Cleanup Plan
Breakneck Hill Farm Dumping Site

Breakneck Hill Road
Southborough, Massachusetts

April 2023

Prepared For:

Town of Southborough
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1.0 Introduction

On behalf of the Town of Southborough (the "Town"), TRC Environmental Corporation (TRC) has prepared this *Cleanup Plan* for the Town-owned portion of the Breakneck Hill Farm Dumping Site (the "Site") located at Breakneck Hill Road in Southborough, Massachusetts. The term "Site" hereinafter refers to the Town-owned portion of the Breakneck Hill Farm dumping area only.

During a June 2021 reconnaissance, evidence of surficial solid waste and debris was observed throughout the western portion of Map 29, Lot 28A (Breakneck Hill Road; owned by the Town of Southborough) and a portion of Map 29, Lot 36 (60 Breakneck Hill Road; a residential property owned by Alexis Fallon). Surficial solid waste/debris was documented to be scattered throughout an approximate 1-acre area. Accordingly, solid waste assessment activities were proposed for the Site and a portion of the adjoining residential property in the May 2022 *Final Assessment Plan*, which was approved by the Massachusetts Department of Environmental Protection (MassDEP) in June 2022. Between February 2022 and January 2023, the Town engaged the abutting residential property owner in access negotiations to implement the proposed assessment activities for a portion of 60 Breakneck Hill Road; however, the Town and the abutting residential property owner were unable to come to terms for access. As a result, solid waste assessment activities were only able to be performed at the Site and not the abutting residential property.

In September 2022, solid waste assessment activities were performed at the Site in accordance with the May 2022 *Final Assessment Plan*. TRC's September 2022 assessment program included test pit installation, documentation of lithology and the presence of and types of solid waste and debris, evaluation of the presence of contamination by screening soil samples with a photoionization detector (PID) and recording visual and olfactory observations, and completion of a limited asbestos containing materials (ACM) inspection. The primary goal of the solid waste assessment was to further evaluate the nature and extent of surficial and buried solid waste at the Site. In addition, assessment activities were performed to determine if oil and/or hazardous materials (OHM) including ACM were present at the Site.

TRC understands that the Town is required to select contractors to facilitate cleanup at the Site via a bidding process and funding for the cleanup operation will be available beginning in July 2023. The term contractor(s) hereinafter include construction, earth working and landscaping professionals, tree and brush removal specialists, laborers, environmental consultants, certified asbestos abatement professionals and project designers, and professional engineers. TRC understands that consolidation and capping of waste is not considered to be a corrective action option for the Site. Accordingly, this plan outlines proposed methods, procedures, and waste removal actions to be performed by the selected contractor(s) to remove all waste materials from the Site in accordance with the February 9, 2023 Administrative Consent Order (ACO) established between the Town and MassDEP. Specifically, this plan includes the following: methods and procedures to segregate and stockpile solid waste; measures to protect adjacent wetland

resource areas from adverse impacts during cleanup efforts; identification of proposed disposal and/or recycling facilities to receive solid waste and debris; an anticipated schedule for cleanup operations; and written approval from the Southborough Conservation Commission to perform work as proposed in this *Cleanup Plan* within areas of the Site under its jurisdiction.

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: Prohibition on Open Dumps and Dumping Grounds and Illegal Disposal of Solid Waste, which states that "*No person shall establish, construct, operate or maintain a dumping ground or operate or maintain a landfill in Massachusetts in such manner as to constitute an open dump.*" Accordingly, the Site is considered to be an illegal dumping ground, and 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 ACO with MassDEP, and a work plan was developed to outline proposed solid waste assessment activities to be performed at the Site. On June 8, 2022, MassDEP approved the May 2022 *Final Assessment* Plan via email.

Between February 2022 and January 2023, the Town engaged the abutting residential property owner in access negotiations; however, the Town and the abutting residential property owner were unable to come to terms for access. Due to access issues with the abutting residential property owner, the Town and MassDEP agreed to a new ACO dated February 9, 2023, which supersedes the original ACO. In addition, the Town submitted a *Revised Final Assessment Plan* and a *Revised Solid Waste Assessment Summary* to MassDEP in February 2023 for the Site, which excludes the abutting residential property; these revised reports were approved by MassDEP on March 13, 2023.

3.0 Previous Assessment & Investigation Activities

The following sections summarize assessment activities previously performed at the Site.

3.1 Wetland Delineation & Aerial Photograph Review

In 2020, the Town of Southborough retained Lucas Environmental, LLC (LE) to perform a detailed wetland investigation in the vicinity of the Site. The detailed wetland investigation included a field survey and a review of aerial photographs to assess potential impacts to wetland areas from dumping. LE concluded that the dumping area is partially located on Town-owned conservation land and extends onto the abutting 60 Breakneck Hill Road property. The solid waste was documented to be located immediately adjacent to wetland resource areas. Due to the proximity of wetland resource areas to the solid waste, LE indicated that state, local, and/or federal wetland permits would be required to facilitate remedial actions. The memorandum prepared by LE that summarizes the wetland delineation and aerial photograph review is provided as **Appendix A**.

3.2 Draft Site Assessment Report

The October 20, 2020 *Draft Site Assessment Report* (email) was prepared by Mr. Paul Pisinski, part-time Public Health Director and Board of Health Agent for the Town. According to the email, Mr. Pisinski visited the Site on September 29, 2020. Following the Site visit, Mr. Pisinski estimated that the solid waste was distributed throughout an approximate 400 feet by 800 feet oval-shaped area located on Town-owned property and the western abutting 60 Breakneck Hill Road property; however, Mr. Pisinski indicated that a survey would need to be conducted to provide an accurate estimate and identify pertinent property lines. Mr. Pisinski stated that the Site was overgrown with brambles, vines, trees, shrubs and weeds, and several void spaces were observed throughout the Site.

The email also references a Site visit performed in 2005 or 2006 by Mr. Pisinski and Mr. Philip Mauch, a former Board of Health Chairman. In the approximately 15-year period between Site visits, the Site reportedly became significantly more overgrown with vegetation. Solid waste at the Site was documented to consist of "old tires, abandoned cars, trucks, farm vehicles and farm equipment, broken metal and plastic pails, broken metal parts, metal and wooden cases, broken glass windows and broken glass bottles, ceramics, demolition debris, discarded furniture, bookcases, desks, and all manner of household trash".

According to the email, the Conservation Commission hired consultants to document conditions at the Site. Mr. Pisinski indicated that an LSP previously collected surface "leachate" samples at the Site. According to Mr. Pisinski, the work performed by the hired consultants "did not detect any hazardous or toxic public health harm". Leachate analysis by others did not reveal a public health threat at the time samples were collected;

however, Mr. Pisinski acknowledged that the partially buried and exposed solid waste at the Site is a public safety concern.

To address the dumping ground, Mr. Pisinski recommended the following actions to the Town: hire a Massachusetts Registered Land Surveyor to perform a survey; hire a tree and brush removal company to clear vegetation from the Site; hire a company to remove the solid waste and restore the Site to the satisfaction of the Conservation Commission and MassDEP. The October 20, 2020 *Draft Site Assessment Report* (email) prepared by Mr. Paul Pisinski is provided as **Appendix B**.

3.3 Land Survey

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, 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**.

3.4 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 3.4.1 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. Test pit locations are depicted on **Figure 3**, and the test pit logs are included as **Appendix E**. A photographic log is also provided as **Appendix C**.

3.4.1 Soil Screening & Sampling

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 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**.

3.4.2 Drums and Containers

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 release(s) stemming from the empty containers was not observed.

3.4.3 Leachate, Sheens & OHM Seeps

Leachate, sheens and/or OHM seeps were not encountered at the Site during the test pitting program.

3.5 ACM Survey

In conjunction with the September 2022 test pitting program, Mr. Brian Burk (Commonwealth of Massachusetts Department of Labor Standards [DLS] certified Asbestos Inspector No. 900513) performed a limited ACM survey on the Town-owned portion of the Site. Specifically, Mr. Burk 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 F**. In addition, the *Limited Asbestos Survey Summary Report* is provided as **Appendix G**.

4.0 Cleanup Plan

In accordance with the February 9, 2023 ACO established between the Town and MassDEP, this *Cleanup Plan* includes the following components: methods and procedures to segregate and stockpile solid waste; measures to protect adjacent wetland resource areas from adverse impacts during cleanup efforts; identification of proposed disposal and/or recycling facilities; an anticipated schedule for cleanup operations; and written approval from the Southborough Conservation Commission to perform work as proposed in this *Cleanup Plan* within areas of the Site under its jurisdiction.

TRC understands that the Town will be required to select contractors to facilitate cleanup at the Site via a bidding process and funding for the cleanup operation will be available beginning in July 2023. Contractors include construction, earth working and landscaping professionals, tree and brush removal specialists, laborers, environmental consultants, certified asbestos abatement professionals and project designers, and professional engineers. The following sections outline proposed work to be completed by the selected contractor(s) including Site preparation, waste removal, and restoration activities.

4.1 Preparation for Site Cleanup

Prior to initiating waste removal actions at the Site, the selected contractor(s) shall prepare the submittals and obtain the permits specified in Section 4.1.1 and perform the field activities specified in Section 4.1.2 to prepare for Site cleanup.

4.1.1 Permits & Submittals

The following sections describe submittals that must be prepared and submitted to the Town's engineer and/or appropriate environmental professional for review, comment, and approval and include permits that are anticipated to be required to facilitate Site cleanup. The selected contractor(s) shall obtain and adhere to all local, state, and federal permits required to excavate and remove all waste materials from the Site.

4.1.1.1 Wetlands Notice of Intent

The Site is located within wetland resource areas including Bordering Vegetated Wetlands (BVW) and associated buffer zones. As a result, the selected contractor shall 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 activities at the Site. Following completion and acceptance of the NOI by MassDEP and the Town, the contractor(s) shall comply with all requirements specified in the Order of Conditions that will be issued for the project.

4.1.1.2 Construction General Permit, NOI & Stormwater Pollution Prevention Plan

The area of disturbance associated with cleanup is anticipated to be greater than one acre. As a result, the selected contractor(s) shall obtain a Construction General Permit

(CGP) for stormwater discharges related to construction at the Site. In accordance with United States Environmental Protection Agency (EPA) requirements, the contractor shall perform the following activities:

- complete and submit a NOI via the National Pollutant Discharge Elimination System (NPDES) eReporting Tool;
- develop a Stormwater Pollution Prevention Plan (SWPPP) and make appropriate revisions to the SWPPP as necessary throughout the duration of the project;
- install and maintain adequate erosion and sediment controls;
- implement pollution prevention practices;
- perform required inspection activities to confirm compliance with the CGP (inspection activities need to be performed by a qualified person as defined by EPA);
- conduct routine maintenance and corrective action activities as necessary;
- document inspections performed during the project;
- comply with turbidity monitoring requirements (if applicable);
- and comply with other state, tribal, and/or other permit requirements listed in Part 9 of the CGP.

4.1.1.3 Health & Safety Protocols

The selected contractor(s) shall develop a Site-specific Health and Safety Plan (HASP) to be followed by cleanup personnel for the duration of 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 shall 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.

4.1.1.4 Non-Traditional Asbestos Abatement Work Plan

Prior to abating ACM at the Site, the selected contractor(s) shall prepare and submit a Non-Traditional Asbestos Abatement Work Plan (NTWP) and associated application to MassDEP for approval. The NTWP must:

- 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 all supporting documentation.

4.1.1.5 Excavated Materials Management Plan

Prior to performing remedial excavation activities at the Site, the selected contractor(s) shall prepare an Excavated Materials Management Plan (EMMP), which shall address the following (at minimum):

- include the names, companies, contact information, and current licensure (as applicable) of key project personnel;
- specify procedures that will be used for field screening of excavated soil, solid waste/debris, and potential ACM;
- identify stockpile and staging areas;
- develop and summarize a material management system that will be utilized to track excavated materials from extraction to final disposal/recycling;
- outline decontamination procedures;
- identify each waste stream and associated disposal facility; and
- include an Environmental Monitoring Plan as an attachment (see Section 4.1.1.6 below).

If unexpected conditions are encountered during the cleanup operation, the EMMP shall be amended by the selected contractor(s).

4.1.1.6 Environmental Monitoring & Mitigation Plan

To minimize potential dust, vapor, and odor issues during cleanup of the Site, the selected contractor(s) shall prepare and implement an Environmental Monitoring and Mitigation Plan. The plan shall specify air quality monitoring protocols, equipment, and mitigation techniques to protect the public and environment during Site cleanup.

4.1.2 Field Work

The following sections describe field work that must be completed by the selected contractor(s) prior to initiating cleanup activities at the Site.

4.1.2.1 Erosion & Sediment Controls

The selected contractor(s) shall implement erosion and sediment controls to prevent impacts during land disturbance activities in accordance with Best Management Practices (BMPs), and local, state and federal requirements. The controls implemented for the project shall prevent erosion, control the movement of sediment, and stabilize exposed soil throughout the duration of cleanup. The selected contractor(s) shall install and maintain erosion and sediment controls per this *Cleanup Plan* and the forthcoming SWPPP that will be prepared for the project.

The selected contractor(s) shall install erosion and sediment controls at the Site and downgradient of the proposed construction pad and access road to protect wetland resource areas. TRC recommends that biodegradable erosion and sediment controls including biodegradable straw wattles or erosion control mix berms are used to reduce labor hours as non-biodegradable erosion and sediment controls and associated anchoring devices would need to be removed from the Site once final Site stabilization has been achieved. TRC estimates that approximately 2,000 linear feet of erosion and sediment controls will need to be installed for the project. Locations of proposed erosion and sediment control features are displayed on **Figure 4**.

To ensure proper function, the selected contractor(s) shall inspect the erosion and sediment controls on a routine basis and after each rainfall event to determine if maintenance or repair is required. If identified, the selected contractor(s) shall perform necessary maintenance and/or repair activities promptly. Sediment deposits (if any) exceeding one-half the height of the controls should be removed to ensure that the controls function as intended.

4.1.2.2 Site Access, Construction Entrances, & Staging Areas

The selected contractor(s) shall 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. The construction access road and pad shall be installed to provide adequate ingress and egress paths to the Site for construction vehicles and equipment and shall be maintained by the selected contractor(s) for the duration of the project. In addition to providing access to and from the Site, the construction access road and pad will also limit the amount of soil tracked off Site. The selected contractor shall coordinate with the Town to ensure that the proposed access path is acceptable. Alternative access paths may be required if the proposed access path is not able to accommodate project equipment.

The proposed construction access road covers approximately 9,100 square feet, extending from the community gardens to the east of the Site beyond the proposed construction pad. 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. 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**.

The selected contractor(s) shall designate an equipment and material staging area at the project Site. The proposed location of the equipment and material staging area is displayed on **Figure 4**.

4.1.2.3 Site Security

The selected contractor(s) shall 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. Access to the project Site should be restricted to project personnel for the duration of the cleanup operation. The proposed chain-link fencing is provided on **Figure 4**.

4.1.2.4 Land Clearing & Grubbing

To prepare the Site for cleanup, the selected contractor(s) shall perform land clearing and grubbing activities throughout an approximate 57,415 square foot area, as displayed on **Figure 5**. Excess vegetation that is not able to remain on Town-owned property (if any) or used by the municipality shall be transported off Site to an appropriate facility for management.

4.2 Cleanup Operations

The following sections outline cleanup operations that shall be performed by the selected contractor(s).

4.2.1 ACM Removal

During the September 2022 limited asbestos survey, ACM was identified on Site. Specifically, 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 were identified throughout the ground surface at the Site. ACM sample locations are displayed on **Figure 3**, and the *Limited Asbestos Survey Summary Report* is provided as **Appendix G**. The selected contractor(s) shall prepare NTWP as described in Section 4.1.1.5, which must be prepared by a DLS-certified Asbestos Project Designer.

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 during the initial stages of Site cleanup.

The potential exists that additional ACM, not identified during the September 2022 limited asbestos survey, is located throughout the Site. If suspect materials are encountered during the cleanup operation, additional asbestos sampling may be required. Protocols and procedures including potential ACM sampling, identification, removal, monitoring, and off-Site management will be specified in the forthcoming NTWP. Proposed disposal facilities capable of accepting ACM waste are provided in Section 4.2.6.

4.2.2 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.

The selected contractor(s) shall remove all solid waste from the dump area in accordance with this *Cleanup Plan* and the EMMP (described in Section 4.1.1.5) that will be prepared for the Site. Waste removal operations shall be performed by appropriately qualified professionals. 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. It should be noted that the solid waste/debris is not uniformly buried, and discrete pockets of buried solid waste/debris are likely present. In addition, the percentage of solid waste/debris 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. Accordingly, to reduce transportation, disposal, and Site restoration costs, the selected contractor(s) shall furnish and operate appropriate to separate excavated soil and cobbles from the apparent solid waste/debris, as feasible. Site soil and cobbles not exhibiting signs of contamination shall be staged on Site for reuse as backfill, grading material, and/or rip rap materials, as appropriate. In addition, the contractor shall separate ferrous and nonferrous metals and rubber tires from the excavated solid waste/debris. The anticipated extent of waste removal is displayed on **Figure 5**.

During solid waste removal activities, the selected contractor(s) shall at minimum:

- furnish and operate construction equipment capable of excavating, sorting, transporting, and stockpiling materials excavated from the Site;
- implement soil screening measures and perform soil sampling activities (as necessary);
- separate materials proposed for off-Site disposal/recycling from materials proposed for on Site reuse;
- securely stockpile materials proposed for off-Site disposal/recycling;
- stage and reuse soil, cobbles, and other non-waste materials for backfill/grading;
- provide management coordination;
- conduct environmental monitoring;
- support compliance efforts;

- screen excavated materials proposed for disposal with a PID and/or other field screening devices, as necessary, in accordance with the anticipated receiving facility's screening requirements;
- assess excavated material for visual and olfactory evidence of contamination;
- screen soil proposed for reuse at the Site with a PID referenced to benzene to evaluate for the presence of volatile organic compounds (VOCs);
- evaluate laboratory data;
- implement health and safety and environmental monitoring protocols;
- employ decontamination measures;
- perform characterization and other environmental sampling (as necessary);
- document all cleanup activities (excavation, waste management, material tacking, transportation, disposal, recycling, monitoring, sampling, etc.) and provide an accurate project schedule in a weekly summary report; and
- submit the weekly summary report to the Town and the Town's engineer and/or environmental professional for review.

Proposed solid waste receiving facilities are provided in Section 4.2.6.

4.2.3 Stockpiling & Material Management

The selected contractor(s) shall designate material stockpile and equipment staging areas. The selected contractor(s) shall 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 with residual soil, recyclable metals, rubber tires, ACM comingled with soil, and soil and other non-waste materials proposed for on-Site reuse. The selected contractor(s) shall develop and implement a material management system that will be utilized to track excavated materials from extraction to stockpile location to final disposal/recycling or on-Site reuse.

Stockpiles shall be managed to prevent erosion and infiltration. In addition, stockpiles shall be managed in a secure manner to prevent exposure to humans and the surrounding environment. When not in use and at the end of each workday, stockpiles shall be securely covered with 10 mil (at minimum) polyethylene sheeting. As necessary, stockpiles shall be placed on polyethylene sheeting to prevent potential impacts to underlying soil. In addition, erosion and sediment controls shall be installed downgradient of the stockpiles. Proposed stockpile and equipment/material staging areas are displayed on **Figure 5**.

4.2.4 Characterization Sampling

The selected contractor(s) shall perform all characterization sampling and analyses required by the selected disposal/recycling facility. 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. At a minimum, characterization samples shall consist of one grab sample and one composite sample, comprised of eight discrete samples representative of the stockpiled material. The characterization samples shall be analyzed for parameters specified in MassDEP's Policy #COMM-97-001 (Reuse & Disposal of Contaminated Soil at Massachusetts Landfills). Toxicity Characteristic Leaching Procedure (TCLP) analyses may also need to be performed depending on the material type, initial characterization analytical results, and requirements of the anticipated receiving facility.

4.2.5 Environmental Monitoring & Mitigation Techniques

Cleanup and earth working activities have the potential to generate dust. As a result, the contractor shall monitor air quality at the Site when there is a potential to generate dust to protect public health and the environment. Air monitoring shall 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, the contractor(s) shall implement wetting techniques to reduce dust generation; however, the use of wetting techniques should be limited to reduce runoff and disposal costs. Dust, vapor, and odor monitoring and mitigation protocols shall be included in the Environmental Monitoring and Mitigation Plan described in Section 4.1.1.6. In addition, the NTWP shall include monitoring and mitigation techniques specific to ACM abatement.

4.2.6 Transportation & Disposal of Waste

Following waste characterization, the selected contractor shall prepare shipping documents (material shipping records, manifest, bills of lading, or other documents) and disposal packages, as necessary, for the excavated materials proposed for off-Site management. The shipping documents and disposal packages shall be submitted to the Town's engineer and/or environmental professional for review and approval. Once approved by the Town's engineer and/or environmental professional, the shipping documents and disposal packages shall be submitted to appropriate local, state, and federal agencies and receiving facility for approval. Following approval by the intended receiving facility, the selected contractor(s) shall load and transport the characterized waste to the designated receiving facility.

Waste materials excavated from the Site, including solid waste/debris and ACM waste, will need to be disposed of at an out-of-state Subtitle D landfill. Proposed facilities capable of receiving the solid waste/debris and ACM waste include the following:

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

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.

The selected contractor(s) shall ultimately be responsible for identifying and selecting the appropriate receiving facilities.

4.2.7 Unexpected Conditions

The following sections summarize unexpected conditions that could be encountered during Site cleanup.

4.2.7.1 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 may be required. Protocols and procedures including potential ACM sampling, identification, removal, monitoring, and off-Site management will be specified in the forthcoming NTWP.

4.2.7.2 Environmental Contamination

If potential evidence of contamination is encountered during waste removal operations, the selected contractor(s) shall notify the Town and the Town's engineer and/or environmental professional for further assessment. Environmental media exhibiting evidence of contamination (i.e., visual/olfactory evidence and/or PID headspace readings exceeding 10 parts per million by volume referenced to benzene) shall be sampled, characterized, and managed separately from other excavated materials. Laboratory analytical results characterizing the suspect environmental media will 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 cleanup program, the Town will notify MassDEP in the appropriate time frame (i.e., 2-hours, 72-hours, and/or 120-days). Following further assessment and characterization of the suspect environmental media, management alternatives will be evaluated.

4.2.7.3 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 shall cease, and the cleanup contractor(s) shall notify the Town and the Town's engineer and/or environmental professional immediately for further evaluation.

4.2.7.4 Groundwater Management

Groundwater was not encountered during the September 2022 solid waste assessment, and groundwater is not anticipated to be encountered during the cleanup operations. Notwithstanding, if groundwater is encountered during the cleanup operation, it should be managed in accordance with local, state, and federal requirements. In addition, the EMMP shall be updated to include groundwater management protocols and procedures.

4.3 Site Restoration & Stabilization

Once cleanup activities have been completed, the Site (potentially including the wetland areas along the perimeter of the Site) will need to be restored and stabilized. The selected contractor(s) shall develop a Site Restoration Plan, providing details for final grading and stabilization of the project Site. The Site Restoration Plan shall consider the total volume of waste and soil that is removed from the Site as well as the direction of the proposed surface water runoff from the site. The selected Site restoration contractor shall implement the Site Restoration Plan. Excavated soil and other non-waste materials retained for on-Site reuse shall be used for backfilling, grading material, and/or riprap, as feasible. If warranted for Site grading purposes, clean imported fill material and topsoil may need to be imported to the Site to achieve desired grade. At minimum, the following specifications shall be implemented by the selected contractor(s) during Site restoration:

- fill materials shall be free of organic material;
- backfill shall be properly compacted in one-foot thick (maximum) lifts;
- slopes shall not be steeper than a 2:1 ratio (horizontal to vertical);
- the uppermost one foot of fill material on slopes shall be compacted to at least 85% of the maximum unit weight;
- topsoil shall be used where necessary to promote vegetative growth; and
- native seeding mixtures shall be used along with jute netting or anchored mulch to stabilize the surface at the Site.

The contractor(s) shall remove all equipment and materials from the Site once restoration and stabilization activities have been completed.

4.4 Cleanup Reporting

The selected contractor(s) shall document all 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. The selected contractor(s) shall provide the weekly summary report to the Town and the Town's engineer and/or environmental professional for review.

Following completion of cleanup and restoration activities at the Site, the selected contractor(s) shall prepare a cleanup completion report, which shall summarize all

cleanup and restoration activities performed at the Site and provide all supporting documentation including (but not limited to) excavation, waste management, material tracking, transportation, disposal, recycling, monitoring, sampling, analytical, and restoration documentation.

4.5 Guidance Documents, Policies, & Regulations

As applicable, the selected contractor(s) shall be familiar with and abide by the following guidance documents, policies, and regulations:

- Solid Waste Management Facility Regulations, 310 CMR 19.00;
- Massachusetts Contingency Plan (MCP), 310 CMR 40.0000;
- Wetlands Protection Act Regulations, 310 CMR 10.00;
- Water Quality Regulations, 314 CMR 9.00;
- Massachusetts Hazardous Waste Regulations, 310 CMR 30.00;
- Massachusetts Stormwater Handbook and Stormwater Standards;
- Site Assignment Regulation for Solid Waste Facilities, 310 CMR 16.000;
- Interim Remediation Waste Management Policy for Petroleum Contaminated Soils, DEP Bureau of Waste Site Cleanup Policy No. WSC-94-400;
- "Hazardous Waste Operations and Emergency Response", Federal Occupational Safety and Health Act (OSHA), 29 CFR 1910.120;
- Massachusetts DEP Policy #COMM-97-001;
- Local regulations governing dust control, soil handling, and health and safety;
- Compendium of Quality Assurance and Quality Control Requirements and Performance Standards (CAM) DEP WSC #02320;
- MassDEP Technical Update Background Levels of Polycyclic Aromatic Hydrocarbons and metals in soils;
- MassDEP Similar Soils Provision Guidance (WSC#-13-500);
- Interim Remediation Waste Management Policy for Petroleum Contaminated Soils Attachment II, Jar headspace analytical Screening Procedure. MassDEP Policy No. WSC-94-900; and
- All other applicable local, state and federal requirements.

The forthcoming NTWP will address pertinent guidance documents, policies, and regulations in connection with asbestos abatement, transportation, and disposal.

4.6 Cost Estimate

TRC understands that the Town is required to select contractors to facilitate cleanup at the Site via a bidding process and funding for the cleanup operation will be available beginning in July 2023. As a result, TRC conservatively prepared a cost estimate for

funding allocation purposes, assuming that the entire volume of solid waste/debris comingled with soil will need to be bulk loaded for off-Site disposal. In addition, TRC prepared a less conservative cost estimate, assuming that waste separation will be feasible and only 30% of the Site volume will need to be transported off Site for management. TRC anticipates that cleanup costs can be significantly reduced if separating the solid waste from Site soil is feasible. The cost estimates prepared in connection with this *Cleanup Plan* are included as **Appendix H**.

Actual costs for Site cleanup will depend on contractor bids and may vary from the cost estimates included as **Appendix H**. If needed, TRC could assist the Town with the bidding process including (but not limited to) the preparation of project specifications and other bidding materials and/or evaluation of bidding documents.

4.7 Anticipated Schedule

TRC anticipates that the project schedule will abide by the requirements of the February 9, 2023 ACO, which include (but are not limited to) the following:

- Within 180 calendar days of the completion date of site assessment actions, including approval of the Revised Assessment Plan by MassDEP, the Town shall submit to MassDEP for written approval a cleanup plan for the Site.
- Within 180 calendar days of the date of MassDEP's written approval of the *Cleanup Plan*, the Town shall commence cleanup actions at the Site.
- The Town shall complete the cleanup actions at the Site as outlined in the *Cleanup Plan* within 180 calendar days after the commencement of cleanup actions.

On March 13, 2023, MassDEP approved the *Revised Final Assessment Plan*. Accordingly, TRC anticipates that the Town will submit this *Cleanup Plan* by the ACO compliance deadline, September 9, 2023. Furthermore, TRC anticipates that the Town will commence Site cleanup within 180 calendar days of *Cleanup Plan* approval by MassDEP and cleanup activities will be completed within 180 calendar days following initiation of Site.

5.0 Statement of Approval

The Town of Southborough Conservation Commission will retain appropriately qualified contractor(s), as necessary, to implement all components of this proposed *Cleanup Plan* as described herein. Proposed deviations from this *Cleanup Plan* (if any) will be presented to the Town's selected engineer and/or environmental professional (as necessary) and MassDEP for review, comment, and approval.

Reviewed & approved by:

Melissa Danza

Melissa Danza
Conservation Agent
Town of Southborough

Reviewed & approved by:

Mark Purple
Town Administrator
Town of Southborough