaminated or suspected to contain NAPL may be placed in separate drums and labeled accordingly. It is anticipated that liquid IDW will be discharged to the Village of Manchester sanitary sewer system. Obtaining a sewer use permit may require sampling the IDW for the parameters of concern. Drummed liquid IDW that is grossly contaminated or suspected to contain NAPL will also be characterized using the investigation test results and other sampling data as necessary to dispose or treat the material in accordance with the applicable rules and regulations.

Potentially contaminated solid wastes will include, soil samples that were collected but not selected for analytical laboratory testing and soil cuttings from rotary drilling operations. It is anticipated that the solid IDW will be placed in a 55-gallon drum. As an exception, solids that are grossly contaminated or suspected to contain NAPL may be placed in separate drums and labeled accordingly. The IDW solids will be characterized and disposed of off-site in accordance with the applicable rules and regulations. If appropriate, IDW generated during these studies may be placed in 55-gallon drums that were placed at the Site during the studies completed in 2017.

3.0 DELIVERABLES

The documents listed below will be prepared and submitted to the NYSDEC.

- **Data Package:** A data package summarizing the work described in Sections 2.1, 2.2 and 2.3 will be prepared and submitted to the NYSDEC for review following the completion of the work. This data package will include: appropriate figures, test boring logs, a potentiometric groundwater contour map depicting the water level measurements from overburden groundwater monitoring wells, the development log, installation log and sampling log for groundwater monitoring well MW-A, the raw data reports provided by the analytical laboratory for the soil/fill, groundwater, and free petroleum product, a copy of the DUSR, and tables summarizing the laboratory results. The relative information compiled will also be incorporated into the FER.
- **EQUIS EDD** – After receipt of DUSR validation of the laboratory results, the electronic data deliverables will be processed using the EQUIS electronic data processing software and the subsequent data package will be submitted to the NYSDEC EIMS Team.

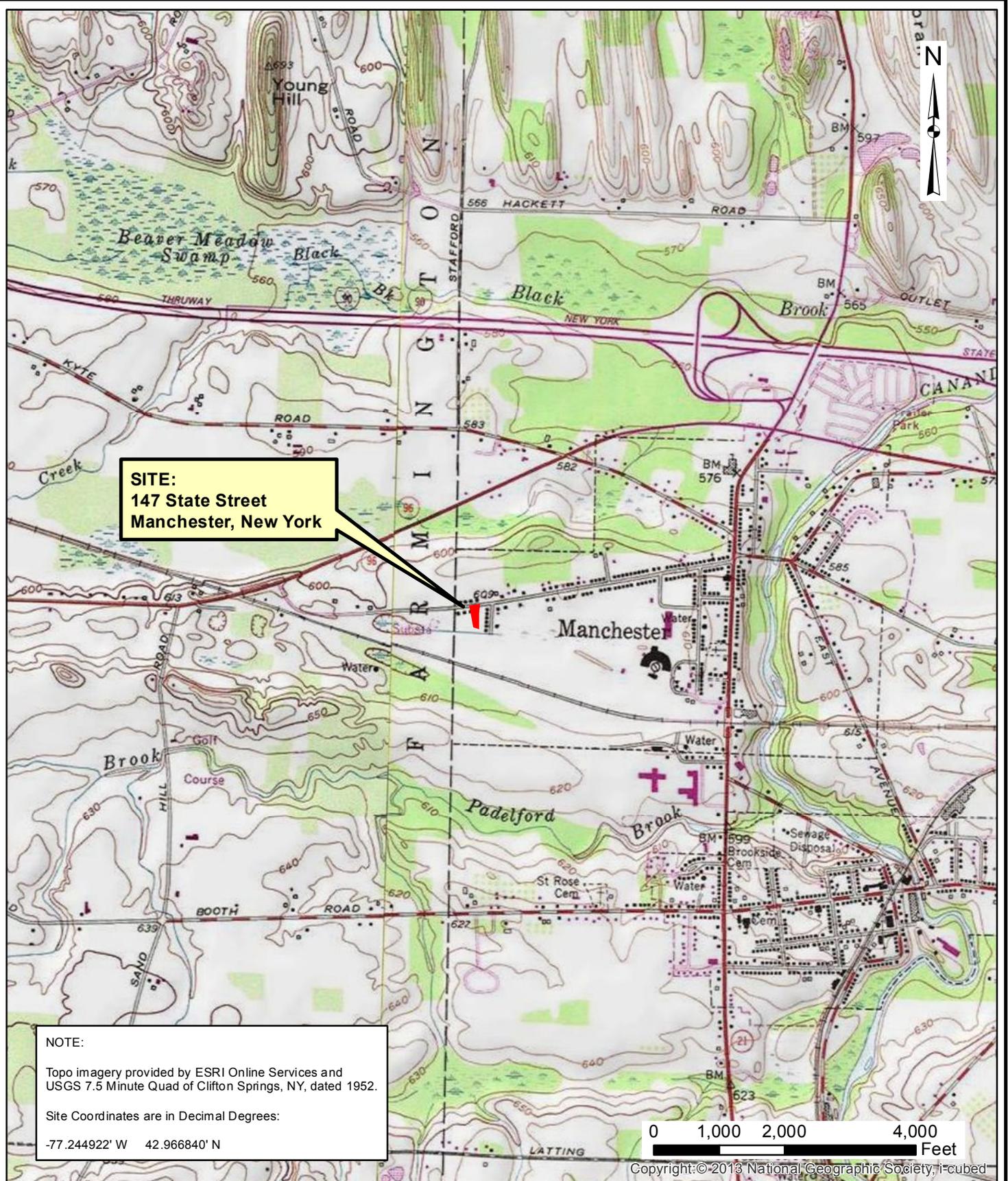
4.0 SCHEDULE

The proposed schedule for the investigation work and deliverables described in this IWP are described below:

- **Test Borings and Monitoring Well Installation** – within 20 business days of NYSDEC approval of the IWP.
- **Monitoring Well Development** – between 2-5 business days after monitoring well installation.
- **Monitoring Well Sampling** – approximately 5 business days after well development.
- **Data Package** – Within 20 business days following the receipt of the analytical laboratory data. A copy of the DUSR will be provided within 10 days of receipt from the data validator.

Modifications to this IWP or the above schedule will be submitted to the NYSDEC for approval prior to implementation.

FIGURES



Date	04-12-2018
Drawn By	CAH
Scale	AS NOTED

day
DAY ENVIRONMENTAL, INC.
 Environmental Consultants
 Rochester, New York 14606
 New York, New York 10170

Project Title	147 STATE STREET MANCHESTER, NEW YORK
	NYSDEC ERP SITE #B00131
Drawing Title	Project Locus Map

Project No.	5474S-18
	FIGURE 1



Legend

- Proposed test boring
- Proposed 2" diameter monitoring well

Existing Test Borings/Monitoring Wells

- ◆ Soil boring advanced in August-September 2017
- Bedrock monitoring well
- Overburden monitoring well
- Abandoned piezometer
- Former Structure
- Approximate site boundary

N

NOTES:

Parcel data obtained from Ontario County Information Services.

Town, Village and Street GIS Data obtained from New York State GIS Clearinghouse.

Aerial photography circa March 28, 2006, obtained from Ontario County Online Resources (ONCOR)

Property survey overlays circa July 12, 1948 and January 5, 2009 obtained from ONCOR



Pictometry (2006)

FIGURE 2
 5474S-18
 Project No.

Project Title
**147 STATE STREET
 MANCHESTER, NEW YORK**
 INVESTIGATION WORK PLAN
 Drawing Title
Site Plan with Existing and Proposed Test Locations

DAY ENVIRONMENTAL, INC.
 Environmental Consultants
 Rochester, New York 14606
 New York, New York 10170

DESIGNED BY	DATE
RLK	04-2018
DRAWN BY	DATE DRAWN
CAH/CPS	04-2018
SCALE	DATE ISSUED
AS NOTED	04-12-2018

ATTACHMENT A

APPENDIX A
SITE SPECIFIC HEALTH & SAFETY PLAN

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1.0 INTRODUCTION

This Health and Safety Plan (HASP) for environmental work being conducted at the Frederick Property site located at 147 State Street, in the Village of Manchester, Ontario County, New York (the Site). This HASP acts as a supporting document for field activities, consisting of soil, fill, surface water and ground water sampling at the Site. This plan will apply to all personnel and all subcontractors involved with the above mentioned activities.

The procedures set forth in this HASP are designed to reduce the risk of chemical and physical hazards that may be present at the Site. These procedures follow applicable federal, state, and local regulations, including Occupational Safety and Health Administration (OSHA) requirements governing activities at hazardous waste sites and the requirements in 29 CFR 1910.120. Specific practices and procedures, including the level of personal protective equipment (PPE), are based on review of currently available information for the Site.

This HASP for conformance with the requirements of a Hazardous Communication Program as specified in 29 CFR 1910.120. Every potential safety hazard associated with work at the Site cannot be predicted or anticipated. This HASP does not attempt to establish rules to cover every contingency that may arise, but it does provide a basic framework for the safe completion of field activities and plans for reasonable contingencies.

2.0 FIELD ACTIVITIES

A detailed description of upcoming field activities to be conducted at the Site is included in the Work Plan. Planned remedial activities include drilling and media sampling.

3.0 POTENTIAL CHEMICAL AND PHYSICAL HAZARDS

Volatile Organic Compounds (VOCs), semi-volatile organic compounds (SVOCs) and metals are the major groups of chemicals that may be present in potentially hazardous concentrations at the Site.

These compounds may present hazards for inhalation; however, some may also present a concern through dermal absorption. As field activities normally involve subsurface disturbance for generally short periods of time, these pathways should be considered and planning, development, and implementation of specific procedures should be conducted to mitigate these potential concerns.

A summary of occupational exposure limits for chemicals of potential concern at the Site is presented in Table.

	ACGIH Threshold Limit Value (TLV) ¹		Permissible Exposure Limits (PEL) ⁴		NIOSH Recommended Exposure Limits (REL) ⁵	
	8 Hour TWA ² (PPM)	STEL/C ³ (PPM)	8 Hour TWA ² (PPM)	STEL/C ³ (PPM)	8 Hour TWA ² (PPM)	STEL/C ³ (PPM)
Volatile Organics 1,2-Dichloroethene (all isomers)	200	NE	200	NE	200	NE
Toluene	50	NE	200	C 300 STEL 500**	100	C 150
Trichloroethylene	50	C 100	100	C 200 STEL 300*	25 (10-Hr TWA)	25 (10- Hr TWA)

Metals

Arsenic	0.01		0.002	NE	0.01	NE
Barium	0.5		0.5	NE	0.5	NE
Cadmium	0.01		0.005	NE	LFC	NE
Chromium	0.5		0.5	NE	1.0	NE
Lead	0.15		0.05	NE	0.05	NE
Mercury	0.025		0.05	NE	0.1	NE
Selenium	0.2		0.2	NE	0.2	NE
Silver	0.1		0.01	NE	0.01	NE

NOTES:

Concentrations on table are in parts per million (PPM) for VOCs and SVOC. Metals are reported as mg/M³

(1) American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value. L = ACGIH recommends exposure by all routes should be carefully controlled to levels as low as possible.

(2) Time Weighted Average (TWA) is the employee's average exposure in any 8-hour work shift of a 40-hour workweek. An employee's exposure to a material listed in this table, in any 8-hour work shift of a 40-hour workweek, shall not exceed the 8-hour TWA PEL given for that material in the table.

(3) Ceiling is a concentration that should not be exceeded at any time.

(4) Permissible Exposure Limit (PEL) is the exposure, inhalation, or dermal permissible exposure limit listed in 29CFR 1910.

(5) National Institute of Occupational Safety and Health (NIOSH) Recommended Exposure Limits.

(6) LFC = Lowest Feasible Concentration

N.E. = not established.

* = 5-minute peak in any 3-hour period

** = 10-minute peak per 8-hour shift

***= Cyclohexane-extractable fraction

4.0 HAZARDS EVALUATION

4.1 CHEMICAL HAZARDS

Standard safety procedures will be followed to minimize exposure of Site personnel to compounds of concern during field. Potential chemical hazards may include the following:

- exposure by inhalation, ingestion, and/or skin absorption of toxic gases, vapors, or dust contaminated with the chemicals of concern;
- injury by contact with corrosive or irritating chemical contaminants; and
- off-site migration of potentially contaminated airborne chemicals or dusts.

Site Personnel in the work zones must observe each other for signs of chemical exposure.

Indications of adverse effects include, but are not limited to:

- changes in complexion and skin color;
- changes in coordination;
- changes in demeanor;
- excessive salivation and preliminary response; and
- changes in speech patterns.

Personnel should also inform their Field Team Leader of non-visible effects of overexposure to chemical materials. These symptoms may include, but are not limited to:

- headaches;
- dizziness;
- nausea;
- blurred vision;
- cramps; and/or
- irritation of eyes, skin or respiratory track.

4.1.1 Site Monitoring for Chemical Hazards

The primary compounds of concern in the work areas are selected VOCs, SVOCs and metals. Work area ambient air monitoring and good work practices will be used during the field activities to ensure that appropriate personal protection is used to minimize potential exposures. Organic vapors and particulate concentrations will be monitored routinely in the breathing zone with an appropriate direct-reading instrument. A calibrated flame ionization detector (FID) or a calibrated photoionization detector (PID) will be used to screen for VOCs during intrusive Site activities. Particulate concentrations will be measured in real time using a calibrated electronic aerosol monitor. Organic vapor and particulate concentrations, in conjunction with field observations, will be used as action level criteria for upgrading or downgrading personal protective equipment (PPE) and implementing additional precautions or procedures.

The potential risks associated with working in hot or cold weather will also be considered when upgrading levels of personal protective equipment. Work area ambient air and employee personal exposure level monitoring will be conducted by or under the supervision of the Health and Safety Officer (HSO). The HSO will properly maintain and calibrate work area ambient air and employee exposure level monitoring instruments throughout field activities to ensure their accuracy and reliability.

4.1.1.1 Organic Vapor Monitoring

Work area ambient air monitoring for VOCs will be conducted in the worker's breathing zone periodically at intervals recommended by the HSO. Screening for specific organic compounds will not be performed unless specific circumstances arise. Rather, action levels will be based on total VOC concentrations. Background VOC concentrations will be measured and recorded on a daily basis prior to initiation of work activities. Action levels listed below are above background.

Total VOC Concentration above background	Action Level	PPE Level
0 to 1 PPM	None	Level D
1 to 5 PPM	Full-Face Respirator with organic vapor cartridges	Level C
>5 PPM	Suspend Work or Supplied-Air Full-Face Respirator	Level B

In order to prevent unnecessary upgrading or downgrading, when the total VOC concentration in the breathing zone is close to an action level, the breathing zone of employees will be continuously monitored for a period of not less than 15 minutes to evaluate whether or not the exceedance is a temporary fluctuation.

4.1.1.2 Particulates Monitoring

Monitoring for particulates will be conducted in the breathing zone periodically at intervals recommended by the HSO. Screening for specific inorganic compounds will not be performed. Rather, action levels of airborne particulate in work area ambient air will be based on the mercury PEL. The decision to upgrade levels of protection must be made in conjunction with consideration of precipitation, wind conditions, and the anticipated duration of field activity. Background particulate concentrations will be measured and recorded on a daily basis prior to initiation of work activities. The action levels listed below are above background.

Sustained Reading in Breathing Zone	Action Level	PPE Level
5 mcg/m ³	None	Level D
5 mcg to 10 mcg/m ³	Full-Face Respirator with organic vapor cartridges	Level C
>10 mcg/m ³	Suspend Work or Supplied-Air Full-Face Respirator	Level B

In order to prevent unnecessary upgrading or downgrading, when the airborne particulate concentration in the breathing zone is close to an action level, the breathing zone of employees will be continuously monitored for a period of not less than 15 minutes to determine whether or not the exceedance is a temporary fluctuation.

4.1.2 Chemical Hazard Action Levels

Based upon the lowest occupational exposure value for the compounds listed in Table 3-1, action levels have been established for activity cessation and the upgrade or downgrade in the level of PPE. These action levels are guidelines; the HSO will have the ability to adjust PPE requirements as appropriate based on field conditions. Level D protection shall be used at a minimum for Site activities. The PPE requirements for additional protective equipment, if necessary, will be determined by the HSO based on weather and wind conditions, the particular field activity, the length of time in one location, potential for exposure, and applicable action levels. Descriptions of the various levels of PPE are presented in Section 6.0.

4.2 PHYSICAL HAZARDS

Standard safety procedures will be followed to minimize potential physical hazards. The primary physical safety hazards at the Site include, but are not limited to:

- • common slip, trip, and fall hazards;
- • overhead and buried utility hazards;
- • drill rig operation;
- • excavation equipment operation;
- • vehicular traffic;
- • lifting excessive weights;
- • sampling hazards;
- • excessive noise levels;
- • heat and cold stress; and
- • Other common industrial hazards.

4.2.1 Common Slip, Trip, Fall Hazards

Personnel should be aware of common slip, trip, or fall hazards that are encountered frequently in industrial and commercial environments. Heightened awareness and emphasis on good housekeeping are the most effective ways to prevent accidents.

4.2.2 Overhead and Buried Utility Hazards

Utility lines, both above and below ground, may pose a safety hazard for Site personnel during soil boring or other heavy equipment operations. If overhead utilities have been identified as a hazard, the equipment operator must maintain a safe clearance between the lines and the equipment at all times during work operations. High voltage lines require greater clearance distances. As a safe work practice, equipment operators will maintain a 20-foot clearance between equipment and power lines or other energized sources unless the source is greater than 350 KV, in which case 29CFR 1910.180(j)(ii) must be applied. The location of buried utilities lines must be determined prior to the start of work activities. A request for subsurface utility clearance will be filed through Dig Safely New York.

4.2.3 Drill Rig Operation

Drill rigs present multiple hazards while in operation. Excessive noise, boom raising, lowering and swing, cable and hook damage and operator error may result in injuries. To minimize potential accidents, the following safety measures should be required for all drilling operations. The drilling subcontractor is responsible for the health and safety of its personnel, equipment, and operations. Operators (drillers) of equipment used on site will be familiar with the requirement for inspection and operation of such equipment;

1. The drilling subcontractor is responsible for ensuring proficiency in safe operation the equipment;
2. Drilling operations shall be performed from a stable ground position. If unable to locate on level ground, the drill rig shall be appropriately checked, blocked, and braced prior to the derrick being raised;
3. A person employed by the drilling subcontractor competent in drilling safety shall make daily inspections of the drilling area;
4. Before drilling, the existence and location of utility lines (electric and gas) will be determined by Dig Safely New York
5. If flammable or combustible materials are encountered, no ignition sources are permitted if the ambient airborne concentration of flammable vapors exceeds 10 percent of the Lower Explosive Limit (LEL) during drilling activities;

6. A combustible gas indicator supplied by the driller will be used as needed to make this determination in conjunction with chemical specific LEL percentages. Operations must be suspended and the area evacuated if the airborne flammable vapor concentration reaches 10 percent of the LEL in an area of an ignition source, such as an internal combustion engine or an exhaust pipe;
7. If drilling equipment is located in the vicinity of overhead power lines, a distance of 20 feet must be maintained between the lines and any point on the drill rig;
8. Daily inspection of the drill rig and associate machinery must be conducted and documented by the driller prior to each day's operation of the rig;
9. In the event that repairs to the drilling rig derrick are required, personnel climbing the derrick to affect such repairs must wear a restraint system, including parachute harness and lifeline, to prevent an accidental fall.

4.2.4 Tools - Hand and Power

Hand and power tools will be utilized during Site activities. Any tools used during field activities will conform to the standards set in both OSHA 29CFR-1926.300 and 1926.305.

To minimize the potential for any safety-related accidents, the following measures will be required:

- all hand and power tools shall be maintained in a safe condition;
- power-operated tools shall be equipped with protective guard when in use;
- all hand-held power tools shall be equipped with a constant pressure switch that will shut off the power when the pressure is released;
- hand tools shall be kept free of splinters or cracks;
- electrical power tools shall have double-insulated type grounding;
- electrical cords are not permitted for hoisting or lowering tools;
- all fuel powered tools shall be stopped while being refueled, serviced or maintained;
- Indoor ambient air will be measured for oxygen and toxic gases when fuel powered tools are used in enclosed spaces.

4.2.5 Vehicular Traffic

Vehicular traffic associated with routine site operations at the Site may pose a significant hazard to project personnel. Precaution should be taken when Site activities make it necessary to work near traveled areas.

4.2.6 Lifting Excessive Weights

Personnel should exercise caution when lifting any object, but particularly objects that weigh greater than 40 pounds. For objects that weigh less than 40 pounds, proper lifting technique is essential to minimize the potential for injury. No excessively bulky objects should be lifted without assistance.

4.2.7 Sampling Hazards

Field activities will consist of collecting soil vapor and ground water samples for analysis and evaluation. The hazards of this operation are primarily associated with the sample collection methods and procedures utilized. Standard methods and procedures that will be utilized for sampling activities are described in the NYSDEC-approved Quality Assurance Project Plan.

4.2.8 Excessive Noise Levels

Noise generated by routine Site operations and heavy equipment such as drilling rigs and excavators may present a hazard during Site operations. Excessive noise can physically damage the ear, hinder communications, and startle or annoy workers. On-site personnel will wear hearing protection when working near heavy equipment and whenever noise levels may exceed 85dBA. The HSO should be consulted if there are any questions regarding the need for hearing protection during a particular activity or a particular work area.

4.2.9 Heat Stress

Heat stress is the aggregate of environmental and physical work factors that make up the total heat load imposed on the body. The environmental factors of heat stress include air temperatures, humidity, radiant heat exchange, wind, and water vapor pressure (related to humidity). Physical work contributes to the total heat stress by producing metabolic heat in the body, proportional to the intensity of work. Heavy physical labor can greatly increase the likelihood of heat fatigue,

heat exhaustion, and heat stroke, the latter being a life threatening condition. Heat stress monitoring of personnel shall commence when the ambient temperature is 80°F (70°F if chemical protective clothing is worn) or above. Frequency of monitoring shall increase as the ambient temperature rises. Various control measures shall be employed if heat stress becomes a problem.

These include:

- provision of liquids to replace lost body fluids;
- establishment of a work regimen that allows for rest periods to cool down; and,
- training workers in the recognition and prevention of heat stress.

Specific steps to implement should ambient temperatures pose a hazard include:

- Site workers will be encouraged to drink water throughout the day;
- They will be advised to slightly increase their salt intake by lightly salting their food;
- on-site drinking water will be kept cool to encourage personnel to drink frequently;
- a work regimen that will provide adequate rest periods for cooling down will be established as required;
- Site personnel will be advised of the dangers and symptoms of heat stroke, heat exhaustion, and heat cramps;
- employees should be instructed to monitor themselves and co-workers for signs of heat stress and to take additional breaks as necessary;
- a shaded rest area must be provided, breaks should take place in the shaded rest area;
- employees shall not be assigned to other tasks during breaks.

Site employees shall be informed of the importance of adequate rest, acclimation, and proper diet in the prevention of heat stress disorders. Heat cramps are caused by heavy sweating and 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. Signs and symptoms include pale, cool, moist skin, heavy sweating; dizziness, nausea, fainting.

Heat stroke is the most serious form of heat stress, and should always be treated as a medical emergency. The body's temperature regulation system fails and the body temperature rapidly rises to critical levels. Immediate action must be taken to cool the body before serious injury or death occurs. Signs and symptoms of heat stroke include;

- red, hot, unusually dry skin;
- lack of, or reduced, perspiration;
- nausea;
- dizziness and confusion;
- strong, rapid pulse and confusion; and,
- coma.

4.2.10 Cold Stress

Cold and/or wet environmental conditions can place workers at risk of cold related illness. Hypothermia can occur whenever temperatures are below 45°F. It is most common during wet windy conditions, with temperatures between 30° to 40°F. The principal cause of hypothermia in these conditions is loss of insulating properties of clothing due to moisture, coupled with heat loss due to wind and evaporation of moisture on the skin. Frostbite, the other hazard associated with exposure to the cold, is the freezing of body tissue, which ranges from superficial freezing of surface skin layers to deep freezing of underlying tissue. Frostbite will only occur when ambient temperatures are below 32°F. The risk of frostbite increases as the temperature drops and the wind speed increases. Most cold-related worker fatalities have resulted from failure to escape low environmental temperatures, or from immersion in low temperature water. The single most important aspect of life-threatening hypothermia is a rapid decrease in the deep core temperature of the body. Site workers should be protected from exposure to cold so that the deep core temperature does not fall below 97°F. Lower body temperatures will very likely result in reduced mental alertness, reduction in rational decision making, or loss of consciousness with the threat of fatal consequences.

4.2.11 Excavation Activities

Excavation activities shall conform to safe work practices in accordance with OSHA regulations 1926.651 and 1926.652. The excavation subcontractor will excavate soil and evaluate soil type and slope the excavation appropriately in conformance with OSHA and any applicable federal, state, and/or local laws, rules, codes, standards, or regulations. Excavation materials shall be contained in approved containers, tanks or in appropriate lay down areas. Appropriate care shall be taken in the recognition that excavated material from areas at the site may contain hazardous materials.

5.0 PERSONNEL RESPONSIBILITIES

The Field Team Leader (FTL) will act in a supervisory capacity over all employees who participate in the field activities specified in this HASP. As part of these responsibilities, the FTL will distribute the HASP to all field team personnel and discuss the HASP prior to the start of field activities. All field personnel will sign the HASP Review Record verifying that they have read and are familiar with the contents of this HASP.

The HSO will be responsible for oversight, implementation and compliance of applicable health and safety regulations on-Site. The HSO has the following authority and responsibilities:

- responsibility for the field implementation, evaluation, and any necessary field modifications of this HASP;
- responsibility for maintaining adequate supplies of all PPE as well as calibration and maintenance of all relevant monitoring instruments;
- authority to suspend field activities due to imminent danger situations;
- responsibility to initiate emergency response activities;
- presentation and documentation of field safety briefings;
- maintenance of daily log of all on-site safety activities.

All personnel entering the site will have completed training requirements for hazardous waste site operations in accordance with OSHA 29 CFR 1910.120 or be certified by their employers as having equivalent training or experience. All personnel entering the site must have completed appropriate medical surveillance as required by OSHA 29 CFR 1910.120(f). All personnel entering the site wearing a negative pressure air purifying respirator must have successfully passed a quantitative fit test in accordance with OSHA 29 CFR 1910.1025 or 1926.58 within the previous 12 months. Employees will be permitted to wear only those brands and models of respirator for which a fit test have been successfully performed.

6.0 PERSONAL PROTECTIVE EQUIPMENT

6.1 PURPOSE /APPROACH

A critical aspect of worker field crew safety is selection and proper use of appropriate PPE. PPE refers to the types of footwear, headwear, eyewear, hearing protection, coveralls, gloves and respiratory protection each individual will wear while performing a specific task(s) and exposed to a particular chemical(s) at a given concentration(s). The levels of PPE protection that may be applied at the Site are commonly referred to as Level D, Level C, and Level B, with Level D requiring the least amount of PPE and Level B the most protective.

Prior experience at the Site indicates that the majority of Site activities will be conducted in Level D protection. The HSO will decide when it is necessary to upgrade, downgrade or modify the existing level of protection based on field monitoring and action levels described in Section 4.0. The HSO will make entries in the health and safety field book detailing each day's PPE requirements, tasks and if the level of PPE is modified, the reason for each change. Each level's PPE requirements may be modified by the HSO as needed. The different levels of PPE and equipment required at each level are described in the following sections and are based on 29 CFR 1910.120.

6.2 LEVEL D PROTECTION

Level D PPE will generally consist of the following:

- coveralls or long pants and shirt affording protection from dermal exposure;
- steel-toe, steel-shank work boots;
- safety glasses; and
- a hard hat.

6.3 LEVEL C PROTECTION

Level C PPE will generally consist of:

- Full-face air purifying respirator (APR) equipped with appropriate organic vapor canisters and/or other chemical cartridges (all personnel requiring respiratory protection must be "fit-tested" with the respirator model to be used in the field). HEPA filters will be available and utilized as warranted by Site conditions. Powered air purifying respirators may be utilized if specified by the HSO. Half-mask air purifying respirators can be donned only with the approval of the HSO;
- chemical-resistant clothing such as Tyvek®, poly-coated Tyvek® or Saranex®. Suits will be hooded and one piece with booties and elastic wristbands;
- outer chemical-resistant (recommend nitrile or neoprene) gloves and inner latex surgical gloves;
- steel-toe, steel-shank work boots with rubber overboots; and
- hard hat.

6.4 LEVEL B PROTECTION

Level B PPE will generally consist of:

- a self-contained breathing apparatus (SCBA) in a pressure demand mode, or supplied air with escape SCBA in the pressure demand mode;
- chemical-resistant clothing such as poly-coated Tyvek® or Saranex®. Suits will be hooded and one piece with booties and elastic wrist bands;
- chemical-resistant (recommend nitrile or neoprene) outer gloves and inner latex surgical gloves (both chemical resistant);
- steel-toe, steel-shank work boots with rubber overboots;
- chemical-resistant tape over protective clothing (as necessary); and
- hard hat.

7.0 SITE WORK AREAS AND DECONTAMINATION

Site operation areas will be formally set up for all field activities. Personal decontamination procedures will be adhered to upon entering or leaving all work areas. Section 7.1 describes the three zones used to control Site operation areas, and Section 7.2 describes decontamination procedures.

7.1 SITE OPERATION AREAS

A three-zone control system will be used during all intrusive Site activities. The purpose of these zones is to control the flow of personnel to and from potentially affected work areas. Guidelines for establishing work areas and support zones are as follows.

7.1.1 Exclusion Zone (EZ)

Primary exclusion zones will be established around each intrusive field activity. Appropriate personal protective equipment must be worn in this zone. This zone will be separated from the contaminant reduction zone (see below) by cones or barrier tape to prevent personnel from entering the exclusion zone boundary without appropriate protective equipment or leaving without proper decontamination.

7.1.2 Contaminant Reduction Zone (CRZ)

The CRZ is the transition area between the EZ and the Support Zone (clean area). All personnel and equipment must be decontaminated in the CRZ upon exiting the EZ and before entering the Support Zone. The CRZ will be set up along the perimeter of the EZ at a point upwind of field activities.

7.1.3 Support Zone (SZ)

The support zone is considered to be clean; as such, protective clothing and equipment are not required but should be available for use in emergencies. All equipment and materials are stored and maintained within this zone. Protective clothing is donned in the support zone before entering the contaminant reduction zone.

7.2 DECONTAMINATION GUIDELINES

In the situation where work areas are controlled using the three-zone concept, all personnel must exit the EZ through an established CRZ. All personnel leaving the point of operations should wash outer gloves and boots, if applicable. The outer boots shall be washed and removed and then either stored in an appropriate area or disposed of properly. If PPE is affected, personnel shall then remove and dispose of their chemical resistant coveralls with care so that inner clothing does not come in contact with any affected surfaces. After chemical resistant coverall removal, personnel shall remove and clean gloves, inspect the gloves, and discard if damaged. Personnel shall then remove the respirator, when applicable. Respirators shall be disinfected between uses by utilizing sanitizing methods and stored in a clean plastic container/bag. Potable water, at a minimum, will be present so that Site personnel can thoroughly wash hands and face if desired after leaving the point of operations.

For Site work not using the three-zone concept (e.g., soil or ground water sampling with typical equipment), portable wash stations will be utilized for easy and efficient access. The wash station shall consist of a potable water supply, soap, and clean towels. Portable sprayer units filled with Alconox® solution and potable water will also be available to wash and rinse off boots, gloves, and other equipment if necessary.

Modifications of the decontamination procedure may be necessary as determined by HSO observations. All reusable equipment brought on must be cleaned at the Site prior to use. Site Decontamination of all field equipment will be conducted as follows:

7.2.1 Heavy Equipment

The drill rig and all downhole tools will be steam cleaned between each field activity location. If necessary, equipment will be scrubbed manually to remove heavy soils prior to steam cleaning. Equipment must be steam cleaned prior to leaving the site.

7.2.2. Sampling Equipment (e.g., scoops, hand-auger, bowls, bailers, etc.)

All non-disposable sampling equipment will be cleaned before each use by washing with solutions in the following order:

- phosphate-free detergent wash;
- potable water rinse;
- distilled or analyte-free lab water;
- air dry unless re-use is imminent;
- wrap in aluminum foil until use.

7.2.3. Meters and Probes

All meters and probes that are used in the field will be cleaned between uses by washing with a phosphate-free detergent/potable water solution followed by rinsing with distilled water or analyte-free water supplied by the project laboratory.

7.3 MANAGEMENT OF GENERATED WASTES

All wash and rinse waters, discarded health and safety equipment, discarded sampling equipment, and other investigation- or remediation derived wastes will be handled and managed in accordance with DER-10.

8.0 SITE ACCESS AND SITE CONTROL

Access to Site activities are normally limited by the Site owner and will be limited to authorized personnel. Access into the established contaminant reduction and exclusion zones will be limited to those authorized personnel with required certifications and wearing appropriate PPE. The exclusion zones will be monitored by the HSO to ensure personnel do not enter without proper personal protection equipment. Failure to comply with Site access and Site control provisions is performed at one's own risk and may result in cancellation of authorization to visit the work area.

9.0 EMERGENCY RESPONSE

In the event of an emergency, the HSO will coordinate on-Site emergency response activities. Appropriate authorities will be notified immediately of the nature and extent of the emergency. This Section provides emergency telephone numbers that will be posted within the support zone or any other visible location. Directions to the nearest hospital are also included.

9.1 RESPONSIBILITIES

The HSO will be primarily responsible for initiating response to all emergencies and will:

1. notify appropriate authorities and health care facilities of the hazards of the field activities;
2. ensure that the following safety equipment is available at the site: fire extinguisher, eyewash station and first aid supplies;
3. have working knowledge of all safety equipment available at the site;
4. ensure that a map that details the most direct route to the nearest hospital is posted with the emergency telephone numbers;
5. for a release incident, determine safe distances and places of refuge.

Others shall initiate emergency response activities if the HSO is not available or if there is a perceived, imminent threat to the health and safety of Site personnel, property, or equipment.

EMERGENCY CONTACTS
Frederick Property Site
Village of Manchester, Ontario County

Project Consultant Refer to update at end of HASP

Emergency Numbers

Ambulance 911
Fire Dept. 911
Police 911
NYSDEC Spill Hotline 1-800-457-7362

Hospital

Clifton Springs Hospital
2 Coulter Road
Clifton Springs, New York 14432
Phone # 315.462.1911

9.2 ACCIDENTS AND INJURIES

In the event of a safety or health emergency, appropriate emergency measures will be taken immediately to assist those who have been injured or exposed and to protect others from hazards. The HSO will be notified immediately and will respond according to the injury.

9.3 SITE COMMUNICATIONS

Telephones (either landlines or cellular) will be located prior to the startup of field activities and will be used as the primary communication network. Radios may be used to communicate with workers on the Site if deemed necessary by the HSO or Field Team Leader.

10.0 ADDITIONAL SAFETY PRACTICES

The following are important safety precautions and practices that will be enforced during the field activities.

1. Eating, drinking, chewing gum or tobacco, smoking, or any practice that increases that probability of hand-to-mouth transfer and possible ingestion of toxic material is prohibited in any area designated by the HSO.
2. Hands and face should be thoroughly washed upon leaving the work area and before eating, drinking, or any other activity.
3. Whenever decontamination procedures for outer garments are in effect, the entire body should be thoroughly washed as soon as possible after the protective garment is removed.
4. No facial hair, which may interfere with the effectiveness of a respirator, will be permitted on personnel required to wear respiratory protection equipment as allowed by law. The respirator must seal against the face so that the wearer receives air only through the air purifying cartridges attached to the respirator. In addition to the OSHA required physician's evaluation, approval to work while wearing respiratory protection, and qualitative fit testing, a negative and positive pressure fit-test shall be performed prior to each respirator use to ensure a proper seal is obtained by the wearer.
5. Even when wearing protective clothing, contact with potentially contaminated surfaces should be avoided whenever possible. One should not walk through puddles, mud, or other discolored surfaces that may be affected; kneel on ground; lean, sit or place equipment on drums, containers, vehicles, or the ground in areas that may be affected.
6. Medicine and alcohol can enhance the effect from exposure to certain compounds. Alcoholic beverages will not be consumed during work hours by personnel involved in the project. Personnel using prescription drugs during the project may be precluded from performing specific tasks (e.g. operating heavy equipment) without authorization from a licensed physician.
7. Personnel and equipment in the work areas will be minimized.

8. Procedures for leaving the work area will be planned and implemented prior to going to the Site. Work areas and decontamination procedures will be established on the basis of prevailing site conditions.
9. Respirators will be issued for the exclusive use of one worker and are required to be cleaned, disinfected, and properly stored after each use.
10. Safety gloves and boots shall be taped to the disposable, chemical protective suits as necessary.
11. Cartridges for air-purifying respirators in use will be changed daily at a minimum.

April 2018 Updates to Site Specific Health and Safety Plan

149 State Street, Manchester, New York

BCP Site # B00131

Project Consultant

Raymond L. Kampff
Day Engineering, P.C.
1563 Lyell Avenue
Rochester, NY 14606
Phone# 585-454-0210 Ext. 125

APPENDIX B

Community Air Monitoring Plan

A Community Air Monitoring Plan (CAMP) has been developed to provide real-time monitoring for volatile organic compounds (VOCs) at the downwind perimeter of each designated work areas when certain excavation activities are in progress. This CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

1. Community Air Monitoring Plan

- a. Real-time air monitoring for VOCs levels at the perimeter of the exclusion zone or work area will be necessary. The site will involve VOC monitoring.
- b. Continuous monitoring will be required for all ground intrusive activities. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.
- c. Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. Periodic monitoring during sample collection shall consist of taking a reading upon arrival at a sample location, overturning soil, and taking a reading prior to leaving a sample location.

2. VOC Monitoring, Response Levels, and Actions

- a. Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind

direction changes. The monitoring work should be performed using equipment appropriate to measure petroleum-related contaminants. The equipment should be calibrated at least daily. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

- b. 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.
- c. 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.
- d. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.
- e. All 15-minute readings must be recorded and be available for State (DEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.