May 2019
(Revised October 2019)

NYS Brownfield Cleanup Program

Remedial Work Plan

Hamilton Hill II - Target Area 1 Site
830 & 834 Albany Street
City of Schenectady
Schenectady County, New York
BCP Site No. C447052

Prepared for:

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CERTIFICATIONS
Hamilton Hill II - Target Area 1 Site (BCP Site No. C447052)
830 and 834 Albany Street
City of Schenectady, Schenectady County

I, Jeffrey A. Marx, P.E., certify that I am a NYS registered professional engineer and that this Remedial Work Plan was prepared in accordance with applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) dated May 3, 2010.

082100	10/23/19	
NYS Professional Engineer #	Date	Signature

REMEDIAL WORK PLAN
HAMILTON HILL II - TARGET AREA 1 SITE
CITY OF SCHENECTADY, SCHENECTADY COUNTY

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1.0 INTRODUCTION & PURPOSE

1.1 Introduction

On behalf of Hamilton Hill II Limited Partnership, C.T. Male Associates Engineering, Surveying, Architecture, Landscape Architecture & Geology, D.P.C. (C.T. Male) has prepared this Remedial Work Plan (RWP) pursuant to the New York State Department of Environmental Conservation (DEC) Brownfield Cleanup Program (BCP). The RWP pertains to the property known as the Hamilton Hill II - Target Area 1 Site (Site No. C447052) located at 830 and 834 Albany Street in the City of Schenectady, Schenectady County, New York (herein the "Site"). The 830 Albany Street property is separated from the 834 Albany Street property by a public thoroughfare known as Craig Street; making the properties adjacent to each other but not contiguous. A Site Location Map is presented as Figure 1.

Hamilton Hill II Limited Partnership entered into a Brownfield Cleanup Agreement (BCA) with the DEC on November 14, 2018 (BCA Index No.: C447052-10-18), to remediate an approximate 0.81 acre property to Unrestricted Use as defined in 6 NYCRR Part 375. Hamilton Hill II Limited Partnership is a Volunteer in the BCP. When construction is completed, the Site will be redeveloped into multi-family residential housing with associated parking and green spaces.

1.2 Purpose and Goal

The purpose of the RWP is to provide a conceptual plan for the selected remedy of the Site. With concurrence from DEC, the preparation of a formal remedial design work plan is not planned considering that the remedial action (generally excavate and properly dispose) is a presumptive remedy, as defined at DER-10-1.3(b)46 and 6 NYCRR Part 375-1.2(ai).

The goal of this RWP is to provide guidance to Hamilton Hill II Limited Partnership's design and construction team to supplement the project's technical specifications, and bidding and construction documents. The remedial action requirements will be incorporated into the overall Site development project as necessary to comply with the BCP. It is the responsibility of the Volunteer to provide this RWP to the general

contractor in order to coordinate and integrate remedial and Site development activities and ensure adherence by the contractor to this RWP. Prior to the start of site development activities, the contractor shall indicate in writing their receipt and review of the RWP.

Requested modifications to the RWP are contained in a letter from DEC dated October 9, 2019, which is presented as Exhibit 2. Modifications in the DEC letter are incorporated into this RWP.

1.3 Nature and Extent of Contamination

The nature and extent of Site contaminants were identified through the completion of a DEC-approved Remedial Investigation (RI) of the Site in March and April 2019. Contaminants in media characterized by the RI were supplemented with analytical data of fill/soil and groundwater sampled in 2016, 2017 and 2018 as part of Phase II Environmental Site Assessment (ESA) investigations of the Site completed by C.T. Male.

The tasks completed as part of the RI and Phase II ESA investigations are detailed in the May 2019 Remedial Investigation Report, but generally included: the collection of surface and shallow fill/soil samples (0 to 2-feet below the ground surface [bgs]) for subjective and laboratory analyses; the collection of subsurface fill/soil and native soil samples (>2 feet bgs) for subjective and laboratory analyses; the collection of groundwater samples for laboratory analyses; and the collection of soil vapor samples for laboratory analyses.

The following sections summarize the nature and extent of contaminants of concern (COCs) per media type investigated and potential sources for the COCs.

1.3.1 Contaminants of Concern in Surface and Shallow Fill/Soil

COCs in shallow fill/soil (0 to 2-feet bgs) include metals, pesticides and semi-volatile organic compounds (SVOCs). The COCs in surface and shallow soil are depicted on Figure 3: Contaminants of Concern in Surface Soil and Shallow Fill/Soil.

The entirety of the Site's shallow soil, with the exception of soil beneath the remaining foundations of the buildings addressed as 830 and 834 Albany Street, are impacted by the metals lead, mercury and zinc.

Pesticides were found to be present in shallow soil across the Site as they were detected above project standards, criteria and guidance (SCGs) in four (4) of six (6) sampling locations.

SVOCs were confined to northern portions of the 834 Albany Street Parcel in the vicinity of Albany and Craig Streets.

1.3.2 Contaminants of Concern in Subsurface Fill/Soil and Native Soil

COCs in subsurface (>2 feet bgs) fill/soil and native soil include metals, pesticides and SVOCs, which were encountered at depths ranging from 2 to 6-feet bgs. The COCs in subsurface fill/soil and native soil are depicted on Figure 4: Contaminants of Concern in Subsurface Fill/Soil and Native Soil.

The predominant metals were lead, mercury and zinc. These analytes were detected at depths ranging from 2 to 6-feet bgs at three (3) sampling locations within southeastern portions of the 830 Albany Street Parcel, at two (2) sampling locations in the vicinity of the former dry cleaning building addressed as 830 Albany Street, and at three (3) sampling locations within the 834 Albany Street Parcel.

The predominant pesticides were 4,4'-DDE and –DDT, which were encountered in samples collected along the northern and eastern boundary of the 830 Albany Street Parcel and adjacent to the former dry cleaning building addressed as 830 Albany Street Parcel.

SVOCs were detected at depths ranging from 2 to 6-feet bgs at two (2) sampling locations in the southern and eastern portion of the 830 Albany Street Parcel and one (1) sampling location in the northwestern corner of the 834 Albany Street Parcel.

1.3.3 Contaminants of Concern in Groundwater

The COCs in groundwater include volatile organic compounds (VOCs), SVOCs and metals. The COCs in groundwater are depicted on Figure 5: Contaminants of Concern in Groundwater.

The VOC tetrachloroethene was detected in two (2) shallow groundwater samples collected from monitoring wells within approximate central portions of the 830 Albany Street Parcel.

The VOC chloroform was detected in four (4) shallow groundwater samples collected from monitoring wells within the 830 Albany Street Parcel.

The SVOC detections were confined to shallow groundwater at three (3) monitoring wells along the northeastern property boundary of the 830 Albany Street Parcel and the northwestern and southeastern property boundary of the 834 Albany Street Parcel.

The metals iron and manganese in groundwater are believed to be naturally occurring and are not viewed as COCs. Sodium is likely related to the application of deicing products (sodium chloride) to the streets and sidewalks. Antimony was detected in one (1) shallow groundwater sample collected from a monitoring well located near the northern boundary of the 830 Albany Street Parcel. Sodium and antimony are also not considered to be COCs in groundwater.

1.3.4 Contaminants of Concern in Soil Vapor

Currently, there are no SCGs for volatile organics in soil vapor. Although VOCs were detected only slightly above regulatory criteria in groundwater and a single detection of the VOC acetone was identified in the soil/fill samples, VOCs were detected in all of the soil vapor sampling points.

1.3.5 Potential Sources for Contaminants of Concern

Potential sources for the COCs include fill/soil that mantles the Site, the historic usage of the buildings addressed as 830 and 834 Albany Street as dry cleaning operations, the sand surrounding two (2) former bulk storage tanks within a concrete vault in the basement foundation remains of the former building addressed as 830 Albany Street (the tanks were closed by removal in March 2019), a known underground storage tank adjacent south of the former building addressed as 830 Albany Street, and a suspect underground tank and/or drum located adjacent west of the aforementioned known underground storage tank.

Based on the COCs in the media types sampled, the potential source areas for the COCs is the fill material mantling the Site and the historic dry cleaning operation and related equipment at the building addressed as 830 Albany Street.

1.3.6 Remedial Action Objectives

Based on the findings and results of the RI, remedial action objectives (RAOs) have been identified for the Site as presented in the following table.

Affected Media	Remedial Action Objectives
Fill/Soil and Native Soil	RAOs for Public Health Protection • Prevent ingestion/direct contact/inhalation of contaminated fill/soil and impacted native soil. • Prevent inhalation of, or exposure to, airborne contaminants adhering to contaminated fill/soil and impacted native soil particles. RAOs for Environmental Protection • Prevent migration of contaminants that would result in groundwater contamination
Groundwater(1)	RAOs for Public Health Protection • Prevent ingestion of groundwater containing contaminant levels exceeding drinking water standards. • Prevent contact with, or inhalation of, volatiles emanating from contaminated groundwater. RAOs for Environmental Protection • Restore groundwater aquifer, to the extent practicable, to pre-disposal/pre-release conditions. • Remove the source of groundwater contamination.
Soil Vapor	RAOs for Public Health • Prevent future building occupants from being exposed to impacted soil vapor in indoor air through source removal and/or installation and operation of a vapor mitigation system. RAOs for Environmental Protection • Remove or reduce the source of soil vapor contamination.
Surface Water	Not Applicable
Sediment	Not Applicable

(1) Post-excavation (remediation) groundwater sampling is required in order to 1) demonstrate compliance with groundwater standards referenced in Section 1.6 of this RWP and 2) that the remedial

action objectives for groundwater are achieved. Accordingly, a subset of existing shallow monitoring wells will be replaced after the excavation activities. The subset of monitoring wells to be replaced and sampled will be pre-approved by the DEC Project Manager.

1.4 Remedial Action Approach

The remedial action for the Site is generalized as closure by removal of underground bulk storage tank(s) and a drum, and fill/soil excavation and off-site disposal. The remedial action may also include temporary groundwater evacuation and treatment if the remedial excavation extends into groundwater. The depth to groundwater beneath the Site is estimated at nine (9) to 13 feet bgs.

1.4.1 Closure of Bulk Storage Tanks and Drums

Two (2) bulk storage tanks were previously located within the basement foundation remains of the former 830 Albany Street building. The tanks were embedded in sand within a vault-like structure. The tanks were closed by removal on March 18, 2019 by Jackson Demolition. The sand that the tanks were embedded in was left in place and will be assessed pursuant to Section 5.1 of this document. Documentation from Jackson Demolition regarding the tank closures is presented as Exhibit 1.

There is one (1) confirmed bulk storage tank and one (1) suspected tank or drum within the 830 Albany Street portion of the Site (see Figure 2 for approximate locations), as explained below.

The confirmed bulk storage tank is an underground tank located at the southern exterior of the former building addressed as 830 Albany Street. The tank is approximately 17 feet long. The diameter and contents of the tank is unknown.

The suspected tank or drum is located underground and adjacent/west of the known underground tank located at the southern exterior of the former building addressed as 830 Albany Street. The tank or drum was identified as a subsurface anomaly during a private utility survey conducted during the RI.

The following are general procedures that will be followed for closure by removal of the known bulk storage tank(s) and any other tank(s) that may be encountered during the remedial action.

- Notify NYSDEC of closure activities through the use of a "Pre-Work Notification for Bulk Storage (PBS or CBS) Tank Installation or Closure" form. The Pre-Work Notification for the previously closed bulk storage tanks in the basement foundation remains of the former building addressed as 830 Albany Street is presented as Exhibit 1.

- Closure of the tanks and associated appurtenances by removal (product, fill and vent piping, underground electric, concrete pump island, etc.) will conform to applicable sections of DER-10, NYSDEC Petroleum Bulk Storage regulations 6 NYCRR Part 613-2.6, Out-of-service UST Systems and Closure, and the Schenectady County Department of Health.

- Any soils, fill, concrete and/or asphalt overlying and/or surrounding the tanks will be removed to allow access to the tanks. The contents of the tanks will be removed and transported to a disposal facility permitted to accept this waste. If in small quantities, the liquids may be temporarily stored in labeled DOT approved 55-gallon drums for disposal at an approved and permitted treatment, storage and disposal facility (TSDF). Oil soaked rags, clothing and polyethylene (i.e., PPE) will also be placed in a labeled DOT approved 55-gallon drum for off-site disposal.

- The tanks will be accessed either through tank man-ways (if present) or a hole will be cut in the tank to allow access for removal of the tank contents and cleaning while the tanks remains in-place. Polyethylene will be placed on the ground adjacent to the tank openings to mitigate contamination of the ground surface when cleaning the tank interiors. Prior to entering the tanks for cleaning, the atmosphere inside the tanks will be assessed by the Contractor completing the work and deemed safe to enter. Confined space entry procedures to be performed by the Contractor shall be performed in accordance with 29 CFR Part 1910.146 for tank cleaning.

- The tanks will be cleaned and purged of any vapors in accordance with applicable regulations. The tanks will be rendered unusable on-site by cutting a hole in them after removal from the ground and/or vault, if not already done so for access. The tank, distribution and vent piping, and associated equipment will

be properly disposed of off-site at a steel recycling facility. Records of disposal/recycling will be provided to the Remediation Engineer.

- The waste contents of the tanks and associated piping and equipment, and cleaning wastes will be properly managed and disposed of off-site at an approved and permitted TSDF. The wastes will be transported by a 6 NYCRR Part 364 transporter permitted to transport these wastes, and disposed of at a facility permitted to accept the waste being disposed of. The disposal facility and general type of waste will be specifically listed on the transporter's permit.

- Register the tanks as "closed-removed" in accordance with NYSDEC Petroleum Bulk Storage regulations and the Schenectady County Department of Health.

The following are general procedures that will be followed for the removal of any drums that may be encountered during the remedial action.

- Excavation of fill/soil in the vicinity of the suspect drum/tank will be done in a controlled manner so as not to accidently compromise the integrity of the drum, including hand digging when within two (2) feet of the drum.

- The integrity of the drum will be assessed and the drum/tank will be assessed for liquid and/or solid content while performing personal air monitoring.

- If the anomaly is found to be a tank, it will be addressed in the same manner as described above.

- If the anomaly is a drum and contains liquids and/or solids and the integrity of the drum is such that it can be handled, the drum will be placed in an over-pack drum and staged on Site for profiling and subsequent off-site disposal at a TSDF.

- If the drum contains liquids and/or solids and the integrity of the drum is compromised, the drum will be cut open and the bulk of the liquids and/or solids within the drum will be transferred into a DOT approved 55-gallon drum for profiling and subsequent off-site disposal. The drum carcass will then be cleaned of any residual liquids and/or solids and the drum will be recycled off-

site as scrap. The residual liquids and/or solids will be placed in the same drum as the bulk solids/liquids.

- The waste contents of the drum and cleaning wastes will be properly managed and disposed of off-site at an approved and permitted TSDF. The wastes will be transported by a 6 NYCRR Part 364 transporter permitted to transport these wastes, and disposed of at a facility permitted to accept the waste being disposed of. The disposal facility and general type of waste must be specifically listed on the transporter's permit.

1.4.2 Remediation of Impacted Fill/Soil and Native Soil

The following general procedures will be followed for the remediation of impacted fill/soil and native soil mantling the Site.

- Excavation and off-site disposal of fill/soil mixtures and native soil mantling the Site from the ground surface to depths ranging from two (2) to 12 feet bgs. The remedial excavation may also include the additional excavation of native soils that do not meet SCGs based on analytical results of confirmatory post-excavation sampling and analysis.

- The remedial excavation will extend horizontally to the Site boundaries or to the extent feasible without compromising the integrity of structures on adjacent properties and/or as limited by access restrictions from adjacent property owners. In the event of not being able to extend excavations to the property boundaries, the limits of the BCA will be adjusted accordingly via a BCA amendment.

- The proposed horizontal and vertical limits of the remedial excavations are depicted on Figure 2: Remedial Action Implementation. As depicted on the Figure, approximately 50% of the Site will be excavated to depths of two (2) to four (4) feet bgs with remaining areas of the Site excavated to depths ranging from three (3) to 12 feet bgs. Soils beneath the foundations of the former buildings addressed as 830 and 834 Albany Street will not be remediated as COCs were not identified in these areas during the RI.

- Any concrete from building remains in contact with fill/soil requiring remediation will either be broken up and disposed of with the impacted fill/soil and/or the impacted fill/soil will be removed from the concrete and the concrete will be disposed of as a separate C&D waste stream.

- Grossly impacted fill/soil, if any, (as defined at DER-10, Section 1.3, Item 23) encountered in the excavation floor at the depth limits of the proposed excavations will be further excavated and staged on-site pending waste characterization and subsequent off-site disposal. The extent of the grossly impacted fill/soil will be subjectively assessed using organic vapor headspace analysis with a hand-held photo-ionization detector (PID) and organoleptic (sight and smell) perception. Confirmatory post-excavation end-point soil samples will be collected for laboratory analysis to confirm the remaining soil meets the prescribed SCGs.

- Groundwater at the Site is impacted by VOCs, SVOCs and metals at concentrations exceeding SCGs. Groundwater entering the excavations during fill/soil remediation may be evacuated and transferred into a temporary holding tank to the extent necessary to remove impacted soils. Dependent upon the volume and quality of the generated groundwater it may either be removed from the Site in tanker trucks or treated on-Site. If treated on-Site, the treated groundwater will be discharged to the closest connection to the municipality's sanitary collection system (i.e. sanitary lines along Albany Street and Craig Street) with approval from the Schenectady Department of Water and Wastewater. If this is implemented, pre- and post-treatment sampling will be performed of the treated water to confirm that the discharge meets the limits established by the City of Schenectady Department of Water and Wastewater. The sampling will be conducted prior to system startup and during on-going system discharges at sampling frequencies required by the City of Schenectady Department of Water and Wastewater. In lieu of treating the groundwater on-Site, groundwater may be evacuated from the holding tank and transported for off-site disposal at an approved and permitted TSDF.

1.4.3 Decommissioning of Monitoring Wells

Prior to beginning the remedial excavation, monitoring wells within the Site will be abandoned in accordance with DEC Policy CP-43: Groundwater Monitoring Well Decommissioning Policy, dated November 3, 2009. The monitoring wells that will be abandoned are depicted on Figure 2 as RIMW1 to RIMW6, RIMW3D, RIMW4D, RIMW6D, 834 MW2, MW1, MW2, MW3, MW4 and MW5. Monitoring wells to be abandoned will be tremi-grouted from the bottom of the monitoring well to the anticipated bottom of the remedial excavation. Figure 2 depicts monitoring wells MW3 and MW4 as destroyed, meaning that these wells have been damaged at or near the ground surface. These wells will still need to be located and properly abandoned, if possible. The monitoring well construction logs are presented in Appendix C.

1.4.4 Remedial Investigation Derived Wastes

Investigation Derived Wastes (IDW) generated as a function of the RI includes 11 55-gallon drums containing drill cuttings from the soil borings, monitoring well development and purge water, and decontamination water used for the decontamination pad. The IDW will be characterized and disposed of off-site at an approved and permitted TSDF. The wastes will be transported by a 6 NYCRR Part 364 transporter permitted to transport these wastes.

1.5 Remedial Treatment Units

The entire Site, the limits of which are shown on Figure 2, is to be considered as one (1) remedial treatment unit or area of concern.

The sampling locations, sampling depths and concentrations of contaminants in fill/soil and native soil exceeding SCGs are summarized in Figures 3 and 4 in Appendix A.

1.6 Applicable NYS Standards, Criteria and Guidance (SCGs)

The applicable SCGs for each media type to be remediated during the remedial action are summarized in the following table.

Media	Regulation	SCGs
Fill/Soil and Native Soil	6 NYCRR Part 375 (December 14, 2007)	Table 375-6.8(a) Unrestricted Use Soil Cleanup Objectives
Groundwater	NYSDEC Division of Water TOGS 1.1.1	Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations (June 1998)

A copy of the December 14, 2007 6 NYCRR Part 375 Table 375-6.8(a) is included in Appendix B for reference. The NYSDEC Division of Water TOGS 1.1.1 document is not included, but the standards or guidance values for the remedial action are the ambient groundwater (GA class) values.

1.7 Remedial Action Schedule

The following provides the anticipated sequence of events and schedule for completion of the remedial action. The sequence of events and schedule are dependent on DEC's timeline for approval of the RWP and the start and sequencing of work by the remediation contractor.

The remedial action is anticipated to be completed during the Summer and Fall of 2019, and will include the following tasks.

- Decommissioning of monitoring wells RIMW1 to RIMW6, RIMW3D, RIMW4D, RIMW6D, 834 MW2, MW1, MW2, MW3, MW4 and MW5.

- Closure by removal of one (1) underground bulk storage tank and a potential underground tank or drum (i.e., anomaly identified by GPR).

- Excavation and off-site disposal of all fill/soil mixtures and select native soils mantling the Site (see Figure 2 for proposed excavation depths), and the possible additional excavation of native soils that do not meet SCGs based on analytical results of confirmatory post-excavation sampling. The remedial excavation will extend to the boundaries of the Site.

- Provide groundwater evacuation, characterization, treatment and/or off-site disposal as necessary during the remedial excavation.

- Characterization and off-site disposal of 11 55-gallon drums of RI derived wastes. The wastes include drill cuttings from the soil borings, monitoring well development and purge water, and decontamination water used for the decontamination pad.

- Preparation and submission of the Final Engineering Report (FER), which is anticipated to be completed during the Winter of 2020. The time lapse for submission of the FER takes into account the time required for receipt of analytical results of remedial excavation end-point sampling, data validation of the analytical results, and review by the Volunteer. A more detailed remedial action schedule will be provided to the Department after completion of field work associated with the remedial activities.

1.8 Miscellaneous General Requirements

Prior to beginning construction of the remedial action, a pre-construction meeting will be held with DEC, the Volunteer, the Remediation Engineer (C.T. Male), the construction manager and the contractor/subcontractors designated to complete the remedial action related work.

The hours of operation of the remedial construction work will conform to the City of Schenectady construction codes. The Department will be notified by the Volunteer of any variances issued by the City of Schenectady.

1.9 Citizen Participation

Citizen participation will continue on this project as follows:

- Placement of the draft RWP in the document repositories prior to the public comment period. A cursory review of the draft RWP will be conducted by DEC for general acceptance before being submitted to the repositories, and then reviewed in more detail by DEC during the comment period.

- Issue a notice for the start of a 45 day public comment period for the draft RWP.
- Comments issued by DEC at the end of the 45 day public comment period will be addressed as necessary to finalize the RWP.
- Once the RWP has been finalized, a public notice fact sheet will be released by the Department before the start of the remedial construction work. The Decision Document will be issued after the RWP is finalized.

DEC approval of the RWP will follow the public comment period unless a public meeting is requested and deemed necessary by DEC. If necessary, a public meeting can be held towards the end of the 45 day comment period to explain the project in further detail, and address public questions and comments.

2.0 TEMPORARY CONSTRUCTION FACILITIES

2.1 Site Security

The Site is approximately 0.81 acre in size and is comprised of two (2) separate parcels addressed as 830 Albany Street and 834 Albany Street located in the Hamilton Hill neighborhood in the City of Schenectady, Schenectady County, New York. Currently, the Site is accessible to residents of surrounding dwellings and commercial entities along Albany and Craig Streets within the Hamilton Hill neighborhood.

Because the Site is accessible to the public, construction fencing with lockable gate(s) will be utilized and installed around the perimeter of the Site prior to the start of the remedial action and remain in-place throughout the remedial action.

2.2 Trailers/Office Space

A construction office trailer(s) or nearby office space will be provided by the contractor for use by the environmental consultant and DEC personnel. The space shall include a desk or table to work on and power to charge field monitoring equipment daily. A minimum area, generally 6 feet by 6 feet, should be sufficient.

2.3 Equipment Decontamination

Construction equipment that comes into contact with the Site's contaminated fill and soil, and potentially impacted groundwater, will be considered contaminated. Prior to the equipment being demobilized from the Site or prior to entering an area deemed clean by meeting applicable SCGs, the equipment will be decontaminated in a manner that removes adhered soils and residues, and washes/rinses the equipment in a controlled manner thereby capturing the soils and wash/rinse water for proper off-site disposal. The waste soils and wash/rinse water will be captured using a stationary or movable decontamination pad. The accumulated soils from the decontamination activity will be temporarily staged with the remediated contaminated soils and ultimately disposed of off-site. The decontamination water will be transferred into 55 gallon drums or directly to the on-site groundwater treatment system (if used) on an as needed basis.

Any wastes (soils or water) generated at the Site will either be sampled first, or assumed to be impacted, and then disposed of accordingly.

Trucks entering and exiting the Site will be subject to the requirements of the Site specific erosion and sediment control measures outlined in this RWP which shall include the requirements of a stabilized construction entrance to mitigate fill/soil from being tracked off-site and onto roadways (see Section 2.7). The public roadway(s) where trucks exit the Site will be monitored by the Remediation Engineer's field representative. If fill/soil tracking is apparent, improvements to the erosion and sediment controls and fill/soil loading procedures will be required and implemented.

2.4 Groundwater Dewatering System During Construction

The remedial action and subsequent redevelopment may require groundwater dewatering and treatment. DEC will be provided with the dewatering and treatment system design prior to its implementation. Design of the treatment system may be provided by C.T. Male, the remediation contractor or the vendor that specializes in this type of treatment.

It is the Volunteer's intention to temporarily treat groundwater and discharge it to the closest connection to the municipality's sanitary collection system (i.e. sanitary lines along Albany and Craig Streets) with approval from the municipal authority. If this is implemented, pre- and post-treatment sampling will be performed of the water treatment system to confirm that the discharge meets the limits established by the City of Schenectady Department of Water and Wastewater. The sampling will be conducted prior to system startup and during on-going system discharges at sampling frequencies required by the City of Schenectady Department of Water and Wastewater.

For the purpose of tracking the volume of treated groundwater that is discharged to the sanitary collection system, a water meter will be installed in-line with the groundwater treatment system. The groundwater treatment system will be operated with equipment to reduce suspended sediment, pre-and post-treatment sampling ports, and treatment media such as granular activated carbon.

In lieu of on-site groundwater treatment, the groundwater may be temporarily stored employing temporary holding tanks and later transported off-site for disposal at an approved and permitted TSDF facility.

2.5 Impacted Soil Handling

Fill/soil within the Site boundaries commencing at the ground surface and extending vertically downwards to two (2) to 12 feet bgs as depicted on Figure 2, will be considered as contaminated and will require special handling.

It will be the responsibility of the Contractor to provide survey control to determine whether the appropriate excavation depths for remediation purposes, as indicated in Figure 2, have been achieved.

Between 3,100 and 6,800 cubic yards (or between 5,300 and 11,600 tons; tonnage to vary depending on the material's in-place density) of in-place contaminated fill/soil is anticipated to be removed and disposed of off-site for remediation purposes. The overall excavation depths may be adjusted based on organic vapor screening with a PID and visual observations by C.T. Male's construction observer. Confirmatory end-point soil samples will be collected by C.T. Male's construction observer and analyzed to confirm the fill/soil that remains in-place meets applicable SCGs.

Should concrete be encountered during excavation activities, it will be segregated and stockpiled on-site and assessed by C.T. Male's construction observer to determine whether the concrete exhibits field evidence of contamination (odors, sheen, and/or discoloration). Concrete exhibiting field evidence of contamination will be broken up and disposed of off-site with the impacted fill/soil.

Concrete with no visual evidence of contamination could be reused on-site as backfill following a determination by the project's structural and/or geotechnical engineer that the reuse of this material is suitable as structural fill. Concrete that is to be reused as backfill will need to be free from excessive fill/soil prior to processing in order to prevent cross contamination. A beneficial use determination (BUD) is required for concrete that will be reused on-Site as backfill. A BUD is a designation made by the Department pursuant to 6 NYCRR Part 360.12, whether Parts 360-365 Solid Waste Management Regulations have jurisdiction over waste material which is to be

beneficially used. Once the Department grants a BUD, the waste material ceases to be considered a solid waste (for the purposes of Parts 360-365) when used as described in the BUD. The BUD will require some type of sampling (e.g. wipe, rinsate or core samples) for a Track 1 remedy, which will be proposed to DEC based on a visual assessment of the concrete that is removed. The means, methods and results of the sampling will be pre-approved by the DEC Project Manager prior to reuse of concrete as on-Site backfill. The contractor needs to understand that concrete must be stockpiled until such time the DEC approves reuse. In lieu of reusing the non-impacted concrete as backfill, the concrete can be disposed of off-site as a separate C&D waste stream. The disposal facility will need to be approved by the DEC Project Manager.

Upon completion of the remedial action, excavation of additional native soil may be necessary to facilitate construction of deeper building foundations. If the confirmatory endpoint floor samples from the remedial excavation indicate that the native soils are not impacted above SCGs, these soils will be considered as clean soil and the reuse and/or disposition of these soils will no longer be regulated. Approval to remove these soils from the Site will require consultation with NYSDEC.

The handling of the contaminated fill/soil will involve direct loading into dump trucks or trailers, and if not directly loaded, stockpiled on-Site. For soil stockpiling, the fill/soil will be staged on a minimum of 12-mil plastic and covered with the same to mitigate washout by rainwater. For directly loaded fill/soil, the trailers will be covered during transport with solid covers (not mesh), and if high in moisture content where free-standing water will be released, the truck gates will be sealed and/or lined with plastic. Mesh tarps or covers will not be allowed for trucks hauling impacted fill/soil from the Site.

In order to dispose of the contaminated fill/soil at an off-site disposal facility (and to be able to directly load the material into dump trucks and/or trailers), waste characterization samples will be collected before the remedial action begins. This will be accomplished by advancing exploratory test pits and/or soil borings for collection of representative fill/soil samples for laboratory analysis. The number of samples and analytical requirements shall be in accordance with the target disposal facility's disposal permit requirements, and if unspecified, shall be at a minimum for the full Toxicity Characteristic Leaching Procedure (TCLP) parameters and RCRA characteristics.

Disposal facility approval letters and other related documentation will be submitted to C.T. Male and NYSDEC for review and approval prior to the exportation of contaminated fill/soil.

All IDW from the RI will be characterized and disposed of off-site.

2.6 Utility Disconnects

The Site is serviced with electricity and natural gas from National Grid. Potable water and sanitary sewer is provided by the City of Schenectady Department of Water and Wastewater. If not already addressed during demolition of the Site buildings, the earthwork contractor is responsible to locate all active utilities and disconnect them per City and County of Schenectady requirements, or properly reroute or protect them during excavation in cooperation with applicable utility providers.

2.7 Construction Entrance

A stabilized construction entrance(s) will be installed to mitigate the tracking of potentially contaminated fill/soil onto public rights-of-way from vehicle traffic exiting the Site. The construction entrance(s) will be constructed of No. 2-inch stone, not less than six (6) inches in depth, placed over filter fabric. The construction entrance(s) shall be a minimum 50 feet in length by 20 feet in width, or larger to mitigate transport of sediment from the project Site to adjacent roadways. The construction entrance(s) will be amended with new stone on an as needed basis when not functioning as designed, and as determined by the Remediation Engineer or C.T. Male's construction observer. Details for a construction entrance(s) are presented on Figure 2A in Appendix A. The Contractor will construct and relocate (if needed) the construction entrances as necessary to effectuate the efficient direct loading of the remediated fill/soil into the trucks for off-site disposal.

2.8 Excavation Shoring/Sheeting

Due to the anticipated horizontal and vertical remedial excavation depths and the estimated vertical depths for foundation construction after completion of the remedial action, shoring and/or sheeting may be required to effectuate stable and safe excavation conditions. The need for and design of the shoring/sheeting systems will be the

responsibility of the earthwork contractor, and shall be designed by a NYS licensed professional engineer. Prior to commencement of the remedial action, excavation shoring/sheeting plans will be submitted to DEC for their information. Excavation shoring/sheeting plans for non-remedial needs are not required to be submitted to DEC.

3.0 SITE CONTROLS DURING REMEDIAL ACTION

3.1 Stormwater Management

The cumulative area of soil disturbance for this project is less than one (1) acre, thereby not requiring coverage under the State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity before commencing construction activity. Regardless, the following best management practices shall be implemented to prevent migration of sediment off-site.

Construction Entrance(s): At a minimum, one (1) construction entrance each within the 830 Albany Street and 834 Albany Street Parcels are required to be installed according to the requirements shown on Figure 2A. Additional construction entrances may be installed, if necessary, and in accordance with the requirements for construction. The construction entrance(s) shall be amended with new stone any time there is evidence of sediment being tracked off-site.

Silt Fence: Silt fence shall be installed prior to Site disturbance in accordance with the requirements shown on Figure 2A. The silt fence shall be installed along the entire Site perimeter, inside of any temporary construction fencing so it can be repaired from the Site and to mitigate tampering by the public.

Inlet Protection: There are two (2) catch basins at the northeast and northwest intersections of Albany and Craig Streets. As these basins have the potential to be affected by sediment during Site disturbance, silt sacks or equivalent erosion protection measures are required unless the excavated grades eliminate the potential for sediment to reach these basins. The locations of mapped catch basins are shown on Figure 2.

The Remediation Engineer or C.T. Male's construction observer will monitor the status and condition of the erosion and sediment control measures listed above and conduct stormwater related observations, and as necessary, recommendations for repairs to the Owner generally on a weekly basis. The Contractor shall designate a single point contact that is responsible for maintaining erosion and sediment control measures in good working order. This individual shall establish a regular schedule for checking the condition of erosion and sediment control measures.

3.2 Air Monitoring

A Community Air Monitoring Plan (CAMP) will be followed during ground intrusive remedial activities (i.e., excavation, disturbance and handling of site fill/soil). The intent of the CAMP is to provide a measure of protection for the downwind community (i.e., 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 remedial work activities. The CAMP is not intended for use in establishing action levels for worker respiratory protection. The CAMP will monitor the air for dust (particulate air monitoring, see Section 3.2.1) and volatile organic compound vapors (VOC air monitoring, see Section 3.2.2) at the downwind perimeter of the work area and/or at off-site occupied buildings within 20 feet of the work area. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. The CAMP is included in Appendix D.

3.2.1 Particulate Air Monitoring

Three (3) real-time particulate monitors capable of continuously measuring concentrations of particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) will be utilized. The instruments will be placed inside environmental enclosures at temporary monitoring stations based on the prevailing wind direction each work day, one (1) upwind and two (2) downwind of the designated work areas. If the remedial action is taking place within 20 feet of off-site occupied structures, monitoring will be conducted at the Site boundaries closest to the exterior walls or air intake vents of the occupied structures.

Each particulate monitor will be equipped with a telemetry unit capable of transmitting real-time particulate data to the Remediation Engineer and/or C.T. Male's construction observer. The particulate monitoring instruments will be capable of displaying and transmitting the short term exposure limit (STEL) or 15 minute averaging period, which will be compared to the NYSDOH Generic Community Air Monitoring Plan action levels for particulates, as listed below. The instruments are programmed to alarm at preset action levels. Instrument alarms will be transmitted in real time to the Remediation Engineer and/or C.T. Male's construction observer via email and/or text message. The dust monitoring data for the remedial action will be stored in the

Environet database and will be periodically downloaded and stored in C.T. Male's electronic project directory.

- If the downwind and/or occupied structures PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that the downwind and/or occupied structures PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.
- If, after implementation of dust suppression techniques, the downwind and/or occupied structures PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind and/or occupied structures PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

In the event of poor weather such as heavy rain, particulate monitoring will not be performed for protection of instrumentation. These weather conditions would limit the effectiveness of the sensitive monitoring equipment and likely suppress particulate generation. Work activities will be halted if fugitive dust migration is visually observed for a sustained period of time during poor weather conditions.

3.2.2 Volatile Organic Compound Air Monitoring

C.T. Male will continuously monitor for VOCs at the upwind and downwind perimeter of the immediate work areas and in the vicinity of occupied structures (if present) with a MiniRAE 3000 VOC monitor or equal. The VOC monitors will be placed in the upwind, downwind and occupied structures (if present) environmental enclosures containing a particulate monitor. The VOC monitors will be equipped with telemetry units capable of transmitting real-time VOC data to the Remediation Engineer and/or C.T. Male's construction observer. The VOC monitoring instruments will be capable of displaying and transmitting the STEL or 15 minute averaging period, which will be compared to the NYSDOH Generic Community Air Monitoring Plan action levels for

VOCs, as listed below. Instrument alarms will be transmitted in real time to the Remediation Engineer and/or C.T. Male's construction observer via email and/or text message. The VOC monitoring data for the remedial action will be stored in the Environet database and will be periodically downloaded and stored in C.T. Male's electronic project directory.

Upwind VOC STEL concentrations will be measured continuously employing a MiniRae 3000 VOC monitor to evaluate the Site's background conditions.

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone and/or area of the work area within 20 feet of any occupied structures exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities will be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.
- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone and/or area of the work area within 20 feet of any occupied structures persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities will 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 and/or area of the Site boundary nearest any occupied structures is below 5 ppm over background for the 15-minute average.
- If the organic vapor level is above 25 ppm at the perimeter of the work area and/or area of the Site boundary nearest any occupied structures, activities will be shutdown. Work activities will then be evaluated to determine the source of the organic vapors and the engineering controls required to reduce/eliminate the organic vapors.

3.3 Noise and Vibration

There is potential for noise and vibration to be an issue depending on the means and methods selected by the construction contractor to excavate and load the Site fill/soil during the remedial action. If sheet piling is used to facilitate the excavation of Site

fill/soil during the remedial excavation, the project plans and specifications will require the contractor to plan for and provide, as necessary, controls to mitigate noise and vibration from adversely affecting the community.

3.4 Dust Control

Dust suppression techniques will be required, as necessary, to control fugitive dust to the extent practical during the remedial action. Such techniques must be employed, at a minimum, if the community air monitoring results indicate that particulate levels are above action levels. All reasonable attempts will be made to inhibit visible and/or fugitive dusts. Techniques to be utilized by the contractor may include one or more of the following:

- Applying water to haul roads.
- Wetting equipment and excavation faces.
- Spraying water on buckets during excavation and dumping.
- Hauling materials in containers or vehicles with solid tarp covers.
- Restricting vehicle speeds on-site.
- Covering excavated areas and materials after excavation immediately after activity ceases.

The contractor will be required to perform dust control measure in a manner consistent with the applicable portions of the "New York Guidelines for Urban Erosion and Sediment Control" and the "New York State Stormwater Management Design Manual".

3.5 Construction Observation and Certification

C.T. Male will provide full-time observation during the remedial action. At the point in construction when the environmental related issues have been fully addressed (i.e., monitoring wells are abandoned, tanks and drum are closed by removal, impacted fill/soil and native soil removed and off-site, groundwater treatment is stabilized or completed and CAMP monitoring is no longer required, etc.), C.T. Male will no longer provide construction observation.

Periodic observation of the remedial action will be made by a C.T. Male NYS registered professional engineer in order to provide the required certification of the FER. The engineer will supervise the construction observer during the remedial action to document that the project is implemented in accordance with the DEC approved RWP. The Remediation Engineer will provide engineering review of remedial related contractor submittals and field changes for the remedial related work.

3.6 Odor Control

If nuisance odors are identified to extend beyond the perimeter of the work area during the fill/soil remedial excavation, measures that may be implemented to abate the nuisance odors include limiting the area of open excavations, limiting the size of soil stockpiles, shrouding open excavations with tarps and other covers, direct load-out of soils to trucks for off-site disposal, use of chemical odorants (non-PFAS containing) via spray or misting systems, and use of staff to monitor odors in surrounding neighborhoods.

4.0 HEALTH AND SAFETY PLAN (HASP)

Health and safety procedures to be followed by C.T. Male will be conducted in accordance with a site-specific Health and Safety Plan (HASP). The HASP will be developed prior to the commencement of the remedial action and will be available at the Site during the remedial action.

The contractor completing the remedial work will be required to provide a site specific HASP that is certified by a Certified Industrial Hygienist, Certified Safety Professional or Remediation Engineer determined equivalent safety professional. The contractor's employees will be required to have read and understood their company's site specific HASP prior to completing the work.

5.0 CONFIRMATION AND DOCUMENTATION SAMPLING

5.1 Tank and Drum Closure Sampling

Two (2) bulk storage tanks embedded in sand in a concrete vault within the remaining basement foundation of the former building addressed as 830 Albany Street (see Figure 2) were closed by removal in March 2019. C.T. Male's field representative will assess the sand surrounding the former tanks for organic vapors employing PID headspace analyses and organoleptic perception. If the soils appear impacted (PID readings above approximately 10 ppm, with petrochemical-type odors and/or staining), they will be characterized and disposed of off-site at a permitted disposal facility. If the soils do not appear impacted, the soils can either be reused on-Site as backfill or disposed of off-site as a separate waste stream.

There is currently one (1) known underground tank (and potentially a second underground tank) adjacent south of the former building addressed as 830 Albany Street (see Figure 2). Upon removal of the tank, C.T. Male's field representative will assess the soils surrounding the tank for organic vapors employing PID headspace analyses and organoleptic perception. If the soils do not appear impacted, post tank closure samples will be collected for laboratory analyses per DER-10, Section (5.5)(C). The samples will be analyzed for the Target Compound List (TCL) of VOCs, SVOCs, pesticides and polychlorinated biphenyls (PCB), the Target Analyte List (TAL) of metals (including mercury) and cyanide (TCL/TAL Parameters). If the soils appear impacted, additional excavation will be conducted until the soils no longer appear impacted employing the above field screening methods. Floor and sidewall samples will be collected from the tank excavation for analyses for the TCL/TAL Parameters to document that the impacted soils have been sufficiently remediated. The impacted soils will be staged atop poly and covered pending waste characterization and off-site disposal.

There is a potential buried drum/tank adjacent south of the former building addressed as 830 Albany Street (see Figure 2). Upon removal of the drum, C.T. Male's field representative will assess the soils surrounding the drum for organic vapors employing PID headspace analyses and organoleptic perception. If the soils do not appear impacted, one (1) soil sample will be collected from immediately beneath the drum for

laboratory analysis for the TCL/TAL Parameters. If the soils appear impacted, additional excavation will be conducted until the soils no longer appear impacted employing the above field screening methods. Floor and sidewall samples will be collected from the drum excavation for analyses for the TCL/TAL Parameters to document that the impacted soils have been sufficiently remediated. The impacted soils will be staged atop poly and covered pending waste characterization and off-site disposal.

5.2 Post-Remediation Confirmation Sampling

Post-remediation confirmation soil samples will be collected for laboratory analysis after removal of impacted fill/soil and native soil to document that SCGs have been met. The samples will be analyzed for the TCL/TAL Parameters. If a certain parameter does not meet the project SCGs, that area will be further excavated and resampled. These samples will be analyzed for only those parameters that had exceedance in the initial samples.

Post-remediation verification soil samples will be collected at a frequency of one (1) grab sample per each 900 square feet of excavation floor and one (1) sample from the bottom of each sidewall for every 30 linear feet of sidewall, pursuant to DEC DER-10. The sidewall samples will be collected at the Site boundaries, at the western and southern perimeter of the 830 Albany Street building footprint, and the northwestern and eastern perimeter of the 834 Albany Street building footprint.

Quality Assurance/Quality Control (QA/QC) samples at a ratio of 1 set of QA/QC samples per 20 media samples will be collected and analyzed. The QA/QC samples for soils will include a blind field duplicate (FD), matrix spike (MS)/matrix spike duplicate (MSD) and equipment (field) blank (EB) samples.

The laboratory will provide the analytical results in DEC ASP Category B Data Deliverable format for subsequent third party data validation. Data validation will be performed in accordance with the USEPA National and Regional Validation Guidelines/Procedures to determine the applicable qualifications of the data. The validator will then prepare a Data Usability Summary Report (DUSR) in accordance with DEC guidance. All of the laboratory data will also be submitted electronically to NYSDEC in Version 4 EQuIS database format.

5.3 Groundwater Treatment Documentation Sampling

Groundwater treatment may be necessary during the remedial action and subsequent new subgrade construction. Groundwater treatment shall be implemented when there is a petroleum sheen on the water surface, the groundwater comes into contact with petroleum contaminated soil, and/or testing for approval to discharge groundwater to the municipal storm/sewer system shows contaminants above applicable acceptance parameters.

The documentation and sampling necessary for the groundwater treatment system will be dependent on the requirement of the applicable City of Schenectady permit for such treatment system. Documentation will likely include influent (prior to treatment) and effluent (post treatment) sampling which will be used to gauge groundwater contaminant levels, document conformance to applicable permit discharge limits, and set forth the frequency of change-out of groundwater treatment media. The proposed sampling frequency and analysis will be presented to DEC for concurrence prior to its implementation.

In lieu of a groundwater treatment system, groundwater staged in temporary holding tanks may be removed and transported for off-site disposal at a permitted TSDF facility.

5.4 Imported Fill Testing

The source of the fill and the analytical data will be provided to the DEC for review and approval prior to importing the fill to the Site. The sampling and analysis requirements for fill imported to the Site are set forth in 5.4(e)10 of DEC DER-10. The following requirements must also be met:

- All materials proposed for import onto the Site will be approved by the certifying Remediation Engineer, and the DEC, and will be in compliance with provisions in 6 NYCRR Part 375 and DER-10 prior to delivery to the Site.
- Material from industrial sites, spill sites, or other environmental remediation sites or potentially contaminated sites will not be imported to the Site.
- All imported soils will meet the backfill quality standards established in 6 NYCRR 375-6.7(d). Based on an evaluation of the land use, protection of

groundwater and protection of ecological resources criteria, the resulting soil quality standards are listed in Table 375-6.8(a) in Appendix B.

All imported fill samples will also be analyzed for the emerging contaminants (ECs) 1,4-dioxane and the DEC list of 21 per- and polyfluoroalkyl substances (PFAS). The EC analytical results will be reviewed by the DEC Project Manager to determine if the fill material is suitable for import onto the Site.

Soils that meet 'exempt' fill requirements under 6 NYCRR Part 360, but do not meet backfill objectives for this Site, will not be imported onto the Site without prior approval by DEC. Solid waste will not be imported onto the Site.

- Trucks entering the Site with imported soils will be securely covered with tight fitting solid covers. Imported soils will be stockpiled separately from excavated materials and covered to prevent dust releases.

6.0 APPLICABLE PERMITS AND RELATED

6.1 Groundwater Discharge

A dewatering system may be necessary during the remedial action and subsequent new subgrade construction to mitigate groundwater infiltration. Groundwater extracted from the subsurface may require treatment prior to discharge to the closest MS4 combined sewer manhole, which will require a sewer discharge permit. The requirements of a sewer discharge permit will be sought from the City of Schenectady Department of Water and Wastewater; the entity that operates the local sewage treatment plant. DEC will be provided a copy of the approval to discharge to the sewer, when applied for and received from the City of Schenectady Department of Water and Wastewater. If the volume of groundwater requiring treatment is anticipated to be low, the impacted groundwater may be pumped to temporary tank(s) and periodically removed from the Site in tanker trucks. The tank liquids will be properly managed and disposed of off-site at an approved and permitted TSDF. The wastes will be transported by a 6 NYCRR Part 364 transporter permitted to transport these types of wastes, and disposed of at a facility permitted to accept the waste being disposed of.

7.0 SITE RESTORATION

7.1 General

The Site will be restored upon completion of work in accordance with the plans and specifications for new construction. Imported backfill will be tested in accordance with Section 5.4. Once the Site is backfilled to final grade or at some point prior to when existing Site soils are no longer being disturbed, CAMP monitoring will be discontinued with pre-approval from DEC.

8.0 REPORTING AND CERTIFICATE OF COMPLETION

8.1 Construction Work Plan

A Construction Work Plan (CWP) will be submitted to the Department for review and approval prior to beginning the remedial action. The CWP should, at a minimum, include the following information.

1. Specify water management and treatment measures. Indicate how excavation water (e.g., groundwater and/or precipitation entering the excavation) will be controlled, treated and/or handled. This should include permits or other authorizations, as appropriate, and should indicate the discharge and sampling requirements.
2. Indicate the anticipated treatment and/or disposal facility or facilities for waste streams.
3. Describe the intended soil excavation approach (e.g., establishing a grid, related confirmatory sampling, and systematic excavation activities to mitigate potential for re-contaminating an excavation area already meeting cleanup criteria).
4. Provide the shoring plans, as appropriate, per Section 2.8 of the RWP.
5. Indicate the anticipated hours of operation for the remedial activities. This should conform with City of Schenectady ordinances, per Section 1.8 of the RWP.
6. Indicate the location of staging and decontamination areas and construction entrances. Provide the specifications for the equipment decontamination pad.
7. Indicate truck routes and queue areas. This information should also be provided to the City of Schenectady.
8. Indicate how excavation depths will be confirmed, per Section 2.5 of the RWP.
9. Specify noise and vibration monitoring requirements, action levels, and city restrictions, per Section 3.3 of the RWP.
10. Specify Site restoration requirements (e.g., grading and seeding).
11. Provide a schedule for the remedial action activities, including notification to the Department, as described in DER-10 Section 5.1.

12. Provide the health and safety plan, per Section 4.0 of the RWP.
13. Indicate that the BUD will be obtained prior to reusing concrete on-Site as backfill.

8.2 Weekly Progress Updates

Progress meeting minutes will be submitted to the DEC Project Manager via email during the remedial action. The progress report will briefly summarize the remedial activities completed at the Site for the previous week. The progress report will be submitted at the beginning of the following week. The format will be in a bulleted style generally highlighting the major items accomplished during the previous week.

8.3 Monthly Progress Reports

Monthly progress reports will report on the progress of the remedial actions accomplished during the reporting period. The reports will be submitted to DEC, with a copy to the NYS Department of Health project manager and pertinent personnel representing the Volunteer. The progress reports will be submitted on or about the 10th day of each month. The progress reports will generally include the following information, where applicable

- Any request for modifications to the approved RWP, and the status of previously requested modifications.
- A discussion of project progress and significant activities during the reporting period, including the status of any requisite permits.
- A discussion of pending/planned significant project activities during the next two months, unless another time frame is authorized by the Department.
- The approved remedial action schedule and proposed modifications to the remedial action schedule, resulting from new information and/or unforeseen conditions.
- A discussion of any problems or delays in the implementation of the remedial action relative to the work and/or remedial action schedule.

- Proposed actions to correct any identified problems, including how to mitigate any adverse schedule impacts.

- Any additional, pertinent documentation that is available (e.g., photographs) that helps communicate progress/issues facing the project.

- A tabulation of sample results received during the reporting period and submission of a report summarizing the data and presenting conclusions.

- A tabulation of waste classification and/or characterization samples collected including the physical state of the material (solid, liquid, sludge), the volume of material, number of samples collected, analyses performed and results.

- A listing of the types and quantities of contamination generated by the remedial action during the reporting period and to date, as well as the name of the disposal facilities, transporters' dates of disposal and, if appropriate, the manifest numbers of each waste load.

8.4 Final Engineering Report

Upon completion of the remedial action, a FER will be prepared that summarizes the work completed and results of the confirmation and documentation sampling. Any deviations from the RWP will also be discussed in the FER. The FER will be prepared in general accordance with the FER requirements promulgated in Section 5.8 of DER-10, as summarized below.

- The final FER submitted to DEC for approval will be prepared, stamped, certified and signed by an individual licensed or otherwise authorized in accordance with Article 145 of the Education Law to practice the profession of engineering using the appropriate certification provided in Table 1.5 of DER-10.

- A description of the remedy, as constructed, pursuant to the DEC-approved RWP.

- A summary of the remedial actions completed, including a description of problems encountered and resolved, summary of changes to the RWP, listing of

the waste streams, the quantity of each waste stream, and the disposal location(s) for each waste stream.

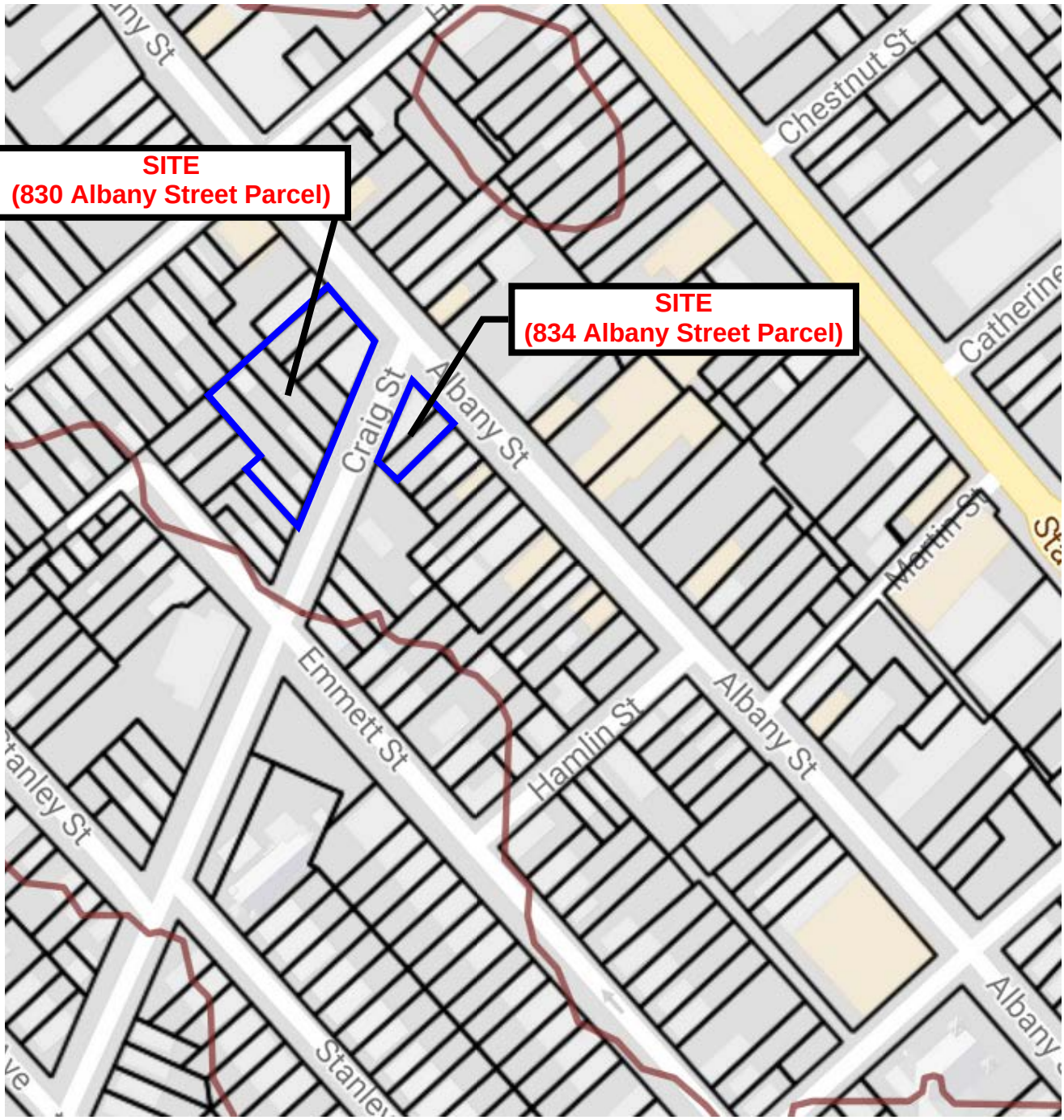
- A list of the remedial action objectives applied to the remedial action.
- Tables and figures containing pre- and post-remedial data keyed appropriately so that completion of the remedial action is documented.
- A detailed description of the applicable areas of remedial action compliance.
- Drawings showing the excavation limits and the excavation end-point soil sampling locations.
- Fully executed manifests documenting off-site transport of the waste materials.
- Analytical results of the excavation end-point soil samples, including laboratory data sheets and the required laboratory data deliverables.

8.5 Certificate of Completion

The Volunteer will be seeking a Certificate of Completion (COC) from DEC upon completion of the remedial action and DEC approval of the FER. It is anticipated that completion of the remedial action and the Volunteer's receipt of the COC will likely occur prior to completion of the entire construction project at the Site. The Volunteer anticipates obtaining a COC by early to mid-2020.

APPENDIX A

FIGURES



MAP REFERENCE
USGS 7.5 Minute Topographical Map
Schenectady, New York Quadrangle
Year 2013

C.T.MALE ASSOCIATES
ENGINEERING, SURVEYING, ARCHITECTURE & LANDSCAPE ARCHITECTURE, D.P.C.
50 CENTURY HILL DRIVE
LATHAM, NY 12110

FIGURE 1: SITE LOCATION MAP
HAMILTON HILL II - TARGET AREA 1 SITE

CITY OF SCHENECTADY	SCHENECTADY COUNTY, NY
SCALE: NOT TO SCALE	The locations and features depicted on this map are approximate and do not represent an actual survey.
DRAFTER: SB	
PROJECT No: 16.6334	

XREFS: NONE

PROJECT NUMBER: 16.6334

MAP REFERENCES:

1. "Map Showing Lot Line Adjustment of No. 310 Craig Street No. 807 Emmett Street" City of Schenectady, County of Schenectady, New York State of New York prepared by Hershberg & Hershberg, Consulting Engineers and Land Surveyors dated March 23, 2016, Map No. 160068 and filed in the Schenectady County Clerk's Office on December 2, 2016 in Cabinet N, Map No. 279.

2. ALTA/NSPS Land Title Boundary and Topographic Survey 820 Albany Street - 824 Albany Street - 830 Albany Street - 834 Albany Street - 840 Albany Street - 811 Albany Street - 827 Albany Street - 831 Albany Street - 302 Craig Street - 304 Craig Street - 306 Craig Street - 308 Craig Street - 310 Craig Street, prepared for TCB Holdings, Inc.", prepared by C.T. Male Associates, Engineering, Surveying, Architecture & Landscape Architecture, D.P.C., dated May 24, 2017, Project No. 17.7266, Drawing No. 17-376.

MAP NOTES:

1. Boundary and topographic information shown hereon was compiled from an actual field survey conducted on April 28, May 4, May 8-9 and May 24, 2017 and June 15, 2017.

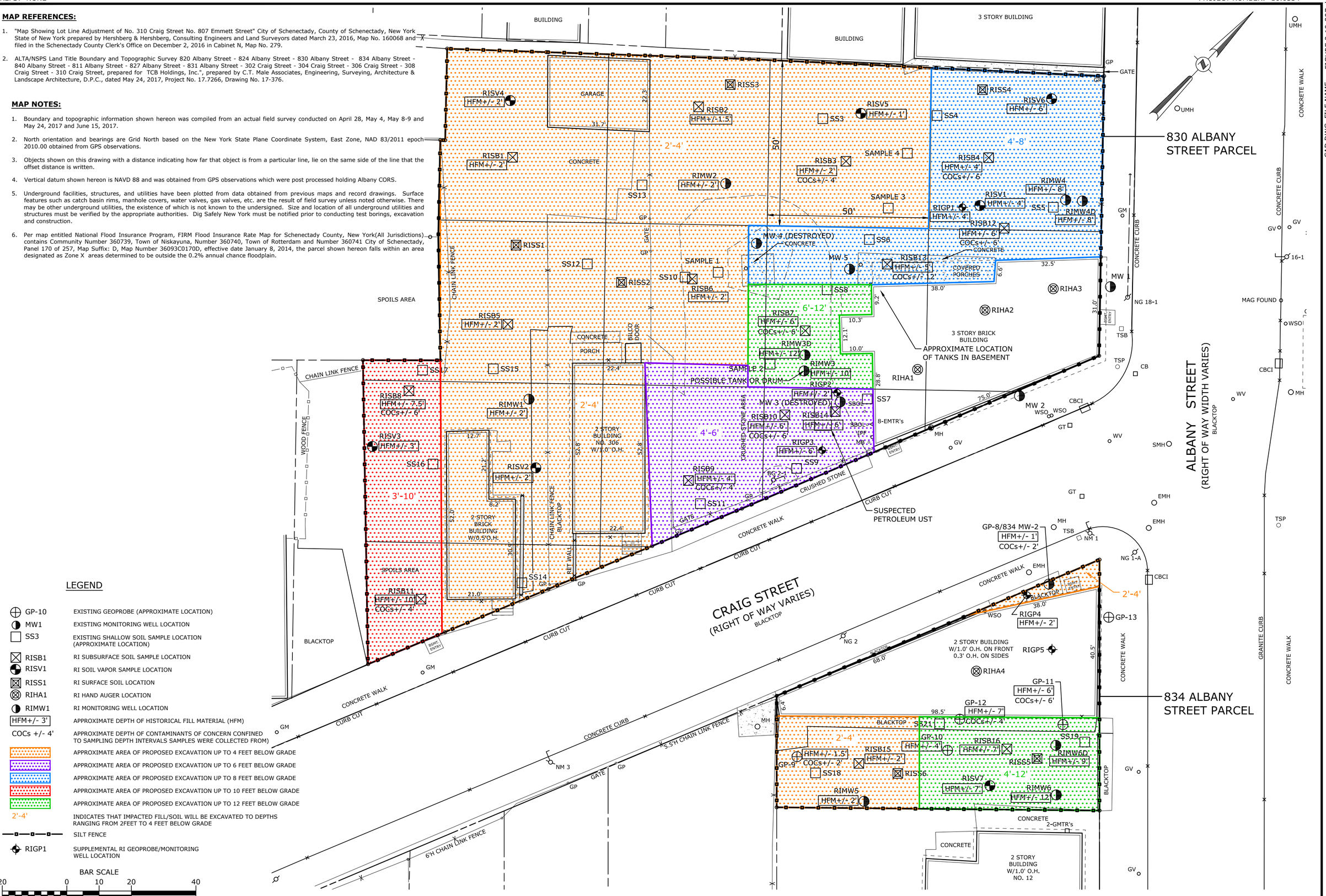
2. North orientation and bearings are Grid North based on the New York State Plane Coordinate System, East Zone, NAD 83/2011 epoch 2010.00 obtained from GPS observations.

3. Objects shown on this drawing with a distance indicating how far that object is from a particular line, lie on the same side of the line that the offset distance is written.

4. Vertical datum shown hereon is NAVD 88 and was obtained from GPS observations which were post processed holding Albany CORS.

5. Underground facilities, structures, and utilities have been plotted from data obtained from previous maps and record drawings. Surface features such as catch basin rims, manhole covers, water valves, gas valves, etc. are the result of field survey unless noted otherwise. There may be other underground utilities, the existence of which is not known to the undersigned. Size and location of all underground utilities and structures must be verified by the appropriate authorities. Dig Safely New York must be notified prior to conducting test borings, excavation and construction.

6. Per map entitled National Flood Insurance Program, FIRM Flood Insurance Rate Map for Schenectady County, New York(All Jurisdictions) contains Community Number 360739, Town of Niskayuna, Number 360740, Town of Rotterdam and Number 360741 City of Schenectady, Panel 170 of 257, Map Suffix: D, Map Number 36093C0170D, effective date January 8, 2014, the parcel shown hereon falls within an area designated as Zone X areas determined to be outside the 0.2% annual chance floodplain.



DATE		REVISIONS RECORD/DESCRIPTION	DRAFTER	CHECK	APPR.
10/10/19	1	REVISED TO SHOW RIGP MON. WELL LOCATIONS	MDD		
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				

DESIGNED : SB
DRAFTED : MDD
CHECKED : SB
PROJ. NO : 16.6334
SCALE : 1" = 20'
DATE : MAY 10, 2019

FIGURE 2: REMEDIAL ACTION IMPLEMENTATION PLAN
830 & 834 ALBANY STREET PARCELS

HAMILTON HILL - TARGET AREA 1 SITE

CITY OF SCHENECTADY — SCHENECTADY COUNTY, NEW YORK

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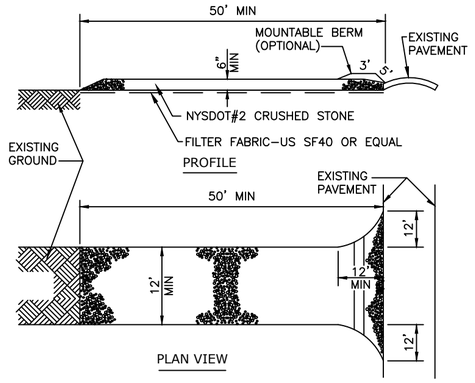
SHEET 1 OF 5
DWG. NO: 19-307

CAD DWG. FILE NAME: C:\Users\micheled\Desktop\WORK FROM HOME\hamilton hill\17.7266\figure mapping\FIGURE DRAWINGS\FIGURE 2 19-307.dwg

CAD DWG. FILE NAME: FIGURE 2 19-307.dwg



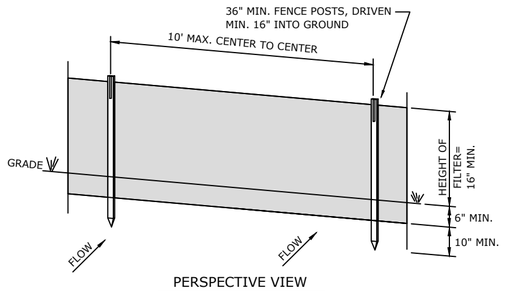
NOTES:

1. USE 1"–4" STONE, OR RECLAIMED OR RECYCLED CONCRETE OR APPROVED EQUAL.
2. THE LENGTH SHALL NOT BE LESS THAN 50 FEET.
3. CRUSHED STONE SHALL BE MAINTAINED AT A MINIMUM OF 6" IN DEPTH.
4. ENTRANCE SHALL HAVE A 12 FOOT MINIMUM WIDTH, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. ENTRANCE SHALL BE AT LEAST 24 FEET WIDE IF SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO THE PLACING OF STONE.
6. ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS NOT PRACTICAL, A MOUNTABLE BERM WITH 1:5 SLOPES WILL BE PERMITTED.
7. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS– OF–WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS–OF–WAY SHALL BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

1
FIG2

STABILIZED CONSTRUCTION ENTRANCE DETAIL

SCALE: NONE
CROSS REFERENCE: NONE



NOTES:

1. FILTER CLOTH TO BE FASTENED SECURELY TO WOODEN STAKES
2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
3. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIALS REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
4. PREFABRICATED SILT FENCE IS ACCEPTABLE AS LONG AS ALL MATERIAL SPECIFICATIONS ARE MET.

2
FIG2

STANDARD SILT FENCE DETAIL

SCALE: NONE
CROSS REFERENCE: NONE

DATE	REVISIONS RECORD/DESCRIPTION	DRAFTER	CHECK	APPR.
	1			
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DESIGNED : SB
DRAFTED : MDD
CHECKED : SB
PROJ. NO : 16.6334
SCALE : 1" = 20'
DATE : MAY 10, 2019

FIGURE 2A: REMEDIAL ACTION IMPLEMENTATION DETAILS 830 & 834 ALBANY STREET PARCELS

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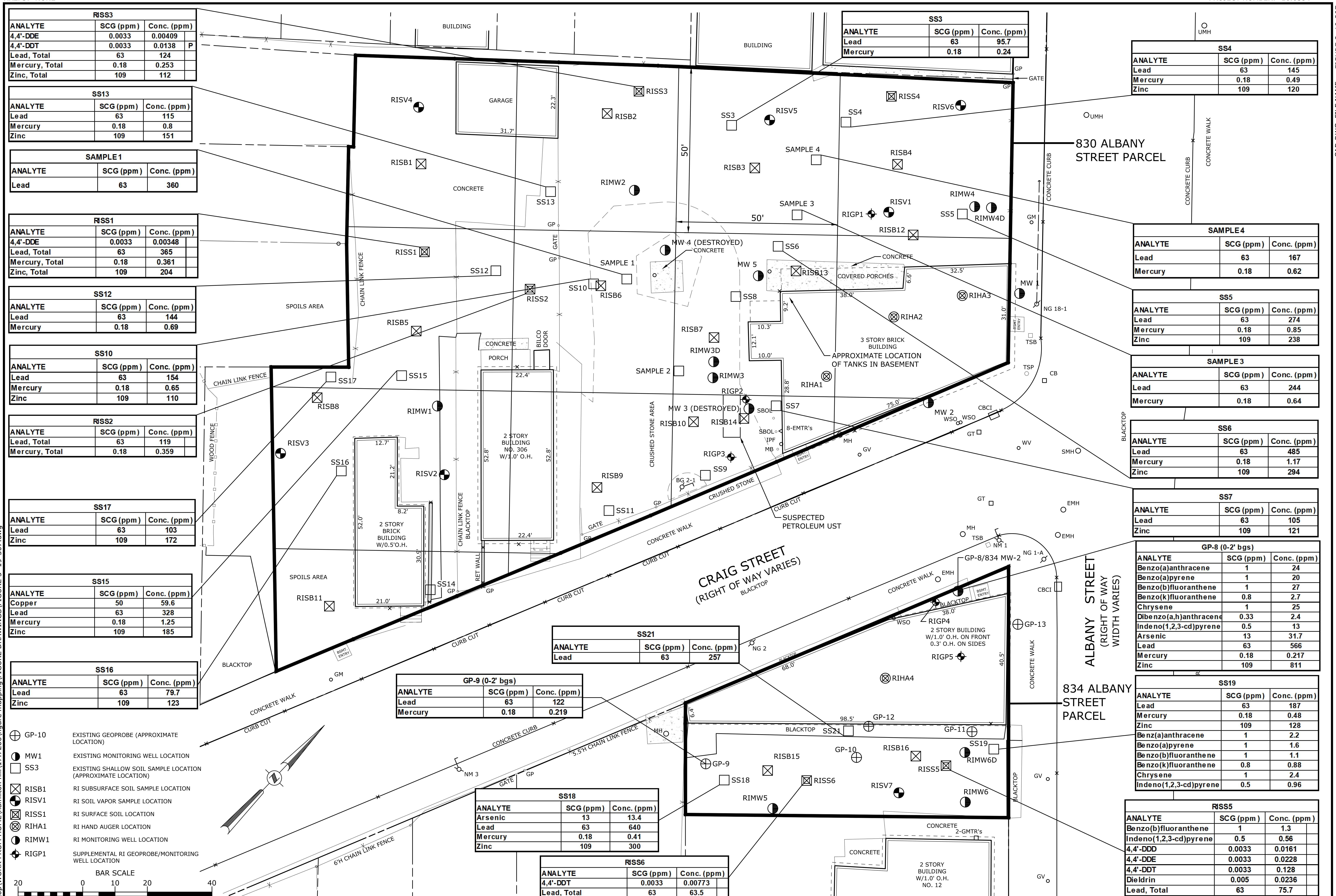
CAD DWG. FILE NAME: FIGURE 3 19-307.dwg



RISS3			
ANALYTE	SCG (ppm)	Conc. (ppm)	
4,4'-DDE	0.0033	0.00409	
4,4'-DDT	0.0033	0.0138	P
Lead, Total	63	124	
Mercury, Total	0.18	0.253	
Zinc, Total	109	112	

SS13		
ANALYTE	SCG (ppm)	Conc. (ppm)
Lead	63	115
Mercury	0.18	0.8
Zinc	109	151

SAMPLE 1		
ANALYTE	SCG (ppm)	Conc. (ppm)
Lead	63	360

RISS1		
ANALYTE	SCG (ppm)	Conc. (ppm)
4,4'-DDE	0.0033	0.00348
Lead, Total	63	365
Mercury, Total	0.18	0.361
Zinc, Total	109	204

SS12		
ANALYTE	SCG (ppm)	Conc. (ppm)
Lead	63	144
Mercury	0.18	0.69

SS10		
ANALYTE	SCG (ppm)	Conc. (ppm)
Lead	63	154
Mercury	0.18	0.65
Zinc	109	110

RISS2		
ANALYTE	SCG (ppm)	Conc. (ppm)
Lead, Total	63	119
Mercury, Total	0.18	0.359

SS17		
ANALYTE	SCG (ppm)	Conc. (ppm)
Lead	63	103
Zinc	109	172

SS15		
ANALYTE	SCG (ppm)	Conc. (ppm)
Copper	50	59.6
Lead	63	328
Mercury	0.18	1.25
Zinc	109	185

SS16		
ANALYTE	SCG (ppm)	Conc. (ppm)
Lead	63	79.7
Zinc	109	123

SS3		
ANALYTE	SCG (ppm)	Conc. (ppm)
Lead	63	95.7
Mercury	0.18	0.24

SS4		
ANALYTE	SCG (ppm)	Conc. (ppm)
Lead	63	145
Mercury	0.18	0.49
Zinc	109	120

SAMPLE 4		
ANALYTE	SCG (ppm)	Conc. (ppm)
Lead	63	167
Mercury	0.18	0.62

SS5		
ANALYTE	SCG (ppm)	Conc. (ppm)
Lead	63	274
Mercury	0.18	0.85
Zinc	109	238

SAMPLE 3		
ANALYTE	SCG (ppm)	Conc. (ppm)
Lead	63	244
Mercury	0.18	0.64

SS6		
ANALYTE	SCG (ppm)	Conc. (ppm)
Lead	63	485
Mercury	0.18	1.17
Zinc	109	294

SS7		
ANALYTE	SCG (ppm)	Conc. (ppm)
Lead	63	105
Zinc	109	121

GP-8 (0-2' bgs)		
ANALYTE	SCG (ppm)	Conc. (ppm)
Benzo(a)anthracene	1	24
Benzo(a)pyrene	1	20
Benzo(b)fluoranthene	1	27
Benzo(k)fluoranthene	0.8	2.7
Chrysene	1	25
Dibenzo(a,h)anthracene	0.33	2.4
Indeno(1,2,3-cd)pyrene	0.5	13
Arsenic	13	31.7
Lead	63	566
Mercury	0.18	0.217
Zinc	109	811

SS19		
ANALYTE	SCG (ppm)	Conc. (ppm)
Lead	63	187
Mercury	0.18	0.48
Zinc	109	128
Benz(a)anthracene	1	2.2
Benzo(a)pyrene	1	1.6
Benzo(b)fluoranthene	1	1.1
Benzo(k)fluoranthene	0.8	0.88
Chrysene	1	2.4
Indeno(1,2,3-cd)pyrene	0.5	0.96

RISS5		
ANALYTE	SCG (ppm)	Conc. (ppm)
Benzo(b)fluoranthene	1	1.3
Indeno(1,2,3-cd)pyrene	0.5	0.56
4,4'-DDD	0.0033	0.0161
4,4'-DDE	0.0033	0.0228
4,4'-DDT	0.0033	0.128
Dieldrin	0.005	0.0236
Lead, Total	63	75.7

SS21		
ANALYTE	SCG (ppm)	Conc. (ppm)
Lead	63	257

GP-9 (0-2' bgs)		
ANALYTE	SCG (ppm)	Conc. (ppm)
Lead	63	122
Mercury	0.18	0.219

SS18		
ANALYTE	SCG (ppm)	Conc. (ppm)
Arsenic	13	13.4
Lead	63	640
Mercury	0.18	0.41
Zinc	109	300

RISS6		
ANALYTE	SCG (ppm)	Conc. (ppm)
4,4'-DDT	0.0033	0.00773
Lead, Total	63	63.5

Symbol	Description
GP-10	EXISTING GEOPROBE (APPROXIMATE LOCATION)
MW1	EXISTING MONITORING WELL LOCATION
SS3	EXISTING SHALLOW SOIL SAMPLE LOCATION (APPROXIMATE LOCATION)
RISB1	RI SUBSURFACE SOIL SAMPLE LOCATION
RISV1	RI SOIL VAPOR SAMPLE LOCATION
RISS1	RI SURFACE SOIL LOCATION
RIHA1	RI HAND AUGER LOCATION
RIMW1	RI MONITORING WELL LOCATION
RIGP1	SUPPLEMENTAL RI GEOPROBE/MONITORING WELL LOCATION

BAR SCALE

20 0 10 20 40

1 inch = 20 ft.

DATE		REVISIONS RECORD/DESCRIPTION	DRAFTER	CHECK	APPR.
10/10/19	1	REVISED TO SHOW RIGP MON. WELL LOCATIONS	MDD		
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				

DESIGNED: SB
DRAFTED : MDD
CHECKED : SB
PROJ. NO : 16.6334
SCALE : 1" = 20'
DATE : MAY 10, 2019

FIGURE 3: CONTAMINANTS OF CONCERN IN SURFACE SOIL AND SHALLOW FILL/SOIL
830 & 834 ALBANY STREET PARCELS

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SHEET 3 OF 5
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RISB10 (2'-4' bgs)		
ANALYTE	SCG (ppm)	Conc. (ppm)
Benzo(a)anthracene	1	3.7
Benzo(a)pyrene	1	3.2
Benzo(b)fluoranthene	1	4.8
Benzo(k)fluoranthene	0.8	1.6
Chrysene	1	3.9
Dibenzo(a,h)anthracene	0.33	0.55
Indeno(1,2,3-cd)pyrene	0.5	2.1
4,4'-DDE	0.0033	0.00696
4,4'-DDT	0.0033	0.0602

RISB10 (4'-6' bgs)		
ANALYTE	SCG (ppm)	Conc. (ppm)
Benzo(a)anthracene	1	1.1
Benzo(b)fluoranthene	1	1.4
Chrysene	1	1.1
Indeno(1,2,3-cd)pyrene	0.5	0.65
4,4'-DDE	0.0033	0.00552
4,4'-DDT	0.0033	0.0355

RISB10 (6'-8' bgs)		
ANALYTE	SCG (ppm)	Conc. (ppm)
SVOCs Below SCGs		
Pesticide Below SCGs		

RISB8 (2'-4' bgs)		
ANALYTE	SCG (ppm)	Conc. (ppm)
Benzo(a)anthracene	1	1.9
Benzo(a)pyrene	1	1.5
Benzo(b)fluoranthene	1	1.8
Chrysene	1	1.8
Indeno(1,2,3-cd)pyrene	0.5	0.81
Lead, Total	63	171
Mercury, Total	0.18	0.457
Zinc, Total	109	142

RISB8 (4'-6' bgs)		
ANALYTE	SCG (ppm)	Conc. (ppm)
SVOCs Below SCGs		
Lead, Total	63	343
Mercury, Total	0.18	0.95
Zinc, Total	109	294

RISB8 (6'-8' bgs)		
ANALYTE	SCG (ppm)	Conc. (ppm)
SVOCs Below SCGs		
Metals Below SCGs		

RISB9 (2'-4' bgs)		
ANALYTE	SCG (ppm)	Conc. (ppm)
Acetone	0.05	0.1
Lead, Total	63	84.1

RISB9 (4'-6' bgs)		
ANALYTE	SCG (ppm)	Conc. (ppm)
Metals Below SCGs		

RISB11 (2'-4' bgs)		
ANALYTE	SCG (ppm)	Conc. (ppm)
4,4'-DDD	0.0033	0.0352
4,4'-DDE	0.0033	0.0379
4,4'-DDT	0.0033	0.0917
Dieldrin	0.005	0.00982
Lead, Total	63	93.3

RISB11 (10'-12' bgs)		
ANALYTE	SCG (ppm)	Conc. (ppm)
Pesticides Below SCGs		
Metals Below SCGs		

RISB13 (10'-12' bgs)		
ANALYTE	SCG (ppm)	Conc. (ppm)
4,4'-DDT	0.0033	0.00376

RISB3 (2'-4' bgs)		
ANALYTE	SCG (ppm)	Conc. (ppm)
Acetone	0.05	0.086

RISB4 (2'-4' bgs)		
ANALYTE	SCG (ppm)	Conc. (ppm)
4,4'-DDT	0.0033	0.00334

RISB4 (4'-6' bgs)		
ANALYTE	SCG (ppm)	Conc. (ppm)
4,4'-DDT	0.0033	0.00534

RISB4 (6'-8' bgs)
Pesticides Below SCGs

RISB12 (2'-4' bgs)		
ANALYTE	SCG (ppm)	Conc. (ppm)
4,4'-DDE	0.0033	0.00458
4,4'-DDT	0.0033	0.0251
Lead, Total	63	124
Mercury, Total	0.18	0.679
Zinc, Total	109	111

RISB12 (4'-6')		
ANALYTE	SCG (ppm)	Conc. (ppm)
4,4'-DDE	0.0033	0.00748
4,4'-DDT	0.0033	0.0569
Dieldrin	0.005	0.00517
Lead, Total	63	129
Mercury, Total	0.18	0.427
Zinc, Total	109	142

RISB12 (6'-8')
ANALYTE SCG (ppm) Conc. (ppm)
Pesticides Below SCGs
Metals Below SCGs

RISB7 (2'-4' bgs)		
ANALYTE	SCG (ppm)	Conc. (ppm)
4,4'-DDT	0.0033	0.00507
Lead, Total	63	127
Mercury, Total	0.18	0.842

RISB7 (4'-6' bgs)		
ANALYTE	SCG (ppm)	Conc. (ppm)
Pesticides Below SCGs		
Lead, Total	63	240
Mercury, Total	0.18	1.19

RISB7 (6'-8' bgs)		
ANALYTE	SCG (ppm)	Conc. (ppm)
Metals Below SCGs		

GP-11 (4'-6' bgs)		
ANALYTE	SCG (ppm)	Conc. (ppm)
Barium	350	450
Lead	63	486

GP-12 (2'-4' bgs)		
ANALYTE	SCG (ppm)	Conc. (ppm)
Benzo(a)anthracene	1	3.1
Benzo(a)pyrene	1	2.8
Benzo(b)fluoranthene	1	4.2
Benzo(k)fluoranthene	0.8	1.2
Chrysene	1	3.5
Dibenzo(a,h)anthracene	0.33	0.5
Indeno(1,2,3-cd)pyrene	0.5	2.2

LEGEND

- GP-10 — EXISTING GEOPROBE (APPROXIMATE LOCATION)
- MW1 — EXISTING MONITORING WELL LOCATION
- SS3 — EXISTING SHALLOW SOIL SAMPLE LOCATION (APPROXIMATE LOCATION)
- RISB1 — RI SUBSURFACE SOIL SAMPLE LOCATION
- RISV1 — RI SOIL VAPOR SAMPLE LOCATION
- RISS1 — RI SURFACE SOIL LOCATION
- RIHA1 — RI HAND AUGER LOCATION
- RIMW1 — RI MONITORING WELL LOCATION
- RIGP1 — SUPPLEMENTAL RI GEOPROBE/MONITORING WELL LOCATION

BAR SCALE

20 0 10 20 40

1 inch = 20 ft.

DATE		REVISIONS RECORD/DESCRIPTION	DRAFTER	CHECK	APPR.
10/10/19	1	REVISED TO SHOW RIGP MON. WELL LOCATIONS	MDD		
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DESIGNED: SB
DRAFTED : MDD
CHECKED : SB
PROJ. NO : 16.6334
SCALE : 1" = 20'
DATE : MAY 10, 2019

FIGURE 4: CONTAMINANTS OF CONCERN IN SUBSURFACE FILL/SOIL AND NATIVE SOIL
830 & 834 ALBANY STREET PARCELS

HAMILTON HILL - TARGET AREA 1 SITE

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SHEET 4 OF 5
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PROJECT NUMBER: 16.6334

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CAD DWG. FILE NAME: FIGURE 5 19-307.dwg

RIMW2_190402		
ANALYTE	SCG (ppm)	Conc. (ppm)
Chloroform	7	8
Tetrachloroethene	5	6.1
Sodium, Total	20,000	43,100

RIMW3D_190401		
ANALYTE	SCG (ppm)	Conc. (ppm)
Manganese, Total	300	414
Sodium, Total	20,000	83,500

RIMW3_190401		
ANALYTE	SCG (ppm)	Conc. (ppm)
Tetrachloroethene	5	7.2
Sodium, Total	20,000	74,100

RIMW1_190329		
ANALYTE	SCG (ppm)	Conc. (ppm)
Sodium, Total	20,000	28,600

MW5_190401		
ANALYTE	SCG (ppm)	Conc. (ppm)
Chloroform	7	11
Sodium, Total	20,000	36,500

RIMW4_190329		
ANALYTE	SCG (ppm)	Conc. (ppm)
Chloroform	7	8.9
Antimony, Total	3	4.24
Sodium, Total	20,000	31,500

RIMW4D_190402		
ANALYTE	SCG (ppm)	Conc. (ppm)
Iron, Total	300	1390
Sodium, Total	20,000	125,000

RIGP1_190723		
ANALYTE	SCG (ppm)	Conc. (ppm)
Chloroform	7	9.4

MW1_190402		
ANALYTE	SCG (ppm)	Conc. (ppm)
Chloroform	7	10
Manganese, Total	300	933.8
Sodium, Total	20,000	34,600

MW2_190402			
ANALYTE	SCG (ppm)	Conc. (ppm)	
Chloroform	7	9.8	
Benzo(a)anthracene	0.002 (GV)	0.03	J
Benzo(a)pyrene	Non Detect	0.04	J
Benzo(b)fluoranthene	0.002 (GV)	0.04	J
Benzo(k)fluoranthene	0.002 (GV)	0.04	J
Chrysene	0.002 (GV)	0.06	J
Hexachlorobenzene	0.04	0.11	J
Indeno(1,2,3-cd)pyrene	0.002 (GV)	0.04	J
Manganese, Total	300	735.3	
Sodium, Total	20,000	37,300	

RIGP3_190723		
ANALYTE	SCG (ppm)	Conc. (ppm)
Tetrachloroethene	5	8.6

RIGP2_190723			
ANALYTE	SCG (ppm)	Conc. (ppm)	
Chloroform	7	9.4	
Tetrachloroethene	5	6.9	
Sodium, Total	20,000	39,600	J

RIGP4_190723			
ANALYTE	SCG (ppm)	Conc. (ppm)	
Sodium, Total	20,000	149,000	J

834 MW2_190402			
ANALYTE	SCG (ppm)	Conc. (ppm)	
Benzo(k)fluoranthene	0.002 (GV)	0.01	J
Sodium, Total	20,000	207,000	

RIGP5_190723			
ANALYTE	SCG (ppm)	Conc. (ppm)	
Benzo(a)anthracen	0.002 (GV)	0.04	J
Benzo(a)pyrene	Non Detect	0.03	J
Benzo(b)fluoranthe	0.002 (GV)	0.04	J
Benzo(k)fluoranthe	0.002 (GV)	0.02	J
Chrysene	0.002 (GV)	0.02	J
Sodium	20,000	176,000	J

RIMW6D_190402		
ANALYTE	SCG (ppm)	Conc. (ppm)
Iron, Total	300	490
Manganese, Total	300	362.9
Sodium, Total	20,000	43,800

RIMW5_190329			
ANALYTE	SCG (ppm)	Conc. (ppm)	
Benzo(b)fluoranthene	0.002 (GV)	0.02	J
Benzo(k)fluoranthene	0.002 (GV)	0.02	J
Indeno(1,2,3-cd)pyrene	0.002 (GV)	0.06	J
Sodium, Total	20,000	150,000	

RIMW6_190329		
ANALYTE	SCG (ppm)	Conc. (ppm)
Sodium, Total	20,000	203,000

LEGEND

- GP-10 EXISTING GEOPROBE (APPROXIMATE LOCATION)
- MW1 EXISTING MONITORING WELL LOCATION
- SS3 EXISTING SHALLOW SOIL SAMPLE LOCATION (APPROXIMATE LOCATION)
- RISB1 RI SUBSURFACE SOIL SAMPLE LOCATION
- RISV1 RI SOIL VAPOR SAMPLE LOCATION
- RISS1 RI SURFACE SOIL LOCATION
- RIHA1 RI HAND AUGER LOCATION
- RIMW1 RI MONITORING WELL LOCATION
- RIGP1 SUPPLEMENTAL RI GEOPROBE/ MONITORING WELL LOCATION

BAR SCALE

20 0 10 20 40

1 inch = 20 ft.

DATE		REVISIONS RECORD/DESCRIPTION	DRAFTER	CHECK	APPR.
10/10/19	1	REVISED TO SHOW RIGP MON. WELLS AND DATA	MDD		
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DESIGNED : SB

DRAFTED : MDD

CHECKED : SB

PROJ. NO : 16.6334

SCALE : 1" = 20'

DATE : MAY 10, 2019

FIGURE 5: CONTAMINANTS OF CONCERN IN GROUNDWATER 830 & 834 ALBANY STREET PARCELS

HAMILTON HILL - TARGET AREA 1 SITE

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DWG. NO: 19-307

APPENDIX B

TABLES

375-6.8 Soil cleanup objective tables.

(a) Unrestricted use soil cleanup objectives.

Table 375-6.8(a):Unrestricted Use Soil Cleanup Objectives

Contaminant	CAS Number	Unrestricted Use
Metals		
Arsenic	7440-38-2	13 [c]
Barium	7440-39-3	350 [c]
Beryllium	7440-41-7	7.2
Cadmium	7440-43-9	2.5 [c]
Chromium, hexavalent [e]	18540-29-9	1[b]
Chromium, trivalent [e]	16065-83-1	30 [c]
Copper	7440-50-8	50
Total Cyanide [e, f]		27
Lead	7439-92-1	63 [c]
Manganese	7439-96-5	1600 [c]
Total Mercury		0.18 [c]
Nickel	7440-02-0	30
Selenium	7782-49-2	3.9[c]
Silver	7440-22-4	2
Zinc	7440-66-6	109 [c]
PCBs/Pesticides		
2,4,5-TP Acid (Silvex) [f]	93-72-1	3.8
4,4'-DDE	72-55-9	0.0033 [b]
4,4'-DDT	50-29-3	0.0033 [b]
4,4'-DDD	72-54-8	0.0033 [b]
Aldrin	309-00-2	0.005 [c]
alpha-BHC	319-84-6	0.02
beta-BHC	319-85-7	0.036
Chlordane (alpha)	5103-71-9	0.094

Table 375-6.8(a):Unrestricted Use Soil Cleanup Objectives

Contaminant	CAS Number	Unrestricted Use
delta-BHC [g]	319-86-8	0.04
Dibenzofuran [f]	132-64-9	7
Dieldrin	60-57-1	0.005 [c]
Endosulfan I [d, f]	959-98-8	2.4
Endosulfan II [d, f]	33213-65-9	2.4
Endosulfan sulfate [d, f]	1031-07-8	2.4
Endrin	72-20-8	0.014
Heptachlor	76-44-8	0.042
Lindane	58-89-9	0.1
Polychlorinated biphenyls	1336-36-3	0.1
Semivolatile organic compounds		
Acenaphthene	83-32-9	20
Acenapthylene [f]	208-96-8	100 [a]
Anthracene [f]	120-12-7	100 [a]
Benz(a)anthracene [f]	56-55-3	1 [c]
Benzo(a)pyrene	50-32-8	1 [c]
Benzo(b)fluoranthene [f]	205-99-2	1 [c]
Benzo(g,h,i)perylene [f]	191-24-2	100
Benzo(k)fluoranthene [f]	207-08-9	0.8 [c]
Chrysene [f]	218-01-9	1 [c]
Dibenz(a,h)anthracene [f]	53-70-3	0.33 [b]
Fluoranthene [f]	206-44-0	100 [a]
Fluorene	86-73-7	30
Indeno(1,2,3-cd)pyrene [f]	193-39-5	0.5 [c]
m-Cresol [f]	108-39-4	0.33 [b]
Naphthalene [f]	91-20-3	12
o-Cresol [f]	95-48-7	0.33 [b]

Table 375-6.8(a):Unrestricted Use Soil Cleanup Objectives

Contaminant	CAS Number	Unrestricted Use
p-Cresol [f]	106-44-5	0.33 [b]
Pentachlorophenol	87-86-5	0.8 [b]
Phenanthrene [f]	85-01-8	100
Phenol	108-95-2	0.33 [b]
Pyrene [f]	129-00-0	100
Volatile organic compounds		
1,1,1-Trichloroethane [f]	71-55-6	0.68
1,1-Dichloroethane [f]	75-34-3	0.27
1,1-Dichloroethene [f]	75-35-4	0.33
1,2-Dichlorobenzene [f]	95-50-1	1.1
1,2-Dichloroethane	107-06-2	0.02 [c]
cis -1,2-Dichloroethene [f]	156-59-2	0.25
trans-1,2-Dichloroethene [f]	156-60-5	0.19
1,3-Dichlorobenzene [f]	541-73-1	2.4
1,4-Dichlorobenzene	106-46-7	1.8
1,4-Dioxane	123-91-1	0.1 [b]
Acetone	67-64-1	0.05
Benzene	71-43-2	0.06
n-Butylbenzene [f]	104-51-8	12
Carbon tetrachloride [f]	56-23-5	0.76
Chlorobenzene	108-90-7	1.1
Chloroform	67-66-3	0.37
Ethylbenzene [f]	100-41-4	1
Hexachlorobenzene [f]	118-74-1	0.33[b]
Methyl ethyl ketone	78-93-3	0.12
Methyl tert-butyl ether [f]	1634-04-4	0.93
Methylene chloride	75-09-2	0.05

Table 375-6.8(a):Unrestricted Use Soil Cleanup Objectives

Contaminant	CAS Number	Unrestricted Use
n - Propylbenzene [f]	103-65-1	3.9
sec-Butylbenzene [f]	135-98-8	11
tert-Butylbenzene [f]	98-06-6	5.9
Tetrachloroethene	127-18-4	1.3
Toluene	108-88-3	0.7
Trichloroethene	79-01-6	0.47
1,2,4-Trimethylbenzene [f]	95-63-6	3.6
1,3,5-Trimethylbenzene[f]	108-67-8	8.4
Vinyl chloride[f]	75-01-4	0.02
Xylene (mixed)	1330-20-7	0.26

All soil cleanup objectives (SCOs) are in parts per million (ppm).

Footnotes

[a] The SCOs for unrestricted use were capped at a maximum value of 100 ppm. See Technical Support Document (TSD), section 9.3.

[b] For constituents where the calculated SCO was lower than the contract required quantitation limit (CRQL), the CRQL is used as the Track 1 SCO value.

[c] For constituents where the calculated SCO was lower than the rural soil background concentration, as determined by the Department and Department of Health rural soil survey, the rural soil background concentration is used as the Track 1 SCO value for this use of the site.

[d] SCO is the sum of endosulfan I, endosulfan II and endosulfan sulfate.

[e] The SCO for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific SCO.

[f] Protection of ecological resources SCOs were not developed for contaminants identified in Table 375-6.8(b) with “NS”. Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the Department to calculate a protection of ecological resources SCO according to the TSD.

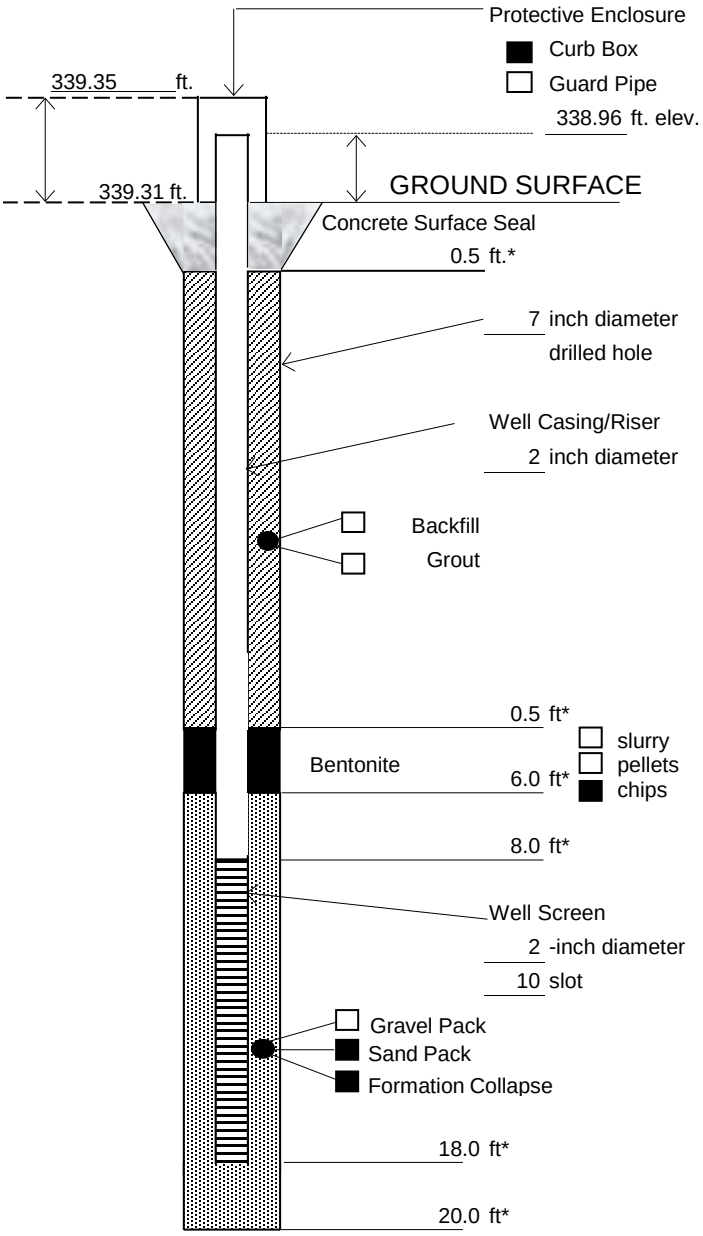
APPENDIX C

MONITORING WELL CONSTRUCTION LOGS

C.T. MALE ASSOCIATES

Well No. RIMW1

MONITORING WELL CONSTRUCTION LOG



* Depth below ground surface.

Project Name: Hamilton Hill II - Target Area 1 Site

Project Number: 16.6334

Well No.: RIMW1 Boring No.: RIMW1

Town/City: Schenectady

County: Schenectady State: NY

Installation Date(s): 3/19/2019

Drilling Contractor: NYEG Drilling, LLC

Drilling Method: Hollow Stem Auger

Water Depth From Top of Riser: 12.54 ft 4/9/19 (Date)

C.T. Male Observer: D. Achty

Materials Used:

5	Bags of Sand	(50	lb. bags)
	Sand Size: #0	Brand:	Filpro
2	Bags of Bentonite	(50	lb. bags)
	Brand:	PDS	
10	ft. of	PVC	well screen
8	ft. of	PVC	well riser
2	Bags of Cement/Concrete	(80	lb. bags)
	Brand:	Quikrete	

Grout Mixture:

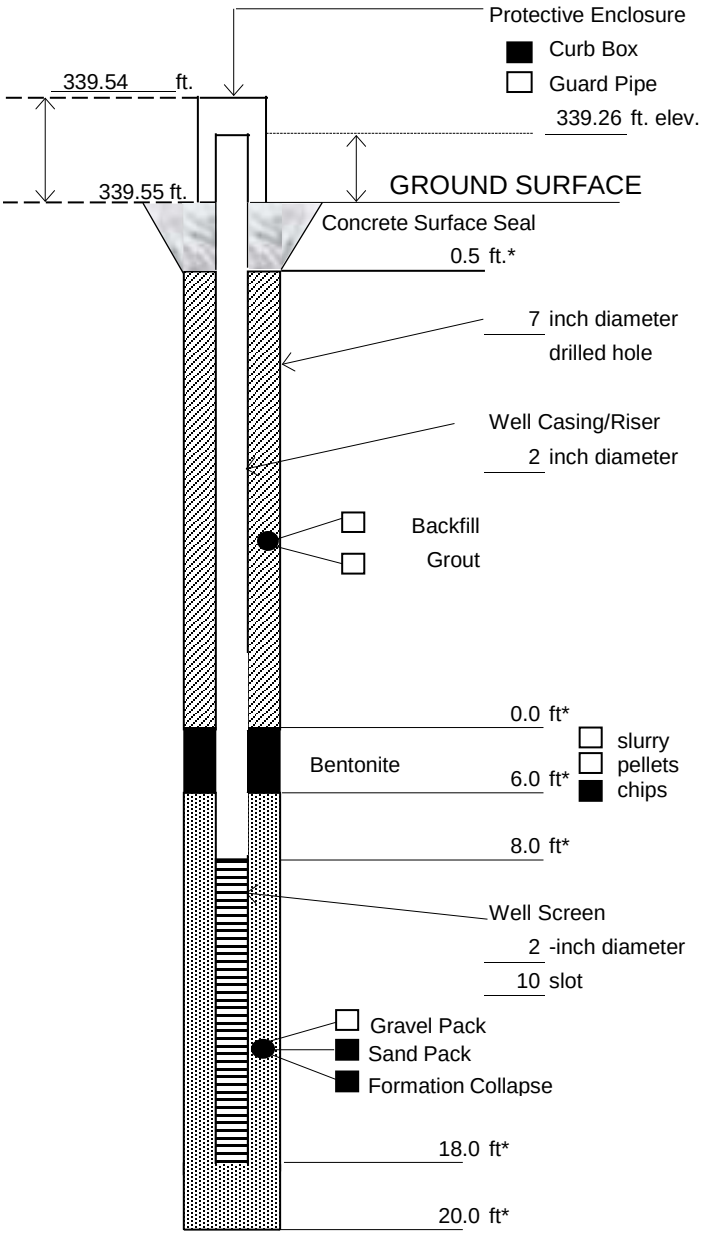
-	Bags of Cement	(-	lb. bags)
-	Lbs. of Bentonite		
-	Gallons of Water		
-	Grout Batches		

Notes:

C.T. MALE ASSOCIATES

Well No. RIMW2

MONITORING WELL CONSTRUCTION LOG



* Depth below ground surface.

Project Name: Hamilton Hill II - Target Area 1 Site

Project Number: 16.6334

Well No.: RIMW2 Boring No.: RIMW2

Town/City: Schenectady

County: Schenectady State: NY

Installation Date(s): 3/21/2019

Drilling Contractor: NYEG Drilling, LLC

Drilling Method: Hollow Stem Auger

Water Depth From Top of Riser: 11.94 ft 4/9/19 (Date)

C.T. Male Observer: D. Achtyl

Materials Used:

5.5	Bags of Sand	(50	lb. bags)
	Sand Size: #0	Brand:	Filpro
2	Bags of Bentonite	(50	lb. bags)
	Brand:	PDS	
10	ft. of	PVC	well screen
8	ft. of	PVC	well riser
2	Bags of Cement/Concrete	(80	lb. bags)
	Brand:	Quikrete	

Grout Mixture:

-	Bags of Cement	(-	lb. bags)
-	Lbs. of Bentonite		
-	Gallons of Water		
-	Grout Batches		

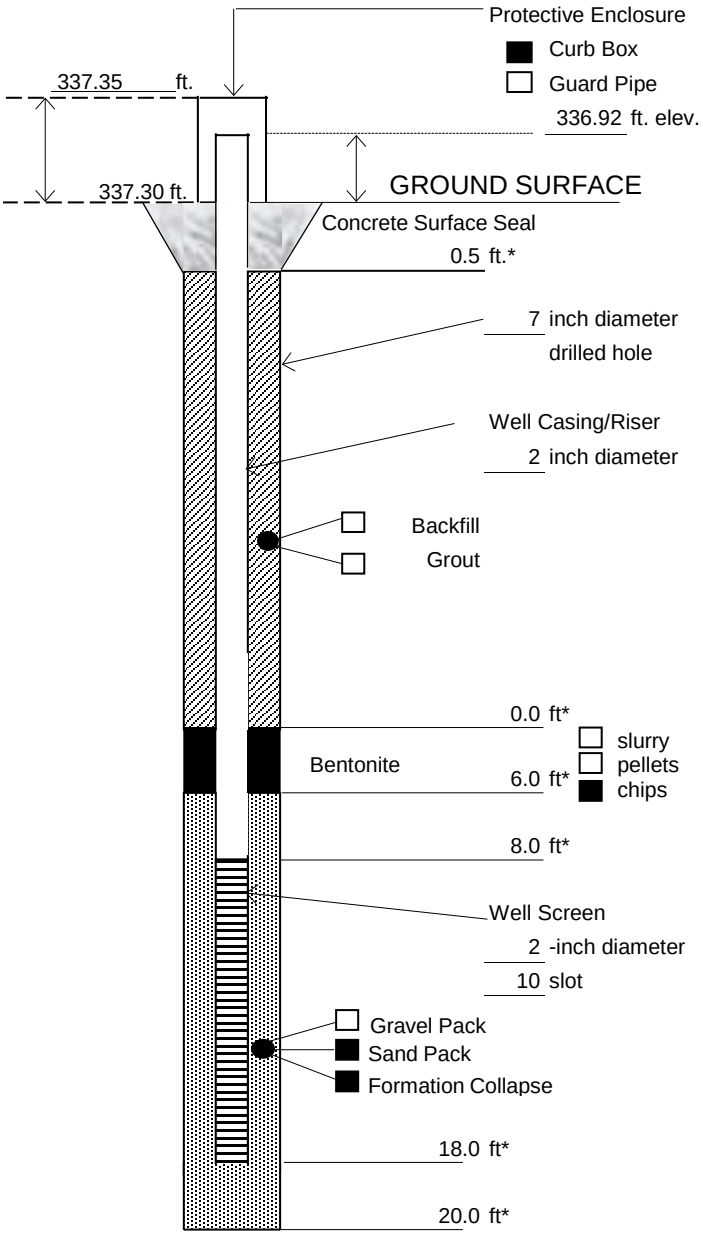
Notes:

Curb box installed 3/15/19.

C.T. MALE ASSOCIATES

Well No. RIMW3

MONITORING WELL CONSTRUCTION LOG



* Depth below ground surface.

Project Name: Hamilton Hill II - Target Area 1 Site

Project Number: 16.6334

Well No.: RIMW3 Boring No.: RIMW3

Town/City: Schenectady

County: Schenectady State: NY

Installation Date(s): 3/22/2019

Drilling Contractor: NYEG Drilling, LLC

Drilling Method: Hollow Stem Auger

Water Depth From Top of Riser: 10.80 ft 4/9/19 (Date)

C.T. Male Observer: D. Achtyl

Materials Used:

6	Bags of Sand	(50	lb. bags)
	Sand Size: #0	Brand:	Filpro
2	Bags of Bentonite	(50	lb. bags)
	Brand:	PDS	
10	ft. of	PVC	well screen
8	ft. of	PVC	well riser
2	Bags of Cement/Concrete	(80	lb. bags)
	Brand:	Quikrete	

Grout Mixture:

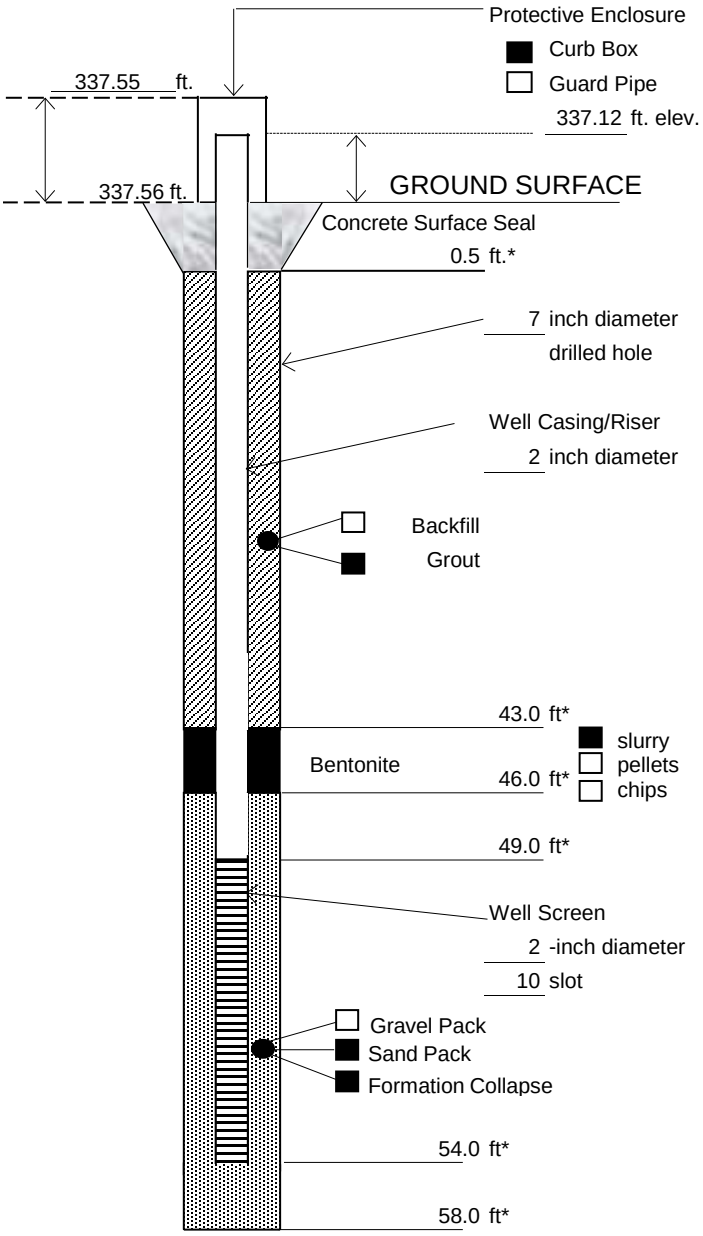
-	Bags of Cement	(-	lb. bags)
-	Lbs. of Bentonite		
-	Gallons of Water		
-	Grout Batches		

Notes:

Well No. RIMW3D

MONITORING WELL CONSTRUCTION LOG

C.T. MALE ASSOCIATES



* Depth below ground surface.

Project Name: Hamilton Hill II - Target Area 1 Site

Project Number: 16.6334

Well No.: RIMW3D Boring No.: RIMW3D

Town/City: Schenectady

County: Schenectady State: NY

Installation Date(s): 3/21/2019

Drilling Contractor: NYEG Drilling, LLC

Drilling Method: Hollow Stem Auger

Water Depth From Top of Riser: 31.28 ft 4/9/19 (Date)

C.T. Male Observer: D. Achtyl

Materials Used:

4.5	Bags of Sand	(50 lb. bags)
	Sand Size: #0	Brand: Filpro
0.5	Bags of Bentonite	(50 lb. bags)
	Brand: PDS	
5	ft. of PVC	well screen
49	ft. of PVC	well riser
-	Bags of Cement/Concrete	(lb. bags)
	Brand:	

Grout Mixture:

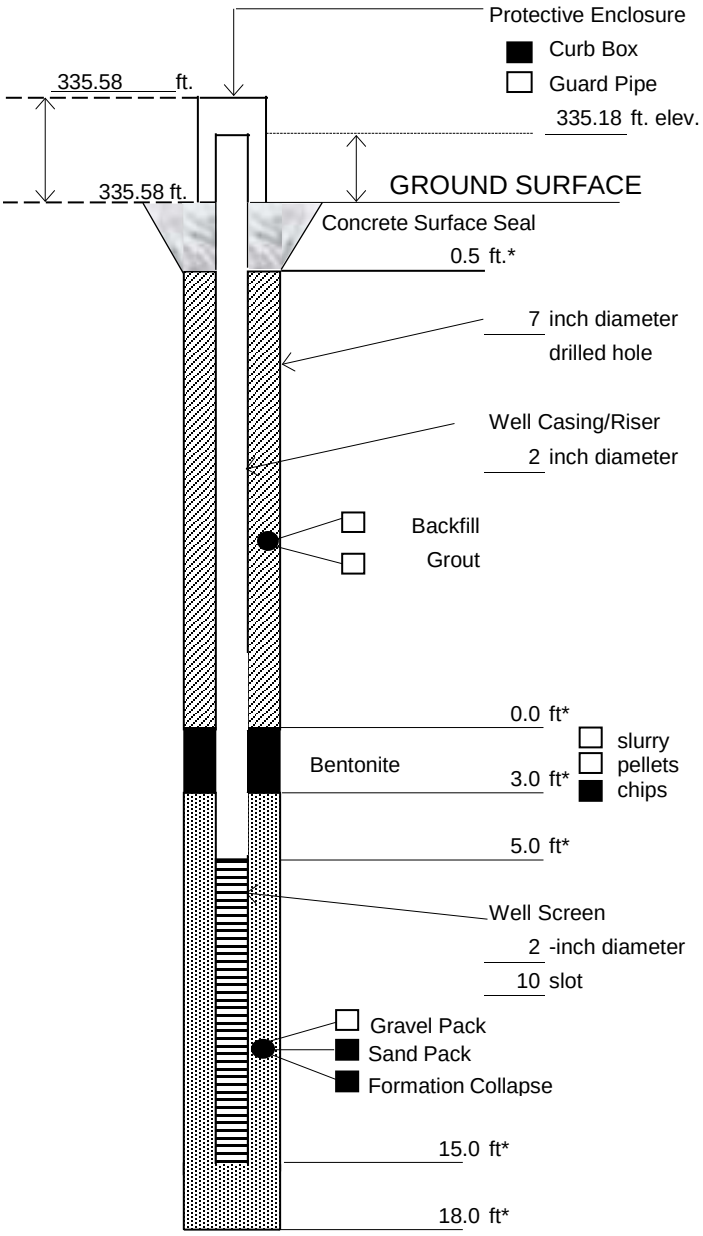
1	Bags of Cement	(47 lb. bags)
2.5	Lbs. of Bentonite	
4	Gallons of Water	
15	Grout Batches	

Notes:

Well No. **RIMW4**

MONITORING WELL CONSTRUCTION LOG

C.T. MALE ASSOCIATES



* Depth below ground surface.

Project Name: Hamilton Hill II - Target Area 1 Site

Project Number: 16.6334

Well No.: RIMW4 Boring No.: RIMW4

Town/City: Schenectady

County: Schenectady State: NY

Installation Date(s): 3/22/2019

Drilling Contractor: NYEG Drilling, LLC

Drilling Method: Hollow Stem Auger

Water Depth From Top of Riser: 8.93 ft 4/9/19 (Date)

C.T. Male Observer: D. Achtyl

Materials Used:

5	Bags of Sand	(50	lb. bags)
	Sand Size: #0	Brand:	Filpro
2	Bags of Bentonite	(50	lb. bags)
	Brand:	PDS	
10	ft. of	PVC	well screen
5	ft. of	PVC	well riser
2	Bags of Cement/Concrete	(80	lb. bags)
	Brand:	Quikrete	

Grout Mixture:

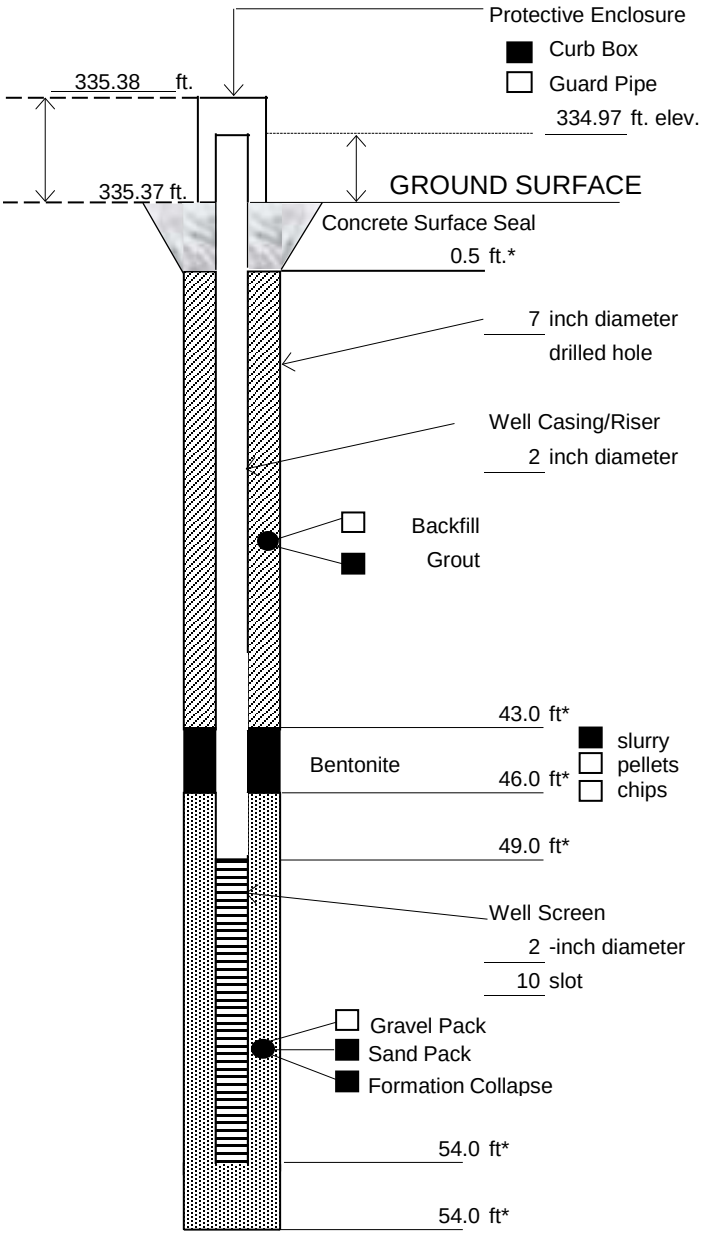
-	Bags of Cement	(-	lb. bags)
-	Lbs. of Bentonite		
-	Gallons of Water		
-	Grout Batches		

Notes:

Well No. **RIMW4D**

MONITORING WELL CONSTRUCTION LOG

C.T. MALE ASSOCIATES



* Depth below ground surface.

Project Name: Hamilton Hill II - Target Area 1 Site

Project Number: 16.6334

Well No.: RIMW4D Boring No.: RIMW4D

Town/City: Schenectady

County: Schenectady State: NY

Installation Date(s): 3/25/2019

Drilling Contractor: NYEG Drilling, LLC

Drilling Method: Hollow Stem Auger

Water Depth From Top of Riser: 29.36 ft 4/9/19 (Date)

C.T. Male Observer: D. Achtyl

Materials Used:

5	Bags of Sand	(50 lb. bags)
	Sand Size: #0	Brand: Filpro
0.5	Bags of Bentonite	(50 lb. bags)
	Brand: Cetco CS Granular	
5	ft. of PVC	well screen
49	ft. of PVC	well riser
2	Bags of Cement/Concrete	(lb. bags)
	Brand: Quickrete	

Grout Mixture:

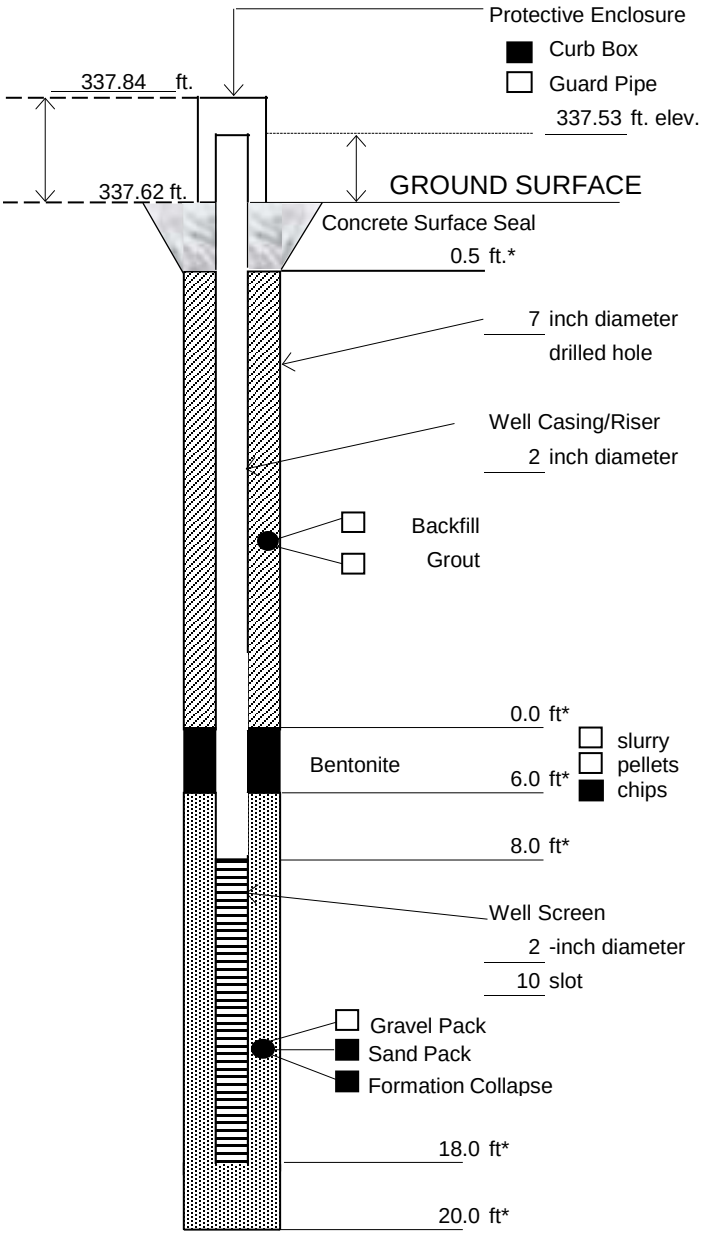
1	Bags of Cement	(47 lb. bags)
2.5	Lbs. of Bentonite	
4	Gallons of Water	
16	Grout Batches	

Notes:

C.T. MALE ASSOCIATES

Well No. RIMW5

MONITORING WELL CONSTRUCTION LOG



* Depth below ground surface.

Project Name: Hamilton Hill II - Target Area 1 Site

Project Number: 16.6334

Well No.: RIMW5 Boring No.: RIMW5

Town/City: Schenectady

County: Schenectady State: NY

Installation Date(s): 3/12/2019

Drilling Contractor: NYEG Drilling, LLC

Drilling Method: Hollow Stem Auger

Water Depth From Top of Riser: 12.89 ft 4/9/19 (Date)

C.T. Male Observer: B. Winslow

Materials Used:

6	Bags of Sand	(50 lb. bags)
	Sand Size: #0	Brand: Filpro
2	Bags of Bentonite	(50 lb. bags)
	Brand: PDS	
10	ft. of PVC	well screen
8	ft. of PVC	well riser
2	Bags of Cement/Concrete	(80 lb. bags)
	Brand: Quikrete High Strength	

Grout Mixture:

-	Bags of Cement	(- lb. bags)
-	Lbs. of Bentonite	
-	Gallons of Water	
-	Grout Batches	

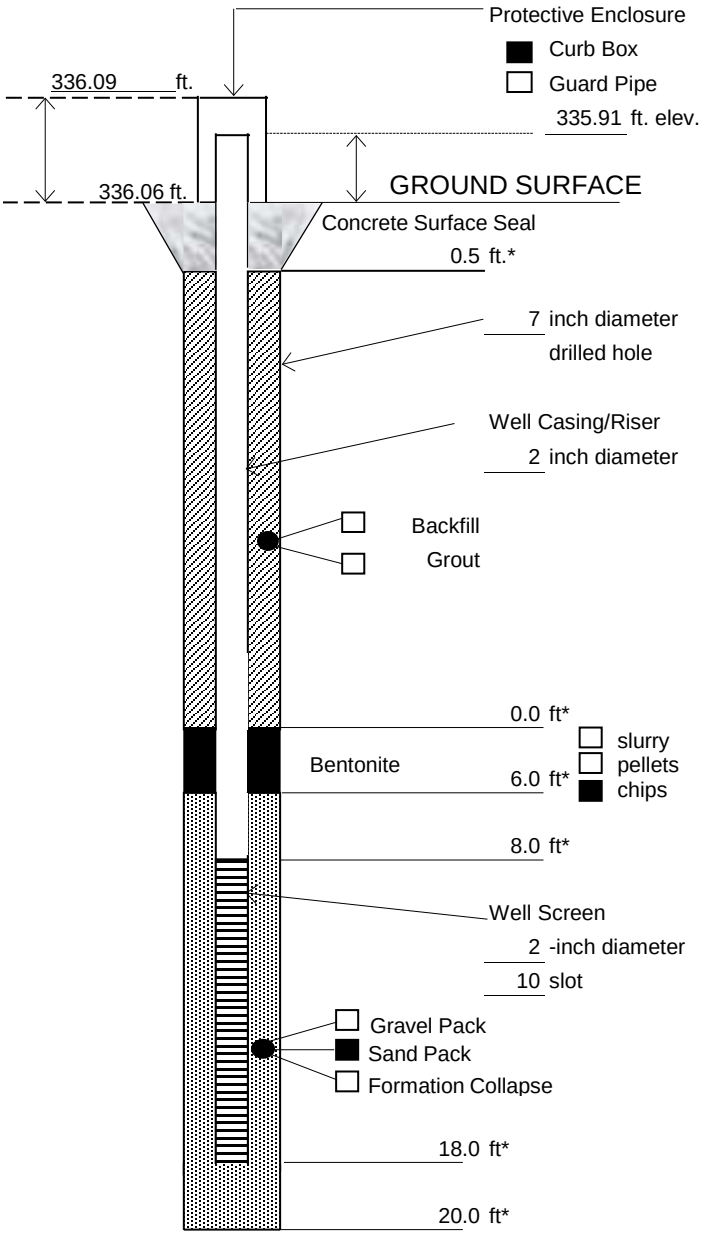
Notes:

Curb box installed 3/15/19.

Well No. RIMW6

MONITORING WELL CONSTRUCTION LOG

C.T. MALE ASSOCIATES



* Depth below ground surface.

Project Name: Hamilton Hill II - Target Area 1 Site

Project Number: 16.6334

Well No.: RIMW6 Boring No.: RIMW6

Town/City: Schenectady

County: Schenectady State: NY

Installation Date(s): 3/12/2019

Drilling Contractor: NYEG Drilling, LLC

Drilling Method: Hollow Stem Auger

Water Depth From Top of Riser: 11.76 ft 4/9/19 (Date)

C.T. Male Observer: B. Winslow

Materials Used:

6	Bags of Sand	(50	lb. bags)
	Sand Size: #0	Brand:	Filpro
2	Bags of Bentonite	(50	lb. bags)
	Brand:	PDS	
10	ft. of	PVC	well screen
8	ft. of	PVC	well riser
2	Bags of Cement/Concrete	(80	lb. bags)
	Brand:	Quikrete	

Grout Mixture:

-	Bags of Cement	(-	lb. bags)
-	Lbs. of Bentonite		
-	Gallons of Water		
-	Grout Batches		

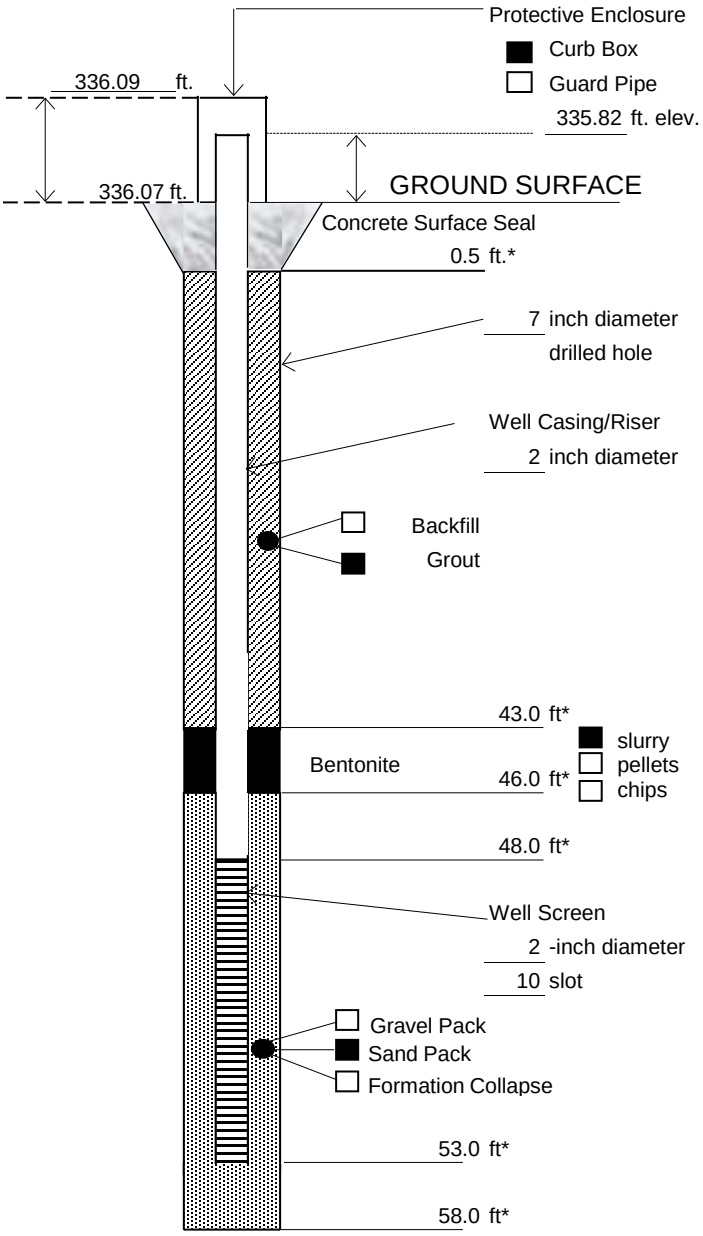
Notes:

Curb box installed 3/15/19.

Well No. **RIMW6D**

MONITORING WELL CONSTRUCTION LOG

C.T. MALE ASSOCIATES



* Depth below ground surface.

Project Name: Hamilton Hill II - Target Area 1 Site

Project Number: 16.6334

Well No.: RIMW6D Boring No.: RIMW6D

Town/City: Schenectady

County: Schenectady State: NY

Installation Date(s): 3/14/2019

Drilling Contractor: NYEG Drilling, LLC

Drilling Method: Hollow Stem Auger

Water Depth From Top of Riser: 33.42 ft 4/9/19 (Date)

C.T. Male Observer: RL, DA

Materials Used:

6	Bags of Sand	(50 lb. bags)
	Sand Size: #0	Brand: Filpro
0.5	Bags of Bentonite	(50 lb. bags)
	Brand:	Cetco c/s granular
5	ft. of	PVC well screen
48	ft. of	PVC well riser
2	Bags of Cement/Concrete	(80 lb. bags)
	Brand:	Quikrete

Grout Mixture:

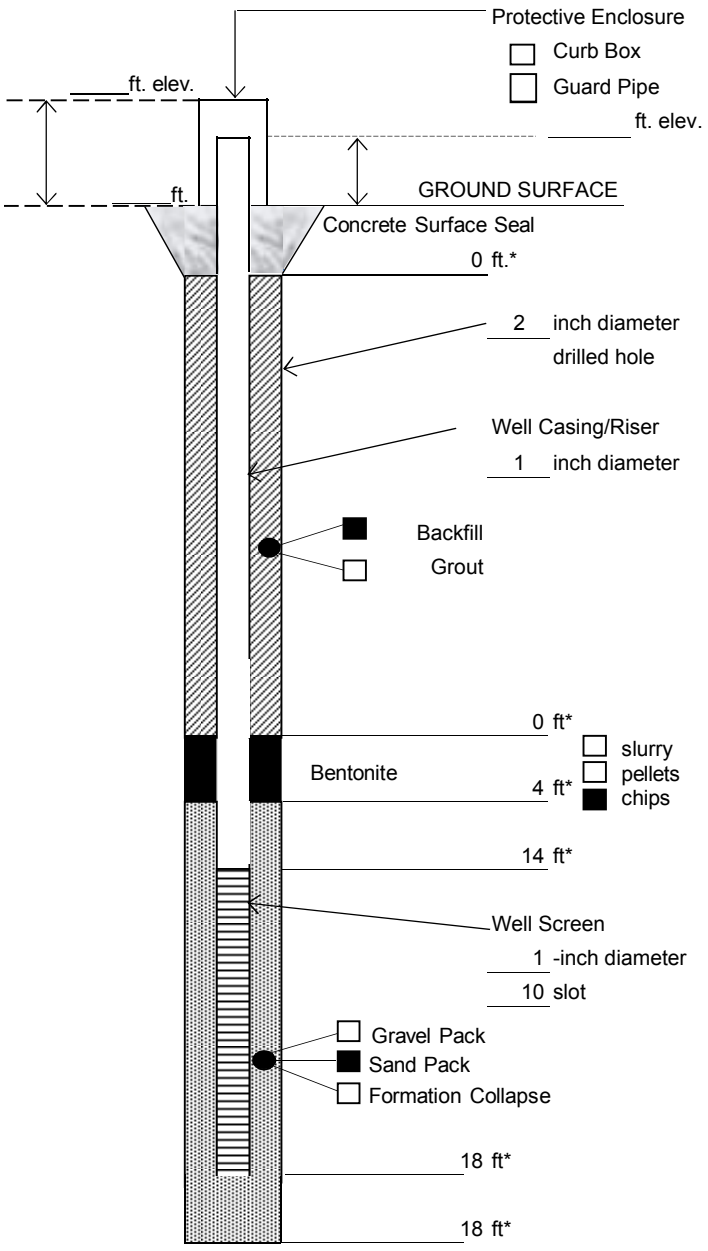
1	Bags of Cement (94 lb. bags)
5	Lbs. of Bentonite
8	Gallons of Water
6	Grout Batches

Notes:

Well No. 834 MW-2

MONITORING WELL CONSTRUCTION LOG

C.T. MALE ASSOCIATES



* Depth below ground surface.

Project Name: Hamilton Hill II, Target Area 1
Supplemental Phae II ESA

Project Number: 16.6334

Well No.: 834 MW-2 Boring No.: GP-8

Town/City: City of Schenectady

County: Schenectady State: New York

Installation Date(s): 8/9/2018

Drilling Contractor: Precision Environmental Services

Drilling Method: Geoprobe

Water Depth From Top of Riser: ft Date

C.T. Male Observer: BW

Materials Used

1/4± Bags of Sand (50 lb. bags)
Sand Size: #0 Brand: Fill-Pro
1/10± Bags of Bentonite (50 lb. bags)
Brand: PDS 3/8
10 ft. of I inch diameter 10 slot PVC well screen
8 ft. of 1 inch diameter PVC well riser
0 Bags of Cement/Concrete (lb. bags)
Brand:

Grout Mixture:

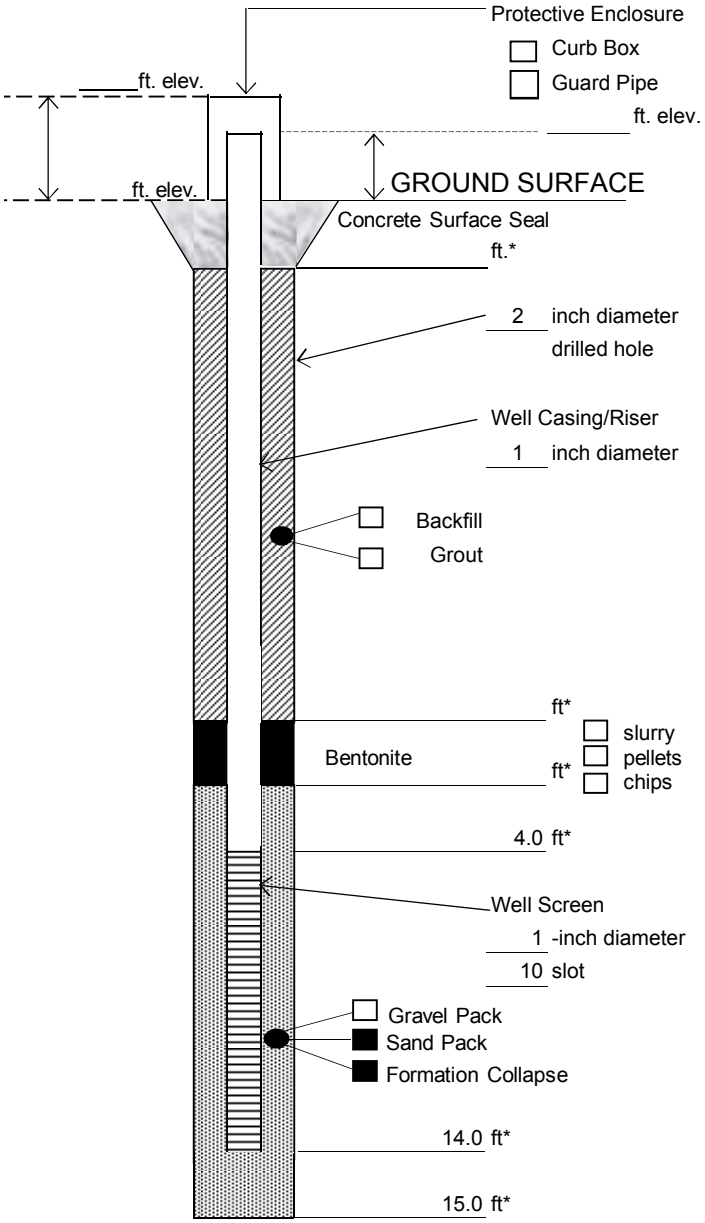
Bags of Cement (lb. bags)
Lbs. of Bentonite
Gallons of Water
Grout Batches

Notes:

Well No. MW-1

MONITORING WELL CONSTRUCTION LOG

C.T. MALE ASSOCIATES



* Depth below ground surface.

Project Name: Former Ralph's Cleaners

Project Number: 16.6334

Well No.: CTM-MW-1 Boring No.: CTM-GP-1

Town/City: Schenectady

County: Schenectady State: New York

Installation Date(s): 6/22/2016

Drilling Contractor: NYEG

Drilling Method: Geoprobe

Water Depth From Top of Riser: ____ ft ____ Date

C.T. Male Observer: Dan Achtyl

Materials Used:

1/2 Bags of Sand (50 lb. bags)
Sand Size: #0 Brand:
1/10 Bags of Bentonite (50 lb. bags)
Brand: Cetco
10 ft. of 10 slot PVC well screen
4 ft. of PVC well riser
0 Bags of Cement/Concrete (____ lb. bags)
Brand:

Grout Mixture:

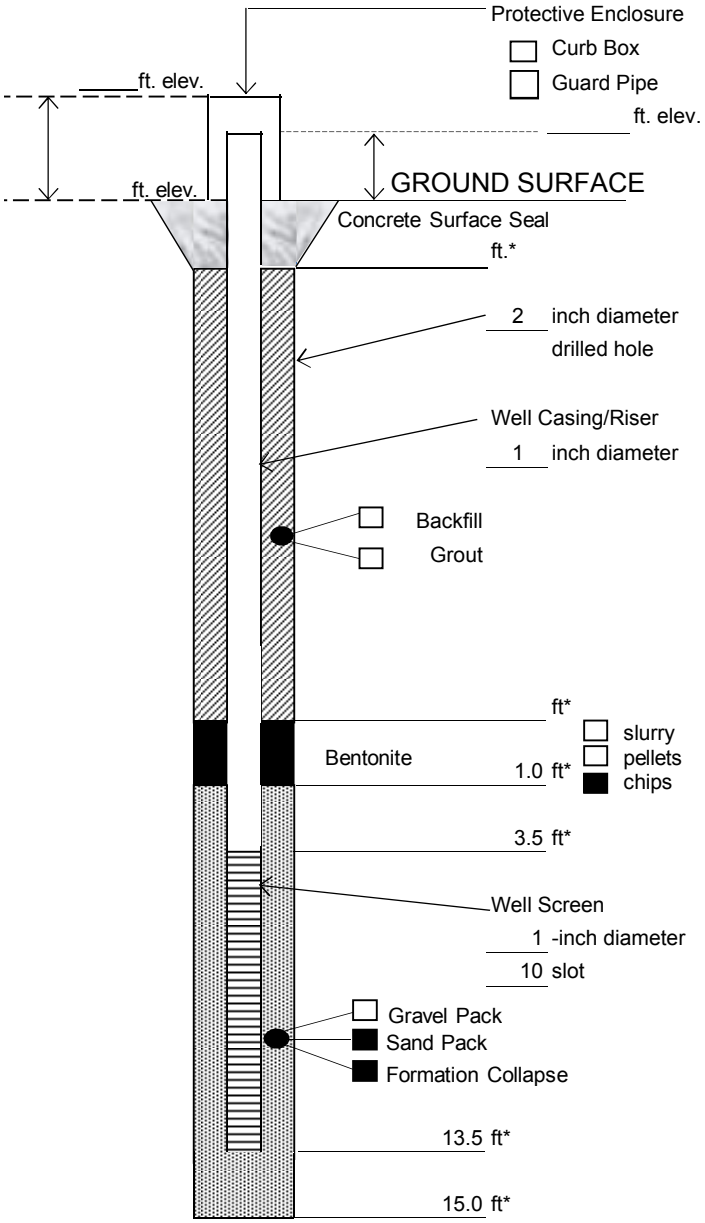
____ Bags of Cement (____ lb. bags)
____ Lbs. of Bentonite
____ Gallons of Water
____ Grout Batches

Notes:

Well No. MW-2

MONITORING WELL CONSTRUCTION LOG

C.T. MALE ASSOCIATES



* Depth below ground surface.

Project Name: Former Ralph's Cleaners

Project Number: 16.6334

Well No.: CTM-MW-2 Boring No.: CTM-GP-2

Town/City: Schenectady

County: Schenectady State: New York

Installation Date(s): 6/22/2016

Drilling Contractor: NYEG

Drilling Method: Geoprobe

Water Depth From Top of Riser: ____ ft ____ Date

C.T. Male Observer: Dan Achtyl

Materials Used:

1/2 Bags of Sand (50 lb. bags)
Sand Size: #0 Brand:
1/10 Bags of Bentonite (50 lb. bags)
Brand: Cetco
10 ft. of 10 slot PVC well screen
3.5 ft. of PVC well riser
0 Bags of Cement/Concrete (____ lb. bags)
Brand:

Grout Mixture:

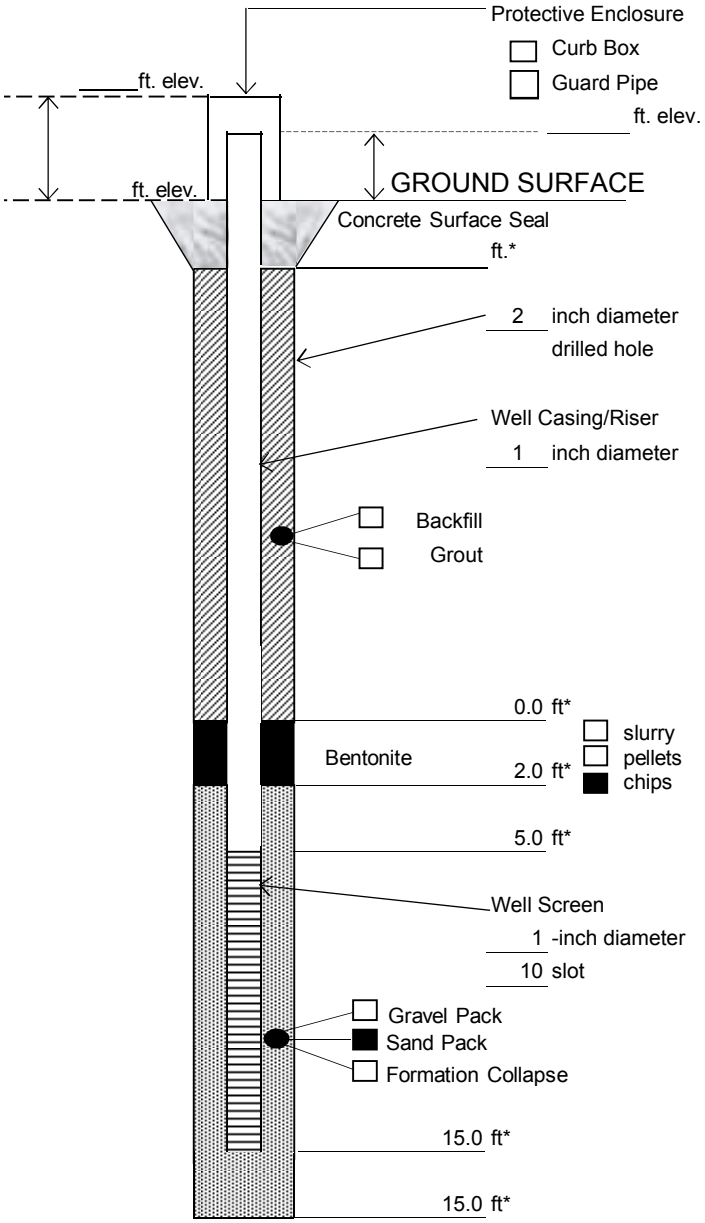
____ Bags of Cement (____ lb. bags)
____ Lbs. of Bentonite
____ Gallons of Water
____ Grout Batches

Notes:

Well No. MW-3

MONITORING WELL CONSTRUCTION LOG

C.T. MALE ASSOCIATES



* Depth below ground surface.

Project Name: Former Ralph's Cleaners

Project Number: 16.6334

Well No.: CTM-MW-3 Boring No.: CTM-GP-3

Town/City: Schenectady

County: Schenectady State: New York

Installation Date(s): 6/22/2016

Drilling Contractor: NYEG

Drilling Method: Geoprobe

Water Depth From Top of Riser: ____ ft ____ Date

C.T. Male Observer: Dan Achtyl

Materials Used:

1/2 Bags of Sand (50 lb. bags)
Sand Size: #0 Brand:
1/10 Bags of Bentonite (50 lb. bags)
Brand: Cetco
10 ft. of 10 slot PVC well screen
5 ft. of PVC well riser
0 Bags of Cement/Concrete (____ lb. bags)
Brand:

Grout Mixture:

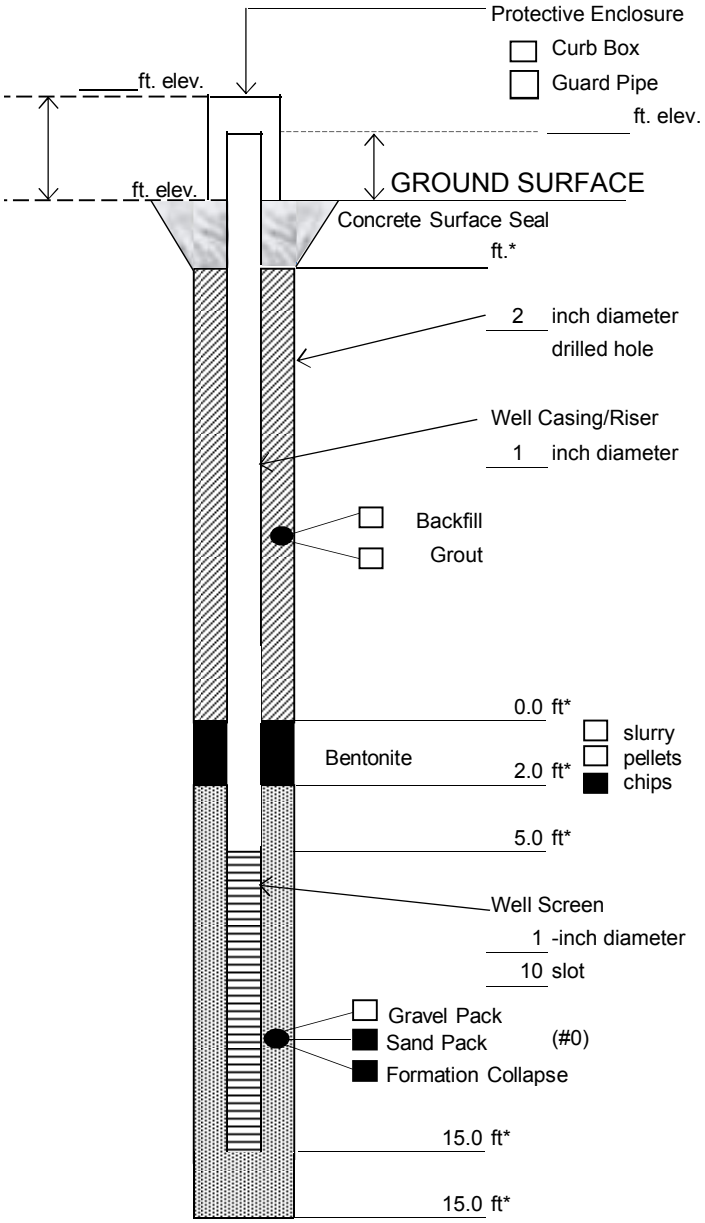
____ Bags of Cement (____ lb. bags)
____ Lbs. of Bentonite
____ Gallons of Water
____ Grout Batches

Notes:

Well No. MW-4

MONITORING WELL CONSTRUCTION LOG

C.T. MALE ASSOCIATES



* Depth below ground surface.

Project Name: Former Ralph's Cleaners

Project Number: 16.6334

Well No.: CTM-MW-4 Boring No.: CTM-GP-4

Town/City: Schenectady

County: Schenectady State: New York

Installation Date(s): 6/22/2016

Drilling Contractor: NYEG

Drilling Method: Geoprobe

Water Depth From Top of Riser: ____ ft ____ Date

C.T. Male Observer: Dan Achtyl

Materials Used:

1/2 Bags of Sand (50 lb. bags)
Sand Size: #0 Brand:
1/10 Bags of Bentonite (50 lb. bags)
Brand: Cetco
10 ft. of 10 slot PVC well screen
5 ft. of PVC well riser
0 Bags of Cement/Concrete (____ lb. bags)
Brand:

Grout Mixture:

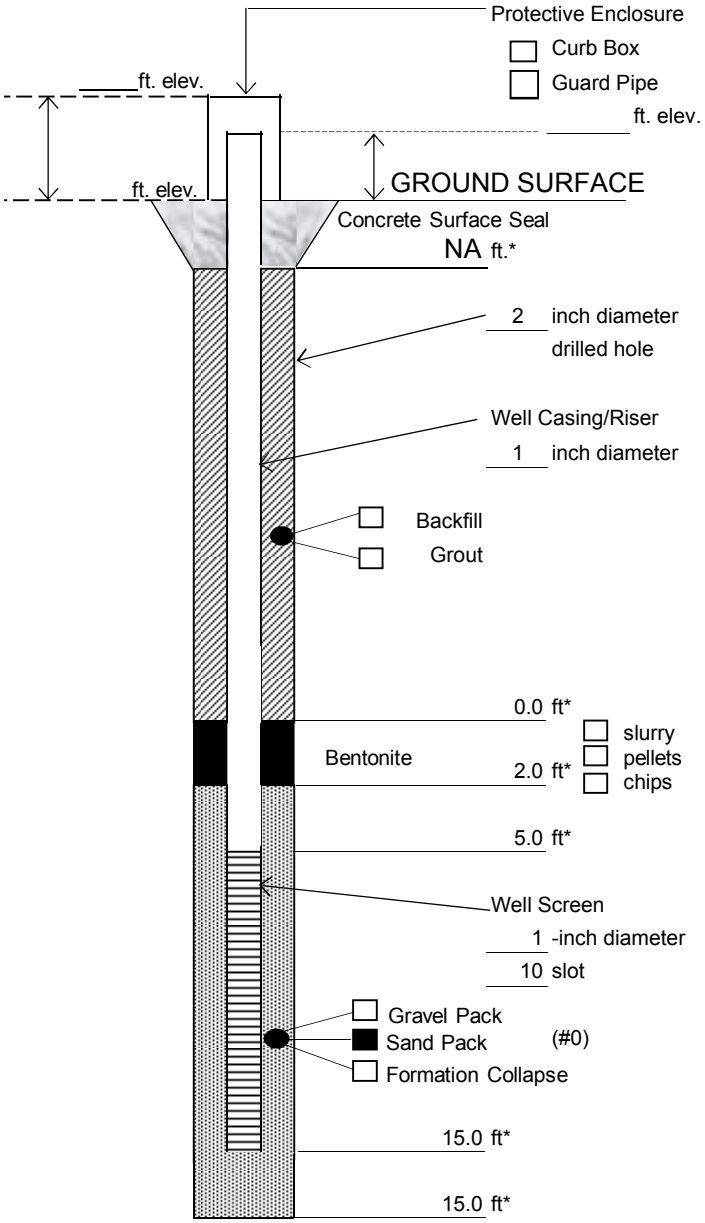
____ Bags of Cement (____ lb. bags)
____ Lbs. of Bentonite
____ Gallons of Water
____ Grout Batches

Notes:

Well No. MW-5

MONITORING WELL CONSTRUCTION LOG

C.T. MALE ASSOCIATES



* Depth below ground surface.

Project Name: Former Ralph's Cleaners

Project Number: 16.6334

Well No.: CTM-MW-5 Boring No.: CTM-GP-5

Town/City: Schenectady

County: Schenectady State: New York

Installation Date(s): 6/22/2016

Drilling Contractor: NYEG

Drilling Method: Geoprobe

Water Depth From Top of Riser: ____ ft ____ Date

C.T. Male Observer: Dan Achtyl

Materials Used:

1/2- 1/3 Bags of Sand (50 lb. bags)
Sand Size: #0 Brand:
1/10 Bags of Bentonite (50 lb. bags)
Brand: Cetco
10 ft. of 10 slot PVC well screen
5 ft. of PVC well riser
0 Bags of Cement/Concrete (____ lb. bags)
Brand:

Grout Mixture:

____ Bags of Cement (____ lb. bags)
____ Lbs. of Bentonite
____ Gallons of Water
____ Grout Batches

Notes:

APPENDIX D

GENERIC CAMP

Appendix 1A
New York State Department of Health
Generic Community Air Monitoring Plan

Overview

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The 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 community (i.e., 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.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical- specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate DEC/NYSDOH staff.

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

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. APeriodic@ monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or

overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

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 or as otherwise specified. 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 the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

1. 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.

2. 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.

3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

4. 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.

Particulate Monitoring, Response Levels, and Actions

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

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

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

3. All readings must be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

December 2009

EXHIBIT 1

TANK CLOSURE DOCUMENTATION

JACKSON
DEMOLITION
We've Got it Down

2754 Aqueduct Road
Schenectady, NY 12309
(518)-374-3366 Fax (518)-372-1116

www.jacksondemolition.com

May 29, 2019

U.W. Marx Construction Company
20 Gurley Ave
Troy, NY 12182

RE: Fuel Tank Removal
830 Albany Street
Schenectady, NY

On 3/18/19, JDS removed two 275 gallon above ground storage tanks from the basement of 830 Albany Street in Schenectady, NY. The tanks were surrounded by a CMU wall and bedding sand had been placed under the tanks, presumable upon installation. The CMU wall was demolished by hand to expose the tanks. Once the tanks were accessible an inspection was conducted. The tanks had been emptied of fuel several years prior and the bottoms of the tanks were corroded away (non-existent) and no fuel or sludge remained in the tanks. JDS rigged the tanks out of the hole with an excavator and disposed of them off-site at a steel recycling facility. The bedding sand and CMU block remain in the bottom of the basement for proper handling and disposal by others.

If you have any other questions or need any additional information, please contact me at (518) 374-3366.

Sincerely,

Joshua Frederick
Vice President

New York State Department of Environmental Conservation
Pre-Work Notification for Bulk Storage (PBS or CBS) Tank Installation or Closure

This form provides notice of an upcoming tank installation and/or closure per 6 NYCRR Sections 613-1.9(h) and (f), 613-2.6(b) (1), 613-3.5 (b) (1) and 613-4.5 (b) (1) of the Petroleum Bulk Storage (PBS) Regulations, or 6 NYCRR Sections 596.2(f) and (h) of the Chemical Bulk Storage (CBS) Regulations. Submit the completed form to the Department's Regional Office at least 30 days prior to action for PBS tank installation * and permanent closure** ; at least 3 days prior for CBS tank installation *** . For CBS permanent tank closure, a minimum of 3 day prior notice is recommended. **If the schedule for work changes you must notify the Department's Regional Office before work begins. Once the work is complete, the facility (property) owner is responsible for submitting a PBS or CBS application to the Department with the complete tank information including the date the action was completed.** The Owner is also responsible to ensure that all work is completed in compliance with the applicable PBS or CBS regulations (i.e., Parts 613 or 598/599). Any questions, call the Department's Regional Office. Information on the Chemical and Petroleum Bulk Storage Programs be found at: http://www.dec.ny.gov/chemical/287.html

*not required for temporary tank system ** unless in response to corrective action *** unless immediate action is required

Check Applicable Program: _____PBS _____CBS **Facility PBS or CBS Registration No.** _____

Site Name: 830 Albany St.	Contractor: JACKSON DEMOLITION SERVICE INC.
Site Address: 830 Albany St.	Address: 7754 AQUEDUCT RD
Site Address (cont): Schenectady, NY 12307	Address(cont): SCHENECTADY, NY 12309
Site Contact: Jake Hewson	Contact: JOSH FREDERICK
Phone Number: (518) 272-2541 Fax Number: (518) 272-1196	Phone Number: 518-374-3366 Fax Number: 518-372-1116
Email Address: jhewson@uwmarx.com	Email Address: jfrederick@jacksondemolition.com

Tank Number	Type of Action (Close & Remove, Close in Place, Install)	Proposed Date (mm/dd/yy)	Tank Location (Aboveground or Underground)	Capacity (Gallons)	Spills/Leaks? (Yes/No w/Spill # if Yes)	Reason for Action
1	REMOVE	3/18	AST - BASEMENT	275	N/A EMPTY	REQUESTED BY GC
2	REMOVE	3/18	AST - BASEMENT	275	N/A EMPTY	REQUESTED BY GC

I hereby certify under penalty of law that the information provided on this form is true to the best of my knowledge and belief. False statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law.

Name of Owner or Authorized Representative (print): _____ Title: _____

Signature _____ Date _____

revised 02/01/2017

EXHIBIT 2

DEC MODIFICATION LETTER

(October 9, 2019)

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Region 4
1130 North Westcott Road, Schenectady, NY 12306-2014
P: (518) 357-2045 | F: (518) 357-2460
www.dec.ny.gov

October 9, 2019

Hamilton Hill II Limited Partnership
Attn: Jennica Huff
90 State Street
Suite 602
Albany, NY 12207
jpetrik-huff@tcbinc.org
(Sent via email only)

RE: Remedial Work Plan
Hamilton Hill II – Target Area 1 Site (Site No. C447052)
830 and 834 Albany Street, City/County of Schenectady

Dear Ms. Huff:

The Department of Environmental Conservation (Department) has reviewed the Remedial Work Plan (RWP) submitted on May 30, 2019 by C.T. Male Associates on behalf of Hamilton Hill II Limited Partnership (Volunteer). The RWP is approvable contingent on the following minor modifications:

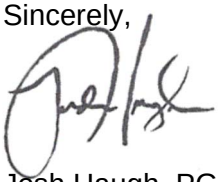
1. The RWP figures should be updated based on the supplemental Remedial Investigation (RI) data.
2. Post-excavation groundwater sampling is required in order to demonstrate (1) compliance with groundwater standards referenced in Section 1.6, and (2) that the remedial action objectives (RAOs) listed in Section 1.3 are achieved. Accordingly, a subset of existing shallow monitoring wells should be replaced after the excavation activities (refer to DER-10 Section 6.2.2(c) for guidance on this).
3. A beneficial use determination (BUD) is required for concrete that will be reused on-site as backfill. The BUD requires sampling (*e.g.*, wipe, rinsate or core samples) for a Track 1 remedy (Section 2.5).
4. All community air monitoring program (CAMP) stations, including the upwind station, should include VOC monitors. Section 3.2.2 should be revised to reflect this.
5. All imported fill samples should be analyzed for 1,4-dioxane and the list of 21 per- and poly-fluoroalkyl substances (PFAS) (Section 5.4).
6. Based on the remedy described in the RWP, a Construction Work Plan (CWP) is required. Section 8.0 should indicate that a CWP will be submitted to the Department for review and approval prior to beginning remedial action. The information requested in the CWP is described below.

The CWP should, at a minimum, include the following information:

1. Specify water management and treatment measures. Indicate how excavation water (*e.g.*, groundwater and/or precipitation entering the excavation) will be controlled, treated and/or handled. This should include permits or other authorizations, as appropriate, and should indicate the discharge and sampling requirements.
2. Indicate the anticipated treatment and/or disposal facility or facilities for all waste streams.
3. Describe the intended soil excavation approach (*e.g.*, establish a grid across the site and excavate each cell individually and, based on the confirmatory sampling results, backfill the open cell before moving on to the next cell).
4. Provide the shoring plans, as appropriate, per Section 2.8 of the RWP.
5. Indicate the anticipated hours of operation for the remedial activities. This should conform with City of Schenectady ordinances, per Section 1.8 of the RWP.
6. Indicate the location of staging and decontamination areas and construction entrances. Provide the specifications for the equipment decontamination pad.
7. Indicate truck routes and queue areas. This information should also be provided to the City of Schenectady.
8. Indicate how excavation depths will be confirmed, per Section 2.5 of the RWP.
9. Specify noise and vibration monitoring requirements, action levels, and city restrictions, per Section 3.3 of the RWP.
10. Specify site restoration requirements (*e.g.*, grading and seeding).
11. Provide a schedule for the remedial action activities, including notification to the Department, as described in DER-10 Section 5.1.
12. Provide the health and safety plan, per Section 4.0 of the RWP; and
13. Indicate that BUD will be obtained prior to reusing concrete on-site as backfill.

If the Volunteer agrees with the above, please revise and certify the RWP and submit a bookmarked pdf (including all appendices) to the Department for approval. The CWP should be submitted for approval prior to beginning remedial action. Please contact me at 518-357-2008 or joshua.haugh@dec.ny.gov if you have any questions about this letter.

Sincerely,



Josh Haugh, PG
Professional Geologist 1

ec: R. Mustico, G. Burke, DEC
S. Wagh, S. Selmer, DOH
K. Moline, A. Smith, S. Bieber, C.T. Male