Excavated Materials Management Plan

Breakneck Hill Farm Dumping Site

Breakneck Hill Road
Southborough, Massachusetts

August 2023

Prepared For:

Town of Southborough
Conservation Commission
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TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

1.0 Introduction

On behalf of the Town of Southborough (the "Town"), TRC Environmental Corporation (TRC) has prepared this *Excavated Materials Management Plan* (EMMP) for cleanup of the Town-owned portion of the Breakneck Hill Farm Dumping Site (the "Site") located at Breakneck Hill Road in Southborough, Massachusetts. Components of this EMMP will be implemented during Site cleanup by TRC and cleanup contractors that will be selected by the Town via a bidding process.

Prior to the Town's ownership, solid waste and asbestos containing materials (ACM) were dumped and/or buried at the Site. In April 2023, the Town submitted the April 2023 *Cleanup Plan* to the Massachusetts Department of Environmental Protection (MassDEP), which outlines proposed cleanup activities at the Site. The April 2023 *Cleanup Plan* was approved by MassDEP on May 31, 2023. Components of the approved *Cleanup Plan* include Site preparation activities, cleanup operations, and Site restoration work.

In accordance with the approved *Cleanup Plan*, this EMMP outlines processes and procedures that will be implemented during Site cleanup, including the following information:

- Names, companies, contact information, and current licensure (as applicable) of key project personnel;
- Required permits and submittals;
- Summary of Site preparation activities and cleanup operations;
- Procedures for solid waste removal and management;
- Procedures for field screening and potential sampling of excavated soil, solid waste, and/or potential ACM;
- Identification of stockpile and staging areas;
- A summary of the material management system that will be utilized to track excavated materials from extraction to final disposal/recycling;
- Description for decontamination procedures;
- Identification of each waste stream and associated disposal facility; and
- Environmental monitoring and mitigation measures.

Once the cleanup contractors are selected, this EMMP will be amended to include contractor-specific information. The term "project" includes all components of this EMMP.

2.0 Site Description & Background

The following sections describe existing conditions of the Site and the general area surrounding the Site. In addition, pertinent Site background information is provided below.

2.1 Site Location & Description

The host parcel that encompasses the Site is located between Breakneck Hill Road and Woodland Road in Southborough, Massachusetts. The host parcel associated with the Site is identified by the Town of Southborough's Assessor's Department as Breakneck Hill Road, Map 29, Lot 28A. The Site is located at the western-central portion of the host parcel and comprises approximately 1.26 acres. The general location of the Site and host parcel are depicted on **Figure 1**. Existing conditions of the Site and the immediate area surrounding the Site are displayed on **Figure 2**, and the Site boundary is displayed on **Figure 3**.

The Town acquired Map 29, Lot 28A from Raymond Davis on June 20, 1980, which was reportedly comprised of approximately 87.66 acres, currently consisting of conservation land. Solid waste and debris at the Site have been documented to include (but not limited to) old tires, machine parts, rusted 55-gallon drums, asphalt shingles, appliances, heavy equipment, broken ceramics, plastic objects, and general trash.

2.2 Site History & Background

Prior to the Town's acquisition, Davco Farm occupied Map 29, Lot 28A. Mr. Davis, President of Davis Tractor Company, operated the Davco Farm. The farm was home to an apple and peach orchard, an apiary and bee supply business, and a Belted Galloway cattle herd. The Site appears to have been used as dumping ground associated with the Davco Farm between approximately 1966 and 1980.

2.3 Adjoining Properties & General Surrounding Area

The Site is situated in a mixed-use area consisting predominantly of residential and commercial properties. The Site is bordered to the north by conservation land followed by a commercial complex and Route 9 (Turnpike Road); to the east by conservation land followed by residential properties and Woodland Road; to the south by conservation land followed by residential properties and Breakneck Hill Road; and to the west by 60 Breakneck Hill Road followed by 48 Breakneck Hill Road and Breakneck Hill Road.

2.4 Regulatory History & Notification

The Site is currently not identified in the Environmental Protection Agency (EPA) Inventory of Open Dumps or the MassDEP list of Inactive/Closed Landfills and Dumping Grounds. In addition, the Site is currently not listed in MassDEP's Waste Site and Reportable Releases database.

Dumping grounds, open dumps, and illegal disposal of solid waste are prohibited by the Commonwealth of Massachusetts under 310 CMR 19.014. Accordingly, the Town formerly notified the MassDEP Central Regional Office's Solid Waste Management Division via email that a dumping ground was located on a portion of Town-owned property on September 28, 2021.

Following notification, the Town entered into a mutually negotiated *Administrative Consent Order* (ACO) with MassDEP, performed initial solid waste assessment activities, and submitted a *Cleanup Plan* for the Site. MassDEP approved the April 2023 *Cleanup Plan* on May 31, 2023. As specified in the ACO, the Town has 180 days following MassDEP approval of the *Cleanup Plan* to initiate cleanup activities at the Site. Accordingly, Site cleanup is anticipated to begin by November 27, 2023. This *Environmental Monitoring and Mitigation Plan* will be implemented by TRC and the cleanup contractors during cleanup of the Site.

3.0 Previous Assessment Activities & Environmental Conditions

The following sections briefly summarize previous assessment activities performed by TRC at the Site and anticipated environmental conditions.

3.1 Land Survey & Topography

In June 2021, land surveying activities were conducted at the Site to outline the extent of visually apparent surface waste/debris, document local topography and existing conditions, and overlay the extent of surficial waste/debris on an aerial photograph. Prior to the existing conditions survey, TRC performed a site reconnaissance to stake out the extent of the visually apparent surficial waste/debris, identify the general area of focus for the surveyors, and conduct a photographic survey.

TRC retained Land Planning, Inc. (Land Planning) of Hanson, Massachusetts to survey the wetland flags that were previously placed by others, the perimeter of surficial waste/debris, and the northern and northeastern bank of the pond. In addition, Land Planning collected ground surface elevation data to map the localized topography in 1-foot contours. Based on the Site reconnaissance and survey, the area of visually apparent surficial waste and debris was documented to cover approximately one acre. Existing conditions of the Site and the immediate area surrounding the Site are displayed on **Figure 2**.

Topography at the Site generally slopes to west/northwest and ranges between approximately 340 feet above mean sea level (msl) and 322 feet above msl. As shown on **Figure 2**, topography near the northwestern Site boundary steeply slopes to the northwest towards an intermittent stream.

3.2 Test Pit Installation

Between September 14, 2022 and September 16, 2022, nineteen (19) test pits were installed by Strategic Environmental Services, Inc. (SES) throughout the Site. The test pits were installed using a track-mounted, mini excavator to further evaluate the nature and extent of solid waste at the Site. The test pits were advanced to depths ranging between approximately 4.5 feet below ground surface (bgs) and 8.5 feet bgs. Test pits were terminated due to shallow refusal, lack of solid waste, or excavator constraints. TRC documented the location, dimensions, and contents of each test pit including the types of solid waste and lithology. In addition, TRC collected soil samples from each test pit for logging and screening purposes as described in Section 3.2.1 below.

A significant amount of solid waste was encountered in 11 of the 19 test pits to depths ranging between the ground surface to approximately 7.0 feet bgs. Based on the findings associated with the September 2022 test pitting program, the vertical and horizontal extent of buried solid waste and debris appears to have been defined at the Site. Notwithstanding, the solid waste and debris is not uniformly buried; discrete pockets of buried solid waste and debris are apparent throughout the Site. Due to access

restrictions, the horizontal extent of buried solid waste and debris was not able to be delineated beyond the western property boundary, extending towards the abutting residential property. The test pits installed at the Site generally encountered light-brown to dark-brown silt with varying amount of sand, cobbles, and solid waste. Groundwater was not encountered during the test pitting program to a maximum explored depth of approximately 8.5 feet bgs. No drums, tanks, or other containers housing hazardous waste or materials were encountered at the Site during the September 2022 test pitting program. However, several corroded drums, tanks, and/or other discarded containers were encountered during the test pitting program; these containers were empty, and evidence of releases stemming from the empty containers was not observed. Leachate, sheens and/or OHM seeps were not encountered at the Site during the test pitting program. Test pit locations are depicted on **Figure 3**, and the test pit logs are included as **Appendix A**. In addition, a photographic log is also provided as **Appendix B**.

During the test pitting program, soil samples were collected from the sidewalls and base of each test pit for logging and screening purposes. Intervals exhibiting evidence of chemical/petroleum contamination (if any) were targeted for screening. The soil samples were screened with a photoionization detector (PID) on a parts per million by volume (ppmv) basis to evaluate for the presence of volatile organics. PID headspace readings ranged between 0.0 ppmv and 1.6 ppmv. Furthermore, visual and/or olfactory evidence of contamination was not encountered during the test pitting program. Based on observations made during soil screening activities, no soil samples were retained for laboratory analyses in accordance with the May 2022 *Final Assessment Plan*. The soil screening results are summarized on **Table 1**.

3.3 ACM Survey

In conjunction with the September 2022 test pitting program, a Commonwealth of Massachusetts Department of Labor Standards (DLS) licensed Asbestos Inspector performed a limited ACM survey at the Site. Specifically, the Massachusetts DLS licensed Asbestos Inspector identified and sampled suspect ACM unearthed during the test pitting program and visually inspected other solid waste and debris present on the ground surface throughout the Site. Nine suspect materials including grey cement board, tan boiler bricks, black asphalt based built-up roofing material (2), black felt paper roofing material (2), grey insulation, red wire insulation, and black conduit were identified and sampled as part of the ACM survey. One of the nine suspect materials was unearthed during test pitting activities. Specifically, the suspect tan fire brick was encountered in test pit TP(86,184) at a depth of approximately 3.5 feet bgs. The remaining eight suspect materials were identified during the visual surficial assessment. Three samples were collected from each of the nine suspect materials (resulting in 27 total samples) and submitted to TRC's Industrial Hygiene Laboratory located in Windsor, Connecticut for asbestos analysis via Polarized Light Microscopy (PLM), United State Environmental Protection Agency (EPA) Method 600/R-93/116.

Laboratory analysis of the 27 ACM survey samples detected asbestos greater than 1% in three of the nine suspect materials. Asbestos was detected in the grey cement board

at 20% and both of the black asphalt based built-up roofing materials between 3% and 5%. The ACM survey sample locations are displayed on **Figure 3**. The ACM survey analytical results are summarized on **Table 2**, and the associated laboratory analytical report is included as **Appendix C**. The *Limited Asbestos Survey Summary Report* is provided as **Appendix D**.

4.0 Excavated Materials Management

The following sections outline processes and procedures that will be implemented by TRC and the cleanup contractors to facilitate cleanup of the Site. Specifically, this EMMP includes the following information:

- Names, companies, contact information, and current licensure (as applicable) of key project personnel;
- Required permits and submittals;
- Summary of Site preparation activities and cleanup operations;
- Procedures for solid waste removal, management, and transportation and disposal;
- Procedures for field screening and potential sampling of excavated soil, solid waste, and/or potential ACM;
- Identification of stockpile and staging areas;
- A summary of the material management system that will be utilized to track excavated materials from extraction to final disposal/recycling;
- Description for decontamination procedures;
- Identification of each waste stream and associated disposal facility; and
- Environmental monitoring and mitigation measures.

Once the cleanup contractors are selected, this EMMP will be amended to include contractor-specific information. In addition, if unexpected conditions are encountered during the cleanup operation, the information included in this EMMP will be revised, as necessary.

4.1 Project Personnel

The following sections summarize key project personnel, associated contact information, and pertinent licensing details. Contact information for certain personnel will be provided closer to project initiation and following the bidding process. TRC personnel will serve the project as the “Engineer”.

4.1.1 TRC Personnel

Environmental Engineer & Project Manager:

Taylor Bevenour, PE, ENV SP
License No. 55724
2 Liberty Square, 6th Floor
Boston, Massachusetts 02109
(617) 429-3857

tbevenour@trccompanies.com

Asbestos Project Designer:
David Gavin, PMP, CSP, CHST, LEED AP BD+C
License No. AD041880
814 Broad Street
Weymouth, Massachusetts 02189
(617) 548-8506
dgavin@trccompanies.com

Asbestos Inspector:
Contact information for the Asbestos Inspector will be provided closer to project initiation.

Asbestos Project Monitor:
Contact information for the Asbestos Inspector will be provided closer to project initiation.

Field Engineer:
Nathan Follett, EIT
2 Liberty Square, 6th Floor
Boston, Massachusetts 02109
(617) 564-5611
nfollett@trccompanies.com

Health & Safety Coordinator:
Lauren Hopp
2 Liberty Square, 6th Floor
Boston, Massachusetts 02109
(617) 429-9790
lhopp@trccompanies.com

4.1.2 Cleanup Contractor Personnel

To Be Determined:
Contact information for the cleanup contractors will be provided following the bidding process and selection by the Town.

4.1.3 Town Personnel

Owner Representatives:
Mark Purple
Town Administrator
17 Common Street
Southborough, Massachusetts 01772
(508) 485-0710

Melissa Danza, CESSWI
Town of Southborough Conservation Agent
9 Cordaville Road, Lower Level
Southborough, Massachusetts 01772
(508) 281-8984

4.2 Permits & Submittals

The following sections describe permits and submittals that are required to be prepared or obtained for the project prior to initiating Site cleanup. Project personnel must adhere to all local, state, and federal permits required to excavate and remove all waste materials from the Site.

4.2.1 Wetlands Notice of Intent

The Site is located within wetland resource areas including Bordering Vegetated Wetlands (BVW) and associated buffer zones. Accordingly, TRC will prepare and file a Notice of Intent (NOI) under the Massachusetts Wetlands Protection Act (WPA) and local wetland bylaw for approval prior to initiating cleanup actions at the Site. Following completion and acceptance of the NOI by MassDEP and the Town, an Order of Conditions will be issued for the project. Cleanup activities will be performed in compliance with the forthcoming Order of Conditions.

4.2.2 Construction General Permit, Notice of Intent & Stormwater Pollution Prevention Plan

The area of disturbance associated with cleanup will be greater than one acre. As a result, TRC will obtain a Construction General Permit (CGP) for stormwater discharges related to construction at the Site on behalf of the Town and the cleanup contractors. In accordance with United States Environmental Protection Agency (EPA) requirements, TRC will perform the following activities related to the CGP, NOI, and Stormwater Pollution Prevention Plan (SWPPP):

- complete and submit a NOI via the National Pollutant Discharge Elimination System (NPDES) eReporting Tool;
- develop a SWPPP and make appropriate revisions to the SWPPP as necessary throughout the duration of the project;
- perform required inspection activities to confirm compliance with the CGP (inspection activities need to be performed by a qualified person as defined by EPA); and
- document inspections and corrective actions completed during the project.

The selected cleanup contractors will be responsible for performing the following activities related to the CGP, NOI, and SWPPP:

- installing and maintaining adequate erosion and sediment controls;
- implementing pollution prevention practices; and
- conducting routine maintenance and corrective actions as necessary.

4.2.3 Health & Safety Protocols

TRC developed a Site-specific Health and Safety Plan (HASP) that will be followed by TRC personnel throughout the project. If new conditions are encountered at the Site during cleanup, the HASP will be revised.

The selected cleanup contractors are required to develop their own Site-specific HASP that their personnel must follow throughout the project. The HASP shall be developed by a competent health professional, include project-specific health and safety protocols, and be updated throughout the project, as necessary. At minimum, the HASP must include pertinent Site information, a general scope of work, a hazard assessment, necessary personal protection monitoring and equipment, Site control and work zones, required training and medical monitoring, general safety requirements, tailgate safety meetings, emergency/contingency plans, and incident reporting. The contractor shall designate a Site Health and Safety Officer to be responsible for ensuring that appropriate monitoring is performed, and work practices and personal protective equipment (PPE) are adequate for working conditions encountered for the duration of cleanup.

4.2.4 Non-Traditional Asbestos Abatement Work Plan

On behalf of the Town, TRC will prepare and submit a Non-Traditional Asbestos Abatement Work Plan (NTWP) and associated application to MassDEP for approval. TRC will coordinate with the selected cleanup contractors to obtain select information that needs to be included as part of the NTWP and associated MassDEP application. The NTWP will:

- describe all work practices, project duration, and anticipated schedule;
- comply with the requirements specified in 310 CMR 7.15;
- bear the signature of the Asbestos Project Designer who prepared the plan; and
- include supporting documentation.

The selected cleanup contractors will be responsible for implementing the NTWP and providing TRC with the necessary information to complete the NTWP and MassDEP application. If additional ACM is identified at the Site during cleanup, TRC will revise the NTWP and associated MassDEP application, as necessary.

4.3 Site Preparation

The following sections describe field work that will be completed by the cleanup contractors prior to initiating Site cleanup.

4.3.1 Erosion & Sediment Controls

The cleanup contractors will implement erosion and sediment controls to prevent impacts during cleanup activities in accordance with Best Management Practices (BMPs), and

local, state and federal requirements. The controls installed by the cleanup contractors will prevent erosion, control the movement of sediment, and stabilize exposed soil throughout the project. At minimum, the cleanup contractors will install and maintain erosion and sediment controls per this plan, contract documents, and the forthcoming SWPPP that will be prepared by TRC for the project.

The cleanup contractors will install approximately 2,660 linear feet of erosion and sediment controls at the locations depicted on **Figure 4**. In addition, the cleanup contractors will install erosion and sediment controls around stockpiled materials when not in use and at the end of each workday. TRC estimates that an additional 200 linear feet of erosion and sediment controls will be required for stockpile management.

To ensure proper function, TRC will perform erosion and sediment control inspections in accordance with the forthcoming SWPPP and requirements of the CGP. If deficiencies are identified during the erosion and sediment control inspections, the cleanup contractors will promptly perform maintenance and repair activities.

4.3.2 Site Access & Construction Entrances

At minimum, the cleanup contractors will install a construction access road extending from the gate at the Southborough Community Garden to the eastern portion of the project Site and a construction pad immediately to the east of the Site. The construction access road and pad will be installed and maintained by the cleanup contractors throughout the project, which will provide adequate ingress and egress paths to and from the Site for construction vehicles and equipment. In addition to providing access to and from the Site, the construction access road and pad will also serve as a soil and sediment control measure, limiting the amount of soil tracked off Site.

The proposed construction access road covers approximately 9,200 square feet, extending from the Southborough Community Gardens to the northeast and connects with the construction entrance situated to the east of the Site. The access road shall be at least 10 feet wide and be constructed of at least four inches of 2 to 4-inch crushed rock underlain by geotextile fabric. The pad shall be constructed of at least six inches of 1 to 3-inch stone underlain by geotextile fabric. The pad width shall be a minimum of 10 feet wide and 50 feet long. The proposed construction pad is located immediately to the east of the Site and comprises approximately 550 square feet. Proposed locations for the construction access road and pad are displayed on **Figure 4**.

It should be noted that the cleanup contractors may need to improve the entrance to Southborough Community Garden's parking lot to accommodate construction equipment and vehicles. In addition, the cleanup contractors shall coordinate with the Town to ensure that the bridge immediately to the west of the access road's entry point (located to the south of the Site) can support the construction equipment and vehicles required to complete the project; improvements to the existing bridge may be required to complete the work described herein.

4.3.3 Contractor Parking

The contractor parking area proposed by the Town is located immediately to the west of the construction access road and to the east of 66 Breakneck Hill Road, as displayed on **Figure 4**. TRC understands that this area was historically clear or vegetation; however, this area has not been maintained and subsequently became overgrown with vegetation. In order to use this area for parking, the cleanup contractors will need to maintain the area by removing the overgrown vegetation, installing erosion and sedimentation controls around the perimeter of the area, providing adequate ground cover (if needed), and storing a spill kit at the parking area in case of an unexpected release of oil or hazardous materials. The contractor parking area may extend up to the existing stone wall, which will not be removed as part of the project.

4.3.4 Site Security

The selected contractors will install secure chain-link fencing around the perimeter of the project Site where heavy equipment will be used, restricting access to the solid waste dumping, excavation, staging, and stockpile areas. TRC estimates that approximately 1,220 linear feet of chain-link fencing will be required to restrict access to the project Site. For the duration of the cleanup operation, access to the project Site should be restricted to project personnel (e.g., TRC, the Town, cleanup contractors, and MassDEP). The proposed chain-link fencing is provided on **Figure 4**.

In addition, the cleanup contractors will protect pastures by installing orange construction fencing (or similar approved by the Town) along the east side of the proposed access route.

4.3.5 Land Clearing & Grubbing

To prepare the Site for cleanup, the cleanup contractors will perform land clearing and grubbing activities throughout the approximate 57,415 square foot area depicted on **Figure 4**. If needed, the contractors may propose additional areas to the Town and TRC for approval.

In addition, the cleanup contractors will perform maintenance activities (clear vegetation) from the approximately 3,375 square foot area proposed for parking. The extent of maintenance may be performed up to the existing stone wall, however, the stone wall shall not be removed and will remain in place. The proposed contractor parking area are displayed on **Figure 4**. If needed, the contractors may propose additional areas to the Town and TRC for approval.

Based on information provided by the Town, TRC anticipates that the cleanup contractors will be able to chip downed trees and provide loads of wood chips to the following locations for the Town's use in the following order until the wood chips are exhausted:

- One truckload to Pine Hill Road for Aqueduct Road;

- One truckload at the Town forest map board/trailhead on Woodland Road;
- One truckload at Beecology; and
- At least one truckload in the north pasture on top of a tarp or another location to be designated by the Town's Stewardship.

In addition, the Town's Stewardship reportedly will accept up to ten approximately 12-inch-diameter logs to block access to unauthorized trails.

The cleanup contractors will coordinate with the Town to determine if invasive species are located within the area to be cleared. If identified by the Town, the cleanup contractors will remove and dispose of the invasive vegetation to an appropriate off-Site facility. Ultimately, the cleanup contractors will coordinate with the Town to determine how much non-invasive vegetation/wood can remain at the Site, be used by the Town, and/or requires off-Site management.

4.4 Cleanup Operations

The following sections outline cleanup operations that will be performed by TRC and the selected cleanup contractors. Cleanup operations include ACM and solid waste removal, stockpiling and material management, field assessment of soil quality, potential characterization sampling, environmental monitoring and mitigation protocols, decontamination procedures, transportation and disposal of waste, reporting, and restoration of the Site. Cleanup activities have the potential to encounter unexpected conditions at the Site, which are also summarized in the following sections.

4.4.1 ACM Removal & Management

During the September 2022 limited asbestos survey, ACM was identified on Site (i.e., approximately 300-square feet of grey cement board containing 20% chrysotile, 200-square feet of black roofing asphalt based built-up containing 5% chrysotile, and 1,800-square feet of black roofing asphalt based built-up containing 3% chrysotile). ACM sample locations are displayed on **Figure 3**, and the *Limited Asbestos Survey Summary Report* is provided as **Appendix D**.

Based on findings associated with the September 2022 limited asbestos survey and assuming that ACM and associated impacts (if any) may extend to a maximum depth of 1-foot bgs, TRC estimates that approximately 2,300 cubic feet (or 85 cubic yards) of ACM comingled with surrounding soil will have to be bulk loaded and removed by the cleanup contractor as part of the Site cleanup operation. To support ACM removal, TRC's Massachusetts Department of Labor Standards (DLS)-licensed Asbestos Project Designer will prepare the NTWP, and TRC's Massachusetts DLS-licensed Asbestos Project Monitor will be on Site during the ACM abatement operation. In addition, TRC will perform environmental monitoring activities using high volume air pumps to collect field samples for analysis of asbestos fibers by phase contrast microscopy (PCM). The cleanup contractor will implement the ACM abatement activities described in the work

plan, including (but not limited to) management of ACM, implementing mitigation measures, and transportation and disposal.

The potential exists that additional ACM that was not identified during the September 2022 limited asbestos survey is located throughout the Site. As a result, TRC's Massachusetts DLS-licensed Asbestos Inspector will be on Site to inspect and sample suspect ACM (if any) unearthed during cleanup. If additional ACM is identified, TRC will update the NTWP, and the contractor will perform supplemental ACM abatement activities. Proposed disposal facilities capable of accepting ACM waste are provided in Section 4.4.5.

4.4.2 Solid Waste Removal & Management

Significant amounts of solid waste and debris were encountered in 11 of the 19 test pits installed at, and in the vicinity of, the Site during the September 2022 solid waste assessment. The 11 test pits encountered waste at the ground surface, and waste was documented to extend to depths ranging between 0.5 feet bgs and 7 feet bgs. Based on field observations made during the assessment, TRC estimates that the Site (i.e., anticipated extent of buried solid waste and debris/the area of dumping) encompasses up to 55,000 square feet. Using the average depth of waste encountered at the Site during the test pitting program, TRC estimates that up to 6,375 cubic yards of solid waste/debris comingled with soil is located throughout the Site. The percentage of solid waste encountered in each test pit during the September 2022 assessment was variable. Based on visual observations conducted during the test pitting program, TRC estimates that approximately 10% to 30% of the dumped volume consists of solid waste and the balance consists of soil and cobbles.

The cleanup contractors will remove all solid waste from the dump area in accordance with this EMMP. The contractor will excavate to 5 feet from original grade throughout the Site to assess and remove soil and solid waste unless otherwise directed by TRC (if solid waste is encountered more than 5 feet below original grade, deeper excavations will be warranted to remove waste from the Site). TRC may determine that excavation to 5 feet below the original grade is not necessary in some portions of the work area as the solid waste is not uniformly buried, and discrete pockets of buried solid waste/debris are likely present. To reduce transportation, disposal, and Site restoration costs, the cleanup contractors will furnish and operate appropriate mechanical screening equipment to separate excavated soil and cobbles from the apparent solid waste, as feasible. The maximum mesh/screening threshold will be 6-inches diameter. Material passed through the mechanical screener that persists in containing solid waste will be disposed of off Site by the cleanup contractor. Site soil and cobbles not exhibiting signs of contamination shall be staged on Site by the contractor for reuse as backfill, grading material, and/or rip rap materials, as appropriate. In addition, the contractor will separate ferrous and nonferrous metals, tires, and other recyclable material from the excavated solid waste/debris. The anticipated extent of waste removal is displayed on **Figure 5**.

During solid waste removal activities, TRC will at minimum:

- Implement soil quality evaluation with field instrumentation such as a photoionization detector (PID) to detect volatile petroleum hydrocarbons (VPH) and perform soil sampling activities;
- Provide management coordination;
- Conduct environmental monitoring;
- Support compliance efforts;
- Assess excavated material for visual and olfactory evidence of contamination;
- Evaluate laboratory data;
- Implement health and safety and environmental monitoring protocols;
- Perform soil stockpile characterization and other environmental sampling (as necessary); and
- Document cleanup activities (excavation, waste management, material tacking, transportation, disposal, recycling, monitoring, sampling, etc.) in a weekly summary report submitted to the Town.

At minimum, the cleanup contractor will perform the following activities to support solid waste removal and management at the Site:

- Acquire work permits and DigSafe clearance;
- Furnish and operate construction equipment capable of excavating, sorting, transporting, stockpiling and loading materials excavated from the Site;
- Separate materials proposed for off-Site disposal/recycling from materials proposed for on Site reuse;
- Secure stockpiled materials;
- Manage materials from generation to final disposal, recycling, or reuse;
- Implement mitigation measures and corrective actions;
- Stage and reuse soil, cobbles, and other non-waste materials for backfill/grading;
- Support sampling and compliance efforts by TRC;
- Implement health and safety and environmental monitoring protocols;
- Employ equipment decontamination measures;
- Provide TRC with an accurate project schedule (to be included in the weekly summary report); and
- Assist with identifying final disposal and recycling facilities.

Proposed solid waste receiving facilities are provided in Section 4.4.5.

4.4.3 In-Field Soil Quality Evaluation & Material Characterization Sampling

TRC's environmental field staff will be on Site to oversee cleanup operations, perform soil quality assessment activities using a PID and/or MultiRAE monitor, assess excavated materials for visual and olfactory evidence of contamination, and collect soil stockpile characterization samples for laboratory analysis. At minimum, material excavated during cleanup will be inspected periodically with a PID on a ppmv basis referenced to benzene to evaluate for the presence of volatile organics. If elevated sustained PID headspace readings are encountered (i.e., concentration greater than 10 ppmv) and/or visual or olfactory evidence of contamination is identified, the contractor will segregate the contaminated material and TRC will collect and submit a representative sample to a Massachusetts-certified laboratory for analyses of volatile organic compounds (VOCs), extractable petroleum hydrocarbons (EPH) targets and fractions, volatile petroleum hydrocarbons (VPH) fractions, priority pollutant metals, polychlorinated biphenyls (PCBs), pesticides, and herbicides. Laboratory analytical results will to be compared to the applicable Reportable Concentrations in accordance with 310 Code of Massachusetts Regulations (CMR) 40.0000, commonly referred to as the Massachusetts Contingency Plan (MCP). If reportable conditions are encountered during the assessment program, TRC will alert the Town and the Town will notify MassDEP in the appropriate time frame determined by the type of MCP Reportable Condition (i.e., 2-hours, 72-hours, and/or 120-days). The laboratory results will be evaluated by TRC and will indicate if the characterized soil will be able to be reused on Site as backfill or transported off Site for disposal.

TRC will perform characterization sampling and analyses, required by the anticipated disposal/recycling facilities. It's anticipated that the most stringent facility requirements will require characterization samples to be collected at a frequency of one characterization sample per 200 tons of waste. The sampling frequency may change depending on facility requirements. At a minimum, characterization samples will consist of one grab sample and one composite sample, comprised of eight discrete samples representative of the stockpiled material. Each characterization sample will be analyzed for the following parameters per out of state landfill permit requirements:

- Volatile Organic Compounds via Method 8260C;
- Semi-Volatile Organic Compounds via Method 8270D;
- Total Petroleum Hydrocarbons via Method 8015-DRO;
- Polychlorinated Biphenyls via Method 8082A;
- MCP 14 Metals via Methods 6010C and 7471B;
- Pesticides via Method 8081B;
- Herbicides via Method 8151A;
- Toxicity Characteristic Leaching Procedure (TCLP) Lead;
- Reactive Sulfide & Reactive Cyanide;
- Ignitability; and
- Corrosivity (pH).

The results will be tabulated and compared to MCP Reportable Concentrations. A Licensed Site Professional (LSP) Opinion for facility acceptance may be required depending on the laboratory analytical results.

4.4.4 Stockpiling & Material Management

The proposed equipment, material, and stockpile staging areas are displayed on **Figure 4** and **Figure 5**. If warranted, the cleanup contractors may propose a different staging areas for approval by TRC. If approved, this EMMP will be revised to reflect the proposed changes.

The cleanup contractors will segregate excavated materials in stockpiles based on material classification, field screening activities, and requirements of the anticipated disposal/recycling facilities. Stockpiled materials are anticipated to include solid waste/debris comingled with residual soil, solid waste free of soil, recyclable metals, rubber tires, ACM comingled with soil, and soil and other non-waste materials proposed for on-Site reuse. The cleanup contractors will manage stockpiles to prevent erosion and infiltration and secure the stockpiles to prevent exposure to humans and the surrounding environment. When not in use and at the end of each workday, the cleanup contractors will securely cover the stockpiles with 10 mil (at minimum) polyethylene sheeting and surrounded with adequate erosion and sediment controls. Contaminated soil (or other materials) will be placed on polyethylene sheeting to prevent potential impacts to underlying soil, and erosion and sediment controls will be installed downgradient of the stockpiles. Stockpiles will be weighted to keep the polyethylene sheeting from be entrained by wind. Weights will be tires, sandbags, and similar materials as opposed to boards, concrete with sharp edges, and similar materials that will puncture the sheeting or cause it to shred during windy conditions.

TRC will document material tracking information in daily field notes, which will be summarized in weekly status reports. Field notes will detail material classifications and approximate generation locations, volumes, and stockpile locations (if applicable). In addition, the field notes will include activities completed during each day, including approximate depths and areas of excavation. As necessary, TRC will provide sketches and take photographs of the work completed throughout each week., TRC will track materials from the point of origin to final management destination (e.g., reused on Site, disposed of off Site). Transport of material off Site will be tracked using appropriate shipping documents (e.g., material shipping records, manifests, bill of ladings) and disposal packages, which will be prepared by TRC in coordination with the cleanup contractors, and final disposal documentation will be obtained from the receiving facilities by the cleanup contractors. The cleanup contractors will be responsible for coordinating the transportation and disposal of all waste streams. Comprehensive material tracking information will be provided to the Town and MassDEP in a *Final Cleanup Completion Report*.

4.4.5 Waste Streams & Proposed Facilities

Shipping documents and disposal packages will be submitted to the appropriate local, state, and federal agencies (when required) and receiving facility for approval. Following

approval by the intended receiving facility, the cleanup contractors will load and transport the characterized waste to the designated receiving facility.

Non-ACM waste materials excavated from the Site are anticipated to be disposed of at either 1) a Massachusetts landfill within a waste cell or 2) at an out-of-state Subtitle D landfill. It is assumed the material will not be suitable for reuse as daily cover at a Massachusetts landfill due to the solid waste content. ACM waste will be disposed of at an out-of-state Subtitle D landfill permitted to accept this material. Out-of-state Subtitle D landfills capable of receiving the solid and ACM waste include (but are not limited to) the following:

- Turnkey Landfill located in Rochester, New Hampshire;
- High Acres Landfill located in Fairport, New York;
- Crossroads located in Norridgewock, Maine; and
- Clinton County Landfill located in Morrisville, New York.

Other disposal facilities can be proposed by the contractors and approved by TRC.

Nonferrous (copper, aluminum, etc.) and ferrous (automobiles, tin, and heavy melt) metals generated during Site cleanup may be recycled at the Schnitzer Metals facility located in Worcester, Massachusetts. In addition, rubber tires may be transported to the JP Routhier & Sons facility located in Littleton, Massachusetts. Other recycling facilities can be proposed by the contractors and approved by TRC. These materials must be cleaned of adhered soil and any chemical contamination prior to loading for off-site recycling.

The cleanup contractors will be responsible for identifying and selecting the appropriate receiving facilities. In addition, the cleanup contractors will be responsible for the transportation and disposal of all wastes generated by the project.

4.4.6 Environmental Monitoring & Mitigation Protocols

Cleanup and earth working activities have the potential to generate dust. As a result, TRC will monitor air quality at the Site when there is a potential to generate dust to protect public health and the environment. Air monitoring will include, at a minimum, daily monitoring and documentation of one upwind and two downwind conditions. If acceptable particulate levels are being exceeded during the Site activities (150 micrograms per cubic meter sustained for 15 minutes), the cleanup contractors will implement wetting techniques to reduce dust generation; however, the use of wetting techniques will be limited to reduce runoff and disposal costs. Dust, vapor, and odor monitoring and mitigation protocols are provided in the Environmental Monitoring and Mitigation Plan, which is included as **Appendix F**. Monitoring and mitigation techniques specific to ACM abatement will be provided in the forthcoming NTWP.

4.4.7 Decontamination Procedures

Based on the findings associated with the test pitting program, contamination is not anticipated to be encountered at the Site. At minimum, the cleanup contractors will implement best management practices to remove soil from equipment and vehicles prior to off-Site mobilization using dry, physical removal methods (e.g., brooms, scraping techniques). As feasible, the cleanup contractors will implement dry removal methods instead of wet removal methods. In addition, the cleanup contractors will install a construction entrance and access road, which will prevent the spread of soil off Site.

If contamination is encountered at the Site, the cleanup contractors will develop a decontamination plan that will outline proposed equipment and vehicle decontamination procedures, identify proposed decontamination areas, and propose disposal methods for decontamination material. The decontamination plan will be prepared by the cleanup contractors for TRC's approval.

5.0 Site Restoration

Nearing the end of Site cleanup, TRC will develop a Site Restoration Plan in coordination with the Town, which will be implemented by the cleanup contractors. The Site Restoration Plan will provide details for final grading and stabilization of the project Site and will incorporate the total volume of waste and soil removed from the Site.

Excavated soil and other non-waste materials retained for on-Site reuse will be used for backfilling, grading material, and/or riprap. If warranted for Site grading purposes, clean imported fill material and topsoil may need to be imported to the Site to achieve desired grade. Current specifications for Site restoration are included in the project specifications.

Once restoration and stabilization activities have been completed, the cleanup contractors will remove all equipment and materials from the Site.

6.0 Potential Unexpected Conditions

Unexpected conditions that could be encountered during Site cleanup are outlined below. If unexpected conditions are encountered, TRC will revise this EMMP to reflect new known Site conditions.

6.1 Additional ACM

The potential exists that additional ACM not identified during the September 2022 limited asbestos survey are located throughout the Site. If suspect materials are encountered, additional asbestos sampling will be required, the NTWP will need to be updated, and additional ACM abatement will be warranted.

6.2 Environmental Contamination

The potential exists for contamination to be encountered during Site cleanup. If contamination is encountered during Site cleanup, TRC will notify the Town and further assessment, sampling, management, reporting, and/or corrective actions may be required.

6.3 Potentially Hazardous Waste or Materials

Cleanup activities performed at the Site have the potential to encounter drums or other containers housing hazardous waste or materials. If drums or other containers are encountered during cleanup activities that potentially house hazardous waste or materials, cleanup operations will cease in and around the area of the new condition, and TRC will notify the Town.

6.4 Groundwater Management

Groundwater was not encountered during the September 2022 solid waste assessment. Notwithstanding, if groundwater is encountered during the cleanup operation, it should be managed in accordance with local, state, and federal requirements. If groundwater is encountered and no evidence of contamination is present (e.g., sheens, odors), the cleanup contractor may extract and reinfiltrate the groundwater to the subsurface within 100 feet of extraction point.

7.0 Reporting

TRC will document cleanup activities (excavation, waste management, material tracking, transportation, disposal, recycling, monitoring, sampling, and analytical documentation) and provide an accurate project schedule in a weekly summary report, which will be provided to the Town for review.

Following completion of cleanup and restoration activities at the Site, TRC will prepare a comprehensive *Final Cleanup Completion Report*, which will summarize cleanup and restoration activities performed at the Site and provide supporting documentation including (but not limited to) excavation, waste management, material tracking, transportation, disposal, recycling, monitoring, sampling, analytical, and restoration documentation. The *Final Cleanup Completion Report* will be provided to the Town and MassDEP.

8.0 Schedule

In accordance with the ACO, Site cleanup will commence by November 27, 2023 and be completed at the latest by May 25, 2024. Notwithstanding, initiation of cleanup activities is anticipated to begin prior to November 27, 2023 and will be contingent on the timeframe associated with the Town's bidding process and contractor availability.

9.0 References

Solid Waste Management Facility Regulations (310 CMR 19.000) prepared by MassDEP dated February 14, 2014.

Existing Conditions Plan, Off Breakneck Hill Road, Southborough, Massachusetts prepared by Land Planning, Inc. dated June 23, 2021.

Final Assessment Plan, Breakneck Hill Farm Dumping Site, Breakneck Hill Road, Southborough, Massachusetts prepared by TRC Environmental Corporation dated May 2022.

Limited Asbestos Survey Summary Report, Solid Waste Assessment, Breakneck Hill Farm Dumping Site, Breakneck Hill Road, Southborough, Massachusetts prepared by TRC Environmental Corporation dated October 3, 2022.

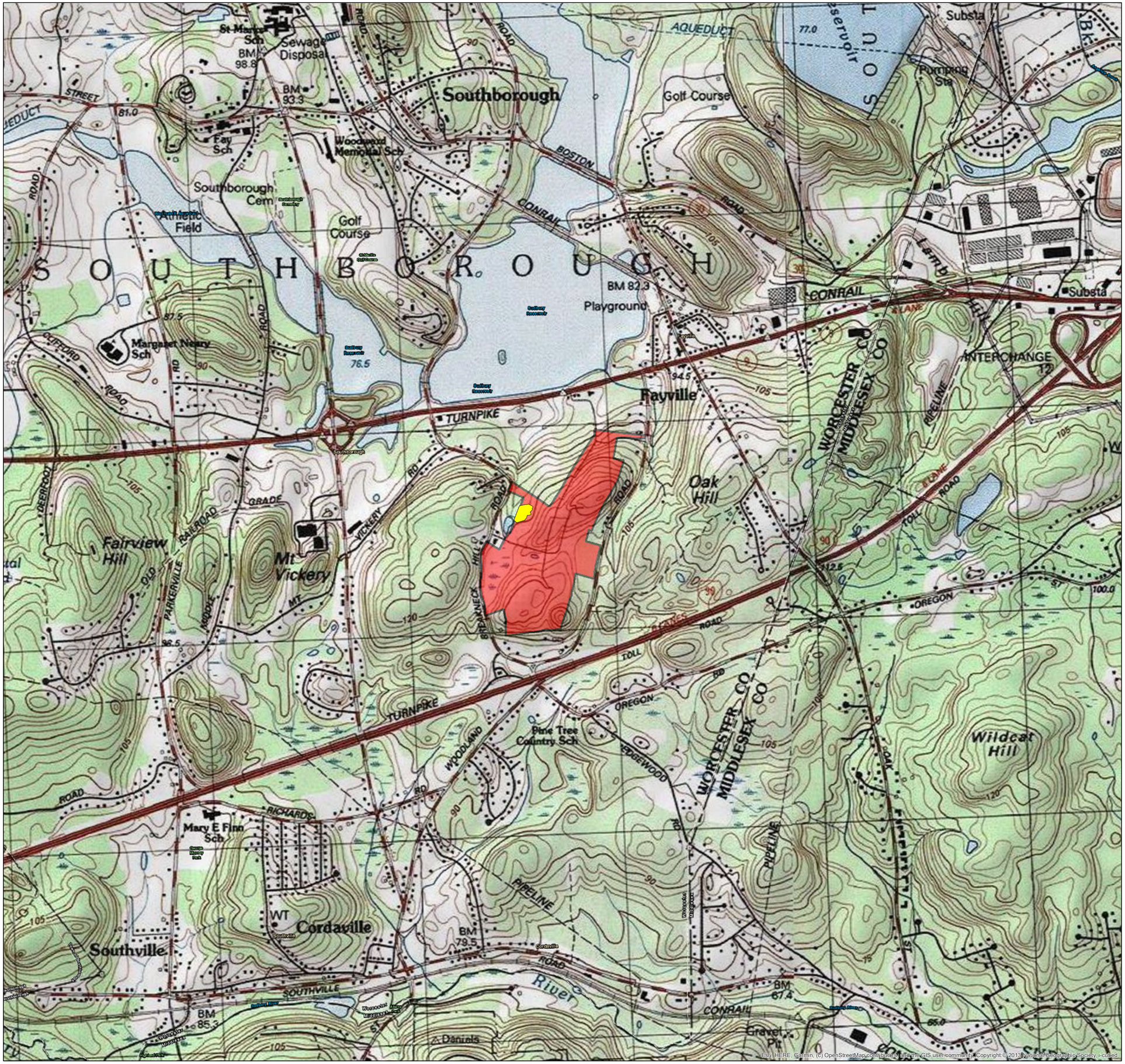
Solid Waste Assessment Summary Report, Breakneck Hill Farm Dumping Site, Breakneck Hill Road, Southborough, Massachusetts prepared by TRC Environmental Corporation dated October 2022.

Revised Final Assessment Plan, Breakneck Hill Farm Dumping Site, Breakneck Hill Road, Southborough, Massachusetts prepared by TRC Environmental Corporation dated February 2023.

Revised Solid Waste Assessment Summary Report, Breakneck Hill Farm Dumping Site, Breakneck Hill Road, Southborough, Massachusetts prepared by TRC Environmental Corporation dated February 2023.

Cleanup Plan, Breakneck Hill Farm Dumping Site, Breakneck Hill Road, Southborough, Massachusetts prepared by TRC Environmental Corporation dated April 2023.

Figures



N

Legend

🟨 Site Boundary

🟥 Project Parcel Boundary

0 225450 900
Feet

PROJECT:	BREAKNECK HILL FARM DUMPING SITE SOUTHBOROUGH, MA 01772		
TITLE:	SITE LOCUS		
DRAWN BY:	C. HARDY	PROJ. NO.:	277567
CHECKED BY:	T. BEVENOUR	FIGURE 1	
APPROVED BY:	T. BEVENOUR		
DATE:	FEBRUARY 2023		
TRC		650 SUFFOLK STREET LOWELL, MA 01854 PHONE: 978.970.5600	
FILE NO.:	Figure 1 - Site Location Map - Breakneck Hill_02132023.mxd		

Plot Date: 2/13/2023, 13:02:55 PM by CHARDY -- LAYOUT: ANSI D (22"x34")
Path: S:\1-PROJECTS\Breakneck Hill\Figure 1 - Site Location Map - Breakneck Hill_02132023.mxd

LEGEND

- WF — LIMIT OF WETLANDS AND ASSOCIATED WETLAND FLAGS PLACED BY OTHERS
- —xD1— LATERAL EXTENT OF VISUALLY APPARENT DEBRIS AND ASSOCIATED DELINEATION FLAGS
- PROPERTY LINE
- --335-- GROUND SURFACE ELEVATION CONTOUR BASED ON NAVD88
- TREE LINE

SOURCE:
BASE MAP OBTAINED FROM *EXISTING CONDITIONS PLAN OFF BREAKNECK HILL ROAD, SOUTHBOROUGH, MA* PREPARED BY LAND PLANNING, INC. DATED 6/23/2021

PROJECT:
BREAKNECK HILL FARM DUMPING SITE
SOUTHBOROUGH, MA 01772

TITLE:
EXISTING CONDITIONS PLAN

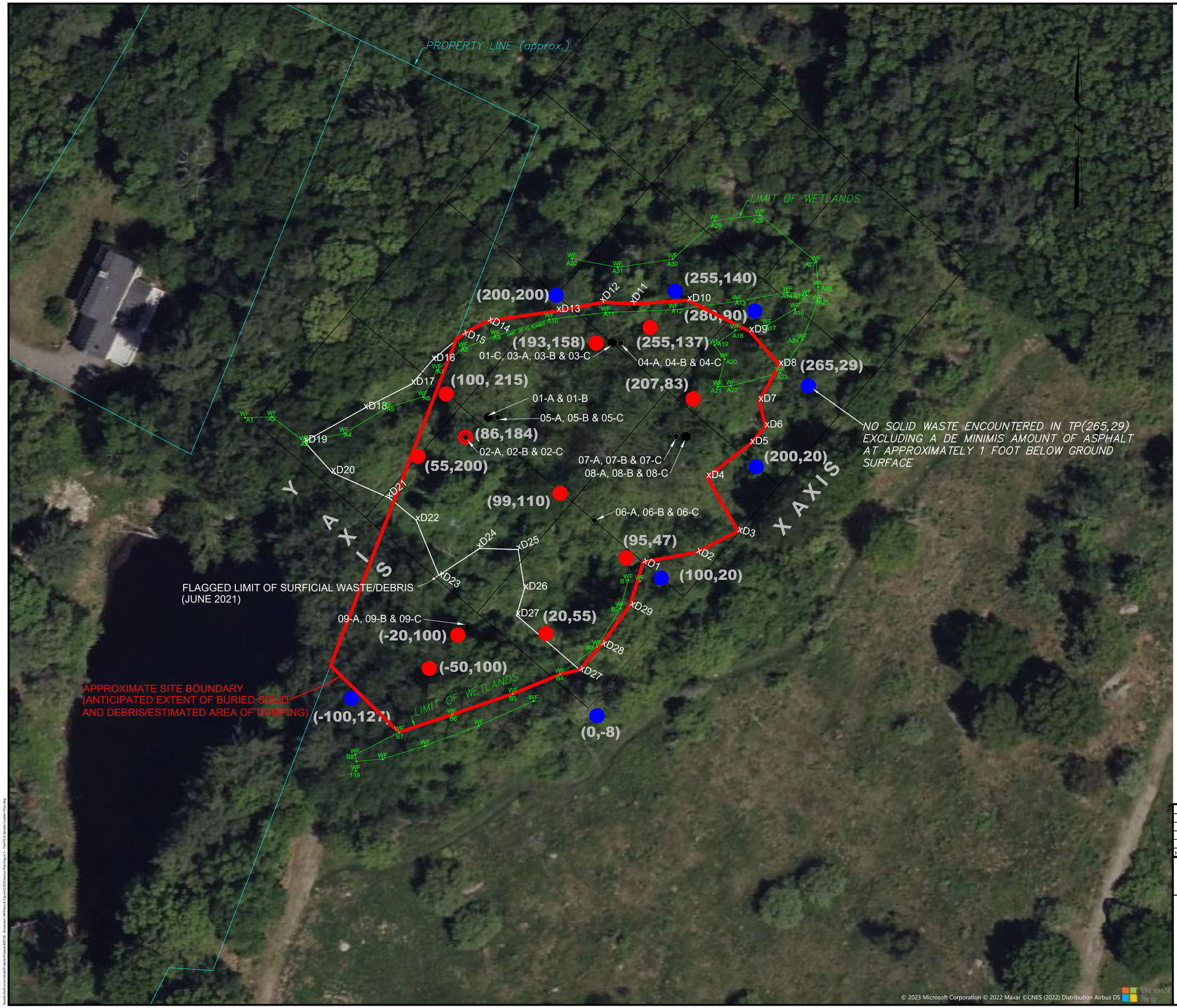
DRAWN BY:	TB	PROJ NO.:	408108.0000.0000
CHECKED BY:	MP	**FIGURE 2**	
APPROVED BY:	TB		
DATE:	January 2022		

TRC
650 Suffolk Street
Suite 200
Lowell, MA 01854
Phone: 978.970.5600

FILE NO.: Figure 2 - Existing Conditions Plan TB.dwg

DRAWING NAME: J:\Projects\Projects\408108 - Breakneck Hill\Plans & Figures\CAD\Proposed Final Assessment Plan\Figure 2 - Existing Conditions Plan TB.dwg --- PLOT DATE: January 10, 2022 - 10:17AM --- LAYOUT: Figure 1

Version: 2017-10-21



LEGEND

- WF — LIMIT OF WETLANDS AND ASSOCIATED WETLAND FLAGS PLACED BY OTHERS
- —xD1— LATERAL EXTENT OF VISUALLY APPARENT DEBRIS AND ASSOCIATED DELINEATION FLAGS PLACED IN JUNE 2021
- (0,0) COMPLETED TEST PIT LOCATION CONTAINING SOLID WASTE & COORDINATES (FEET FROM ORIGIN)
- (0,0) COMPLETED TEST PIT LOCATION NOT CONTAINING SOLID WASTE & COORDINATES (FEET FROM ORIGIN)
- 01-A ASBESTOS-CONTAINING MATERIAL SURVEY SAMPLE LOCATION THAT CONTAINED ASBESTOS
- 01-A ASBESTOS-CONTAINING MATERIAL SURVEY SAMPLE LOCATION THAT DID NOT CONTAIN ASBESTOS

0 30 60 90 120
SCALE IN FEET
1 in = 30 ft

NO.	BY	DATE	REVISION	APPD.

TITLE:

TEST PIT & SAMPLE LOCATION PLAN

PROJECT:

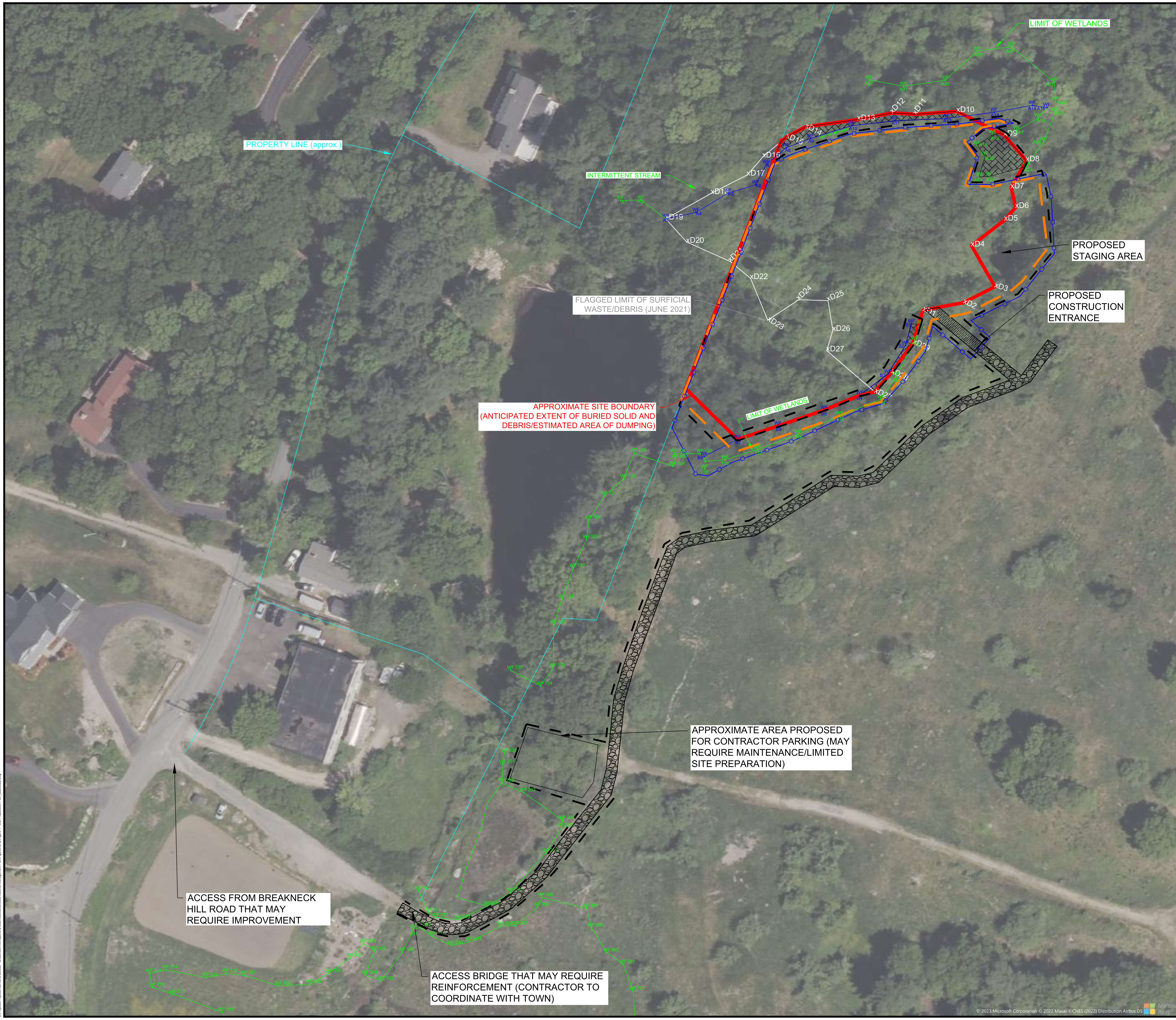
BREAKNECK HILL FARM DUMPING SITE
SOUTHBOROUGH, MA 01772

DRAWN BY:	TB	PROJ. NO.:	408108.2023.0000
CHECKED BY:	LA		
APPROVED BY:	TB		**FIGURE 3**
DATE:	FEBRUARY 2023		

TRC
WANNALANCIT MILLS
650 SUFFOLK STREET
LOWELL, MA 01854
(978) 970 5600

FILE NO.: Figure 3 - Test Pit & Sample Location Plan.dwg

\\trcwh-cifs\Environmental\Projects\Projects\408108 - Breakneck Hill\Phase II Figures\CAD\Dwg\Plan\Figure 3 - Test Pit & Sample Location Plan.dwg



LEGEND

Symbol	Description
WF	LIMIT OF WETLANDS AND ASSOCIATED WETLAND FLAGS PLACED BY OTHERS
WF	LIMIT OF WETLAND BANK
—xD1—	LATERAL EXTENT OF VISUALLY APPARENT DEBRIS AND ASSOCIATED DELINEATION FLAGS PLACED IN JUNE 2021
	PROPOSED EROSION AND SEDIMENT CONTROLS
	PROPOSED CONSTRUCTION ACCESS ROAD
	PROPOSED CONSTRUCTION PAD
	PROPOSED EXTENT OF LAND CLEARING AND GRUBBING
	PROPOSED CONSTRUCTION FENCE
	AREA BETWEEN WETLAND FLAGS AND SITE BOUNDARY Note: It's not anticipated that heavy equipment will need to be used to remove solid waste and debris in the area between the wetland flags and site boundary. These areas are suspected to contain surficial waste and debris only.

NOTES:
1. Wetland flagging as completed by Lucas Environmental, LLC 500A Washington Street, Quincy Massachusetts 02169

0 40 80 120 160
SCALE IN FEET
1 in = 40 ft

NO.	BY	DATE	REVISION	APP'D.

TITLE:
SITE PREPARATION PLAN

PROJECT:
BREAKNECK HILL FARM DUMPING SITE
SOUTHBOROUGH, MA 01772

DRAWN BY:	CH	PROJ. NO.:	408108.2023.0000
CHECKED BY:	TB		
APPROVED BY:	TB	**FIGURE 4**	
DATE:	AUGUST 2023		

TRC WANNALANCIT MILLS 650 SUFFOLK STREET LOWELL, MA 01854 (978) 970 5600

FILE NO.: Figure 4 - Site Preparation Plan_20230822.dwg

LEGEND

WF — LIMIT OF WETLANDS AND ASSOCIATED WETLAND FLAGS PLACED BY OTHERS

WF — LIMIT OF WETLAND BANK

APPROXIMATE EXTENT OF WASTE TO BE REMOVED

AREA BETWEEN WETLAND FLAGS AND SITE BOUNDARY
Note: It's not anticipated that heavy equipment will need to be used to remove solid waste and debris in the area between the wetland flags and site boundary. These areas are suspected to contain surficial waste and debris only.

NOTES:
1. Wetland flagging as completed by Lucas Environmental, LLC 500A Washington Street, Quincy Massachusetts 02169

0 40 80 120 160
SCALE IN FEET
1 in = 40 ft

NO.	BY	DATE	REVISION	APP'D.

TITLE:
SOLID WASTE REMOVAL AND STOCKPILE PLAN

PROJECT:
BREAKNECK HILL FARM DUMPING SITE
SOUTHBOROUGH, MA 01772

DRAWN BY:	CH	PROJ NO.:	408108.2023.0000
CHECKED BY:	TB		
APPROVED BY:	TB	**FIGURE 5**	
DATE:	AUGUST 2023		

TRC
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650 SUFFOLK STREET
LOWELL, MA 01854
(978) 970 5600

FILE NO.: Figure 5 - Solid Waste Removal and Stockpile Plan_20230822.dwg

Tables

Table 1: Soil Screening Summary
Solid Waste Assessment
September 14, 2022 - September 16, 2022
Breakneck Hill Farm Dumping Site
Breakneck Hill Road
Southborough, Massachusetts

Date	Test Pit Identification	Maximum Depth (fbgs)	PID Headspace Reading Range (ppmv)	Maximum PID Headspace Reading (ppmv)	Sample Collected for Analytical Parameters (excluding asbestos content)?	Sample Identification
9/14/2022	TP (100, 215)	5.5	0.2 - 0.4	0.4	No	NA
9/14/2022	TP (55, 200)	7.0	0.2 - 0.6	0.6	No	NA
9/14/2022	TP (86, 184)	7.5	0.1 - 0.3	0.3	No	NA
9/14/2022	TP (99, 110)	5.5	0.0 - 0.3	0.3	No	NA
9/14/2022	TP (193, 158)	6.0	0.1 - 0.2	0.2	No	NA
9/14/2022	TP (207, 83)	8.5	0.1 - 0.2	0.2	No	NA
9/15/2022	TP (200, 20)	5.0	0.0 - 0.2	0.2	No	NA
9/15/2022	TP (265, 29)	5.0	0.0 - 0.2	0.2	No	NA
9/15/2022	TP (280, 90)	6.0	0.1	0.1	No	NA
9/15/2022	TP (255, 140)	5.0	0.1 - 0.2	0.2	No	NA
9/15/2022	TP (200, 200)	4.5	0.0 - 0.1	0.1	No	NA
9/15/2022	TP (100, 20)	5.0	0.0 - 0.1	0.1	No	NA
9/15/2022	TP (0, -8)	5.0	0.0 - 0.6	0.6	No	NA
9/16/2022	TP (-20, 100)	5.0	0.0 - 0.1 *	0.1 *	No	NA
9/16/2022	TP (-50, 100)	5.0	0.0 - 0.1 *	0.1 *	No	NA
9/16/2022	TP (-100, 127)	5.0	0.0 - 1.6	1.6	No	NA
9/16/2022	TP (20, 55)	6.0	0.5 - 0.9	0.9	No	NA
9/16/2022	TP (225, 137)	5.0	0.2 - 0.6	0.6	No	NA
9/16/2022	TP (95, 47)	5.0	0.1 - 0.2	0.2	No	NA

PID - Photoionization Detector
fbgs - feet below ground surface
ppmv - parts per million by volume (referenced to benzene)
NA - Not Applicable
Samples (if any) were collected if PID headspace readings exceeded 10 ppmv and/or visual or olfactory evidence of contamination was encountered.
* - PID readings were recollected due to erroneous initial readings caused by equipment malfunction.
Refer to the test pit logs for lithology and solid waste descriptions, and refer to the Test Pit & Sample Location Plan for test pit locations and where solid waste was encountered.

Table 2: ACM Sampling Analytical Results Summary
ACM Survey
September 14, 2022 - September 16, 2022
Breakneck Hill Farm Dumping Site
Breakneck Hill Road
Southborough, Massachusetts

Date Collected	Sample Identification	Description	Asbestos %	Asbestos Type	Considered ACM?
9/14/2022	01-A	Grey Cement Board	20%	Chrysotile	Yes
9/14/2022	01-B	Grey Cement Board	NA/PS	NA/PS	Yes
9/14/2022	01-C	Grey Cement Board	NA/PS	NA/PS	Yes
9/14/2022	02-A	Tan Boiler Brick	ND	None	No
9/14/2022	02-B	Tan Boiler Brick	ND	None	No
9/14/2022	02-C	Tan Boiler Brick	ND	None	No
9/14/2022	03-A	Black Roofing, Asphalt Based Built-Up	5%	Chrysotile	Yes
9/14/2022	03-B	Black Roofing, Asphalt Based Built-Up	NA/PS	NA/PS	Yes
9/14/2022	03-C	Black Roofing, Asphalt Based Built-Up	NA/PS	NA/PS	Yes
9/14/2022	04-A	Black Roofing, Felt Paper	ND	None	No
9/14/2022	04-B	Black Roofing, Felt Paper	ND	None	No
9/14/2022	04-C	Black Roofing, Felt Paper	ND	None	No
9/15/2022	05-A	Grey Insulation, Unknown	ND	None	No
9/15/2022	05-B	Grey Insulation, Unknown	ND	None	No
9/15/2022	05-C	Grey Insulation, Unknown	ND	None	No
9/15/2022	06-A	Red/Black Wire Insulation	ND	None	No
9/15/2022	06-B	Red/Black Wire Insulation	ND	None	No
9/15/2022	06-C	Red/Black Wire Insulation	ND	None	No
9/15/2022	07-A	Black Roofing, Felt Paper	ND	None	No
9/15/2022	07-B	Black Roofing, Felt Paper	ND	None	No
9/15/2022	07-C	Black Roofing, Felt Paper	ND	None	No
9/15/2022	08-A	Black Roofing, Asphalt Based Built-Up	3%	Chrysotile	Yes
9/15/2022	08-B	Black Roofing, Asphalt Based Built-Up	NA/PS	NA/PS	Yes
9/15/2022	08-C	Black Roofing, Asphalt Based Built-Up	NA/PS	NA/PS	Yes
9/16/2022	09-A	Black Conduit	ND	None	No
9/16/2022	09-B	Black Conduit	ND	None	No
9/16/2022	09-C	Black Conduit	ND	None	No

Asbestos-Containing Material (ACM) is any material containing more than 1% asbestos
ND - Asbestos was not detected at a concentration exceeding the laboratory reporting limit (1% asbestos)
NA/PS - Not Analyzed/Positive Stop

Appendix A

Test Pit Logs

Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(100,215)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/14/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	To be determined
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	5.5
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	5 x 4
FIELD SCREENING EQUIPMENT	Photoionization Detector (PID)	**TOTAL VOLUME OF SOIL (CY)**	4.1
		DEPTH TO WATER (Feet)	Not Encountered
LOGGED BY	Brian Burk & Garry Yapto	**WEATHER**	65F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was not encountered in test pit.

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
0			Dark-brown SILT, some solid waste (i.e., refrigerator, metal panels, empty 55-gallon drum, miscellaneous automobile parts and wire fencing) and sand, trace organics (no odor/staining, dry).		
1			Dark-brown SILT, some boulders, cobbles and sand (no odor/ staining, dry.		
2			Dark-brown SILT, some solid waste (i.e., scrap metal, plastic and bricks), boulders, cobbles and sand (no odor/staining, dry).	0.2 - 0.4	
3					
4					
5			Brown SILT, some sand, boulders and cobbles (no odor/staining, dry).		
			Test pit terminated at 5.5 feet below ground surface due to safety concerns along slope and capabilities of machine.	0.4	

Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(55,200)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/14/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	To be determined
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	7
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	3 x 7
FIELD SCREENING EQUIPMENT	PID	**TOTAL VOLUME OF SOIL (CY)**	5.4
		DEPTH TO WATER (Feet)	Not Encountered
LOGGED BY	Brian Burk & Garry Yapto	**WEATHER**	65F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was not encountered in test pit.

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
0			Dark-brown SILT, some solid waste (i.e., scrap metal and plastic), cobbles and sand, trace organics (no odor/staining, dry).		
2			Dark-brown SILT, some solid waste (i.e., asphalt), cobbles and sand (no odor/staining, dry).	0.4	
3				0.6	
4			Dark-brown SILT, some cobbles and sand (no odor/staining, dry).	0.3	
7			Test pit terminated at 7 feet below ground surface.	0.2	

Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(86,184)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/14/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	To be determined
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	7.5
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	4 x 7.5
FIELD SCREENING EQUIPMENT	PID	**TOTAL VOLUME OF SOIL (CY)**	8.3
LOGGED BY	Brian Burk & Garry Yapto	**DEPTH TO WATER (Feet)**	Not Encountered
		WEATHER	65F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was encountered in test pit (see below).

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
0			Dark-brown SILT, some solid waste (i.e., plastic, scrap metal, glass and brick) and sand, trace organics (no odor/staining, dry).		
1					
2				0.1	
3			Light-brown to gray SILT, some solid waste (i.e., plastic, scrap metal, glass and brick) and sand, (no odor/staining, dry).	0.2	
4				0.2	Suspect fire brick sampled for potential ACM (samples 02-A through 02-C)
5					
6					
7					Amount of solid waste appears to be reducing with depth; however, could not advance deeper to determine vertical extent of solid waste at TP(86,184) due to equipment and Site constraints.
			Test pit terminated at 7.5 feet below ground surface.	0.3	

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650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(99,110)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/14/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	To be determined
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	5.5
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	3.5 x 9
FIELD SCREENING EQUIPMENT	PID	**TOTAL VOLUME OF SOIL (CY)**	6.4
LOGGED BY	Brian Burk & Garry Yapto	**DEPTH TO WATER (Feet)**	Not Encountered
		WEATHER	65F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was not encountered.

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
1			Dark-brown SILT, some solid waste (i.e., scrap metal, plastic, glass, electrical cables, garden planters, house-hold waste, brick, Styrofoam and hub caps) and sand, trace organics (no odor/staining, dry).		
2				0.3	
3			Dark-brown SILT, some solid waste (i.e., scrap metal, plastic, house-hold waste, Styrofoam and clay pipe) and sand (no odor/staining, dry).	0.2	
4					
5			Light-brown SILT, some sand, boulders and cobbles (no odor/staining, dry).	0.3	
			Test pit terminated at 5.5 feet below ground surface.		

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TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(193,158)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/14/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	To be determined
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	6
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	6 x 9.5
FIELD SCREENING EQUIPMENT	PID	**TOTAL VOLUME OF SOIL (CY)**	12.7
LOGGED BY	Brian Burk & Garry Yapto	**DEPTH TO WATER (Feet)**	Not Encountered
		WEATHER	65F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was not encountered in test pit.

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
0			Dark-brown SILT, some solid waste (i.e., metal shelving, empty drum, fencing, tires, plastic, glass, cans, brick and concrete block) and sand, trace organics (no odor/staining, dry).		
1					
2					
3			Light-brown SILT, some sand, boulders and cobbles (no odor/ staining, dry).	0.1	
4				0.2	
5				0.2	
6			Test pit terminated at 6 feet below ground surface.	0.1	

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TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(207,83)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/14/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	To be determined
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	8.5
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	5 x 9.5
FIELD SCREENING EQUIPMENT	PID	**TOTAL VOLUME OF SOIL (CY)**	15
LOGGED BY	Brian Burk & Garry Yapto	**DEPTH TO WATER (Feet)**	Not Encountered
		WEATHER	65F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was not encountered in test pit.

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
0			Dark-brown SILT, some solid waste (i.e., scrap metal, plastic, sheets, cans, fencing, tires, brick, wood debris and concrete block) and sand, trace organics (no odor/staining, dry).		
1			Dark-brown SILT, some solid waste (i.e., scrap metal, plastic, sheets, cans, fencing, tires, brick, wood debris and concrete block) and sand (no odor/staining, dry).		
3				0.1	
4				0.1	
4			Dark-brown SILT, some sand (no odor/staining, dry).		
7			Gray SILT, some sand (no odor/staining, dry).		
8			Light-brown SILT, some sand (no odor/staining, dry).	0.2	
			Test pit terminated at 8.5 feet below ground surface.		

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TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(200,20)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/15/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	To be determined
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	5
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	6.5 x 10
FIELD SCREENING EQUIPMENT	PID	**TOTAL VOLUME OF SOIL (CY)**	12
LOGGED BY	Brian Burk & Garry Yapto	**DEPTH TO WATER (Feet)**	Not Encountered
		WEATHER	60F-68F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was not encountered in test pit.

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
			Dark-brown SILT, some sand, trace organics (no odor/staining, dry).		Solid waste was not encountered in test pit TP(200,20).
1			Dark-brown SILT, some sand, boulders and cobbles (no odor/ staining, dry).		
2				0.0	
3				0.2	
4			Light-brown SILT, some sand (no odor/staining, dry).		
5			Test pit terminated at 5 feet below ground surface.	0.0	

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TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(265,29)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/15/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	To be determined
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	5
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	4 x 9
FIELD SCREENING EQUIPMENT	PID	**TOTAL VOLUME OF SOIL (CY)**	6.7
LOGGED BY	Brian Burk & Garry Yapto	**DEPTH TO WATER (Feet)**	Not Encountered
		WEATHER	60F-68F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was not encountered in test pit.

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
0			Dark-brown SILT, some sand, trace organics (no odor/staining, dry).		Solid waste was not encountered in test pit TP(265,29), excluding trace amount of asphalt at approximately 1' below ground surface.
1			Light-brown SILT, some sand, boulders and cobbles, trace asphalt (no odor/staining, dry).		
2					
3					
4				0.2	
5			Test pit terminated at 5 feet below ground surface.	0.0	

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TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(280,90)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/15/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	To be determined
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	6
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	4 x 7
FIELD SCREENING EQUIPMENT	PID	**TOTAL VOLUME OF SOIL (CY)**	6.2
LOGGED BY	Brian Burk & Garry Yapto	**DEPTH TO WATER (Feet)**	Not Encountered
		WEATHER	60F-68F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was not encountered in test pit.

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
			Dark-brown SILT, some sand, trace organics (no odor/staining, dry).		Solid waste was not encountered in test pit TP(280,90).
1			Dark-brown SILT, some sand and cobbles (no odor/staining, dry).		
2				0.1	
				0.1	
3				0.1	
			Gray SILT (with orange striations), some sand (no odor/staining, dry).		
4					
5			Gray SILT (with orange striations), some sand, boulders and cobbles (no odor/staining, dry).		
6			Test pit terminated at 6 feet below ground surface on apparent boulders.	0.1	

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TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(255,140)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/15/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	To be determined
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	5
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	3.5 x 9
FIELD SCREENING EQUIPMENT	PID	**TOTAL VOLUME OF SOIL (CY)**	5.8
		DEPTH TO WATER (Feet)	Not Encountered
LOGGED BY	Brian Burk & Garry Yapto	**WEATHER**	60F-68F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was not encountered in test pit.

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
0			Dark-brown SILT, some sand, trace organics (no odor/staining, dry).		Solid waste was not encountered in test pit TP(255,140).
2			Light-gray SILT, some sand (no odor/staining, dry).		
3			Light-gray SILT (with orange striations), some sand and cobbles (no odor/staining, dry).	0.1 - 0.2	
5			Test pit terminated at 5 feet below ground surface.	0.2	

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TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(200,200)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/15/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	To be determined
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	4.5
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	4 x 9
FIELD SCREENING EQUIPMENT	PID	**TOTAL VOLUME OF SOIL (CY)**	6
LOGGED BY	Brian Burk & Garry Yapto	**DEPTH TO WATER (Feet)**	Not Encountered
		WEATHER	60F-68F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was not encountered in test pit.

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
			Dark-brown SILT, some sand, trace organics (no odor/staining, dry).		Solid waste was not encountered in test pit TP(200,200).
1			Light-gray SILT, some sand and cobbles (no odor/staining, dry).		
2				0.1	
3				0.1	
4			Light-brown SILT (with orange striations), some sand (no odor/staining, dry).		
			Test pit terminated at 4.5 feet below ground surface.	0.0	

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TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(100,20)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/15/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	To be determined
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	5
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	4.5 x 9
FIELD SCREENING EQUIPMENT	PID	**TOTAL VOLUME OF SOIL (CY)**	7.5
LOGGED BY	Brian Burk & Garry Yapto	**DEPTH TO WATER (Feet)**	Not Encountered
		WEATHER	60F-68F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was not encountered in test pit.

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
0			Dark-brown SILT, some sand, trace organics (no odor/staining, dry).		Solid waste was not encountered in test pit TP(100,20).
1			Dark-brown SILT, some sand, boulders and cobbles (no odor/ staining, dry).		
2				0.1	
3				0.1	
4					
5			Test pit terminated at 5 feet below ground surface.	0.0	

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TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(0,-8)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/15/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	To be determined
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	5
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	4 x 9
FIELD SCREENING EQUIPMENT	PID	**TOTAL VOLUME OF SOIL (CY)**	6.7
LOGGED BY	Brian Burk & Garry Yapto	**DEPTH TO WATER (Feet)**	Not Encountered
		WEATHER	65F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was not encountered in test pit.

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
			Dark-brown SILT, some sand, trace organics (no odor/staining, dry).		Solid waste was not encountered in test pit TP(0,-8).
1			Brown SILT, some sand (no odor/staining, dry).		
2			Light-brown SILT, some sand, boulders and cobbles (no odor/staining, dry).		
3				0.6	
4					
5			Test pit terminated at 5 feet below ground surface.	0.1	

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TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(-20,100)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/16/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	To be determined
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	5
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	4 x10
FIELD SCREENING EQUIPMENT	PID	**TOTAL VOLUME OF SOIL (CY)**	7.4
LOGGED BY	Brian Burk & Garry Yapto	**DEPTH TO WATER (Feet)**	Not Encountered
		WEATHER	50F-70F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was not encountered in test pit.

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
1			Dark-brown SILT, some solid waste (i.e., plastic bags, cans, scrap metal, plastic, brick, wood and glass) and sand, trace organics (no odor/ staining, dry).		
2			Dark-brown to gray SILT, some sand, boulders and cobbles (no odor/ staining, dry).	0.1	
3					
4					
5			Test pit terminated at 5 feet below ground surface.	0.1	

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TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(-50,100)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/16/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	To be determined
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	5
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	6 x 6
FIELD SCREENING EQUIPMENT	PID	**TOTAL VOLUME OF SOIL (CY)**	6.7
LOGGED BY	Brian Burk & Garry Yapto	**DEPTH TO WATER (Feet)**	Not Encountered
		WEATHER	50F-70F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was not encountered in test pit.

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
0			Brown SILT, some solid waste (i.e., scrap metal, brick, glass and plastic) and sand, trace organics (no odor/staining, dry).		
1					
2			Brown SILT, some solid waste (i.e., scrap metal, brick, glass and plastic) and sand (no odor/staining, dry).	0.1	
3			Light-brown SILT, some sand, boulders and cobbles (no odor/staining, dry).		
4					
5			Test pit terminated at 5 feet below ground surface.	0.1	

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TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(-100,127)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/16/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	To be determined
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	5
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	4 x 9
FIELD SCREENING EQUIPMENT	PID	**TOTAL VOLUME OF SOIL (CY)**	6.7
LOGGED BY	Brian Burk & Garry Yapto	**DEPTH TO WATER (Feet)**	Not Encountered
		WEATHER	60F-68F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was not encountered in test pit.

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
			Brown SILT, some sand, trace organics (no odor/staining, dry).		Solid waste was not encountered in test pit TP(-100,127).
1			Light-brown SILT, some sand (no odor/staining, dry).		
2			Light-brown SILT, some sand and cobbles (no odor/staining, dry).		
3				1.6	
4			Light-brown to gray SILT, some sand and cobbles (no odor/staining, dry).		
5			Test pit terminated at 5 feet below ground surface.	1.6	

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TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(20,55)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/16/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	To be determined
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	6
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	4 x 9
FIELD SCREENING EQUIPMENT	PID	**TOTAL VOLUME OF SOIL (CY)**	8
LOGGED BY	Brian Burk & Garry Yapto	**DEPTH TO WATER (Feet)**	Not Encountered
		WEATHER	50F-70F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was not encountered in test pit.

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
0			Dark-brown SILT, some solid waste (i.e., scrap metal, cable, farm equipment, plastic, rubber tires and brick) and sand, trace organics (no odor/staining, dry).		
1			Dark-brown SILT, some sand and cobbles (no odor/staining, dry).		
2					
3			Light-brown SILT, some sand, boulders and cobbles (no odor/ staining, dry).	0.5 - 0.7	
4					
5			Dark-brown SILT, some sand, boulders and cobbles (no odor/ staining, dry).	0.9	
6			Test pit terminated at 6 feet below ground surface.		

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TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(255,137)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/16/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	To be determined
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	5
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	4 x 8
FIELD SCREENING EQUIPMENT	PID	**TOTAL VOLUME OF SOIL (CY)**	5.9
LOGGED BY	Brian Burk & Garry Yapto	**DEPTH TO WATER (Feet)**	Not Encountered
		WEATHER	50F-70F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was not encountered in test pit.

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
			Brown SILT, some solid waste (i.e., scrap metal and plastic) and sand, trace organics (no odor/staining, dry).		
1			Light-brown SILT, some sand, boulders and cobbles (no odor/staining, dry).		
2				0.2 - 0.6	
3			Dark-brown SILT, some sand, boulders and cobbles (no odor/ staining, dry).		
4					
5			Gray SILT, some sand (no odor/staining, dry).		
			Test pit terminated at 5 feet below ground surface.	0.3	

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TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(95,47)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/16/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	NA
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	5
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	4 x 8
FIELD SCREENING EQUIPMENT	PID	**TOTAL VOLUME OF SOIL (CY)**	5.9
LOGGED BY	Brian Burk & Garry Yapto	**DEPTH TO WATER (Feet)**	Not Encountered
		WEATHER	50F-70F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was not encountered in test pit.

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
0			Dark-brown SILT, some solid waste (i.e., scrap metal, plastic and rubber tire) and sand, trace organics (no odor/staining, dry).		
1			Light-brown SILT, some sand, boulders and cobbles (no odor/ staining, dry).		
2				0.1	
3					
4					
5			Test pit terminated at 5 feet below ground surface.	0.2	

Appendix B

Photograph Log

Appendix A
Photograph Log

Photo 1: Test Pit TP(100,215); refer to **Figure 4** for location and **Appendix E** for a description of materials encountered

Photo 2: Test Pit TP(55,200); refer to **Figure 4** for location and **Appendix E** for a description of materials encountered

Photo 3: Test Pit TP(86,184); refer to **Figure 4** for location and **Appendix E** for a description of materials encountered

Photo 4: Test Pit TP(99,110); refer to **Figure 4** for location and **Appendix E** for a description of materials encountered

Appendix A
Photograph Log

Photo 5: Test Pit TP(193,158); refer to **Figure 4** for location and **Appendix E** for a description of materials encountered

Photo 6: Test Pit TP(207,83); refer to **Figure 4** for location and **Appendix E** for a description of materials encountered

Photo 7: Test Pit TP(200,20); refer to **Figure 4** for location and **Appendix E** for a description of materials encountered

Photo 8: Test Pit TP(265,29); refer to **Figure 4** for location and **Appendix E** for a description of materials encountered

Appendix A
Photograph Log

Photo 9: Test Pit TP(255,140); refer to **Figure 4** for location and **Appendix E** for a description of materials encountered

Photo 10: Test Pit TP(100,20); refer to **Figure 4** for location and **Appendix E** for a description of materials encountered

Photo 11: Test Pit TP(0,-8), refer to **Figure 4** for location and **Appendix E** for a description of materials encountered

Photo 12: Test Pit TP(-20,100); refer to **Figure 4** for location and **Appendix E** for a description of materials encountered

Appendix A
Photograph Log

Photo 13: Test Pit TP(-50,100); refer to **Figure 4** for location and **Appendix E** for a description of materials encountered

Photo 14: Test Pit TP(20,55); refer to **Figure 4** for location and **Appendix E** for a description of materials encountered

Photo 15: Test Pit TP(255,137); refer to **Figure 4** for location and **Appendix E** for a description of materials encountered

Photo 16: Orange discolored surface water located in intermittent stream downgradient of dumping area to northwest of Test Pit TP(100,215)

Appendix C

Laboratory Analytical Report

Industrial Hygiene Laboratory
21 Griffin Road North
Windsor, CT 06095
(860) 298-6308

BULK ASBESTOS ANALYSIS REPORT

CLIENT: Town of Southborough

Lab Log #: 0060158
Project #: 408108.2022.0000
Date Received: 09/20/2022
Date Analyzed: 09/21/2022

Site: Breakneck Hill, 60 Breakneck Hill Road, Southborough, MA

POLARIZED LIGHT MICROSCOPY by EPA 600/R-93/116

Sample No.	Sample Location	Homogeneous Material Description	Other Matrix Materials		Asbestos %	Asbestos Type
01-A	100,180 truck	Grey Cement Board		- - -	20%	Chrysotile
01-B	100,180 truck	- -		- -	NA/PS	- -
01-C	200,150 surface	- -		- -	NA/PS	- -
02-A	100,180 offset 3.5' depth	Tan Boiler Brick		- - -	ND	None
02-B	100,180 offset 3.5' depth	Tan Boiler Brick		- - -	ND	None
02-C	100,180 offset 3.5' depth	Tan Boiler Brick		- - -	ND	None
03-A	200,150 surface	Black Roofing, Asphalt Based Built-Up		- - -	5%	Chrysotile
03-B	200,150 surface	- -		- -	NA/PS	- -
03-C	200,150 surface	- -		- -	NA/PS	- -
04-A	200,150 surface	Black Roofing, Felt Paper		- - -	ND	None
04-B	200,150 surface	Black Roofing, Felt Paper		- - -	ND	None
04-C	200,150 surface	Black Roofing, Felt Paper		- - -	ND	None
05-A	100,180 by truck	Grey Insulation, Unknown	95%	mineral wool	ND	None
05-B	100,180 by truck	Grey Insulation, Unknown	95%	mineral wool	ND	None
05-C	100,180 by truck	Grey Insulation, Unknown	95%	mineral wool	ND	None
06-A	By 100,100	Red/Black Wire Insulation		- - -	ND	None
06-B	By 100,100	Red/Black Wire Insulation		- - -	ND	None

Industrial Hygiene Laboratory
21 Griffin Road North
Windsor, CT 06095
(860) 298-6308

POLARIZED LIGHT MICROSCOPY by EPA 600/R-93/116

Sample No.	Sample Location	Homogeneous Material Description	Other Matrix Materials		Asbestos %	Asbestos Type
06-C	By 100,100	Red/Black Wire Insulation		- - -	ND	None
07-A	20' SW of 200,75	Black Roofing, Felt Paper	90%	fibrous glass	ND	None
07-B	20' SW of 200,75	Black Roofing, Felt Paper	90%	fibrous glass	ND	None
07-C	20' SW of 200,75	Black Roofing, Felt Paper	90%	fibrous glass	ND	None
08-A	20' SW of 200,75	Black Roofing, Asphalt Based Built-Up		- - -	3%	Chrysotile
08-B	20' SW of 200,75	- -		- -	NA/PS	- -
08-C	20' SW of 200,75	- -		- -	NA/PS	- -
09-A	By 0,100	Black Conduit		- - -	ND	None
09-B	By 0,100	Black Conduit		- - -	ND	None
09-C	By 0,100	Black Conduit		- - -	ND	None

ND - asbestos was not detected
Trace - asbestos was observed at level of 1% or less - This is the reporting limit
NA/PS - Not Analyzed / Positive Stop
SNA - Sample Not Analyzed- See Chain of Custody for details
Notes: Asbestos-Containing Material (ACM) is any material containing more than 1% asbestos

Note: Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. In those cases, EPA recommends, and certain states (e.g. NY) require, that negative results be confirmed by quantitative transmission electron microscopy.

The Laboratory at TRC follows the EPA's Interim Method for the Determination of Asbestos in Bulk Insulation 1982 (EPA 600/M4-82-020) Bulk Analysis Code 18/A01 and the EPA recommended Method for the Determination of Asbestos in Bulk Building Materials July 1993, R.L. Perkins and B.W. Harvey, (EPA/600/R-93/116) Bulk Analysis Code 18/A03, which utilize polarized light microscopy (PLM). Our analysts have completed an accredited course in asbestos identification. TRC's Laboratory is accredited under the National Voluntary Laboratory Accreditation Program (NVLAP), for Bulk Asbestos Fiber Analysis, NVLAP Code 18/A01, effective through June 30, 2023. TRC is accredited by the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC in the Industrial Hygiene Program (IHLAP) for PLM effective through October 1, 2024. Asbestos content is determined by visual estimate unless otherwise indicated. Quality Control is performed in-house on at least 10% of samples and QC data related to the samples is available upon written request from client.

Analyzed by: Joel Corso, Laboratory Analyst

Reviewed by: Kathleen Williamson, Laboratory Manager

Date Issued 09/22/2022

600158

TRC

650 Suffolk Street Suite 200 Lowell MA 01854

ASBESTOS BULK SAMPLE CHAIN OF CUSTODY FORM

Client:
Southborough Conservation Commission

Project Number:
408108.2022.0000

Sampling Technician:
Brian Burk
Mobile App: BSI - HAZMAT Survey

Project Name:
Breakneck Hill
Breakneck Hill
60 Breakneck Hill Rd Southborough Ma

Tracking Number:

Requested TAT:
3 DAY

ASBESTOS BULK SAMPLE INFORMATION

Sample Date	Sample Identification	Material Description	Homogeneous Area	Sample Location	Lab Identification (Lab Use Only)
09/14/22	01-A	Cement Board, Grey	200,150 Surface , 100,180 Truck	100,180 truck	
09/14/22	01-B	Cement Board, Grey	200,150 Surface , 100,180 Truck	100,180 truck	
09/14/22	01-C	Cement Board, Grey	200,150 Surface , 100,180 Truck	200,150 surface	
09/14/22	02-A	Boiler Brick, Tan	N/A	100,180 offset 3.5' depth	
09/14/22	02-B	Boiler Brick, Tan	N/A	100,180 offset 3.5' depth	
09/14/22	02-C	Boiler Brick, Tan	N/A	100,180 offset 3.5' depth	
09/14/22	03-A	Roofing, Asphalt Based Built-Up, Black	200,150 Surface	200,150 surface	
09/14/22	03-B	Roofing, Asphalt Based Built-Up, Black	200,150 Surface	200,150 surface	
09/14/22	03-C	Roofing, Asphalt Based Built-Up, Black	200,150 Surface	200,150 surface	
09/14/22	04-A	Roofing, Felt Paper, Black	200,150 Surface	200,150 surface	
09/14/22	04-B	Roofing, Felt Paper, Black	200,150 Surface	200,150 surface	
09/14/22	04-C	Roofing, Felt Paper, Black	200,150 Surface	200,150 surface	
09/15/22	05-A	Insulation, Unknown , Grey	100,180 By Truck	100,180 by truck	
09/15/22	05-B	Insulation, Unknown , Grey	100,180 By Truck	100,180 by truck	
09/15/22	05-C	Insulation, Unknown , Grey	100,180 By Truck	100,180 by truck	

60158

09/15/22	06-A	Wire Insulation, Red	25' SE 100,100	By 100,100	
09/15/22	06-B	Wire Insulation, Red	25' SE 100,100	By 100,100	
09/15/22	06-C	Wire Insulation, Red	25' SE 100,100	By 100,100	
09/15/22	07-A	Roofing, Felt Paper, Black	20' SW Of 200,75	20' SW of 200,75	
09/15/22	07-B	Roofing, Felt Paper, Black	20' SW Of 200,75	20' SW of 200,75	
09/15/22	07-C	Roofing, Felt Paper, Black	20' SW Of 200,75	20' SW of 200,75	
09/15/22	08-A	Roofing, Asphalt Based Built-Up, Black	20' SW Of 200,75	20' SW of 200,75	
09/15/22	08-B	Roofing, Asphalt Based Built-Up, Black	20' SW Of 200,75	20' SW of 200,75	
09/15/22	08-C	Roofing, Asphalt Based Built-Up, Black	20' SW Of 200,75	20' SW of 200,75	
09/16/22	09-A	Conduit , Black	By 0,100	By 0,100	
09/16/22	09-B	Conduit , Black	By 0,100	By 0,100	
09/16/22	09-C	Conduit , Black	By 0,100	By 0,100	

Special Instruction to Laboratory:
N/A

CHAIN OF CUSTODY INFORMATION AND LABORATORY INFORMATION

Relinquished By:	**Date and Time**	**Received By:**	**Date and Time**
1. (Print): Brian Burk	09/18/2022 3:37 pm America/New_York	K Williamson	9/20/22 1100
. (Sign):			
II. (Print):			
(Sign):			

Email Results To:
bdburk@trccompanies.com

Analytical Method:
PLM EPA 600/R-93/116

Lab Comments:

Appendix D

Limited Asbestos Survey Summary Report

LIMITED ASBESTOS SURVEY SUMMARY REPORT

Solid Waste Assessment

Breakneck Hill Farm Dumping Site
Breakneck Hill Road,
Southborough, Massachusetts

Prepared for:

Town of Southborough Conservation Commission

Report Date: October 5, 2022

Prepared By:

650 Suffolk Street Suite 200 Lowell MA 01854

TRC Project: 408108.2022.0000

TABLE OF CONTENTS

Appendices

1.0 Executive Summary

The Town of Southborough (the "Town") Conservation Commission contracted TRC Environmental Corporation (TRC) to conduct an asbestos survey at the Breakneck Hill Farm Dumping Site located at Breakneck Hill Road in Southborough Massachusetts (the "Site"). The purpose of the asbestos survey was to identify and sample potential asbestos-containing materials (ACM) during solid waste assessment activities, which were performed throughout the Town-owned portion of the Site only. The Site is located on Town-owned conservation land and extends to the west onto an abutting residential property identified as 60 Breakneck Hill Road. Access to 60 Breakneck Hill Road was not provided during the asbestos survey. The ACM survey was conducted in conjunction with the solid waste assessment between September 14, 2022 and September 16, 2022 by Mr. Brian Burk, Commonwealth of Massachusetts Department of Labor Standards certified Asbestos Inspector No. 900513.

Asbestos Containing Materials

ACM are defined by the Occupational Safety and Health Administration (OSHA), the Environmental Protection Agency (EPA), and the Massachusetts Department of Environmental Protection as any material containing more than one percent (>1.0%) asbestos when analyzed using Polarized Light Microscopy (PLM) methods. Laboratory analysis confirmed that asbestos was present within some of the bulk samples collected from the Town-owned portion of the Site at concentrations greater than 1.0%. Accordingly, ACM were identified at the Town-owned portion of the Site (refer to Section 4.1.2 for more details).

Any materials uncovered during excavation or other site activities that are not addressed in this inspection report, or suspect ACM identified in the future, must be sampled by an accredited asbestos inspector prior to any disturbance, or the suspect materials must be treated as ACM.

2.0 Introduction

The Town of Southborough Conservation Commission contracted TRC to conduct an asbestos survey at the Breakneck Hill Farm Dumping Site located at Breakneck Hill Road in Southborough, Massachusetts. The purpose of the survey was to identify and sample suspect ACM unearthed during test pitting activities and other surficial solid waste and debris present throughout the Town-owned portion of the Site. The ACM survey was performed between September 14, 2022 and September 16, 2022 by Mr. Brian Burk, Commonwealth of Massachusetts Department of Labor Standards certified Asbestos Inspector No. 900513.

3.0 Background

3.1 Site Description & History

The Site is located to the east/southeast of 48 Breakneck Hill Road in Southborough, Massachusetts. The Site is heavily vegetated and comprises approximately one acre. The Site is located on two separate tax parcels, Map 29, Lot 28A and Lot 36. The Town acquired Map 29, Lot 28A from Raymond Davis on June 20, 1980, which reportedly comprises approximately 87.66 acres and currently consists of conservation land. The area of dumping is located on the western-central portion of Map 29, Lot 28A, and the balance of the Site extends onto 60 Breakneck Hill Road (Map 29, Lot 36), a western adjoining property that currently is utilized for residential purposes. Refuse within the dump area has been documented to include (but not limited to) old

tires, machine parts, rusted 55-gallon drums, asphalt shingles, appliances, heavy equipment, broken ceramics, plastic objects, and general trash.

Prior to the Town's acquisition, Davco Farm occupied Map 29, Lot 28A. Mr. Davis, President of Davis Tractor Company, operated the Davco Farm. The farm was home to an apple and peach orchard, apiary and bee supply business, and a Belted Galloway cattle herd. Between approximately 1966 and 1980, the Site appears to have been used as dumping ground associated with the Davco Farm.

3.2 Purpose & Scope of Work

An asbestos survey was performed to determine if ACM are present throughout the Town-owned portion of the Breakneck Hill Farm Dumping Site. The survey was performed during a solid waste assessment, which was conducted by TRC between September 14, 2022 and September 16, 2022. TRC performed the asbestos survey throughout accessible areas of Site during solid waste assessment activities, which were performed to assess the horizontal and vertical extent of solid waste throughout the Site. Bulk samples of suspect ACM were collected and submitted for laboratory analysis to determine asbestos content. It should be noted that suspect ACM may be present in other areas throughout the Site that were not identified during the limited ACM survey, buried in the ground surface or in heavily overgrown or similarly inaccessible areas. Limitations are further discussed in Section 6.0.

3.3 Survey Procedures

The asbestos survey was performed using guidelines established by the EPA guidance document "Guidance for Controlling Asbestos-Containing Materials in Buildings" (EPA 5605-85/024), 40 CFR Part 61 National Emission Standards for Hazardous Air Pollutants (NESHAP), Paragraph 61.145, Standard for Demolition and Renovation, EPA AHERA 40 CFR 763 and OSHA 1926.1101 regulations.

A visual survey was conducted to identify the types, locations, and approximate quantities of ACM, presumed ACM (as defined in 29 CFR 1926.1101), and otherwise suspect ACM. Certain building and other materials present throughout the solid waste and debris were assessed as potential ACM. Where feasible, bulk samples of suspect ACM were collected in a random manner and submitted for laboratory analysis to determine asbestos content.

It should be noted that multiple bulk samples were collected from each homogenous area of suspect ACM observed. In accordance with U.S. EPA guidelines, multiple samples were collected from each homogenous area of suspect ACM. Note that if one or more samples within a homogenous area of suspect ACM are positive for asbestos, then all of the suspect ACM must be treated as ACM. During the survey, nine suspect materials were identified, and three samples were collected from each of the nine suspect materials for laboratory analysis, resulting in 27 total samples.

3.4 Analytical Methods

Sample analysis was performed by TRC's Industrial Hygiene Laboratory located in Windsor, Connecticut, using Polarized Light Microscopy with Dispersion Staining (PLM/DS) in accordance with the United States Environmental Protection Agency (US EPA) "Method for the Determination of Asbestos in Bulk Building Materials", EPA/600/R-93/116. The TRC laboratory is accredited

through the National Institute of Standards and Technology, National Voluntary Laboratory Accreditation Program (No. 101424-0). TRC's Massachusetts Analytical Laboratory certification number is AA000052. The laboratory bulk sample analysis report is provided as Appendix B.

4.0 Findings

4.1 Asbestos Containing Materials

Laboratory analytical results indicated that the following materials were positive for asbestos at concentrations greater than 1%:

Asbestos Positive Materials Breakneck Hill Farm Dumping Site Southborough, Massachusetts					
Samples	**Material**	**Location**	**Percentage / Type**	**Approx. Quantity**	**Condition / Material Type / NESHAP Category**
01-A 01-B 01-C	Grey Cement Board	200,150 Surface , 100,180 Truck	20% Chrysotile	300 SF	Significantly Damaged/Misc.
03-A 03-B 03-C	Black Roofing Asphalt Based Built-Up	200,150 Surface	5% Chrysotile	200 SF	Significantly Damaged/Misc.
08-A 08-B 08-C	Black Roofing Asphalt Based Built-Up	20' SW of 200,75	3% Chrysotile	1800 SF	Significantly Damaged/Misc.

4.2 Non-Asbestos Containing Materials

Laboratory results of the bulk sampling indicated that none of the following sampled materials contained detectable levels of asbestos:

Asbestos Negative Materials Breakneck Hill Farm Dumping Site Southborough, Massachusetts			
Samples	**Material Description**	**Material Location(s)**	**Estimated Quantity**
02-A 02-B 02-C	Tan Boiler Brick	86,184 Test Pit	N/A
04-A 04-B 04-C	Black Roofing Felt Paper	200,150 Surface	200 SF
05-A 05-B 05-C	Grey Insulation Unknown	100,180 By Truck	10 SF
06-A 06-B 06-C	Red Wire Insulation	25' SE 100,100	10 LF
07-A 07-B 07-C	Black Roofing Felt Paper	20' SW of 200,75	1800 SF
09-A 09-B 09-C	Black Conduit	By 0,100	5 LF

5.0 Conclusions & Recommendations

Results of laboratory analysis confirmed asbestos was identified within three of the suspect materials, as summarized in Section 4.1. The ACM were found to be in poor condition at the time of the inspection. The identified ACM should be securely covered with polyethylene sheeting to restrict access.

In addition, the Masschusetts Department of Environmental Protection (MassDEP) should be notified that ACM have been identified at the Site. Additional assessment activities may be warranted based on MassDEP's determination. Following completion of additional ACM assessment activities (if any), a Massachusetts DLS-certified Project Designer should prepare a work plan for the removal of all identified ACM or assumed ACM that may be disturbed as part of the future Site cleanup plan. Removal of ACM should be performed by a Massachusetts DLS

licensed asbestos abatement contractor, and should be handled, stored, and disposed of according to all local, state, and federal regulations.

Any materials uncovered during additional investigation, excavation, or other site activities that are not addressed in this inspection report, or are considered to be uncharacterized, suspect ACM, must be sampled by an accredited asbestos inspector prior to any disturbance or treated as ACM.

6.0 Limitations

Services performed by TRC were conducted in a manner consistent with "state of the industry" practices, recognizing that even the most comprehensive survey may not detect all suspect materials at the Site. Reasonable measures were taken to detect the presence of normally suspect materials within the survey area; however, other materials present at the Site that are not normally considered to be suspect ACM could also contain asbestos (although unlikely). In addition, other suspect materials could be buried beneath the ground surface that were not unearthed during the test pitting program, and the ground surface at the Site was covered with very dense vegetation, which prohibited a thorough evaluation of all solid waste and debris present throughout the Town-owned portion of the Site. Furthermore, access was not provided to the portion of the Site located on the abutting residential property. Accordingly, additional ACM could be present at the portion of the Site located on the abutting residential property. Given these limitations, TRC cannot act as an insurer or certify that other ACM not identified by the survey are not located at the Site. No expressed or implied representation or warranty is included in our report except that the services were performed within the limit of the scope of work authorized by the client and the encountered Site conditions. This report is not intended for, and may not be utilized as, a bidding document or as an abatement project specification document.

Sincerely,
TRC Environmental Corporation

Brian Burk
Environmental Scientist
MA DLS AI900513

Taylor Bevenour
Senior Environmental Engineer

LEGEND

- WF — LIMIT OF WETLANDS AND ASSOCIATED WETLAND FLAGS PLACED BY OTHERS
- —xD1— LATERAL EXTENT OF VISUALLY APPARENT DEBRIS AND ASSOCIATED DELINEATION FLAGS PLACED IN JUNE 2021
- (0,0) COMPLETED TEST PIT LOCATION CONTAINING SOLID WASTE & COORDINATES (FEET FROM ORIGIN)
- (0,0) COMPLETED TEST PIT LOCATION NOT CONTAINING SOLID WASTE & COORDINATES (FEET FROM ORIGIN)
- 01-A ASBESTOS-CONTAINING MATERIAL SURVEY SAMPLE LOCATION THAT CONTAINED ASBESTOS
- 01-A ASBESTOS-CONTAINING MATERIAL SURVEY SAMPLE LOCATION THAT DID NOT CONTAIN ASBESTOS

NOTES:

FEATURES INCLUDING WETLAND AND DEBRIS DELINEATION FLAGS WERE OBTAINED FROM *EXISTING CONDITIONS PLAN OFF BREAKNECK HILL ROAD, SOUTHBOROUGH, MA* PREPARED BY LAND PLANNING, INC. DATED 6/23/2021

TEST PITS WERE COMPLETED BETWEEN SEPTEMBER 14, 2022 AND SEPTEMBER 16, 2022 USING A TRACK-MOUNTED MINI-EXCAVATOR. MATERIAL EXCAVATED DURING THE TEST PITTING PROGRAM WAS BE UTILIZED AS BACKFILL AND RETURNED TO A SIMILAR LOCATION AND DEPTH FROM WHERE IT ORIGINATED

TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROLS WERE INSTALLED IN THE VICINITY OF EACH TEST PIT LOCATION, AS NECESSARY, PRIOR TO ADVANCEMENT

0 30 60 90 120
SCALE IN FEET
1 in = 30 ft

NO.	BY	DATE	REVISION	APP'D.

TITLE:

TEST PIT & SAMPLE LOCATION PLAN

PROJECT:

BREAKNECK HILL FARM DUMPING SITE
SOUTHBOROUGH, MA 01772

DRAWN BY:	TB	PROJ. NO.:	408108.2023.0000
CHECKED BY:	LA	**FIGURE 4**	
APPROVED BY:	TB		
DATE:	FEBRUARY 2023		

TRC
WANNALANCIT MILLS
650 SUFFOLK STREET
LOWELL, MA 01854
(978) 970 5600

FILE NO.: Figure 4 - Test Pit & Sample Location Plan.dwg

TRC | mobile data solutions

BREAKNECK HILL BREAKNECK HILL – SUSPECT ASBESTOS CONTAINING MATERIALS PHOTOGRAPHIC LOG

Sample Numbers: 01-A, 01-B, 01-C **Material Description:** Cement Board **Material Color:** Grey **Accessible Material:** Accessible **Reason Inaccessible:** N/A **Asbestos Detected:** Positive **Asbestos Type:** 20% Chrysotile **Homogeneous Area:** 200,150 Surface , 100,180 Truck **Total Approximate Quantity:** 300 SF **Condition:** N/A **Material Type:** N/A **NESHAP Category:** N/A **Notes:** Not Applicable	
Sample Numbers: 02-A, 02-B, 02-C **Material Description:** Boiler Brick **Material Color:** Tan **Accessible Material:** Accessible **Reason Inaccessible:** N/A **Asbestos Detected:** Negative **Asbestos Type:** No Asbestos Detected **Homogeneous Area:** **Total Approximate Quantity:** TBD **Condition:** N/A **Material Type:** N/A **NESHAP Category:** N/A **Notes:** Not Applicable	

TRC | mobile data solutions

BREAKNECK HILL BREAKNECK HILL – SUSPECT ASBESTOS CONTAINING MATERIALS PHOTOGRAPHIC LOG

Sample Numbers: 03-A, 03-B, 03-C **Material Description:** Roofing Asphalt Based Built-Up **Material Color:** Black **Accessible Material:** Accessible **Reason Inaccessible:** N/A **Asbestos Detected:** Positive **Asbestos Type:** 5% Chrysotile **Homogeneous Area:** 200,150 Surface **Total Approximate Quantity:** 200 SF **Condition:** N/A **Material Type:** N/A **NESHAP Category:** N/A **Notes:** Not Applicable	
Sample Numbers: 04-A, 04-B, 04-C **Material Description:** Roofing Felt Paper **Material Color:** Black **Accessible Material:** Accessible **Reason Inaccessible:** N/A **Asbestos Detected:** Negative **Asbestos Type:** No Asbestos Detected **Homogeneous Area:** 200,150 Surface **Total Approximate Quantity:** 200 SF **Condition:** N/A **Material Type:** N/A **NESHAP Category:** N/A **Notes:** Not Applicable	

TRC | mobile data solutions

BREAKNECK HILL BREAKNECK HILL – SUSPECT ASBESTOS CONTAINING MATERIALS PHOTOGRAPHIC LOG

Sample Numbers: 05-A, 05-B, 05-C **Material Description:** Insulation Unknown **Material Color:** Grey **Accessible Material:** Accessible **Reason Inaccessible:** N/A **Asbestos Detected:** Negative **Asbestos Type:** No Asbestos Detected **Homogeneous Area:** 100,180 By Truck **Total Approximate Quantity:** 10 SF **Condition:** N/A **Material Type:** N/A **NESHAP Category:** N/A **Notes:** Not Applicable	
Sample Numbers: 06-A, 06-B, 06-C **Material Description:** Wire Insulation **Material Color:** Red **Accessible Material:** Accessible **Reason Inaccessible:** N/A **Asbestos Detected:** Negative **Asbestos Type:** No Asbestos Detected **Homogeneous Area:** 25' SE 100,100 **Total Approximate Quantity:** 10 LF **Condition:** N/A **Material Type:** N/A **NESHAP Category:** N/A **Notes:** Not Applicable	

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BREAKNECK HILL BREAKNECK HILL – SUSPECT ASBESTOS CONTAINING MATERIALS PHOTOGRAPHIC LOG

Sample Numbers: 07-A, 07-B, 07-C **Material Description:** Roofing Felt Paper **Material Color:** Black **Accessible Material:** Accessible **Reason Inaccessible:** N/A **Asbestos Detected:** Negative **Asbestos Type:** No Asbestos Detected **Homogeneous Area:** 20' SW Of 200,75 **Total Approximate Quantity:** 1800 SF **Condition:** N/A **Material Type:** N/A **NESHAP Category:** N/A **Notes:** Not Applicable	
Sample Numbers: 08-A, 08-B, 08-C **Material Description:** Roofing Asphalt Based Built-Up **Material Color:** Black **Accessible Material:** Accessible **Reason Inaccessible:** N/A **Asbestos Detected:** Positive **Asbestos Type:** 3% Chrysotile **Homogeneous Area:** 20' SW Of 200,75 **Total Approximate Quantity:** 1800 SF **Condition:** N/A **Material Type:** N/A **NESHAP Category:** N/A **Notes:** Not Applicable	

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BREAKNECK HILL BREAKNECK HILL – SUSPECT ASBESTOS CONTAINING MATERIALS PHOTOGRAPHIC LOG

Sample Numbers: 09-A, 09-B, 09-C
Material Description: Conduit
Material Color: Black
Accessible Material: Accessible
Reason Inaccessible: N/A
Asbestos Detected: Negative
Asbestos Type: No Asbestos Detected
Homogeneous Area: By 0,100
Total Approximate Quantity: 5 LF
Condition: N/A
Material Type: N/A
NESHAP Category: N/A
Notes: Not Applicable

Industrial Hygiene Laboratory
21 Griffin Road North
Windsor, CT 06095
(860) 298-6308

BULK ASBESTOS ANALYSIS REPORT

CLIENT: Town of Southborough

Lab Log #: 0060158
Project #: 408108.2022.0000
Date Received: 09/20/2022
Date Analyzed: 09/21/2022

Site: Breakneck Hill, 60 Breakneck Hill Road, Southborough, MA

POLARIZED LIGHT MICROSCOPY by EPA 600/R-93/116

Sample No.	Sample Location	Homogeneous Material Description	Other Matrix Materials		Asbestos %	Asbestos Type
01-A	100,180 truck	Grey Cement Board		- - -	20%	Chrysotile
01-B	100,180 truck	- -		- -	NA/PS	- -
01-C	200,150 surface	- -		- -	NA/PS	- -
02-A	100,180 offset 3.5' depth	Tan Boiler Brick		- - -	ND	None
02-B	100,180 offset 3.5' depth	Tan Boiler Brick		- - -	ND	None
02-C	100,180 offset 3.5' depth	Tan Boiler Brick		- - -	ND	None
03-A	200,150 surface	Black Roofing, Asphalt Based Built-Up		- - -	5%	Chrysotile
03-B	200,150 surface	- -		- -	NA/PS	- -
03-C	200,150 surface	- -		- -	NA/PS	- -
04-A	200,150 surface	Black Roofing, Felt Paper		- - -	ND	None
04-B	200,150 surface	Black Roofing, Felt Paper		- - -	ND	None
04-C	200,150 surface	Black Roofing, Felt Paper		- - -	ND	None
05-A	100,180 by truck	Grey Insulation, Unknown	95%	mineral wool	ND	None
05-B	100,180 by truck	Grey Insulation, Unknown	95%	mineral wool	ND	None
05-C	100,180 by truck	Grey Insulation, Unknown	95%	mineral wool	ND	None
06-A	By 100,100	Red/Black Wire Insulation		- - -	ND	None
06-B	By 100,100	Red/Black Wire Insulation		- - -	ND	None

Industrial Hygiene Laboratory
21 Griffin Road North
Windsor, CT 06095
(860) 298-6308

POLARIZED LIGHT MICROSCOPY by EPA 600/R-93/116

Sample No.	Sample Location	Homogeneous Material Description	Other Matrix Materials		Asbestos %	Asbestos Type
06-C	By 100,100	Red/Black Wire Insulation		- - -	ND	None
07-A	20' SW of 200,75	Black Roofing, Felt Paper	90%	fibrous glass	ND	None
07-B	20' SW of 200,75	Black Roofing, Felt Paper	90%	fibrous glass	ND	None
07-C	20' SW of 200,75	Black Roofing, Felt Paper	90%	fibrous glass	ND	None
08-A	20' SW of 200,75	Black Roofing, Asphalt Based Built-Up		- - -	3%	Chrysotile
08-B	20' SW of 200,75	- -		- -	NA/PS	- -
08-C	20' SW of 200,75	- -		- -	NA/PS	- -
09-A	By 0,100	Black Conduit		- - -	ND	None
09-B	By 0,100	Black Conduit		- - -	ND	None
09-C	By 0,100	Black Conduit		- - -	ND	None

ND - asbestos was not detected
Trace - asbestos was observed at level of 1% or less - This is the reporting limit
NA/PS - Not Analyzed / Positive Stop
SNA - Sample Not Analyzed- See Chain of Custody for details
Notes: Asbestos-Containing Material (ACM) is any material containing more than 1% asbestos

Note: Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. In those cases, EPA recommends, and certain states (e.g. NY) require, that negative results be confirmed by quantitative transmission electron microscopy.

The Laboratory at TRC follows the EPA's Interim Method for the Determination of Asbestos in Bulk Insulation 1982 (EPA 600/M4-82-020) Bulk Analysis Code 18/A01 and the EPA recommended Method for the Determination of Asbestos in Bulk Building Materials July 1993, R.L. Perkins and B.W. Harvey, (EPA/600/R-93/116) Bulk Analysis Code 18/A03, which utilize polarized light microscopy (PLM). Our analysts have completed an accredited course in asbestos identification. TRC's Laboratory is accredited under the National Voluntary Laboratory Accreditation Program (NVLAP), for Bulk Asbestos Fiber Analysis, NVLAP Code 18/A01, effective through June 30, 2023. TRC is accredited by the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC in the Industrial Hygiene Program (IHLAP) for PLM effective through October 1, 2024. Asbestos content is determined by visual estimate unless otherwise indicated. Quality Control is performed in-house on at least 10% of samples and QC data related to the samples is available upon written request from client.

Analyzed by: Joel Corso, Laboratory Analyst

Reviewed by: Kathleen Williamson, Laboratory Manager

Date Issued 09/22/2022

600158

TRC

650 Suffolk Street Suite 200 Lowell MA 01854

ASBESTOS BULK SAMPLE CHAIN OF CUSTODY FORM

Client:
Southborough Conservation Commission

Project Number:
408108.2022.0000

Sampling Technician:
Brian Burk
Mobile App: BSI - HAZMAT Survey

Project Name:
Breakneck Hill
Breakneck Hill
60 Breakneck Hill Rd Southborough Ma

Tracking Number:

Requested TAT:
3 DAY

ASBESTOS BULK SAMPLE INFORMATION

Sample Date	Sample Identification	Material Description	Homogeneous Area	Sample Location	Lab Identification (Lab Use Only)
09/14/22	01-A	Cement Board, Grey	200,150 Surface , 100,180 Truck	100,180 truck	
09/14/22	01-B	Cement Board, Grey	200,150 Surface , 100,180 Truck	100,180 truck	
09/14/22	01-C	Cement Board, Grey	200,150 Surface , 100,180 Truck	200,150 surface	
09/14/22	02-A	Boiler Brick, Tan	N/A	100,180 offset 3.5' depth	
09/14/22	02-B	Boiler Brick, Tan	N/A	100,180 offset 3.5' depth	
09/14/22	02-C	Boiler Brick, Tan	N/A	100,180 offset 3.5' depth	
09/14/22	03-A	Roofing, Asphalt Based Built-Up, Black	200,150 Surface	200,150 surface	
09/14/22	03-B	Roofing, Asphalt Based Built-Up, Black	200,150 Surface	200,150 surface	
09/14/22	03-C	Roofing, Asphalt Based Built-Up, Black	200,150 Surface	200,150 surface	
09/14/22	04-A	Roofing, Felt Paper, Black	200,150 Surface	200,150 surface	
09/14/22	04-B	Roofing, Felt Paper, Black	200,150 Surface	200,150 surface	
09/14/22	04-C	Roofing, Felt Paper, Black	200,150 Surface	200,150 surface	
09/15/22	05-A	Insulation, Unknown , Grey	100,180 By Truck	100,180 by truck	
09/15/22	05-B	Insulation, Unknown , Grey	100,180 By Truck	100,180 by truck	
09/15/22	05-C	Insulation, Unknown , Grey	100,180 By Truck	100,180 by truck	

60158

09/15/22	06-A	Wire Insulation, Red	25' SE 100,100	By 100,100	
09/15/22	06-B	Wire Insulation, Red	25' SE 100,100	By 100,100	
09/15/22	06-C	Wire Insulation, Red	25' SE 100,100	By 100,100	
09/15/22	07-A	Roofing, Felt Paper, Black	20' SW Of 200,75	20' SW of 200,75	
09/15/22	07-B	Roofing, Felt Paper, Black	20' SW Of 200,75	20' SW of 200,75	
09/15/22	07-C	Roofing, Felt Paper, Black	20' SW Of 200,75	20' SW of 200,75	
09/15/22	08-A	Roofing, Asphalt Based Built-Up, Black	20' SW Of 200,75	20' SW of 200,75	
09/15/22	08-B	Roofing, Asphalt Based Built-Up, Black	20' SW Of 200,75	20' SW of 200,75	
09/15/22	08-C	Roofing, Asphalt Based Built-Up, Black	20' SW Of 200,75	20' SW of 200,75	
09/16/22	09-A	Conduit , Black	By 0,100	By 0,100	
09/16/22	09-B	Conduit , Black	By 0,100	By 0,100	
09/16/22	09-C	Conduit , Black	By 0,100	By 0,100	

Special Instruction to Laboratory:
N/A

CHAIN OF CUSTODY INFORMATION AND LABORATORY INFORMATION

Relinquished By:	**Date and Time**	**Received By:**	**Date and Time**
1. (Print): Brian Burk	09/18/2022 3:37 pm America/New_York	K Williamson	9/20/22 1100
. (Sign):			
II. (Print):			
(Sign):			

Email Results To:
bdburk@trccompanies.com

Analytical Method:
PLM EPA 600/R-93/116

Lab Comments:

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DEPARTMENT OF LABOR STANDARDS

Michael Flanagan
Director

Asbestos Inspector

BRIAN BURK

Eff. Date 08/25/22
Exp. Date 08/25/23

AI900513

Member of C.O.N.E.S.

BOSR BOS

23

Appendix E

Environmental Monitoring & Mitigation Plan

Environmental Monitoring & Mitigation Plan

Breakneck Hill Farm Dumping Site

Breakneck Hill Road
Southborough, Massachusetts

August 2023

Prepared For:

Town of Southborough
Conservation Commission
17 Common Street
Southborough, Massachusetts 01772

Prepared By:

TRC Environmental Corporation
650 Suffolk Street
Lowell, Massachusetts 01854
(978) 970-5600

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

1.0 Introduction

On behalf of the Town of Southborough (the "Town"), TRC Environmental Corporation (TRC) has prepared this *Environmental Monitoring and Mitigation Plan* for cleanup activities that will be performed to remove waste at the Town-owned portion of the Breakneck Hill Farm Dumping Site (the "Site") located at Breakneck Hill Road in Southborough, Massachusetts. Components of this *Environmental Monitoring and Mitigation Plan* will be implemented by TRC and the cleanup contractors that will be selected by the Town through a bidding process during cleanup of the Site.

Prior to the Town's ownership, solid waste and asbestos containing materials (ACM) were dumped and/or buried at the Site. In April 2023, the Town submitted the April 2023 *Cleanup Plan* to the Massachusetts Department of Environmental Protection (MassDEP), which outlines proposed cleanup activities at the Site. The April 2023 *Cleanup Plan* was approved by MassDEP on May 31, 2023. Components of the approved *Cleanup Plan* include Site preparation activities, cleanup operations, and Site restoration work.

In accordance with the approved *Cleanup Plan*, this *Environmental Monitoring and Mitigation Plan* has been prepared to outline environmental monitoring and mitigation activities for the Site cleanup. Construction activities at the Site have the potential to generate fugitive dust, vapors, and odors. Accordingly, TRC (Engineer and environmental field staff) and the cleanup contractors (to be selected by the Town through a bidding process) will implement the environmental monitoring and mitigation activities summarized herein to minimize potential dust, vapor, and odor issues that may arise during Site cleanup to comply with the requirements of MassDEP's Air Pollution Control Regulations, 310 CMR 7.00. Specifically, this plan describes potential sources for fugitive dust, vapor, and odor, dust control and mitigation procedures, vapor and odor control procedures, air monitoring protocols, and corrective action measures to protect project personnel, the public, and the environment throughout Site cleanup.

2.0 Site Description & Background

The following sections describe existing conditions of the Site and the general area surrounding the Site. In addition, pertinent Site background information is provided below.

2.1 Site Location & Description

The Site is located between Breakneck Hill Road and Woodland Road in Southborough, Massachusetts. The host parcel associated with the Site is identified by the Town of Southborough's Assessor's Department as Breakneck Hill Road, Map 29, Lot 28A. The Site is located at the western-central portion of the host parcel and comprises approximately 1.26 acres. The general location of the Site and host parcel are depicted on **Figure 1**. Existing conditions of the Site and the immediate area surrounding the Site are displayed on **Figure 2**, and the Site boundary is displayed on **Figure 3**.

The Town acquired Map 29, Lot 28A from Raymond Davis on June 20, 1980, which was reportedly comprised of approximately 87.66 acres, currently consisting of conservation land. Solid waste and debris at the Site have been documented to include (but not limited to) old tires, machine parts, rusted 55-gallon drums, asphalt shingles, appliances, heavy equipment, broken ceramics, plastic objects, and general trash.

2.2 Site History & Background

Prior to the Town's acquisition, Davco Farm occupied Map 29, Lot 28A. Mr. Davis, President of Davis Tractor Company, operated the Davco Farm. The farm was home to an apple and peach orchard, an apiary and bee supply business, and a Belted Galloway cattle herd. The Site appears to have been used as dumping ground associated with the Davco Farm between approximately 1966 and 1980.

2.3 Adjoining Properties & General Surrounding Area

The Site is situated in a mixed-use area consisting predominantly of residential and commercial properties. The Site is bordered to the north by conservation land followed by a commercial complex and Route 9 (Turnpike Road); to the east by conservation land followed by residential properties and Woodland Road; to the south by conservation land followed by residential properties and Breakneck Hill Road; and to the west by 60 Breakneck Hill Road followed by 48 Breakneck Hill Road and Breakneck Hill Road.

2.4 Regulatory History & Notification

The Site is currently not identified in the Environmental Protection Agency (EPA) Inventory of Open Dumps or the MassDEP list of Inactive/Closed Landfills and Dumping Grounds. In addition, the Site is currently not listed in MassDEP's Waste Site and Reportable Releases database.

Dumping grounds, open dumps, and illegal disposal of solid waste are prohibited by the Commonwealth of Massachusetts under 310 CMR 19.014. Accordingly, the Town formerly notified the MassDEP Central Regional Office's Solid Waste Management Division via email that a dumping ground was located on a portion of Town-owned property on September 28, 2021.

Following notification, the Town entered into a mutually negotiated *Administrative Consent Order* (ACO) with MassDEP, performed initial solid waste assessment activities, and submitted a *Cleanup Plan* for the Site. MassDEP approved the April 2023 *Cleanup Plan* on May 31, 2023. As specified in the ACO, the Town has 180 days following MassDEP approval of the *Cleanup Plan* to initiate cleanup activities at the Site. Accordingly, Site cleanup is anticipated to begin by November 27, 2023. This *Environmental Monitoring and Mitigation Plan* will be implemented by TRC and the cleanup contractors during cleanup of the Site.

3.0 Known Environmental Conditions & Cleanup Plan Components

The following sections briefly summarize previous assessment activities performed by TRC at the Site, known environmental conditions, and components of the approved *Cleanup Plan*.

3.1 Land Survey & Topography

In June 2021, land surveying activities were conducted at the Site to outline the extent of visually apparent surface waste/debris, document local topography and existing conditions, and overlay the extent of surficial waste/debris on an aerial photograph. Prior to the existing conditions survey, TRC performed a site reconnaissance to stake out the extent of the visually apparent surficial waste/debris, identify the general area of focus for the surveyors, and conduct a photographic survey.

TRC retained Land Planning, Inc. (Land Planning) of Hanson, Massachusetts to survey the wetland flags that were previously placed by others, the perimeter of surficial waste/debris, and the northern and northeastern bank of the pond. In addition, Land Planning collected ground surface elevations to prepare localized topography in 1-foot contours. Based on the Site reconnaissance and survey, the area of visually apparent surficial waste and debris was documented to cover approximately one acre. Existing conditions of the Site and the immediate area surrounding the Site are displayed on **Figure 2**.

Topography at the Site generally slopes to west/northwest and ranges between approximately 340 feet above mean sea level (msl) and 322 feet above msl. As shown on **Figure 2**, topography near the northwestern Site boundary steeply slopes to the northwest towards an intermittent stream.

3.2 Test Pit Installation

Between September 14, 2022 and September 16, 2022, nineteen (19) test pits were installed by Strategic Environmental Services, Inc. (SES) throughout the Site. The test pits were installed using a track-mounted, mini excavator to further evaluate the nature and extent of solid waste at the Site. The test pits were advanced to depths ranging between approximately 4.5 feet below ground surface (bgs) and 8.5 feet bgs. Test pits were terminated due to shallow refusal, lack of solid waste, or excavator constraints. TRC documented the location, dimensions, and contents of each test pit including the types of solid waste and lithology. In addition, TRC collected soil samples from each test pit for logging and screening purposes as described in Section 3.2.1 below.

A significant amount of solid waste was encountered in 11 of the 19 test pits to depths ranging between the ground surface to approximately 7.0 feet bgs. Based on the findings associated with the September 2022 test pitting program, the vertical and horizontal extent of buried solid waste and debris appears to have been defined at the Site. Notwithstanding, the solid waste and debris is not uniformly buried; discrete pockets of

buried solid waste and debris are apparent throughout the Site. Due to access restrictions, the horizontal extent of buried solid waste and debris was not able to be delineated beyond the western property boundary, extending towards the abutting residential property. The test pits installed at the Site generally encountered light-brown to dark-brown silt with varying amount of sand, cobbles, and solid waste. Groundwater was not encountered during the test pitting program to a maximum explored depth of approximately 8.5 feet bgs. No drums, tanks, or other containers housing hazardous waste or materials were encountered at the Site during the September 2022 test pitting program. However, several corroded drums, tanks, and/or other discarded containers were encountered during the test pitting program; these containers were empty, and evidence of releases stemming from the empty containers was not observed. Leachate, sheens and/or OHM seeps were not encountered at the Site during the test pitting program. Test pit locations are depicted on **Figure 3**, and the test pit logs are included as **Appendix A**. In addition, a photographic log is also provided as **Appendix B**.

During the test pitting program, soil samples were collected from the sidewalls and base of each test pit for logging and screening purposes. Intervals exhibiting evidence of chemical/petroleum contamination (if any) were targeted for screening. The soil samples were screened with a photoionization detector (PID) on a parts per million by volume (ppmv) basis to evaluate for the presence of volatile organics. PID headspace readings ranged between 0.0 ppmv and 1.6 ppmv. Furthermore, visual and/or olfactory evidence of contamination was not encountered during the test pitting program. Based on observations made during soil screening activities, no soil samples were retained for laboratory analyses in accordance with the May 2022 *Final Assessment Plan*. The soil screening results are summarized on **Table 1**.

3.3 ACM Survey

In conjunction with the September 2022 test pitting program, a Commonwealth of Massachusetts Department of Labor Standards (DLS) licensed Asbestos Inspector performed a limited ACM survey at the Site. Specifically, the Massachusetts DLS licensed Asbestos Inspector identified and sampled suspect ACM unearthed during the test pitting program and visually inspected other solid waste and debris present on the ground surface throughout the Site. Nine suspect materials including grey cement board, tan boiler bricks, black asphalt based built-up roofing material (2), black felt paper roofing material (2), grey insulation, red wire insulation, and black conduit were identified and sampled as part of the ACM survey. One of the nine suspect materials was unearthed during test pitting activities. Specifically, the suspect tan fire brick was encountered in test pit TP(86,184) at a depth of approximately 3.5 feet bgs. The remaining eight suspect materials were identified during the visual surficial assessment. Three samples were collected from each of the nine suspect materials (resulting in 27 total samples) and submitted to TRC's Industrial Hygiene Laboratory located in Windsor, Connecticut for asbestos analysis via Polarized Light Microscopy (PLM), United State Environmental Protection Agency (EPA) Method 600/R-93/116.

Laboratory analysis of the 27 ACM survey samples detected asbestos greater than 1% in three of the nine suspect materials. Asbestos was detected in the grey cement board at 20% and both of the black asphalt based built-up roofing materials between 3% and 5%. The ACM survey sample locations are displayed on **Figure 3**. The ACM survey analytical results are summarized on **Table 2**, and the associated laboratory analytical report is included as **Appendix C**. The *Limited Asbestos Survey Summary Report* is provided as **Appendix D**.

3.4 Cleanup Plan Components

Components of the approved *Cleanup Plan* include Site preparation activities, cleanup operations, and Site restoration work. Field activities for Site preparation include (but are not limited to) construction of an access road, entrance, and land clearing. Field work for Site cleanup includes excavation and earth working activities, removal of ACM and solid waste, separation of soil from waste, stockpiling and material management, and transportation and disposal of waste.

Based on previous assessment activities, TRC estimates that approximately 2,300 cubic feet (or 85 cubic yards) of ACM comingled with surrounding soil will be bulk loaded and removed during the initial stages of Site cleanup. Environmental monitoring and mitigation activities associated with ACM removal will be specified in a forthcoming *Non-Traditional Asbestos Abatement Work Plan* (NTWP). Once complete, the NTWP will be attached to this *Environmental Monitoring and Mitigation Plan* as **Appendix E**.

Using the average depth of waste encountered at the Site during the test pitting program, TRC estimates that up to 6,375 cubic yards of solid waste/debris comingled with soil is located throughout the Site. Based on observations made during the test pitting program, TRC estimates that approximately 10% to 30% of the dumped volume consists of solid waste and the balance consists of soil and cobbles. Accordingly, excavated soil and cobbles will be separated from the apparent solid waste/debris, as feasible. Site soil and cobbles (not exhibiting signs of contamination) will be staged on Site for reuse as backfill, grading material, and/or rip rap materials, as appropriate. In addition, ferrous and nonferrous metals and rubber tires will be separated from the excavated solid waste/debris. Excavated material generated during Site cleanup will be managed appropriately and either be reused at the Site or transported off Site for disposal/recycling, as necessary.

4.0 Environmental Monitoring & Mitigation Plan

Construction activities at the Site have the potential to generate fugitive dust, vapors, and/or odors. Accordingly, TRC and the cleanup contractors will implement the environmental monitoring and mitigation activities summarized herein to minimize potential dust, vapor, and odor issues that may arise during Site cleanup to comply with the requirements of MassDEP's Air Pollution Control Regulations, 310 CMR 7.00. Environmental monitoring and mitigation activities specific to ACM removal will be provided in a forthcoming NTWP. Once complete, the NTWP will be attached to this *Environmental Monitoring and Mitigation Plan* as **Appendix E**.

The following sections summarize potential sources of fugitive dust, vapors, and odors, mitigation and control procedures, air monitoring protocols, and corrective action measures to protect project personnel, the public, and the environment throughout the project.

4.1 Potential Sources for Fugitive Dust, Vapor, and Odor

Construction activities that have the potential to generate fugitive dust are anticipated to be performed at the Site, within the extent of land clearing, grubbing and construction fencing, and access road extending from Breakneck Hill Road to the Site. These features are displayed on **Figure 4**. Potential sources of fugitive dust include the following:

- Land clearing and grubbing activities;
- Excavation and earth working operations;
- Loading, transportation, and unloading of materials;
- Open excavations;
- Stockpiled materials;
- Access roads and hauling routes; and
- Operation of construction equipment (e.g. trucks, heavy equipment, chainsaws, separators, compactors, etc.).

During the September 2022 test pitting program, noxious vapors or odors were not encountered. Accordingly, these conditions are not anticipated to be encountered during Site cleanup. Unexpected conditions that may generate noxious vapors or odors at the Construction Area include (but are not limited to) the following:

- Contaminated environmental media;
- Drums or other containers housing OHM; and
- Leachate;
- Sheens; and
- OHM seeps.

The dust, vapor, and/or odor control measures that are described in the following sections will be implemented during the Site cleanup, as necessary.

4.2 Air Monitoring

During the cleanup operation, TRC will perform air monitoring to monitor potential fugitive dust emissions using dust monitors (i.e., DustTRAK II Aerosol Monitors or approved equals). Air monitoring shall include, at a minimum, daily monitoring during cleanup and documentation of one upwind and two downwind locations. The air monitoring equipment will be set to a typical breathing zone height and conducted at the construction fence line. The upwind location will represent background conditions at the Construction Area. In accordance with the USEPA National Ambient Air Quality Standard, the dust action level will be 150 $\mu g/m^3$ for particulates of 10 microns or less (PM-10) when sustained for a 15-minute period. The action levels presented herein are intended as generic dust action levels. The procedures and assumptions presented herein may need to be modified if unexpected conditions are encountered. If the action level is exceeded (difference between background and highest of the downwind readings), the cleanup contractors shall implement the corrective action measures described in Section 4.3 below.

If sources of noxious odors or vapors are encountered during Site cleanup, TRC will utilize supplemental monitoring equipment, including a PID and/or a MultiRAE monitor, as necessary. If PID readings (referenced to benzene) are sustained above 5 parts per million by volume (ppmv) in the breathing zone for at least 15 minutes, the monitor will move to an upwind location for 15 minutes. After 15 minutes, the monitor will return to the original location and measure again. If PID readings remain above 5 ppmv (referenced to benzene) the corrective actions described in Section 4.4 shall be performed to reduce objectional vapors. In the unlikely event that PID readings exceed 50 ppmv (referenced to benzene), work shall cease, the Engineer and contractor's safety officer shall be notified, and additional corrective measures will be evaluated.

4.3 Dust Control Procedures & Corrective Actions

Implementing dust control measures and performing corrective actions are important to protect project workers, the public, and the environment. This section describes dust control measures and best management practices that will be implemented at the Construction Area by the cleanup contractors. To the extent feasible, construction activities will be performed using methods that minimize dust generation. The cleanup contractors are responsible for controlling fugitive dust emissions at the Construction Area during working and non-working hours. Visible dust shall be controlled at all times.

If visible dust is being generated and/or dust monitoring equipment indicates that particulate concentrations exceed the established levels at the downwind boundary of the Construction Area (described above in Section 4.2), the cleanup contractors will apply a water mist to the source of fugitive dust, reducing concentrations of fugitive dust released to ambient air. As necessary, the contractor may apply water mist to the sources of

fugitive dust identified in Section 4.1. Notwithstanding, the contractors shall minimize water usage to the extent feasible to limit Site cleanup and disposal costs. Dust suppression agents shall be limited to water.

When not in use, the cleanup contractors will securely cover stockpiled materials using 10-mil thick (minimum) polyethylene sheeting to prevent fugitive dust emissions. If necessary, the cleanup contractors may install wind barriers around the stockpiles. As feasible, the cleanup contractors shall limit the distances between loading and unloading areas. In addition, the cleanup contractors shall minimize the freefall distance when transferring materials to stockpiled locations.

When hauling material at the Site or driving on access roads, construction workers shall limit the speed of equipment and vehicles to 5 miles per hour (mph). If dust continues to be generated at unacceptable levels, the contractors shall further reduce speed and/or apply a water mist to trafficked paths until acceptable levels are able to be maintained.

The cleanup contractors shall physically remove any soil from equipment and vehicles prior to departing from the Site. The cleanup contractors shall ensure that soil is not tracked beyond the Construction Area. If soil tracking occurs, the cleanup contractors shall immediately remove the soil using appropriate sweeping methods. In addition, the cleanup contractors shall promptly cleanup any spilled materials if spillage occurs, and open-bodied trucks shall be covered when carrying materials generated from the Site prior to departure.

4.4 Vapor and Odor Control Procedures & Corrective Actions

Based on previous assessment activities, noxious vapors and odors are not anticipated to be encountered during Site cleanup. Notwithstanding, if objectionable vapors or odors are encountered during construction, the cleanup contractors shall limit the exposure area by covering the suspect source(s) with reusable covers, foam suppressants, and/or implement other best management practices to reduce these nuisance conditions.

5.0 References

Real-Time Air Monitoring at Construction and Remediation Sites to Estimate Risks of Contaminated Dust Migration prepared by MassDEP dated October 1997.

Solid Waste Management Facility Regulations (310 CMR 19.000) prepared by MassDEP dated February 14, 2014.

Limited Asbestos Survey Summary Report, Solid Waste Assessment, Breakneck Hill Farm Dumping Site, Breakneck Hill Road, Southborough, Massachusetts prepared by TRC Environmental Corporation dated October 3, 2022.

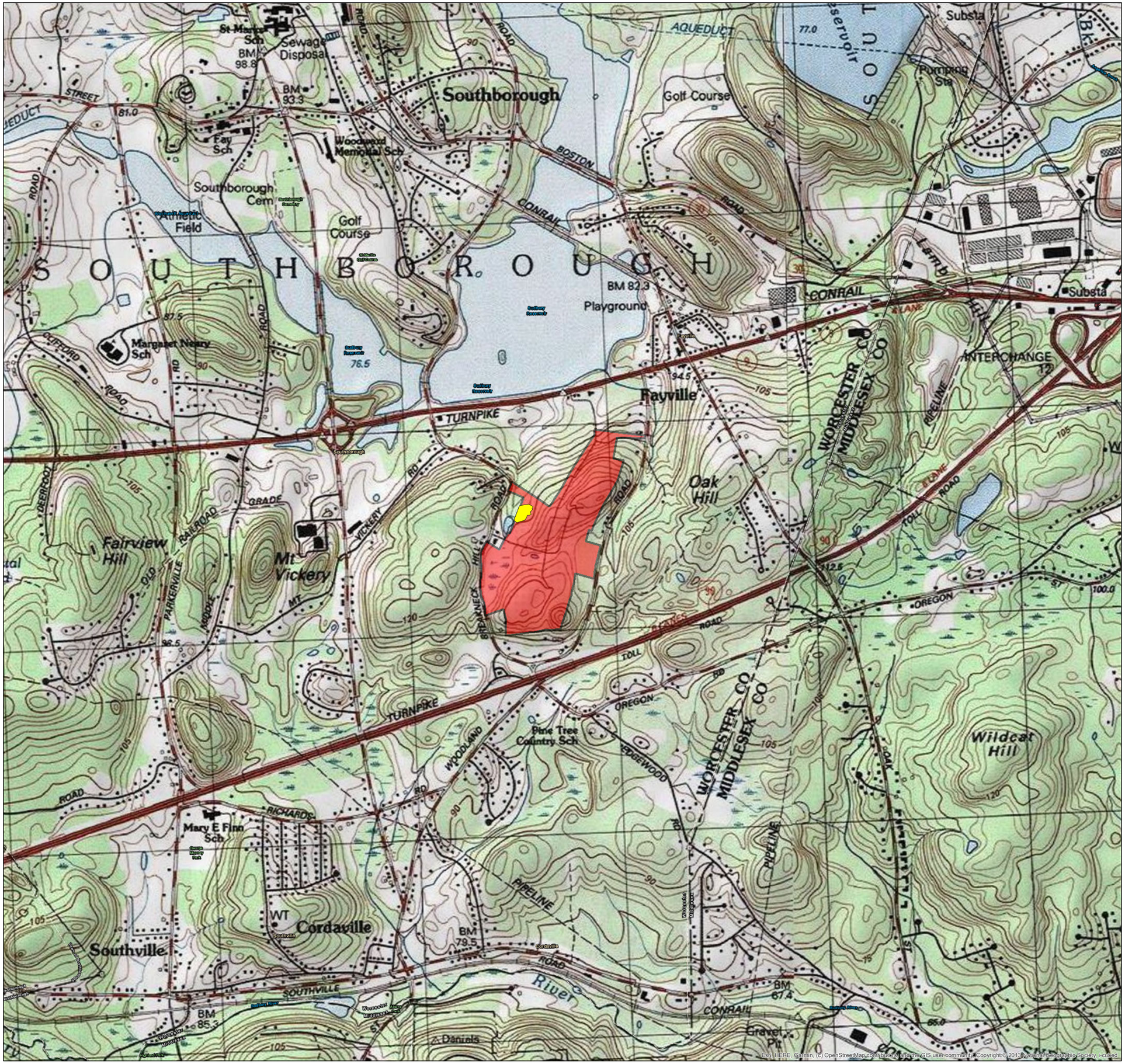
Solid Waste Assessment Summary Report, Breakneck Hill Farm Dumping Site, Breakneck Hill Road, Southborough, Massachusetts prepared by TRC Environmental Corporation dated October 2022.

Revised Final Assessment Plan, Breakneck Hill Farm Dumping Site, Breakneck Hill Road, Southborough, Massachusetts prepared by TRC Environmental Corporation dated February 2023.

Revised Solid Waste Assessment Summary Report, Breakneck Hill Farm Dumping Site, Breakneck Hill Road, Southborough, Massachusetts prepared by TRC Environmental Corporation dated February 2023.

Cleanup Plan, Breakneck Hill Farm Dumping Site, Breakneck Hill Road, Southborough, Massachusetts prepared by TRC Environmental Corporation dated April 2023.

Figures



PROJECT:	BREAKNECK HILL FARM DUMPING SITE SOUTHBOROUGH, MA 01772		
TITLE:	SITE LOCUS		
DRAWN BY:	C. HARDY	PROJ. NO.:	277567
CHECKED BY:	T. BEVENOUR	FIGURE 1	
APPROVED BY:	T. BEVENOUR		
DATE:	FEBRUARY 2023		

TRC

650 SUFFOLK STREET
LOWELL, MA 01854
PHONE: 978.970.5600

FILE NO.: Figure 1 - Site Location Map - Breakneck Hill_02132023.mxd

Plot Date: 2/13/2023, 13:02:55 PM by CHARDY -- LAYOUT: ANSI D (22"x34")
Path: S:\1-PROJECTS\Breakneck Hill\Figure 1 - Site Location Map - Breakneck Hill_02132023.mxd

SOURCE:
BASE MAP OBTAINED FROM *EXISTING CONDITIONS PLAN OFF BREAKNECK HILL ROAD, SOUTHBOROUGH, MA* PREPARED BY LAND PLANNING, INC. DATED 6/23/2021

LEGEND

- WF — LIMIT OF WETLANDS AND ASSOCIATED WETLAND FLAGS PLACED BY OTHERS
- —xD1— LATERAL EXTENT OF VISUALLY APPARENT DEBRIS AND ASSOCIATED DELINEATION FLAGS
- PROPERTY LINE
- ---335--- GROUND SURFACE ELEVATION CONTOUR BASED ON NAVD88
- TREE LINE

PROJECT:
BREAKNECK HILL FARM DUMPING SITE
SOUTHBOROUGH, MA 01772

TITLE:
EXISTING CONDITIONS PLAN

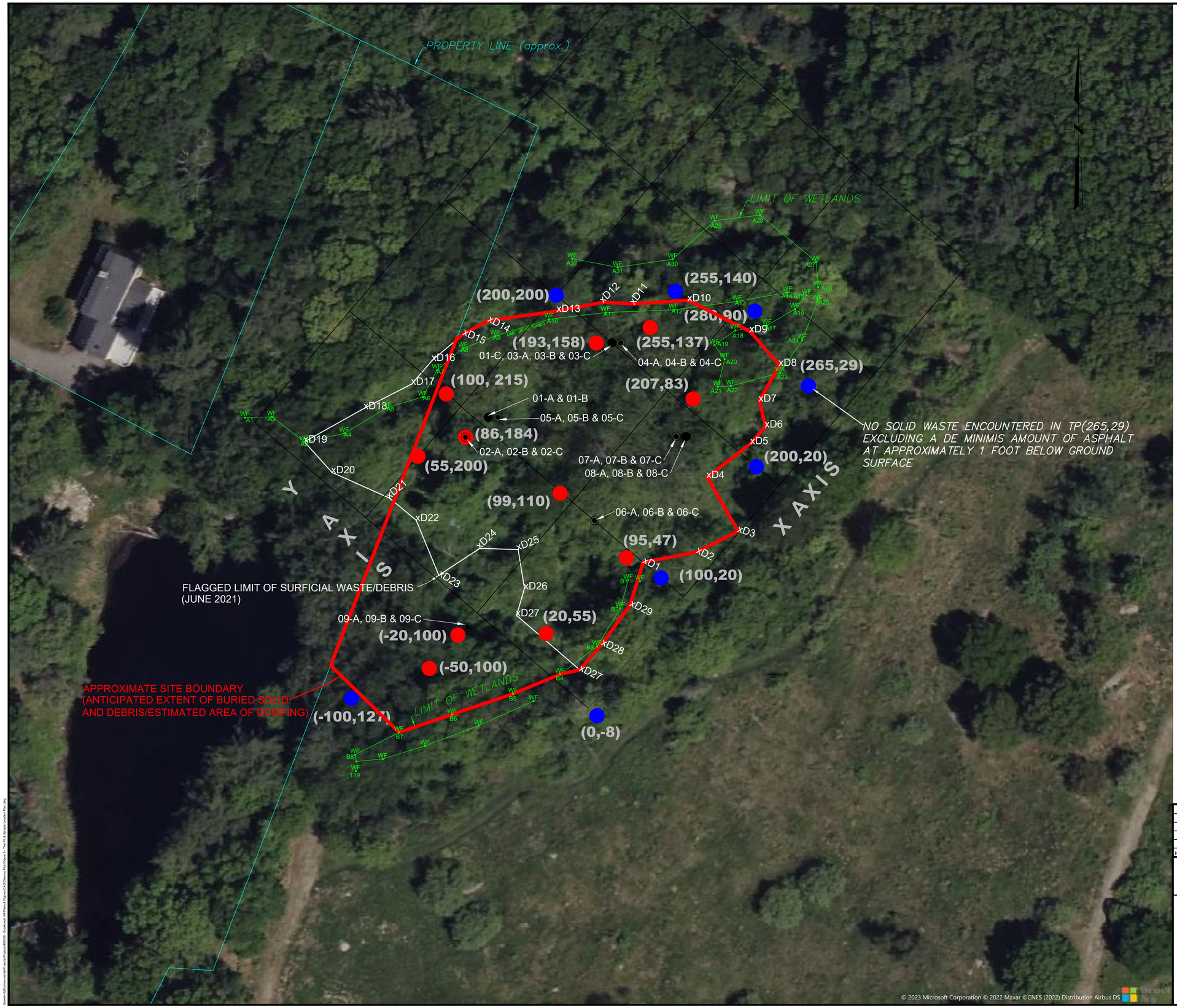
DRAWN BY:	TB	PROJ NO.:	408108.0000.0000
CHECKED BY:	MP	**FIGURE 2**	
APPROVED BY:	TB		
DATE:	January 2022		

TRC
650 Suffolk Street
Suite 200
Lowell, MA 01854
Phone: 978.970.5600

FILE NO.: Figure 2 - Existing Conditions Plan TB.dwg

DRAWING NAME: J:\Projects\Projects\408108 - Breakneck Hill\Plans & Figures\CAD\Proposed Final Assessment Plan\ Figure 2 - Existing Conditions Plan TB.dwg --- PLOT DATE: January 10, 2022 - 10:17AM --- LAYOUT: Figure 1

Version: 2017-10-21



LEGEND

- WF — LIMIT OF WETLANDS AND ASSOCIATED WETLAND FLAGS PLACED BY OTHERS
- —xD1— LATERAL EXTENT OF VISUALLY APPARENT DEBRIS AND ASSOCIATED DELINEATION FLAGS PLACED IN JUNE 2021
- (0,0) COMPLETED TEST PIT LOCATION CONTAINING SOLID WASTE & COORDINATES (FEET FROM ORIGIN)
- (0,0) COMPLETED TEST PIT LOCATION NOT CONTAINING SOLID WASTE & COORDINATES (FEET FROM ORIGIN)
- 01-A ASBESTOS-CONTAINING MATERIAL SURVEY SAMPLE LOCATION THAT CONTAINED ASBESTOS
- 01-A ASBESTOS-CONTAINING MATERIAL SURVEY SAMPLE LOCATION THAT DID NOT CONTAIN ASBESTOS

0 30 60 90 120
SCALE IN FEET
1 in = 30 ft

NO.	BY	DATE	REVISION	APPD.

TITLE:

TEST PIT & SAMPLE LOCATION PLAN

PROJECT:

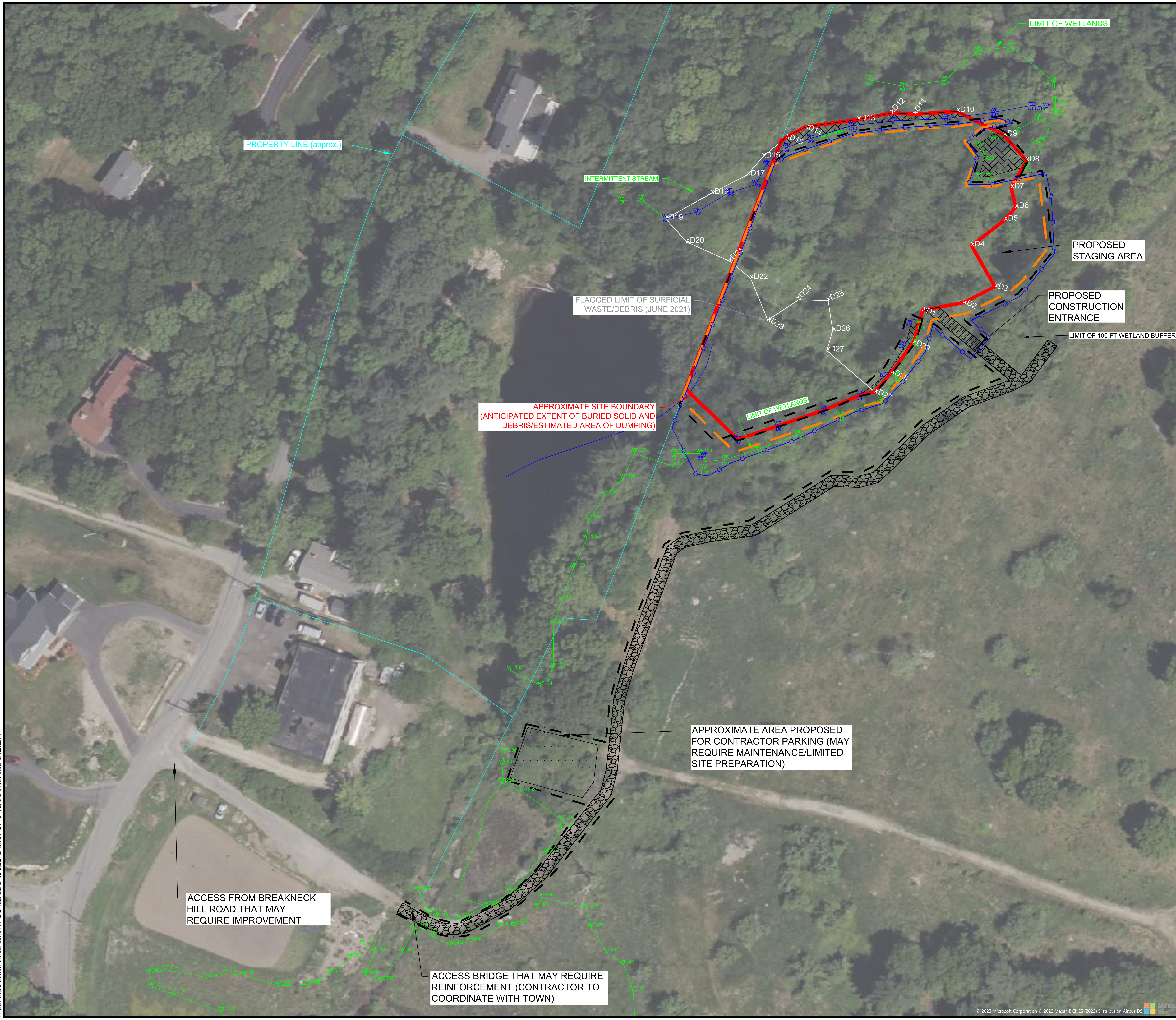
BREAKNECK HILL FARM DUMPING SITE
SOUTHBOROUGH, MA 01772

DRAWN BY:	TB	PROJ. NO.:	408108.2023.0000
CHECKED BY:	LA		
APPROVED BY:	TB		**FIGURE 3**
DATE:	FEBRUARY 2023		

TRC
WANNALANCIT MILLS
650 SUFFOLK STREET
LOWELL, MA 01854
(978) 970 5600

FILE NO.: Figure 3 - Test Pit & Sample Location Plan.dwg

\\trcwh-cifs\Environmental\Projects\Projects\408108 - Breakneck Hill\Phase II Figures\CAD\Dwg\Plan\Figure 3 - Test Pit & Sample Location Plan.dwg



LEGEND

- WF — LIMIT OF WETLANDS AND ASSOCIATED WETLAND FLAGS PLACED BY OTHERS
- WF — LIMIT OF WETLAND BANK
- —xD1— LATERAL EXTENT OF VISUALLY APPARENT DEBRIS AND ASSOCIATED DELINEATION FLAGS PLACED IN JUNE 2021
- PROPOSED EROSION AND SEDIMENT CONTROLS
- PROPOSED CONSTRUCTION ACCESS ROAD
- PROPOSED CONSTRUCTION PAD
- PROPOSED EXTENT OF LAND CLEARING AND GRUBBING
- PROPOSED CONSTRUCTION FENCE
- AREA BETWEEN WETLAND FLAGS AND SITE BOUNDARY
  Note: It's not anticipated that heavy equipment will need to be used to remove solid waste and debris in the area between the wetland flags and site boundary. These areas are suspected to contain surficial waste and debris only.

NOTES:
1. Wetland flagging as completed by Lucas Environmental, LLC 500A Washington Street, Quincy Massachusetts 02169

0 40 80 120 160
SCALE IN FEET
1 in = 40 ft

NO.	BY	DATE	REVISION	APP'D.

TITLE:

ENVIRONMENTAL MONITORING & MITIGATION PLAN

PROJECT:

BREAKNECK HILL FARM DUMPING SITE
SOUTHBOROUGH, MA 01772

DRAWN BY:	CH	PROJ. NO.:	408108.2023.0000
CHECKED BY:	TB	**FIGURE 4**	
APPROVED BY:	TB		
DATE:	AUGUST 2023		

TRC
WANNALANCIT MILLS
650 SUFFOLK STREET
LOWELL, MA 01854
(978) 970 5600

FILE NO.: Figure 4 - Environmental Monitoring and Mitigation Plan_20230822.dwg

Tables

Table 1: Soil Screening Summary
Solid Waste Assessment
September 14, 2022 - September 16, 2022
Breakneck Hill Farm Dumping Site
Breakneck Hill Road
Southborough, Massachusetts

Date	Test Pit Identification	Maximum Depth (fbgs)	PID Headspace Reading Range (ppmv)	Maximum PID Headspace Reading (ppmv)	Sample Collected for Analytical Parameters (excluding asbestos content)?	Sample Identification
9/14/2022	TP (100, 215)	5.5	0.2 - 0.4	0.4	No	NA
9/14/2022	TP (55, 200)	7.0	0.2 - 0.6	0.6	No	NA
9/14/2022	TP (86, 184)	7.5	0.1 - 0.3	0.3	No	NA
9/14/2022	TP (99, 110)	5.5	0.0 - 0.3	0.3	No	NA
9/14/2022	TP (193, 158)	6.0	0.1 - 0.2	0.2	No	NA
9/14/2022	TP (207, 83)	8.5	0.1 - 0.2	0.2	No	NA
9/15/2022	TP (200, 20)	5.0	0.0 - 0.2	0.2	No	NA
9/15/2022	TP (265, 29)	5.0	0.0 - 0.2	0.2	No	NA
9/15/2022	TP (280, 90)	6.0	0.1	0.1	No	NA
9/15/2022	TP (255, 140)	5.0	0.1 - 0.2	0.2	No	NA
9/15/2022	TP (200, 200)	4.5	0.0 - 0.1	0.1	No	NA
9/15/2022	TP (100, 20)	5.0	0.0 - 0.1	0.1	No	NA
9/15/2022	TP (0, -8)	5.0	0.0 - 0.6	0.6	No	NA
9/16/2022	TP (-20, 100)	5.0	0.0 - 0.1 *	0.1 *	No	NA
9/16/2022	TP (-50, 100)	5.0	0.0 - 0.1 *	0.1 *	No	NA
9/16/2022	TP (-100, 127)	5.0	0.0 - 1.6	1.6	No	NA
9/16/2022	TP (20, 55)	6.0	0.5 - 0.9	0.9	No	NA
9/16/2022	TP (225, 137)	5.0	0.2 - 0.6	0.6	No	NA
9/16/2022	TP (95, 47)	5.0	0.1 - 0.2	0.2	No	NA

PID - Photoionization Detector
fbgs - feet below ground surface
ppmv - parts per million by volume (referenced to benzene)
NA - Not Applicable
Samples (if any) were collected if PID headspace readings exceeded 10 ppmv and/or visual or olfactory evidence of contamination was encountered.
* - PID readings were recollected due to erroneous initial readings caused by equipment malfunction.
Refer to the test pit logs for lithology and solid waste descriptions, and refer to the Test Pit & Sample Location Plan for test pit locations and where solid waste was encountered.

Table 2: ACM Sampling Analytical Results Summary
ACM Survey
September 14, 2022 - September 16, 2022
Breakneck Hill Farm Dumping Site
Breakneck Hill Road
Southborough, Massachusetts

Date Collected	Sample Identification	Description	Asbestos %	Asbestos Type	Considered ACM?
9/14/2022	01-A	Grey Cement Board	20%	Chrysotile	Yes
9/14/2022	01-B	Grey Cement Board	NA/PS	NA/PS	Yes
9/14/2022	01-C	Grey Cement Board	NA/PS	NA/PS	Yes
9/14/2022	02-A	Tan Boiler Brick	ND	None	No
9/14/2022	02-B	Tan Boiler Brick	ND	None	No
9/14/2022	02-C	Tan Boiler Brick	ND	None	No
9/14/2022	03-A	Black Roofing, Asphalt Based Built-Up	5%	Chrysotile	Yes
9/14/2022	03-B	Black Roofing, Asphalt Based Built-Up	NA/PS	NA/PS	Yes
9/14/2022	03-C	Black Roofing, Asphalt Based Built-Up	NA/PS	NA/PS	Yes
9/14/2022	04-A	Black Roofing, Felt Paper	ND	None	No
9/14/2022	04-B	Black Roofing, Felt Paper	ND	None	No
9/14/2022	04-C	Black Roofing, Felt Paper	ND	None	No
9/15/2022	05-A	Grey Insulation, Unknown	ND	None	No
9/15/2022	05-B	Grey Insulation, Unknown	ND	None	No
9/15/2022	05-C	Grey Insulation, Unknown	ND	None	No
9/15/2022	06-A	Red/Black Wire Insulation	ND	None	No
9/15/2022	06-B	Red/Black Wire Insulation	ND	None	No
9/15/2022	06-C	Red/Black Wire Insulation	ND	None	No
9/15/2022	07-A	Black Roofing, Felt Paper	ND	None	No
9/15/2022	07-B	Black Roofing, Felt Paper	ND	None	No
9/15/2022	07-C	Black Roofing, Felt Paper	ND	None	No
9/15/2022	08-A	Black Roofing, Asphalt Based Built-Up	3%	Chrysotile	Yes
9/15/2022	08-B	Black Roofing, Asphalt Based Built-Up	NA/PS	NA/PS	Yes
9/15/2022	08-C	Black Roofing, Asphalt Based Built-Up	NA/PS	NA/PS	Yes
9/16/2022	09-A	Black Conduit	ND	None	No
9/16/2022	09-B	Black Conduit	ND	None	No
9/16/2022	09-C	Black Conduit	ND	None	No

Asbestos-Containing Material (ACM) is any material containing more than 1% asbestos
ND - Asbestos was not detected at a concentration exceeding the laboratory reporting limit (1% asbestos)
NA/PS - Not Analyzed/Positive Stop

Appendix A

Photograph Log

Appendix A
Photograph Log

Photo 1: Test Pit TP(100,215); refer to **Figure 4** for location and **Appendix E** for a description of materials encountered

Photo 2: Test Pit TP(55,200); refer to **Figure 4** for location and **Appendix E** for a description of materials encountered

Photo 3: Test Pit TP(86,184); refer to **Figure 4** for location and **Appendix E** for a description of materials encountered

Photo 4: Test Pit TP(99,110); refer to **Figure 4** for location and **Appendix E** for a description of materials encountered

Appendix A
Photograph Log

Photo 5: Test Pit TP(193,158); refer to **Figure 4** for location and **Appendix E** for a description of materials encountered

Photo 6: Test Pit TP(207,83); refer to **Figure 4** for location and **Appendix E** for a description of materials encountered

Photo 7: Test Pit TP(200,20); refer to **Figure 4** for location and **Appendix E** for a description of materials encountered

Photo 8: Test Pit TP(265,29); refer to **Figure 4** for location and **Appendix E** for a description of materials encountered

Appendix A
Photograph Log

Photo 9: Test Pit TP(255,140); refer to **Figure 4** for location and **Appendix E** for a description of materials encountered

Photo 10: Test Pit TP(100,20); refer to **Figure 4** for location and **Appendix E** for a description of materials encountered

Photo 11: Test Pit TP(0,-8), refer to **Figure 4** for location and **Appendix E** for a description of materials encountered

Photo 12: Test Pit TP(-20,100); refer to **Figure 4** for location and **Appendix E** for a description of materials encountered

Appendix A
Photograph Log

Photo 13: Test Pit TP(-50,100); refer to **Figure 4** for location and **Appendix E** for a description of materials encountered

Photo 14: Test Pit TP(20,55); refer to **Figure 4** for location and **Appendix E** for a description of materials encountered

Photo 15: Test Pit TP(255,137); refer to **Figure 4** for location and **Appendix E** for a description of materials encountered

Photo 16: Orange discolored surface water located in intermittent stream downgradient of dumping area to northwest of Test Pit TP(100,215)

Appendix B

Test Pit Logs

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650 Suffolk Street
Lowell, MA 01854
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Fax: 978-453-1995

TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(100,215)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/14/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	To be determined
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	5.5
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	5 x 4
FIELD SCREENING EQUIPMENT	Photoionization Detector (PID)	**TOTAL VOLUME OF SOIL (CY)**	4.1
		DEPTH TO WATER (Feet)	Not Encountered
LOGGED BY	Brian Burk & Garry Yapto	**WEATHER**	65F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was not encountered in test pit.

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
0			Dark-brown SILT, some solid waste (i.e., refrigerator, metal panels, empty 55-gallon drum, miscellaneous automobile parts and wire fencing) and sand, trace organics (no odor/staining, dry).		
1			Dark-brown SILT, some boulders, cobbles and sand (no odor/ staining, dry.		
2			Dark-brown SILT, some solid waste (i.e., scrap metal, plastic and bricks), boulders, cobbles and sand (no odor/staining, dry).	0.2 - 0.4	
3					
4					
5			Brown SILT, some sand, boulders and cobbles (no odor/staining, dry).		
			Test pit terminated at 5.5 feet below ground surface due to safety concerns along slope and capabilities of machine.	0.4	

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TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(55,200)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/14/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	To be determined
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	7
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	3 x 7
FIELD SCREENING EQUIPMENT	PID	**TOTAL VOLUME OF SOIL (CY)**	5.4
		DEPTH TO WATER (Feet)	Not Encountered
LOGGED BY	Brian Burk & Garry Yapto	**WEATHER**	65F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was not encountered in test pit.

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
0			Dark-brown SILT, some solid waste (i.e., scrap metal and plastic), cobbles and sand, trace organics (no odor/staining, dry).		
2			Dark-brown SILT, some solid waste (i.e., asphalt), cobbles and sand (no odor/staining, dry).	0.4	
3				0.6	
4			Dark-brown SILT, some cobbles and sand (no odor/staining, dry).	0.3	
7			Test pit terminated at 7 feet below ground surface.	0.2	

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TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(86,184)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/14/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	To be determined
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	7.5
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	4 x 7.5
FIELD SCREENING EQUIPMENT	PID	**TOTAL VOLUME OF SOIL (CY)**	8.3
LOGGED BY	Brian Burk & Garry Yapto	**DEPTH TO WATER (Feet)**	Not Encountered
		WEATHER	65F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was encountered in test pit (see below).

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
0			Dark-brown SILT, some solid waste (i.e., plastic, scrap metal, glass and brick) and sand, trace organics (no odor/staining, dry).		
1					
2				0.1	
3			Light-brown to gray SILT, some solid waste (i.e., plastic, scrap metal, glass and brick) and sand, (no odor/staining, dry).	0.2	
4				0.2	Suspect fire brick sampled for potential ACM (samples 02-A through 02-C)
5					
6					
7					Amount of solid waste appears to be reducing with depth; however, could not advance deeper to determine vertical extent of solid waste at TP(86,184) due to equipment and Site constraints.
			Test pit terminated at 7.5 feet below ground surface.	0.3	

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TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(99,110)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/14/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	To be determined
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	5.5
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	3.5 x 9
FIELD SCREENING EQUIPMENT	PID	**TOTAL VOLUME OF SOIL (CY)**	6.4
LOGGED BY	Brian Burk & Garry Yapto	**DEPTH TO WATER (Feet)**	Not Encountered
		WEATHER	65F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was not encountered.

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
1			Dark-brown SILT, some solid waste (i.e., scrap metal, plastic, glass, electrical cables, garden planters, house-hold waste, brick, Styrofoam and hub caps) and sand, trace organics (no odor/staining, dry).		
2				0.3	
3			Dark-brown SILT, some solid waste (i.e., scrap metal, plastic, house-hold waste, Styrofoam and clay pipe) and sand (no odor/staining, dry).	0.2	
4					
5			Light-brown SILT, some sand, boulders and cobbles (no odor/staining, dry).	0.3	
			Test pit terminated at 5.5 feet below ground surface.		

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TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(193,158)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/14/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	To be determined
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	6
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	6 x 9.5
FIELD SCREENING EQUIPMENT	PID	**TOTAL VOLUME OF SOIL (CY)**	12.7
LOGGED BY	Brian Burk & Garry Yapto	**DEPTH TO WATER (Feet)**	Not Encountered
		WEATHER	65F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was not encountered in test pit.

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
0			Dark-brown SILT, some solid waste (i.e., metal shelving, empty drum, fencing, tires, plastic, glass, cans, brick and concrete block) and sand, trace organics (no odor/staining, dry).		
1					
2					
3			Light-brown SILT, some sand, boulders and cobbles (no odor/ staining, dry).	0.1	
4				0.2	
5				0.2	
6			Test pit terminated at 6 feet below ground surface.	0.1	

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TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(207,83)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/14/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	To be determined
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	8.5
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	5 x 9.5
FIELD SCREENING EQUIPMENT	PID	**TOTAL VOLUME OF SOIL (CY)**	15
LOGGED BY	Brian Burk & Garry Yapto	**DEPTH TO WATER (Feet)**	Not Encountered
		WEATHER	65F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was not encountered in test pit.

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
0			Dark-brown SILT, some solid waste (i.e., scrap metal, plastic, sheets, cans, fencing, tires, brick, wood debris and concrete block) and sand, trace organics (no odor/staining, dry).		
1			Dark-brown SILT, some solid waste (i.e., scrap metal, plastic, sheets, cans, fencing, tires, brick, wood debris and concrete block) and sand (no odor/staining, dry).		
3				0.1	
4				0.1	
4			Dark-brown SILT, some sand (no odor/staining, dry).		
7			Gray SILT, some sand (no odor/staining, dry).		
8			Light-brown SILT, some sand (no odor/staining, dry).	0.2	
			Test pit terminated at 8.5 feet below ground surface.		

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TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(200,20)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/15/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	To be determined
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	5
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	6.5 x 10
FIELD SCREENING EQUIPMENT	PID	**TOTAL VOLUME OF SOIL (CY)**	12
LOGGED BY	Brian Burk & Garry Yapto	**DEPTH TO WATER (Feet)**	Not Encountered
		WEATHER	60F-68F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was not encountered in test pit.

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
			Dark-brown SILT, some sand, trace organics (no odor/staining, dry).		Solid waste was not encountered in test pit TP(200,20).
1			Dark-brown SILT, some sand, boulders and cobbles (no odor/ staining, dry).		
2				0.0	
3				0.2	
4			Light-brown SILT, some sand (no odor/staining, dry).		
5			Test pit terminated at 5 feet below ground surface.	0.0	

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TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(265,29)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/15/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	To be determined
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	5
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	4 x 9
FIELD SCREENING EQUIPMENT	PID	**TOTAL VOLUME OF SOIL (CY)**	6.7
LOGGED BY	Brian Burk & Garry Yapto	**DEPTH TO WATER (Feet)**	Not Encountered
		WEATHER	60F-68F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was not encountered in test pit.

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
0			Dark-brown SILT, some sand, trace organics (no odor/staining, dry).		Solid waste was not encountered in test pit TP(265,29), excluding trace amount of asphalt at approximately 1' below ground surface.
1			Light-brown SILT, some sand, boulders and cobbles, trace asphalt (no odor/staining, dry).		
2					
3					
4				0.2	
5			Test pit terminated at 5 feet below ground surface.	0.0	

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TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(280,90)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/15/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	To be determined
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	6
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	4 x 7
FIELD SCREENING EQUIPMENT	PID	**TOTAL VOLUME OF SOIL (CY)**	6.2
LOGGED BY	Brian Burk & Garry Yapto	**DEPTH TO WATER (Feet)**	Not Encountered
		WEATHER	60F-68F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was not encountered in test pit.

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
			Dark-brown SILT, some sand, trace organics (no odor/staining, dry).		Solid waste was not encountered in test pit TP(280,90).
1			Dark-brown SILT, some sand and cobbles (no odor/staining, dry).		
2				0.1	
				0.1	
3				0.1	
			Gray SILT (with orange striations), some sand (no odor/staining, dry).		
4					
5			Gray SILT (with orange striations), some sand, boulders and cobbles (no odor/staining, dry).		
6			Test pit terminated at 6 feet below ground surface on apparent boulders.	0.1	

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TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(255,140)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/15/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	To be determined
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	5
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	3.5 x 9
FIELD SCREENING EQUIPMENT	PID	**TOTAL VOLUME OF SOIL (CY)**	5.8
		DEPTH TO WATER (Feet)	Not Encountered
LOGGED BY	Brian Burk & Garry Yapto	**WEATHER**	60F-68F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was not encountered in test pit.

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
0			Dark-brown SILT, some sand, trace organics (no odor/staining, dry).		Solid waste was not encountered in test pit TP(255,140).
2			Light-gray SILT, some sand (no odor/staining, dry).		
3			Light-gray SILT (with orange striations), some sand and cobbles (no odor/staining, dry).	0.1 - 0.2	
5			Test pit terminated at 5 feet below ground surface.	0.2	

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TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(200,200)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/15/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	To be determined
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	4.5
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	4 x 9
FIELD SCREENING EQUIPMENT	PID	**TOTAL VOLUME OF SOIL (CY)**	6
LOGGED BY	Brian Burk & Garry Yapto	**DEPTH TO WATER (Feet)**	Not Encountered
		WEATHER	60F-68F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was not encountered in test pit.

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
			Dark-brown SILT, some sand, trace organics (no odor/staining, dry).		Solid waste was not encountered in test pit TP(200,200).
1			Light-gray SILT, some sand and cobbles (no odor/staining, dry).		
2				0.1	
3				0.1	
4			Light-brown SILT (with orange striations), some sand (no odor/staining, dry).		
			Test pit terminated at 4.5 feet below ground surface.	0.0	

Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(100,20)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/15/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	To be determined
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	5
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	4.5 x 9
FIELD SCREENING EQUIPMENT	PID	**TOTAL VOLUME OF SOIL (CY)**	7.5
LOGGED BY	Brian Burk & Garry Yapto	**DEPTH TO WATER (Feet)**	Not Encountered
		WEATHER	60F-68F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was not encountered in test pit.

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
0			Dark-brown SILT, some sand, trace organics (no odor/staining, dry).		Solid waste was not encountered in test pit TP(100,20).
1			Dark-brown SILT, some sand, boulders and cobbles (no odor/ staining, dry).		
2				0.1	
3				0.1	
4					
5			Test pit terminated at 5 feet below ground surface.	0.0	

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Fax: 978-453-1995

TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(0,-8)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/15/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	To be determined
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	5
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	4 x 9
FIELD SCREENING EQUIPMENT	PID	**TOTAL VOLUME OF SOIL (CY)**	6.7
LOGGED BY	Brian Burk & Garry Yapto	**DEPTH TO WATER (Feet)**	Not Encountered
		WEATHER	65F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was not encountered in test pit.

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
			Dark-brown SILT, some sand, trace organics (no odor/staining, dry).		Solid waste was not encountered in test pit TP(0,-8).
1			Brown SILT, some sand (no odor/staining, dry).		
2			Light-brown SILT, some sand, boulders and cobbles (no odor/staining, dry).		
3				0.6	
4					
5			Test pit terminated at 5 feet below ground surface.	0.1	

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Lowell, MA 01854
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Fax: 978-453-1995

TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(-20,100)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/16/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	To be determined
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	5
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	4 x10
FIELD SCREENING EQUIPMENT	PID	**TOTAL VOLUME OF SOIL (CY)**	7.4
LOGGED BY	Brian Burk & Garry Yapto	**DEPTH TO WATER (Feet)**	Not Encountered
		WEATHER	50F-70F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was not encountered in test pit.

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
1			Dark-brown SILT, some solid waste (i.e., plastic bags, cans, scrap metal, plastic, brick, wood and glass) and sand, trace organics (no odor/ staining, dry).		
2			Dark-brown to gray SILT, some sand, boulders and cobbles (no odor/ staining, dry).	0.1	
3					
4					
5			Test pit terminated at 5 feet below ground surface.	0.1	

Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(-50,100)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/16/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	To be determined
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	5
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	6 x 6
FIELD SCREENING EQUIPMENT	PID	**TOTAL VOLUME OF SOIL (CY)**	6.7
LOGGED BY	Brian Burk & Garry Yapto	**DEPTH TO WATER (Feet)**	Not Encountered
		WEATHER	50F-70F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was not encountered in test pit.

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
0			Brown SILT, some solid waste (i.e., scrap metal, brick, glass and plastic) and sand, trace organics (no odor/staining, dry).		
1					
2			Brown SILT, some solid waste (i.e., scrap metal, brick, glass and plastic) and sand (no odor/staining, dry).	0.1	
3			Light-brown SILT, some sand, boulders and cobbles (no odor/staining, dry).		
4					
5			Test pit terminated at 5 feet below ground surface.	0.1	

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Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(-100,127)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/16/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	To be determined
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	5
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	4 x 9
FIELD SCREENING EQUIPMENT	PID	**TOTAL VOLUME OF SOIL (CY)**	6.7
LOGGED BY	Brian Burk & Garry Yapto	**DEPTH TO WATER (Feet)**	Not Encountered
		WEATHER	60F-68F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was not encountered in test pit.

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
			Brown SILT, some sand, trace organics (no odor/staining, dry).		Solid waste was not encountered in test pit TP(-100,127).
1			Light-brown SILT, some sand (no odor/staining, dry).		
2			Light-brown SILT, some sand and cobbles (no odor/staining, dry).		
3				1.6	
4			Light-brown to gray SILT, some sand and cobbles (no odor/staining, dry).		
5			Test pit terminated at 5 feet below ground surface.	1.6	

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650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(20,55)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/16/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	To be determined
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	6
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	4 x 9
FIELD SCREENING EQUIPMENT	PID	**TOTAL VOLUME OF SOIL (CY)**	8
LOGGED BY	Brian Burk & Garry Yapto	**DEPTH TO WATER (Feet)**	Not Encountered
		WEATHER	50F-70F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was not encountered in test pit.

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
0			Dark-brown SILT, some solid waste (i.e., scrap metal, cable, farm equipment, plastic, rubber tires and brick) and sand, trace organics (no odor/staining, dry).		
1			Dark-brown SILT, some sand and cobbles (no odor/staining, dry).		
2					
3			Light-brown SILT, some sand, boulders and cobbles (no odor/ staining, dry).	0.5 - 0.7	
4					
5			Dark-brown SILT, some sand, boulders and cobbles (no odor/ staining, dry).	0.9	
6			Test pit terminated at 6 feet below ground surface.		

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Fax: 978-453-1995

TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(255,137)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/16/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	To be determined
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	5
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	4 x 8
FIELD SCREENING EQUIPMENT	PID	**TOTAL VOLUME OF SOIL (CY)**	5.9
LOGGED BY	Brian Burk & Garry Yapto	**DEPTH TO WATER (Feet)**	Not Encountered
		WEATHER	50F-70F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was not encountered in test pit.

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
			Brown SILT, some solid waste (i.e., scrap metal and plastic) and sand, trace organics (no odor/staining, dry).		
1			Light-brown SILT, some sand, boulders and cobbles (no odor/staining, dry).		
2				0.2 - 0.6	
3			Dark-brown SILT, some sand, boulders and cobbles (no odor/ staining, dry).		
4					
5			Gray SILT, some sand (no odor/staining, dry).		
			Test pit terminated at 5 feet below ground surface.	0.3	

Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

TEST PIT LOG

PROJECT/NUMBER	408108.2022.0000	**TEST PIT NUMBER**	TP(95,47)
LOCATION	Breakneck Hill Rd, Southborough, MA	**DATE**	9/16/2022
CONTRACTOR/PERSONNEL	Strategic Environmental Services/Sean	**GROUND ELEVATION**	NA
EQUIPMENT USED	Bobcat E35 (Mini-Excavator)	**TOTAL DEPTH (feet)**	5
PIEZOMETER INSTALLED	None	**TEST PIT DIMENSIONS (feet)**	4 x 8
FIELD SCREENING EQUIPMENT	PID	**TOTAL VOLUME OF SOIL (CY)**	5.9
LOGGED BY	Brian Burk & Garry Yapto	**DEPTH TO WATER (Feet)**	Not Encountered
		WEATHER	50F-70F, Sunny

REMARKS No evidence of contamination was encountered, and no soil samples were collected. Potential ACM was not encountered in test pit.

DEPTH (ft. BGL)	SAMPLE ID.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	NOTES
0			Dark-brown SILT, some solid waste (i.e., scrap metal, plastic and rubber tire) and sand, trace organics (no odor/staining, dry).		
1			Light-brown SILT, some sand, boulders and cobbles (no odor/ staining, dry).		
2				0.1	
3					
4					
5			Test pit terminated at 5 feet below ground surface.	0.2	

Appendix C

Laboratory Analytical Report

Industrial Hygiene Laboratory
21 Griffin Road North
Windsor, CT 06095
(860) 298-6308

BULK ASBESTOS ANALYSIS REPORT

CLIENT: Town of Southborough

Lab Log #: 0060158
Project #: 408108.2022.0000
Date Received: 09/20/2022
Date Analyzed: 09/21/2022

Site: Breakneck Hill, 60 Breakneck Hill Road, Southborough, MA

POLARIZED LIGHT MICROSCOPY by EPA 600/R-93/116

Sample No.	Sample Location	Homogeneous Material Description	Other Matrix Materials		Asbestos %	Asbestos Type
01-A	100,180 truck	Grey Cement Board		- - -	20%	Chrysotile
01-B	100,180 truck	- -		- -	NA/PS	- -
01-C	200,150 surface	- -		- -	NA/PS	- -
02-A	100,180 offset 3.5' depth	Tan Boiler Brick		- - -	ND	None
02-B	100,180 offset 3.5' depth	Tan Boiler Brick		- - -	ND	None
02-C	100,180 offset 3.5' depth	Tan Boiler Brick		- - -	ND	None
03-A	200,150 surface	Black Roofing, Asphalt Based Built-Up		- - -	5%	Chrysotile
03-B	200,150 surface	- -		- -	NA/PS	- -
03-C	200,150 surface	- -		- -	NA/PS	- -
04-A	200,150 surface	Black Roofing, Felt Paper		- - -	ND	None
04-B	200,150 surface	Black Roofing, Felt Paper		- - -	ND	None
04-C	200,150 surface	Black Roofing, Felt Paper		- - -	ND	None
05-A	100,180 by truck	Grey Insulation, Unknown	95%	mineral wool	ND	None
05-B	100,180 by truck	Grey Insulation, Unknown	95%	mineral wool	ND	None
05-C	100,180 by truck	Grey Insulation, Unknown	95%	mineral wool	ND	None
06-A	By 100,100	Red/Black Wire Insulation		- - -	ND	None
06-B	By 100,100	Red/Black Wire Insulation		- - -	ND	None

Industrial Hygiene Laboratory
21 Griffin Road North
Windsor, CT 06095
(860) 298-6308

POLARIZED LIGHT MICROSCOPY by EPA 600/R-93/116

Sample No.	Sample Location	Homogeneous Material Description	Other Matrix Materials		Asbestos %	Asbestos Type
06-C	By 100,100	Red/Black Wire Insulation		- - -	ND	None
07-A	20' SW of 200,75	Black Roofing, Felt Paper	90%	fibrous glass	ND	None
07-B	20' SW of 200,75	Black Roofing, Felt Paper	90%	fibrous glass	ND	None
07-C	20' SW of 200,75	Black Roofing, Felt Paper	90%	fibrous glass	ND	None
08-A	20' SW of 200,75	Black Roofing, Asphalt Based Built-Up		- - -	3%	Chrysotile
08-B	20' SW of 200,75	- -		- -	NA/PS	- -
08-C	20' SW of 200,75	- -		- -	NA/PS	- -
09-A	By 0,100	Black Conduit		- - -	ND	None
09-B	By 0,100	Black Conduit		- - -	ND	None
09-C	By 0,100	Black Conduit		- - -	ND	None

ND - asbestos was not detected
Trace - asbestos was observed at level of 1% or less - This is the reporting limit
NA/PS - Not Analyzed / Positive Stop
SNA - Sample Not Analyzed- See Chain of Custody for details
Notes: Asbestos-Containing Material (ACM) is any material containing more than 1% asbestos

Note: Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. In those cases, EPA recommends, and certain states (e.g. NY) require, that negative results be confirmed by quantitative transmission electron microscopy.

The Laboratory at TRC follows the EPA's Interim Method for the Determination of Asbestos in Bulk Insulation 1982 (EPA 600/M4-82-020) Bulk Analysis Code 18/A01 and the EPA recommended Method for the Determination of Asbestos in Bulk Building Materials July 1993, R.L. Perkins and B.W. Harvey, (EPA/600/R-93/116) Bulk Analysis Code 18/A03, which utilize polarized light microscopy (PLM). Our analysts have completed an accredited course in asbestos identification. TRC's Laboratory is accredited under the National Voluntary Laboratory Accreditation Program (NVLAP), for Bulk Asbestos Fiber Analysis, NVLAP Code 18/A01, effective through June 30, 2023. TRC is accredited by the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC in the Industrial Hygiene Program (IHLAP) for PLM effective through October 1, 2024. Asbestos content is determined by visual estimate unless otherwise indicated. Quality Control is performed in-house on at least 10% of samples and QC data related to the samples is available upon written request from client.

Analyzed by: Joel Corso, Laboratory Analyst

Reviewed by: Kathleen Williamson, Laboratory Manager

Date Issued 09/22/2022

600158

TRC

650 Suffolk Street Suite 200 Lowell MA 01854

ASBESTOS BULK SAMPLE CHAIN OF CUSTODY FORM

Client:
Southborough Conservation Commission

Project Number:
408108.2022.0000

Sampling Technician:
Brian Burk
Mobile App: BSI - HAZMAT Survey

Project Name:
Breakneck Hill
Breakneck Hill
60 Breakneck Hill Rd Southborough Ma

Tracking Number:

Requested TAT:
3 DAY

ASBESTOS BULK SAMPLE INFORMATION

Sample Date	Sample Identification	Material Description	Homogeneous Area	Sample Location	Lab Identification (Lab Use Only)
09/14/22	01-A	Cement Board, Grey	200,150 Surface , 100,180 Truck	100,180 truck	
09/14/22	01-B	Cement Board, Grey	200,150 Surface , 100,180 Truck	100,180 truck	
09/14/22	01-C	Cement Board, Grey	200,150 Surface , 100,180 Truck	200,150 surface	
09/14/22	02-A	Boiler Brick, Tan	N/A	100,180 offset 3.5' depth	
09/14/22	02-B	Boiler Brick, Tan	N/A	100,180 offset 3.5' depth	
09/14/22	02-C	Boiler Brick, Tan	N/A	100,180 offset 3.5' depth	
09/14/22	03-A	Roofing, Asphalt Based Built-Up, Black	200,150 Surface	200,150 surface	
09/14/22	03-B	Roofing, Asphalt Based Built-Up, Black	200,150 Surface	200,150 surface	
09/14/22	03-C	Roofing, Asphalt Based Built-Up, Black	200,150 Surface	200,150 surface	
09/14/22	04-A	Roofing, Felt Paper, Black	200,150 Surface	200,150 surface	
09/14/22	04-B	Roofing, Felt Paper, Black	200,150 Surface	200,150 surface	
09/14/22	04-C	Roofing, Felt Paper, Black	200,150 Surface	200,150 surface	
09/15/22	05-A	Insulation, Unknown , Grey	100,180 By Truck	100,180 by truck	
09/15/22	05-B	Insulation, Unknown , Grey	100,180 By Truck	100,180 by truck	
09/15/22	05-C	Insulation, Unknown , Grey	100,180 By Truck	100,180 by truck	

60158

09/15/22	06-A	Wire Insulation, Red	25' SE 100,100	By 100,100	
09/15/22	06-B	Wire Insulation, Red	25' SE 100,100	By 100,100	
09/15/22	06-C	Wire Insulation, Red	25' SE 100,100	By 100,100	
09/15/22	07-A	Roofing, Felt Paper, Black	20' SW Of 200,75	20' SW of 200,75	
09/15/22	07-B	Roofing, Felt Paper, Black	20' SW Of 200,75	20' SW of 200,75	
09/15/22	07-C	Roofing, Felt Paper, Black	20' SW Of 200,75	20' SW of 200,75	
09/15/22	08-A	Roofing, Asphalt Based Built-Up, Black	20' SW Of 200,75	20' SW of 200,75	
09/15/22	08-B	Roofing, Asphalt Based Built-Up, Black	20' SW Of 200,75	20' SW of 200,75	
09/15/22	08-C	Roofing, Asphalt Based Built-Up, Black	20' SW Of 200,75	20' SW of 200,75	
09/16/22	09-A	Conduit , Black	By 0,100	By 0,100	
09/16/22	09-B	Conduit , Black	By 0,100	By 0,100	
09/16/22	09-C	Conduit , Black	By 0,100	By 0,100	

Special Instruction to Laboratory:
N/A

CHAIN OF CUSTODY INFORMATION AND LABORATORY INFORMATION

Relinquished By:	**Date and Time**	**Received By:**	**Date and Time**
1. (Print): Brian Burk	09/18/2022 3:37 pm America/New_York	K Williamson	9/20/22 1100
. (Sign):			
II. (Print):			
(Sign):			

Email Results To:
bdburk@trccompanies.com

Analytical Method:
PLM EPA 600/R-93/116

Lab Comments:

Appendix D

Limited Asbestos Survey Summary Report

LIMITED ASBESTOS SURVEY SUMMARY REPORT

Solid Waste Assessment

Breakneck Hill Farm Dumping Site
Breakneck Hill Road,
Southborough, Massachusetts

Prepared for:

Town of Southborough Conservation Commission

Report Date: October 5, 2022

Prepared By:

650 Suffolk Street Suite 200 Lowell MA 01854

TRC Project: 408108.2022.0000

TABLE OF CONTENTS

Appendices

1.0 Executive Summary

The Town of Southborough (the "Town") Conservation Commission contracted TRC Environmental Corporation (TRC) to conduct an asbestos survey at the Breakneck Hill Farm Dumping Site located at Breakneck Hill Road in Southborough Massachusetts (the "Site"). The purpose of the asbestos survey was to identify and sample potential asbestos-containing materials (ACM) during solid waste assessment activities, which were performed throughout the Town-owned portion of the Site only. The Site is located on Town-owned conservation land and extends to the west onto an abutting residential property identified as 60 Breakneck Hill Road. Access to 60 Breakneck Hill Road was not provided during the asbestos survey. The ACM survey was conducted in conjunction with the solid waste assessment between September 14, 2022 and September 16, 2022 by Mr. Brian Burk, Commonwealth of Massachusetts Department of Labor Standards certified Asbestos Inspector No. 900513.

Asbestos Containing Materials

ACM are defined by the Occupational Safety and Health Administration (OSHA), the Environmental Protection Agency (EPA), and the Massachusetts Department of Environmental Protection as any material containing more than one percent (>1.0%) asbestos when analyzed using Polarized Light Microscopy (PLM) methods. Laboratory analysis confirmed that asbestos was present within some of the bulk samples collected from the Town-owned portion of the Site at concentrations greater than 1.0%. Accordingly, ACM were identified at the Town-owned portion of the Site (refer to Section 4.1.2 for more details).

Any materials uncovered during excavation or other site activities that are not addressed in this inspection report, or suspect ACM identified in the future, must be sampled by an accredited asbestos inspector prior to any disturbance, or the suspect materials must be treated as ACM.

2.0 Introduction

The Town of Southborough Conservation Commission contracted TRC to conduct an asbestos survey at the Breakneck Hill Farm Dumping Site located at Breakneck Hill Road in Southborough, Massachusetts. The purpose of the survey was to identify and sample suspect ACM unearthed during test pitting activities and other surficial solid waste and debris present throughout the Town-owned portion of the Site. The ACM survey was performed between September 14, 2022 and September 16, 2022 by Mr. Brian Burk, Commonwealth of Massachusetts Department of Labor Standards certified Asbestos Inspector No. 900513.

3.0 Background

3.1 Site Description & History

The Site is located to the east/southeast of 48 Breakneck Hill Road in Southborough, Massachusetts. The Site is heavily vegetated and comprises approximately one acre. The Site is located on two separate tax parcels, Map 29, Lot 28A and Lot 36. The Town acquired Map 29, Lot 28A from Raymond Davis on June 20, 1980, which reportedly comprises approximately 87.66 acres and currently consists of conservation land. The area of dumping is located on the western-central portion of Map 29, Lot 28A, and the balance of the Site extends onto 60 Breakneck Hill Road (Map 29, Lot 36), a western adjoining property that currently is utilized for residential purposes. Refuse within the dump area has been documented to include (but not limited to) old

tires, machine parts, rusted 55-gallon drums, asphalt shingles, appliances, heavy equipment, broken ceramics, plastic objects, and general trash.

Prior to the Town's acquisition, Davco Farm occupied Map 29, Lot 28A. Mr. Davis, President of Davis Tractor Company, operated the Davco Farm. The farm was home to an apple and peach orchard, apiary and bee supply business, and a Belted Galloway cattle herd. Between approximately 1966 and 1980, the Site appears to have been used as dumping ground associated with the Davco Farm.

3.2 Purpose & Scope of Work

An asbestos survey was performed to determine if ACM are present throughout the Town-owned portion of the Breakneck Hill Farm Dumping Site. The survey was performed during a solid waste assessment, which was conducted by TRC between September 14, 2022 and September 16, 2022. TRC performed the asbestos survey throughout accessible areas of Site during solid waste assessment activities, which were performed to assess the horizontal and vertical extent of solid waste throughout the Site. Bulk samples of suspect ACM were collected and submitted for laboratory analysis to determine asbestos content. It should be noted that suspect ACM may be present in other areas throughout the Site that were not identified during the limited ACM survey, buried in the ground surface or in heavily overgrown or similarly inaccessible areas. Limitations are further discussed in Section 6.0.

3.3 Survey Procedures

The asbestos survey was performed using guidelines established by the EPA guidance document "Guidance for Controlling Asbestos-Containing Materials in Buildings" (EPA 5605-85/024), 40 CFR Part 61 National Emission Standards for Hazardous Air Pollutants (NESHAP), Paragraph 61.145, Standard for Demolition and Renovation, EPA AHERA 40 CFR 763 and OSHA 1926.1101 regulations.

A visual survey was conducted to identify the types, locations, and approximate quantities of ACM, presumed ACM (as defined in 29 CFR 1926.1101), and otherwise suspect ACM. Certain building and other materials present throughout the solid waste and debris were assessed as potential ACM. Where feasible, bulk samples of suspect ACM were collected in a random manner and submitted for laboratory analysis to determine asbestos content.

It should be noted that multiple bulk samples were collected from each homogenous area of suspect ACM observed. In accordance with U.S. EPA guidelines, multiple samples were collected from each homogenous area of suspect ACM. Note that if one or more samples within a homogenous area of suspect ACM are positive for asbestos, then all of the suspect ACM must be treated as ACM. During the survey, nine suspect materials were identified, and three samples were collected from each of the nine suspect materials for laboratory analysis, resulting in 27 total samples.

3.4 Analytical Methods

Sample analysis was performed by TRC's Industrial Hygiene Laboratory located in Windsor, Connecticut, using Polarized Light Microscopy with Dispersion Staining (PLM/DS) in accordance with the United States Environmental Protection Agency (US EPA) "Method for the Determination of Asbestos in Bulk Building Materials", EPA/600/R-93/116. The TRC laboratory is accredited

through the National Institute of Standards and Technology, National Voluntary Laboratory Accreditation Program (No. 101424-0). TRC's Massachusetts Analytical Laboratory certification number is AA000052. The laboratory bulk sample analysis report is provided as Appendix B.

4.0 Findings

4.1 Asbestos Containing Materials

Laboratory analytical results indicated that the following materials were positive for asbestos at concentrations greater than 1%:

Asbestos Positive Materials Breakneck Hill Farm Dumping Site Southborough, Massachusetts					
Samples	**Material**	**Location**	**Percentage / Type**	**Approx. Quantity**	**Condition / Material Type / NESHAP Category**
01-A 01-B 01-C	Grey Cement Board	200,150 Surface , 100,180 Truck	20% Chrysotile	300 SF	Significantly Damaged/Misc.
03-A 03-B 03-C	Black Roofing Asphalt Based Built-Up	200,150 Surface	5% Chrysotile	200 SF	Significantly Damaged/Misc.
08-A 08-B 08-C	Black Roofing Asphalt Based Built-Up	20' SW of 200,75	3% Chrysotile	1800 SF	Significantly Damaged/Misc.

4.2 Non-Asbestos Containing Materials

Laboratory results of the bulk sampling indicated that none of the following sampled materials contained detectable levels of asbestos:

Asbestos Negative Materials Breakneck Hill Farm Dumping Site Southborough, Massachusetts			
Samples	**Material Description**	**Material Location(s)**	**Estimated Quantity**
02-A 02-B 02-C	Tan Boiler Brick	86,184 Test Pit	N/A
04-A 04-B 04-C	Black Roofing Felt Paper	200,150 Surface	200 SF
05-A 05-B 05-C	Grey Insulation Unknown	100,180 By Truck	10 SF
06-A 06-B 06-C	Red Wire Insulation	25' SE 100,100	10 LF
07-A 07-B 07-C	Black Roofing Felt Paper	20' SW of 200,75	1800 SF
09-A 09-B 09-C	Black Conduit	By 0,100	5 LF

5.0 Conclusions & Recommendations

Results of laboratory analysis confirmed asbestos was identified within three of the suspect materials, as summarized in Section 4.1. The ACM were found to be in poor condition at the time of the inspection. The identified ACM should be securely covered with polyethylene sheeting to restrict access.

In addition, the Masschusetts Department of Environmental Protection (MassDEP) should be notified that ACM have been identified at the Site. Additional assessment activities may be warranted based on MassDEP's determination. Following completion of additional ACM assessment activities (if any), a Massachusetts DLS-certified Project Designer should prepare a work plan for the removal of all identified ACM or assumed ACM that may be disturbed as part of the future Site cleanup plan. Removal of ACM should be performed by a Massachusetts DLS

licensed asbestos abatement contractor, and should be handled, stored, and disposed of according to all local, state, and federal regulations.

Any materials uncovered during additional investigation, excavation, or other site activities that are not addressed in this inspection report, or are considered to be uncharacterized, suspect ACM, must be sampled by an accredited asbestos inspector prior to any disturbance or treated as ACM.

6.0 Limitations

Services performed by TRC were conducted in a manner consistent with "state of the industry" practices, recognizing that even the most comprehensive survey may not detect all suspect materials at the Site. Reasonable measures were taken to detect the presence of normally suspect materials within the survey area; however, other materials present at the Site that are not normally considered to be suspect ACM could also contain asbestos (although unlikely). In addition, other suspect materials could be buried beneath the ground surface that were not unearthed during the test pitting program, and the ground surface at the Site was covered with very dense vegetation, which prohibited a thorough evaluation of all solid waste and debris present throughout the Town-owned portion of the Site. Furthermore, access was not provided to the portion of the Site located on the abutting residential property. Accordingly, additional ACM could be present at the portion of the Site located on the abutting residential property. Given these limitations, TRC cannot act as an insurer or certify that other ACM not identified by the survey are not located at the Site. No expressed or implied representation or warranty is included in our report except that the services were performed within the limit of the scope of work authorized by the client and the encountered Site conditions. This report is not intended for, and may not be utilized as, a bidding document or as an abatement project specification document.

Sincerely,
TRC Environmental Corporation

Brian Burk
Environmental Scientist
MA DLS AI900513

Taylor Bevenour
Senior Environmental Engineer

LEGEND

- WF — LIMIT OF WETLANDS AND ASSOCIATED WETLAND FLAGS PLACED BY OTHERS
- —xD1— LATERAL EXTENT OF VISUALLY APPARENT DEBRIS AND ASSOCIATED DELINEATION FLAGS PLACED IN JUNE 2021
- (0,0) COMPLETED TEST PIT LOCATION CONTAINING SOLID WASTE & COORDINATES (FEET FROM ORIGIN)
- (0,0) COMPLETED TEST PIT LOCATION NOT CONTAINING SOLID WASTE & COORDINATES (FEET FROM ORIGIN)
- 01-A ASBESTOS-CONTAINING MATERIAL SURVEY SAMPLE LOCATION THAT CONTAINED ASBESTOS
- 01-A ASBESTOS-CONTAINING MATERIAL SURVEY SAMPLE LOCATION THAT DID NOT CONTAIN ASBESTOS

NOTES:

FEATURES INCLUDING WETLAND AND DEBRIS DELINEATION FLAGS WERE OBTAINED FROM *EXISTING CONDITIONS PLAN OFF BREAKNECK HILL ROAD, SOUTHBOROUGH, MA* PREPARED BY LAND PLANNING, INC. DATED 6/23/2021

TEST PITS WERE COMPLETED BETWEEN SEPTEMBER 14, 2022 AND SEPTEMBER 16, 2022 USING A TRACK-MOUNTED MINI-EXCAVATOR. MATERIAL EXCAVATED DURING THE TEST PITTING PROGRAM WAS BE UTILIZED AS BACKFILL AND RETURNED TO A SIMILAR LOCATION AND DEPTH FROM WHERE IT ORIGINATED

TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROLS WERE INSTALLED IN THE VICINITY OF EACH TEST PIT LOCATION, AS NECESSARY, PRIOR TO ADVANCEMENT

0 30 60 90 120
SCALE IN FEET
1 in = 30 ft

NO.	BY	DATE	REVISION	APP'D.

TITLE: **TEST PIT & SAMPLE LOCATION PLAN**

PROJECT: **BREAKNECK HILL FARM DUMPING SITE**
SOUTHBOROUGH, MA 01772

DRAWN BY:	TB	PROJ. NO.:	408108.2023.0000
CHECKED BY:	LA	**FIGURE 4**	
APPROVED BY:	TB		
DATE:	FEBRUARY 2023		

TRC
WANNALANCIT MILLS
650 SUFFOLK STREET
LOWELL, MA 01854
(978) 970 5600

FILE NO.: Figure 4 - Test Pit & Sample Location Plan.dwg

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BREAKNECK HILL BREAKNECK HILL – SUSPECT ASBESTOS CONTAINING MATERIALS PHOTOGRAPHIC LOG

Sample Numbers: 01-A, 01-B, 01-C **Material Description:** Cement Board **Material Color:** Grey **Accessible Material:** Accessible **Reason Inaccessible:** N/A **Asbestos Detected:** Positive **Asbestos Type:** 20% Chrysotile **Homogeneous Area:** 200,150 Surface , 100,180 Truck **Total Approximate Quantity:** 300 SF **Condition:** N/A **Material Type:** N/A **NESHAP Category:** N/A **Notes:** Not Applicable	
Sample Numbers: 02-A, 02-B, 02-C **Material Description:** Boiler Brick **Material Color:** Tan **Accessible Material:** Accessible **Reason Inaccessible:** N/A **Asbestos Detected:** Negative **Asbestos Type:** No Asbestos Detected **Homogeneous Area:** **Total Approximate Quantity:** TBD **Condition:** N/A **Material Type:** N/A **NESHAP Category:** N/A **Notes:** Not Applicable	

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BREAKNECK HILL BREAKNECK HILL – SUSPECT ASBESTOS CONTAINING MATERIALS PHOTOGRAPHIC LOG

Sample Numbers: 03-A, 03-B, 03-C **Material Description:** Roofing Asphalt Based Built-Up **Material Color:** Black **Accessible Material:** Accessible **Reason Inaccessible:** N/A **Asbestos Detected:** Positive **Asbestos Type:** 5% Chrysotile **Homogeneous Area:** 200,150 Surface **Total Approximate Quantity:** 200 SF **Condition:** N/A **Material Type:** N/A **NESHAP Category:** N/A **Notes:** Not Applicable	
Sample Numbers: 04-A, 04-B, 04-C **Material Description:** Roofing Felt Paper **Material Color:** Black **Accessible Material:** Accessible **Reason Inaccessible:** N/A **Asbestos Detected:** Negative **Asbestos Type:** No Asbestos Detected **Homogeneous Area:** 200,150 Surface **Total Approximate Quantity:** 200 SF **Condition:** N/A **Material Type:** N/A **NESHAP Category:** N/A **Notes:** Not Applicable	

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BREAKNECK HILL BREAKNECK HILL – SUSPECT ASBESTOS CONTAINING MATERIALS PHOTOGRAPHIC LOG

Sample Numbers: 05-A, 05-B, 05-C **Material Description:** Insulation Unknown **Material Color:** Grey **Accessible Material:** Accessible **Reason Inaccessible:** N/A **Asbestos Detected:** Negative **Asbestos Type:** No Asbestos Detected **Homogeneous Area:** 100,180 By Truck **Total Approximate Quantity:** 10 SF **Condition:** N/A **Material Type:** N/A **NESHAP Category:** N/A **Notes:** Not Applicable	
Sample Numbers: 06-A, 06-B, 06-C **Material Description:** Wire Insulation **Material Color:** Red **Accessible Material:** Accessible **Reason Inaccessible:** N/A **Asbestos Detected:** Negative **Asbestos Type:** No Asbestos Detected **Homogeneous Area:** 25' SE 100,100 **Total Approximate Quantity:** 10 LF **Condition:** N/A **Material Type:** N/A **NESHAP Category:** N/A **Notes:** Not Applicable	

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BREAKNECK HILL BREAKNECK HILL – SUSPECT ASBESTOS CONTAINING MATERIALS PHOTOGRAPHIC LOG

Sample Numbers: 07-A, 07-B, 07-C **Material Description:** Roofing Felt Paper **Material Color:** Black **Accessible Material:** Accessible **Reason Inaccessible:** N/A **Asbestos Detected:** Negative **Asbestos Type:** No Asbestos Detected **Homogeneous Area:** 20' SW Of 200,75 **Total Approximate Quantity:** 1800 SF **Condition:** N/A **Material Type:** N/A **NESHAP Category:** N/A **Notes:** Not Applicable	
Sample Numbers: 08-A, 08-B, 08-C **Material Description:** Roofing Asphalt Based Built-Up **Material Color:** Black **Accessible Material:** Accessible **Reason Inaccessible:** N/A **Asbestos Detected:** Positive **Asbestos Type:** 3% Chrysotile **Homogeneous Area:** 20' SW Of 200,75 **Total Approximate Quantity:** 1800 SF **Condition:** N/A **Material Type:** N/A **NESHAP Category:** N/A **Notes:** Not Applicable	

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BREAKNECK HILL BREAKNECK HILL – SUSPECT ASBESTOS CONTAINING MATERIALS PHOTOGRAPHIC LOG

Sample Numbers: 09-A, 09-B, 09-C
Material Description: Conduit
Material Color: Black
Accessible Material: Accessible
Reason Inaccessible: N/A
Asbestos Detected: Negative
Asbestos Type: No Asbestos Detected
Homogeneous Area: By 0,100
Total Approximate Quantity: 5 LF
Condition: N/A
Material Type: N/A
NESHAP Category: N/A
Notes: Not Applicable

Industrial Hygiene Laboratory
21 Griffin Road North
Windsor, CT 06095
(860) 298-6308

BULK ASBESTOS ANALYSIS REPORT

CLIENT: Town of Southborough

Lab Log #: 0060158
Project #: 408108.2022.0000
Date Received: 09/20/2022
Date Analyzed: 09/21/2022

Site: Breakneck Hill, 60 Breakneck Hill Road, Southborough, MA

POLARIZED LIGHT MICROSCOPY by EPA 600/R-93/116

Sample No.	Sample Location	Homogeneous Material Description	Other Matrix Materials		Asbestos %	Asbestos Type
01-A	100,180 truck	Grey Cement Board		- - -	20%	Chrysotile
01-B	100,180 truck	- -		- -	NA/PS	- -
01-C	200,150 surface	- -		- -	NA/PS	- -
02-A	100,180 offset 3.5' depth	Tan Boiler Brick		- - -	ND	None
02-B	100,180 offset 3.5' depth	Tan Boiler Brick		- - -	ND	None
02-C	100,180 offset 3.5' depth	Tan Boiler Brick		- - -	ND	None
03-A	200,150 surface	Black Roofing, Asphalt Based Built-Up		- - -	5%	Chrysotile
03-B	200,150 surface	- -		- -	NA/PS	- -
03-C	200,150 surface	- -		- -	NA/PS	- -
04-A	200,150 surface	Black Roofing, Felt Paper		- - -	ND	None
04-B	200,150 surface	Black Roofing, Felt Paper		- - -	ND	None
04-C	200,150 surface	Black Roofing, Felt Paper		- - -	ND	None
05-A	100,180 by truck	Grey Insulation, Unknown	95%	mineral wool	ND	None
05-B	100,180 by truck	Grey Insulation, Unknown	95%	mineral wool	ND	None
05-C	100,180 by truck	Grey Insulation, Unknown	95%	mineral wool	ND	None
06-A	By 100,100	Red/Black Wire Insulation		- - -	ND	None
06-B	By 100,100	Red/Black Wire Insulation		- - -	ND	None

Industrial Hygiene Laboratory
21 Griffin Road North
Windsor, CT 06095
(860) 298-6308

POLARIZED LIGHT MICROSCOPY by EPA 600/R-93/116

Sample No.	Sample Location	Homogeneous Material Description	Other Matrix Materials		Asbestos %	Asbestos Type
06-C	By 100,100	Red/Black Wire Insulation		- - -	ND	None
07-A	20' SW of 200,75	Black Roofing, Felt Paper	90%	fibrous glass	ND	None
07-B	20' SW of 200,75	Black Roofing, Felt Paper	90%	fibrous glass	ND	None
07-C	20' SW of 200,75	Black Roofing, Felt Paper	90%	fibrous glass	ND	None
08-A	20' SW of 200,75	Black Roofing, Asphalt Based Built-Up		- - -	3%	Chrysotile
08-B	20' SW of 200,75	- -		- -	NA/PS	- -
08-C	20' SW of 200,75	- -		- -	NA/PS	- -
09-A	By 0,100	Black Conduit		- - -	ND	None
09-B	By 0,100	Black Conduit		- - -	ND	None
09-C	By 0,100	Black Conduit		- - -	ND	None

ND - asbestos was not detected
Trace - asbestos was observed at level of 1% or less - This is the reporting limit
NA/PS - Not Analyzed / Positive Stop
SNA - Sample Not Analyzed- See Chain of Custody for details
Notes: Asbestos-Containing Material (ACM) is any material containing more than 1% asbestos

Note: Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. In those cases, EPA recommends, and certain states (e.g. NY) require, that negative results be confirmed by quantitative transmission electron microscopy.

The Laboratory at TRC follows the EPA's Interim Method for the Determination of Asbestos in Bulk Insulation 1982 (EPA 600/M4-82-020) Bulk Analysis Code 18/A01 and the EPA recommended Method for the Determination of Asbestos in Bulk Building Materials July 1993, R.L. Perkins and B.W. Harvey, (EPA/600/R-93/116) Bulk Analysis Code 18/A03, which utilize polarized light microscopy (PLM). Our analysts have completed an accredited course in asbestos identification. TRC's Laboratory is accredited under the National Voluntary Laboratory Accreditation Program (NVLAP), for Bulk Asbestos Fiber Analysis, NVLAP Code 18/A01, effective through June 30, 2023. TRC is accredited by the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC in the Industrial Hygiene Program (IHLAP) for PLM effective through October 1, 2024. Asbestos content is determined by visual estimate unless otherwise indicated. Quality Control is performed in-house on at least 10% of samples and QC data related to the samples is available upon written request from client.

Analyzed by: Joel Corso, Laboratory Analyst

Reviewed by: Kathleen Williamson, Laboratory Manager

Date Issued 09/22/2022

600158

TRC

650 Suffolk Street Suite 200 Lowell MA 01854

ASBESTOS BULK SAMPLE CHAIN OF CUSTODY FORM

Client:
Southborough Conservation Commission

Project Number:
408108.2022.0000

Sampling Technician:
Brian Burk
Mobile App: BSI - HAZMAT Survey

Project Name:
Breakneck Hill
Breakneck Hill
60 Breakneck Hill Rd Southborough Ma

Tracking Number:

Requested TAT:
3 DAY

ASBESTOS BULK SAMPLE INFORMATION

Sample Date	Sample Identification	Material Description	Homogeneous Area	Sample Location	Lab Identification (Lab Use Only)
09/14/22	01-A	Cement Board, Grey	200,150 Surface , 100,180 Truck	100,180 truck	
09/14/22	01-B	Cement Board, Grey	200,150 Surface , 100,180 Truck	100,180 truck	
09/14/22	01-C	Cement Board, Grey	200,150 Surface , 100,180 Truck	200,150 surface	
09/14/22	02-A	Boiler Brick, Tan	N/A	100,180 offset 3.5' depth	
09/14/22	02-B	Boiler Brick, Tan	N/A	100,180 offset 3.5' depth	
09/14/22	02-C	Boiler Brick, Tan	N/A	100,180 offset 3.5' depth	
09/14/22	03-A	Roofing, Asphalt Based Built-Up, Black	200,150 Surface	200,150 surface	
09/14/22	03-B	Roofing, Asphalt Based Built-Up, Black	200,150 Surface	200,150 surface	
09/14/22	03-C	Roofing, Asphalt Based Built-Up, Black	200,150 Surface	200,150 surface	
09/14/22	04-A	Roofing, Felt Paper, Black	200,150 Surface	200,150 surface	
09/14/22	04-B	Roofing, Felt Paper, Black	200,150 Surface	200,150 surface	
09/14/22	04-C	Roofing, Felt Paper, Black	200,150 Surface	200,150 surface	
09/15/22	05-A	Insulation, Unknown , Grey	100,180 By Truck	100,180 by truck	
09/15/22	05-B	Insulation, Unknown , Grey	100,180 By Truck	100,180 by truck	
09/15/22	05-C	Insulation, Unknown , Grey	100,180 By Truck	100,180 by truck	

60158

09/15/22	06-A	Wire Insulation, Red	25' SE 100,100	By 100,100	
09/15/22	06-B	Wire Insulation, Red	25' SE 100,100	By 100,100	
09/15/22	06-C	Wire Insulation, Red	25' SE 100,100	By 100,100	
09/15/22	07-A	Roofing, Felt Paper, Black	20' SW Of 200,75	20' SW of 200,75	
09/15/22	07-B	Roofing, Felt Paper, Black	20' SW Of 200,75	20' SW of 200,75	
09/15/22	07-C	Roofing, Felt Paper, Black	20' SW Of 200,75	20' SW of 200,75	
09/15/22	08-A	Roofing, Asphalt Based Built-Up, Black	20' SW Of 200,75	20' SW of 200,75	
09/15/22	08-B	Roofing, Asphalt Based Built-Up, Black	20' SW Of 200,75	20' SW of 200,75	
09/15/22	08-C	Roofing, Asphalt Based Built-Up, Black	20' SW Of 200,75	20' SW of 200,75	
09/16/22	09-A	Conduit , Black	By 0,100	By 0,100	
09/16/22	09-B	Conduit , Black	By 0,100	By 0,100	
09/16/22	09-C	Conduit , Black	By 0,100	By 0,100	

Special Instruction to Laboratory:
N/A

CHAIN OF CUSTODY INFORMATION AND LABORATORY INFORMATION

Relinquished By:	**Date and Time**	**Received By:**	**Date and Time**
1. (Print): Brian Burk	09/18/2022 3:37 pm America/New_York	K Williamson	9/20/22 1100
. (Sign):			
II. (Print):			
(Sign):			

Email Results To:
bdburk@trccompanies.com

Analytical Method:
PLM EPA 600/R-93/116

Lab Comments:

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DEPARTMENT OF LABOR STANDARDS

Michael Flanagan
Director

Asbestos Inspector

BRIAN BURK

Eff. Date 08/25/22
Exp. Date 08/25/23

AI900513

Member of C.O.N.E.S.

BOSR BOS

23

Appendix E

Non-Traditional Asbestos Abatement Work Plan
(To be completed)