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**Appendix C**

Site Specific Soil Management Plan prepared by Millennium Environmental

**Site Specific  
Soil Management Plan**



254 / 272R Lynnway  
Lynn, Massachusetts

Submitted By:  
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## **1.0 EARTH WORK**

Earthwork, excavation and soil handling and management will be conducted in accordance with this Plan, and local, state, and federal regulations.

### **1.1 Excavation**

The Contractor will conduct the excavation in accordance with this submittal, Health Safety Plan and applicable contract specifications. The Contractor will be responsible for conducting a site visit to identify any potential overhead hazards or potential obstructions, and will be responsible for calling dig safe prior to conduction intrusive work. MEI, the Consultant, and the Owner will be notified at least three days prior to conducting any intrusive work. Excavated material will be managed using methods to reduce the potential for cross contamination of soils, and shall not expand the excavation area to remove localized areas of contaminated soils unless directed to do so by the Owner. Excavated material will be reused on the site to the maximum extent possible based on the physical and chemical suitability of the material.

Prior to the start of excavation the staff will be familiarize with the existing site information and the 2-hour and 72-hour reporting requirements under the MCP. In addition, any materials or conditions that are suspected to be different than the know conditions will be further evaluated by MEI. Any confirmed identified MCP reportable conditions or sign of contamination not previously known will be reported immediately to the Owner.

### **1.2 Schedule**

The progress schedule has been prepared by the General Contractor and submitted for review by the affected parties.

### **1.3 Field Screening**

Soil samples will be evaluated in accordance with Department of Environmental Protection Policy No.WSC-94-40, Jar Headspace Analytical Screening Procedure. Soils will be evaluated with a photo ionization detector (PID), visual and olfactory evaluation for VOC's, oil, grease, and other contaminants. Soil/Fill strata shall be initially segregated based on geotechnical suitability for reuse as fill material and then further segregated based on the suspected level of contamination as outlined in the following table. Should either (any one method) visual, olfactory, or PID screening exceed the criteria then the material will be presumed contaminated until further characterized and shall be relocated to the staging area. Headspace procedures will be performed at a rate of One (1) sample per fifty (50) Cubic Yards. Jar Headspace results will be recorded in MEI's Material Classification Worksheet.

**Jar Headspace Screening Classification System**

MEDIA	VISUAL/ODOR	JAR HEADSPACE ANALYSIS	SCREENING CLASSIFICATION
Soil	Light or No Shading, or Odor; or,	<10 ppm	Stockpile as Reuse Material
Soil	Moderate Shading, Odor, or Unnatural Colors; or,	10 to 100 ppm	Segregate from Reuse Material Presumed to be contaminated.
Soil	Heavy Staining, Odor, or Unidentified Wastes; or,	> 100 ppm	Potentially Hazardous Soil and/or Waste. Segregate from Reuse and Presumed Contaminated Material.

Excavated soils may be stockpiled on site in a segregated stockpile area.. The excavated materials scheduled for offsite disposition will be stockpiled and managed in accordance with Section 2.0. Composite samples will be collected from each stockpile at a frequency of 1 per 500 cubic yards and analyzed for chemical constituents listed in Section 6.0. Screening requirements are applicable to material that has not been classified. Alternatively the contractor may elect to complete in-situ sample collection for the purposes of characterizing the soil and thereby eliminate the need to stockpile material.

Soils will be characterized and classified in accordance with the following soil classification provisions:

1. Reuse Excavated Material On-site as Backfill
2. Disposal of Soil - Background Soils
3. Disposal of Soil – Impacted <RCS-1
4. In-State Unlined Landfill
5. In-State Lined Landfill
6. Disposal of Soil – Non-Hazardous Solid Waste
7. Disposal of Soil – RCRA Hazardous Waste
8. Disposal of Asbestos Waste

Disposal or reuse of the material shall depend on sampling and characterization analytical results and physical characteristics. Should the analytical results identify concentrations less than either RCS-1 or S2/GW3 remedial standards as identified in the MCP and it meets the geotechnical criteria then the soils will be reused as backfill on the site. Asphalt recycling facilities, and some others, require additional analysis for disposal at their facility. After the initial characterization additional sampling and analyses will be conducted, as needed, for specific soils and disposal facilities.

#### **1.4 Stockpiling**

It is currently anticipated that the majority of soils on this project will be pre-characterized prior to excavation and direct loaded into trucks for off-site disposal. In some cases where soil could not be pre-characterized or the soil is suspected to be substantially different stockpiling measures may occur. Excavated material will be stored in a the laydown area at the western side of the site. Stockpiling or consolidating of material will NOT be conducted near public or private water supply wells. Each stockpile will be identified with a waterproof sign attached to a stake driven into the pile.

The samples will be analyzed by a certified laboratory as identified in Section 6.2.

Stockpiling of soil will occur separately on a dated portion of the site. Material brought from the site will be maintained separately from other material until final disposition has been determined. The excavated material will be stockpiled in five hundred (500) cubic yard piles for jar headspace screening purposes. All material will be stockpiled in areas with an impermeable surface. The impermeable barrier will consist of 40-mil HDPE liner material. Stockpiles will be bermed and covered with 10-mil polyethylene to minimize the potential release of contaminants.

Any soils characterized as Hazardous Waste, upon generation, will be stored in containers, tanks or containment buildings as defined by RCRA & TSCA. Stockpiled soils that are determined to be Hazardous Waste will be transferred to such storage areas within a reasonably short period of time.

#### **1.5 Dust Control Measures**

The total dust criteria at the site shall conform to the requirements of the Dust Vapor and Odor Control Plan. During work on the site dust monitoring will be conducted on an as needed basis. The monitoring will be conducted using a total suspended particulate meter, such as a Mini-Ram or equivalent meter. This is a direct reading instrument providing instantaneous results. A daily log of the air monitoring results collected in the field will be submitted to the Construction Manager on a weekly basis.

The current standard for PM<sub>10</sub> particulates, as established in 40 CFR 50, is 0.15 milligrams per cubic meter. The contractor will implement dust suppressions measures at concentrations of 0.15 mg/m<sup>3</sup> or greater.

Dust suppression measures consist of pre-wetting the areas of excavation, changing the work pattern, or limiting the area of excavation. A water truck will be utilized to spray the access roads to minimize the generation of dust in and around the staging area. Additional information will be provided, if required.

## **2.0 SOIL TRACKING PROCEDURES**

The following information covers the excavation, loading, transportation, reuse, recycling and/or disposal of all materials encountered in the construction. The work will conform to the requirements of the MCP for remediation waste management (310 CMR 40.0030 through 40.0049) including, but not limited to, the Bill of Lading (BOL) Process. Soil on this project will be tracked using one of the two following formats: Bill of Lading for clean and non-RCRA contaminated soil, or a Uniform Hazardous Waste Manifest for the RCRA contaminated soil. Each tracking format is described in the sections below. The Engineer will be notified of the schedule to ship soils at least three working days in advance.

### **2.1 Tracking of Excavated Material**

A tracking system will be employed to track soils between excavation, stockpiling, sampling, and testing, and final disposition. The soil tracking system will identify the source of material by station, offset, depth, and date of excavation to the stockpile identification and location. For record keeping purposes soil / fill that is reused on-site as backfill, shall be transported to and from the staging area under a Material Shipping Record.

### **2.2 MADEP 21E Bills of Lading**

Should excavated material be in a transportable state (i.e. no free liquids and reasonably dry), both clean and contaminated material will be loaded into dump trailers and transported to facilities identified in this Soils Management Plan. The Contractor and Engineer will approve any and all material transporters. Soil will be transported to the appropriate facilities in accordance with United States Department of Transportation (DOT), and other applicable regulations. If the material is a hazardous waste, then the hauler will be licensed in states affected by the transport, otherwise a common carrier will be used. MEI, along with the appropriate facilities, will prepare Bills of Lading with applicable analytical backup, notification, and control forms, including facility final letters of acceptance addressed to the Owner prior to loading and shipment. MEI will coordinate with the disposal facilities and Federal and State Environmental Agencies as required. The Owner's LSP will sign the Bills of Lading first. Then the Owner will be designated as the generator, and an Owner's representative will sign the Bills of Lading. Within two days of final shipment and facility sign-off (Form BWSC-12C), the facility will forward all original MADEP Bill of Lading BWSC -12B, and -C Forms with attached certified scale weight tickets to the Contractor's LSP for review. Certified tare and gross weight slips will be provided for each load received at the disposal facility (i.e., the weight slips will be attached to each returned Bill of Lading). Soils will not be transported off-site until disposal facility approvals have been received and accepted by MEI and Bills of Lading have been properly completed and signed by an Owner's representative.

In addition, the following requirements will apply for Bills of Lading on this Project.

Prior to shipment of materials under the Bill of Lading process, and each time information on the Bill of Lading is revised, the Contractor and its LSP shall submit such completed Bill of Lading form(s) to the Owner for review and approval at least 10 days prior to transport.



Each Bill of Lading utilized shall be characterized with a unique alphanumeric identifier to enable its ready correlation to associated Bill of Lading Log Sheets and Bill of Lading Summary Sheets.

For this Work, separate Bills of Lading shall be utilized for the transport of non-hazardous waste contaminated soil; soil associated material shall be designated on the Bill of Lading at the portion of the form designated "F. Description of Remediation Waste".

#### Bill of Lading Log Sheet and Bill of Lading Summary Sheet

1. Separate Bill of Lading Log Sheets and Bill of Lading Summary Sheets shall be maintained for each unique Bill of Lading utilized under this Contract.
2. Associated unique Bill of Lading alphanumeric identifier shall be recorded on each Log Sheet and each Summary Sheet.
3. The Log Sheets and Summary Sheets shall be prepared by or under the direct supervision of the Owner.
4. Executed bills of lading and or manifests with attached certified scale weight tickets will be submitted to the Owner within two weeks of shipment.

Two copies of each Bill of Lading Summary Sheet and facility sign-off (form BWSC -12b & -12c), complete in all respects, shall be submitted to the Owner under cover letter of the Contractor within two weeks of completion of the work under that BOL. Copies of this documentation will be provided as required to the local, state, and/or federal agencies.

### **2.3 Hazardous Waste Manifest**

MEI and the facility will prepare hazardous waste manifests with applicable analytical backup, notification, and control forms. The facility will coordinate with the Federal and State Environmental Agencies as required. The Owner will be designated as generator, and will sign manifests. Confirmed Hazardous Waste soils, will be loaded into a registered 30 cubic yard end dump trailer and/or 10 – 12 cubic yard roll-offs and transported to a Project approved TSCA/RCRA facility. Hazardous waste will be transported from the Site to the disposal facility in accordance with United States Department of Transportation (DOT), EPA, DEP, and other applicable regulations. The hauler will be licensed in states affected by the transport. The facility will furnish generator copies of the hazardous waste manifest to the Engineer for submittal to the appropriate State Environmental Agencies and to retain for the Owner's records. Certified tare and gross weight slips will be provided for each load received at the disposal facility (i.e., the weight slips will be attached to each returned manifest). No hazardous waste will be transported off-site until disposal facility approvals have been received and accepted by the Engineer, and hazardous waste manifests have been properly completed and signed by the Owner with acceptance by the Engineer as required.

### **3.0 SOIL REUSE/ RECYCLING, AND DISPOSAL FACILITIES**

The following list of facilities represents a baseline group of receiving facilities. Additional facilities may be forwarded to the Owner prior to offsite shipment for approval as a receiving facility accompanied by a letter of acceptance from the facility. A brief description of potential disposal facilities to be utilized is presented in the following sections. Please see Appendix B for additional information concerning the Soil Reuse/Recycling and Disposal Facility(s). Soils that are non-contaminated but are not of sufficient geotechnical quality will be shipped in an unlined landfill identified below or a facility submitted for approval under a separate cover.

#### **3.1 <RCS-1 and Background Facility**

This material classification is for any soil or fill material which contains oil or hazardous materials (OHM) at concentrations less than background levels or greater than background levels but less than release notification thresholds established by 310 CMR 40.0300 and 40.1600.. And it shall be disposed of at a facility of like or greater contaminate levels; included in Appendix B is the proposed disposal location. Alternatively, impacted soil maybe reused at the area of excavation or as fill provided it is reused in an area of equal or greater contamination.

#### **3.2 In-State Unlined Landfill**

This material classification at a minimum must meet the guidelines established for Reuse of Contaminated Soil at Massachusetts Landfills as specified by Massachusetts Department of Environmental Protection (MADEP) Policy No. COMM 97-0001 Guidelines. Specifically, soils shipped under this category must meet the criteria for unlined landfills.

See Appendix B for additional Facility(s) information.

#### **3.3 In-State Lined Landfill**

A landfill with a DEP approved lining and functioning leachate collection system, permitted to accept contaminated soils. The facility shall be permitted to accept petroleum contaminated soil and sediment with contaminant concentrations below those in the facilities operating permit.

#### **3.4 In-State Recycling Facility**

This type of facility shall be approved by the Commonwealth of Massachusetts to accept petroleum contaminated soil. The facility shall be eligible to accept petroleum contaminated soils provided that the concentrations of contaminants in the soil are below the concentrations specified in the facility's Class A Recycling Permit.

#### **3.5 Out-of-State Recycle**

This type of facility shall be state approved or permitted to accept material that exceeds allowable chemical criteria for In-State recycling, reuse, or beneficial reuse.

### **3.6 Out-of-State Non-RCRA Landfill**

This type of landfill shall be state approved or permitted to accept material that exceeds the allowable chemical criteria for in-state recycling, reuse, or beneficial use.

### **3.7 RCRA Landfill**

Material that contains PCB levels between 50 ppm and 500 ppm; material that is acceptable for landfill disposal as defined in 40 CFR Part 761; material that is classified as either a RCRA characteristic waste or RCRA waste as defined in 40 CFR Part 261 but meets the treatment standards established in 40 CFR Part 268 – Land Disposal Restrictions; and all other material classified as a hazardous waste in 310 CMR 30.00.