



Department of Environmental Protection

Policy #COMM-97-001: Reuse & Disposal of Contaminated Soil at Massachusetts Landfills

Supersedes Policy #BWP-94-037

This Policy provides guidance to the regulated community about the Department of Environmental Protection's requirements, standards, and approvals for testing, tracking, transport, and reuse or disposal of contaminated soil at Massachusetts permitted landfills. This Policy supersedes Department Policy BWP-94-037.

/signed August 15, 1997/
Edward Kunce
Deputy Commissioner

1.0 Policy Statement and Scope

This Policy provides information to the regulated community about the Massachusetts Department of Environmental Protection's (the Department) requirements, standards, management practices and approvals for the testing, tracking, transport, and reuse or disposal of Contaminated Soil at Massachusetts landfills. This Policy is effective immediately and supersedes the Department Policy # BWP-94-037. The Department is updating Policy # BWP-94-037 with this Policy in order to:

- update the standards for management of Contaminated Soil by Massachusetts landfills;
- maintain consistency with Policy # COMM-94-007, *Interim Policy for Sampling, Analysis, Handling and Tracking Requirements for Dredged Sediment Reused or Disposed at Massachusetts Permitted Landfills*, February 15, 1995;
- reflect changes to Table 1 *Contaminant Levels for Soil Reuse at Landfills*, and to include contaminant levels for the reuse of Contaminated Soil at unlined landfills;
- maintain consistency with revisions in 310 CMR 30.000, *Massachusetts Hazardous Waste Regulations*, November 18, 1994;
- describe the procedures and requirements lined landfills must meet to reuse or dispose of Treated TCLP Soil (including Treated TCLP-Lead Soil);
- prohibit the reuse or disposal of Treated TCLP Soil at unlined landfills; and
- maintain consistency with EPA's 1995 Household Hazardous Waste Exemption for Residential Lead Soil.

Landfills which intend to reuse or dispose of Contaminated Soil must have a prior approval from the Department under 310 CMR 19.000 unless: the soil **does not exceed** the contaminant levels of Table 1; meets the other acceptance criteria of this Policy; and the landfill complies with the management, technical and procedural requirements of this Policy.

This Policy is not meant to be, and shall not be relied upon to be, a complete list of all the regulatory requirements for managing Contaminated Soil. Parties managing Contaminated Soil shall consult 310 CMR 40.0000 (the Massachusetts Contingency Plan), 310 CMR 30.000 (the Massachusetts Hazardous

Waste Regulations), and 310 CMR 19.000 (the Massachusetts Solid Waste Management Regulations) for other applicable requirements.

The information contained in this Policy is intended solely for guidance. This Policy does not create any substantive or procedural rights, enforceable by any party in any administrative proceeding with the Commonwealth.

Additional copies of this Policy, and other policies and forms referenced throughout this Policy can be obtained from DEP's Web site. The 21E Bill of Lading and Material Shipment Record forms and instructions can also be obtained through the Regional Service Centers located in each Department Regional Office.

2.0 Applicability

This Policy provides information to the regulated community on the reuse and disposal of Contaminated Soil at Massachusetts landfills. This Policy applies to Contaminated Soil generated from 21E disposal sites; Contaminated Soil which exhibits concentrations of oil and/or hazardous material below the applicable notification thresholds specified in 310 CMR 40.0300 and 310 CMR 40.1600; Contaminated Soil generated at out-of-state locations; Treated TCLP Soil (including Treated TCLP-Lead Soil); Residential Lead Soil; and soil contaminated with used or unused waste oil (see 310 CMR 30.252(2)).

This Policy does not apply to soil that is either a listed or characteristic hazardous waste, except Treated TCLP Soil as described in **Section 8.0, *Reuse and Disposal of Treated TCLP Soil***, nor does it apply to the management of wastes such as industrial waste, sludge, street sweepings (guidance on the management of street sweepings is provided in DEP Policy BWP-94-092, *Reuse and Disposal of Street Sweepings, Department of Environmental Protection Bureau of Waste Prevention, Final Policy # BWP-94-092*, April 15, 1997), catch basin sediments or Municipal Solid Waste (MSW).

3.0 Terminology

This section contains definitions of the important terms and acronyms used in this Policy.

Contaminated Soil means soil that contains oil and/or hazardous materials as a result of a release to the environment. This includes anthropogenic contaminants, regardless of whether the contaminant levels exceed the applicable Reportable Concentration (RC) under section 310 CMR 40.1600 of the MCP. This definition of Contaminated Soil is broader than that in 310 CMR 40.0006 since it includes soil contaminated at less than the RCs.

Department means the Massachusetts Department of Environmental Protection.

Hazardous Waste Treatment, Storage, or Disposal Facilities (TSDFs) as used in this Policy means facilities which treat, store, or dispose of hazardous waste as an ongoing operation. These are distinguishable from facilities which generate hazardous waste and may engage in discrete storage or treatment activities; (e.g., tank and containers treatment or storage on-site by generators for less than ninety days). It does not include treatment that occurs at 21E sites under the MCP or licensed hazardous waste treatment facilities that only treat only waste generated on-site as part of the facilities' manufacturing operations.

Treatment, storage, or disposal facilities, unlike generators, are required by federal and/or state law to be permitted or licensed either as an *Interim Status Facility* or as a *Permitted Hazardous Waste Facility*.

Interim Status Facilities, defined and regulated by Title 40 Code of Federal Regulations Part 265 (or Authorized State Hazardous Waste Regulations), and *Permitted Hazardous Waste Facilities*, defined and regulated by Title 40 Code of Federal Regulations Part 264 and Part 270 (or Authorized State Hazardous Waste Regulations), are required to comply with a series of ongoing requirements for waste analysis, facility inspection, record keeping, employee training, siting, environmental monitoring, closure/post-closure planning, and financial assurance, that do not apply to generators.

Household means, for purposes of 310 CMR 30.000 and the household hazardous waste exemption, single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas (310 CMR 30.104(6)).

Land Disposal Restrictions (LDRs) each means the federal hazardous waste land disposal restrictions found at Title 40, Chapter I, Part 268 of the Code of Federal Regulations.

Licensed Site Professional (LSP) each means a hazardous waste site cleanup professional, as defined in M.G.L. 21A, s. 19, holding a valid license issued by the Board of Registration of Hazardous Waste Site Cleanup Professionals pursuant to M.G.L. c. 21A ss. 19 through 19J.

Lined Landfill is a landfill that has a liner system complying with 310 CMR 19.110, and a leachate collection system complying with 310 CMR 19.110(9).

Massachusetts Contingency Plan (MCP) each mean 310 CMR 40.0000

Qualified Environmental Professional (QEP) each means an individual who: is knowledgeable about the procedures and methods for characterizing wastes and contaminated media; is familiar with the receiving state, Massachusetts, and federal regulations applicable to the management of such materials; performs or oversees the management of Contaminated Soil as an integral part of his or her professional duties; and is professionally licensed or certified in a discipline related to environmental assessment (i.e., engineering, geology, soil science, LSP, or environmental science) by a state or recognized professional organization.

RCRA means the Federal Hazardous Waste statute: 42 U.S.C. Sections 6901 et. seq and federal regulations issued there under.

Residential Lead Soil means lead Contaminated Soil, originating from household locations, defined at 310 CMR 30.104(6) of the Massachusetts Hazardous Waste Regulations and which is being managed as a solid waste under EPA's application of the household hazardous waste exemption (EPA Region I letter to Mr. Philip O'Brien, Ph.D., New Hampshire Department of Environmental Services: *Applicability of the Household Hazardous Waste Exclusion to Lead Contaminated Residential Soil*, April 21, 1995.)

Soil means any unconsolidated mineral and organic matter overlying bedrock that has been subjected to and influenced by geologic and other environmental factors, excluding sediment as defined in 310 CMR 40.0006.

Toxicity Characteristic (TC) Waste means a waste that is a hazardous waste if the extract from a representative sample of the waste contains any of the materials listed in 310 CMR 30.125B at a concentration equal to or greater than the respective value given in that table. The extract is obtained using the Toxicity Characteristic test described in 310 CMR 30.155B. Where the waste contains less than

0.5% filterable solids, the waste itself, after filtering, is considered to be the extract for purposes of 310 CMR 30.125B.

Toxicity Characteristic Leaching Procedure (TCLP) means the Toxicity Characteristic test for determining whether a waste is a hazardous waste because of a Toxicity Characteristic defined in 310 CMR 30.125B.

Treated TCLP Soil includes both Treated TCLP Non-Lead and Treated TCLP-Lead Soil.

Treated TCLP Non-Lead Soil means Contaminated Soil that: originally failed the TCLP under 310 CMR 30.155B for a TC contaminant other than lead D008 (e.g. Hazardous Waste Codes: D004 Arsenic, D005 Barium, D006 Cadmium, D007 Chromium, D009 Mercury, D010 Selenium, and D011 Silver and the TC Organic Constituents D012-D043); and that has been treated in compliance with Title 40, Code of Federal Regulations Part 268 to the LDRs (e.g., passes the TCLP); and under the LDRs no longer requires management as a TC characteristic hazardous waste (e.g., may be managed as a solid waste).

Treated TCLP-Lead Soil means Contaminated Soil that: originally failed the Toxicity Characteristic Leaching Procedure (TCLP) under 310 CMR 30.155B for lead; has been treated in compliance with Title 40, Code of Federal Regulations Part 268 to the LDRs (e.g., passes the TCLP); and no longer requires management as a D008 TC characteristic hazardous waste (310 CMR 30.125B).

4.0 Contaminant Levels, and Approval Procedures for the Reuse and Disposal of Contaminated Soil at Massachusetts Landfills

4.1 Contaminant Levels for Reuse

Table 1 lists the allowable contaminant levels for reuse of soil at Massachusetts landfills. The Department has determined that Contaminated Soil which **does not exceed** the contaminant levels in **Table 1** may be reused as daily cover, intermediate cover and pre-capping contour material at Massachusetts landfills provided it is managed consistent with all the provisions of this Policy, the facility's permit and 310 CMR 19.000.

With respect to the contaminant levels and reuses identified in section 4.1, compliance with this Policy may constitute compliance with the requirements to obtain a Department approval for the handling of special waste at 310 CMR 19.061 and the requirements at 310 CMR 19.130(15) regarding cover material, for the categories of Contaminated Soil identified in this Policy.

A list of Massachusetts lined and unlined landfills may be obtained from DEP. This list may be updated by the Department from time to time. These landfills shall be contacted by the generator, LSP or Qualified Environmental Professional to determine whether the operator has an interest in receiving Contaminated Soil for landfill reuse. It is the responsibility of the generator, and the LSP or QEP to determine whether a specific landfill may accept Contaminated Soil as described in this Policy.

4.2 Reuse of Contaminated Soil at Lined Landfills

Contaminated Soil that **does not exceed** the contaminant levels listed in **Table 1** for lined landfills and that is managed as described in this Policy may be reused at lined landfills as daily cover, intermediate cover and pre-capping contour material (e.g., grading and shaping material) without obtaining a prior Department approval. A Landfill - Minor Modification, BWP SW 22 permit or other approval under 310

CMR 19.000 by the Department shall be obtained prior to the reuse at a lined landfill of any Contaminated Soil which:

- **exceeds** the contaminant levels in **Table 1**, or;
- may not be managed consistent with the guidelines in **Section 7.0, Landfill Operation Practices**, or;
- contains oil and/or hazardous materials for which no threshold is provided in **Table 1**.

4.3 Reuse of Contaminated Soil at Unlined Landfills

Unlined landfills may accept Contaminated Soil for reuse as: daily cover, intermediate cover, and pre-capping contour material without prior approval by the Department, provided such use is not in conflict with any consent order, consent degree, court judgment, or Department-approved closure plan or conceptual grading plan, and provided that: the Contaminated Soil **does not exceed** the contaminant levels for unlined landfills in **Table 1**; the soil is managed in accordance with the provisions of this Policy; the landfill has either a Department approved closure plan, or an approved permit or Administrative Consent Order with a Department approved closure schedule and has a Department approved conceptual grading plan. The closure plan and/or conceptual grading plan shall also have:

- an erosion control/sedimentation plan;
- an excavate (e.g., Contaminated Soil) placement plan; and
- for landfills that reuse the soil as daily cover, a Department approved limitation on the amount of Contaminated Soil which may be stockpiled for daily cover.

A Landfill - Minor Modification, BWP SW 22 permit or other approval by the Department shall be obtained prior to the reuse at an unlined landfill of any Contaminated Soil which:

- **exceeds** the contaminant levels in **Table 1**, or;
- may not be managed consistent with the guidelines of **Section 7.0, Landfill Operation Practices**, or;
- contains oil and/or hazardous materials for which no threshold is provided in **Table 1**.

4.4 Disposal of Contaminated Soil at Lined or Unlined Landfills

A Special Waste Determination (BWP SW 14 or BWP SW 31) or Other Department approval pursuant to 310 CMR 19.000 shall be obtained prior to the disposal of Contaminated Soil at a **lined or unlined landfill**. An **unlined landfill** must also have either a Department approved closure plan or have entered into an agreed upon closure schedule with the Department (e.g., Administrative Consent Order, permit).

Contaminated Soil which does not require notification under the MCP shall not be disposed of at landfills if a cost effective alternative exists that involves the reuse, recycling, destruction, and/or detoxification of such Contaminated Soil. Applicants seeking to dispose of Contaminated Soil at a Massachusetts landfill shall demonstrate the infeasibility of alternatives to such disposal. Feasibility determinations performed under 310 CMR 40.0032(5) and M.G.L. c. 21E will be considered sufficient for this purpose.

5.0 Testing and Characterization

5.1 General

This Section describes the type and level of information, data, and documentation the generator shall provide to the landfill operator when proposing the management of Contaminated Soil at a Massachusetts landfill. This information is consistent with that required under EPA's RCRA "due diligence" policy, for determining when environmental media (e.g., Contaminated Soil) is a hazardous waste (Federal Register, 53 FR 51444).

310 CMR 40.0000, 310 CMR 30.000 and Department Policies #WSC-94-400, #WSC-310-91, and #WSC-91-401 (*Policy for the Investigation, Assessment, and Remediation of Petroleum Releases: Interim Site Investigation Protocol Document*, April 9, 1991) contain additional information applicable to the characterization of Contaminated Soil. Other federal requirements under the Toxic Substance Control Act (TSCA) or RCRA may also apply to the characterization of Contaminated Soil.

The landfill operator and the generator shall obtain sufficient information to demonstrate that the soil may be accepted by the landfill. It is the landfill operator's responsibility to obtain sufficient information to determine and document: the type and quantity of contaminated soil it receives and that it meets the Policy's acceptance criteria. This does not relieve the generator of the responsibility to appropriately and adequately characterize its waste and to send it only to facilities that may legally accept it.

TABLE 1 CONTAMINANT LEVELS FOR SOIL REUSE AT LANDFILLS		
CONTAMINANT	Reuse Levels (mg/kg) ^a	
	Lined Landfills	Unlined Landfill
Total Arsenic	40	40
Total Cadmium	80	30
Total Chromium	1,000	1,000
Total Lead	2,000	1,000
Total Mercury	10	10
Total Petroleum Hydrocarbons (TPH)	5,000	2,500
Total PCBs ^b	< 2	< 2
Total SVOCs ^c	100	100
Total VOCs ^d	10	4
Conductivity ^e (umhos/cm)	8,000 umhos/cm	4,000 umhos/cm
Listed or Characteristic Hazardous Waste (TCLP) ^f	NONE	NONE

TABLE 1 NOTES:

- The reuse levels are expressed as total levels in mg/kg and apply to reuse of soil as daily cover, intermediate cover, and pre-capping contour material at lined landfills and unlined landfills as described in this Policy.
- Total concentrations of polychlorinated biphenyls EPA Method 8080.
- Total concentrations of compounds listed in EPA Method 8270.
- Total concentration of compounds listed in EPA Method 8260.
- For soil which may be expected to contain elevated NaCl.
- TCLP testing shall be performed for metals or organic compounds when the total concentrations in the soil are above the theoretical levels at which the TCLP criteria may be exceeded. For guidance parties shall consult United States Environmental Protection Agency, Memorandum #36, "Notes on RCRA Methods and QA Activities", pp. 19-21, Gail Hanson, January 12, 1993.

[Please note that the methods specified in footnotes d, e, and f indicate the universe of chemicals to be added up in calculating the total concentrations for these classes of contaminants. Section 5.0 of this Policy provides guidance for determining which specific chemicals must be considered chemicals of concern (e.g., contaminants) within the soil. This Policy does not specify the analytical test methods to be used to quantify the specific contaminants. Readers can consult 310 CMR 40.0017 Environmental Sample Collection and Analysis, 310 CMR 30.110 *Criteria, Procedures for Determining Which Wastes are to be Regulated as Hazardous Waste or Non-Hazardous Waste* and 310 CMR 30.151 *Representative Sampling Methods* for additional information which may be applicable to the selection of appropriate sampling and analytical methods.]

5.2 Testing

Contaminated Soil shall be sampled at sufficient and adequately distributed locations so that the concentrations of the contaminants of concern in the soil are adequately characterized. The factors listed below shall be considered

when developing and implementing such a sampling plan. Evaluation of release, source, and site specific conditions assist in developing the basis for the selection of field screening techniques, sampling methodologies, sampling frequencies, and the contaminants of concern (e.g., analytical parameters) used to characterize Contaminated Soil. These include, but are not necessarily limited to the following:

- the type(s) and likely constituents of the petroleum oil (e.g., unused waste oil, used waste oil, or mixtures) or hazardous material known or suspected to be the source of the contaminants;
- the presence or likelihood of any other oil and/or hazardous materials (e.g., chlorinated solvents, metals, polychlorinated biphenyls (PCBs), semi-volatile organic compounds (SVOCs), halogenated volatile organic compounds (VOCs));
- current and former site uses, past incidents involving the spill or release of oil and/or hazardous material, and past and present management practices of oil and/or hazardous materials at the site;
- the potential for the soil to contain listed hazardous waste or to be a characteristic hazardous waste;
- visual/olfactory observations, field screening, analytical data, and/or in-situ pre-characterization data;
- soil matrix type - naturally occurring soil or fill/soil mixtures (e.g., homogeneous or heterogeneous soil conditions);
- the identification and segregation of discrete "hot spots";
- soil volume; and
- the presence of anthropogenic contaminants (e.g., arsenic, lead).

5.3 Treated TCLP Soil

Generators of Treated TCLP Soil shall also comply with the characterization, waste analysis, notification, reporting and licensing requirements of the applicable federal and state Hazardous Waste Regulations. These requirements may include, but are not limited to, the provisions of Title 40 Code of Federal Regulations Parts: 262.11, 264, 265, and 268.

5.4 Residential Lead Soil

Residential Lead Soil shall be characterized as described in this Policy to determine whether it meets **all** the acceptance criteria, contaminant levels and guidelines of this Policy. The characterization shall include ascertaining whether the Contaminated Soil: exceeds the contaminant levels in **Table 1**; contains other oil and/or hazardous materials or listed hazardous waste; or if it is a characteristic hazardous waste other than lead (i.e., D001-D007, or D009-D043 Hazardous Waste).

Residential Lead Soil intended for reuse or disposal at a lined landfill need not be tested to determine if it is D008 TC Waste (e.g., lead). Residential Lead Soil intended for reuse at an unlined landfill that does not contain total lead *in* excess of 1000 mg/kg also does not require TCLP testing to determine if it is a D008 TC Waste (e.g., lead). However, the Department may require TCLP testing for Residential Lead Soil intended for reuse at an unlined fill if the total lead level exceeds 1000 mg/kg.

5.5 Documentation

When accepting Contaminated Soil a landfill operator shall obtain sufficient information and documentation to determine whether the Contaminated Soil has been adequately characterized, meets the Policy's acceptance criteria, and may be reused by the landfill, as provided in this Policy. The documentation shall include, but not necessarily be limited to, the following types of information:

- quantity of Contaminated Soil;
- a description of the source and type of the release and the contaminants;
- a description of current and former site usage;
- chemical characterization of the soil including any laboratory analytical data used to support the determination;
- any field screening analytical data used to support the determination;
- a physical description of the soil including the soil classification method used;
- a statement from the generator as to whether any other releases or spills have occurred in the vicinity of the site which may have affected the site, including the types of oil and hazardous material spilled/released;
- a statement that the generator has used due diligence, as described in the Department's Policy HW93-01 in characterizing the soil and as to whether or not the soil contains a listed hazardous waste and/or is itself a characteristic hazardous waste; and

- in addition, for TCLP-Treated Soil, from the treater, a description of the treatment process and a copy of the waste analysis plan complying with Title 40 Code of Federal Regulations Part 264, 265, or 268, as applicable.

Section 6.0 Transportation, Shipping Documentation, Record Keeping and Reporting

6.1 General

The transportation of Contaminated Soil to Massachusetts landfills shall be conducted in accordance with the 21E Bill of Lading (21E BOL) provisions of 310 CMR 40.0030 (**Section 6.2, 21E Bill of Lading**), if applicable, or, if not applicable, the Material Shipping Record (MSR) (**Section 6.3, Material Shipping Record**) procedures described in this Policy. Contaminated Soil generated at out-of-state locations and transported to Massachusetts landfills shall use a Material Shipping Record.

Soil may be transported by common carrier, provided that this method of transport is protective of the public health, safety, welfare and the environment. All soil shall be covered by a tarpaulin or other means during transport to prevent the soil from escaping the truck during transport (310 CMR 40.0036(5) *Management Requirements for Storing Remediation Waste* and M.G.L. c.85 Sec.36 *Construction and loading of vehicles to prevent dropping of load on way*).

Nothing in this Section is intended to prohibit the voluntary use of the 21E Bill of Lading process to document the transport of soil with contamination below the applicable 120 day notification threshold, specified in 310 CMR 40.0300 and 310 CMR 40.1600.

6.2 21E Bill of Lading

Contaminated Soil generated and transported within Massachusetts shall comply with the MCP, as applicable. The MCP requires that Contaminated Soil containing oil and/or hazardous material at concentrations equal to or greater than a release notification threshold established by 310 CMR 40.0300 and 310 CMR 40.1600 shall be transported in compliance with the 21E Bill of Lading requirements of 310 CMR 40.0034 and 40.0035 of the MCP.

6.3 Material Shipping Record

Contaminated Soil, containing oil and/or hazardous material at concentrations *less* than an applicable release notification threshold established by 310 CMR 40.0300 and 310 CMR 40.1600, need not be transported in accordance with the 21E BOL provisions. Contaminated Soil generated from out-of-state locations also is not subject to the 21E BOL requirements of the MCP. Therefore, for these classes of Contaminated Soil, a Material Shipping Record (MSR) shall be submitted to the landfill by the generator with the certification of a Qualified Environmental Professional (QEP). **Attachment III, Material Shipping Record and Instructions**, includes a description of the qualifications of the QEP and a copy of the MSR form.

Treated TCLP-Lead Soil that has been treated at and is generated from a licensed Commercial Hazardous Waste Treatment, Storage or Disposal Facility (TSDF, see Section 3), shall be shipped from the TSDF to the landfill using a Material Shipping Record. The QEP for purposes of the MSR may be the individual at the TSDF responsible for implementing the TSDF's waste analysis plan.

6.4 Facility Record Keeping

All record keeping shall be in compliance with 310 CMR 19.009 of the Solid Waste Management Regulations. Copies of the 21E BOLs, MSRs and all supporting documentation submitted by the generator to the landfill shall be kept by the landfill operator for review by Department staff. All 21E BOLs, MSRs and supporting documentation shall be kept by the landfill permittee at the facility, unless an alternate location has been approved by the Department, for at least three (3) years. This period shall be automatically extended for the duration of any enforcement action. This period may also be extended by the Department.

6.5 Reporting

Landfills that use Contaminated Soil as daily or intermediate cover, or pre-capping contour material or for disposal shall send 21E BOL and MSR summary reports as part of the landfill's regular annual operational reports to the appropriate Department Regional Office (See Attachment I for the Department Regional Office addresses). The summary reports shall include the source of the Contaminated Soil, volumes, dates received, use and reference the 21E BOL or BWP MSR Tracking Numbers.

7.0 Landfill Operation Practices

The reuse of Contaminated Soil, containing contaminants at concentrations which *do not exceed* the contaminant levels in **Table 1**, as daily cover, intermediate cover or pre-capping contour material at landfills, is based in part on the results of a risk assessment by the Department's Office of Research and Standards. This risk assessment was predicated on adherence to the landfill operating procedures listed below. Therefore, these procedures shall be followed when managing Contaminated Soil at a Massachusetts landfill.

1. When it is used for daily cover the standards in daily cover in 310 CMR 19.130(15) shall be met, including the requirement that the cover material be substantially odor free.
2. Contaminated Soil applied as daily cover shall not exceed 25% of the total volume of solid waste disposed in any single day.
3. When Contaminated Soil is proposed for use as intermediate cover, the standards in 310 CMR 19.130(15)(c) shall be met including the requirement that the material meet the following Unified Soil Classification System categories: G.C.; S.C.; C.H.; C.L.; or O.H.
4. Unlined landfills that accept Contaminated Soil for use as daily cover, intermediate cover and pre-capping contour material shall have in place Department approved erosion control and excavate placement plans. In addition, unlined landfills that accept Contaminated Soil for use as daily cover shall have a Department approval specifying the quantity of Contaminated Soil to be stockpiled for use as daily cover.
5. Daily cover or other reuse materials which contain Contaminated Soil shall be applied within 90 days of receipt at the facility.
6. Preventative maintenance shall be employed to ensure that the Contaminated Soil, whether stockpiled or applied to the landfill, does not erode into the area between the operating footprint of the landfill and the property boundary.
7. Fugitive dust levels shall be kept to a minimum through the use of Best Management Practices such as chemical addition or other Department-approved method. Contaminated Soil shall be prohibited from use on haul roads or other areas used for vehicle or truck traffic.
8. Stockpiling of Contaminated Soil intended for use at lined landfills shall be limited to portions of the landfill which are lined. Stockpiling of Contaminated Soil at unlined landfills shall be restricted to areas above the existing landfill footprint.
9. Storage of Contaminated Soil shall not take place on areas of the landfill which have received final cover.
10. Contaminated Soil shall not be applied or placed in contact with the landfill liner.
11. Contaminated Soil shall have no free draining liquids. Visual inspection based on the source of excavate shall be sufficient to determine whether there are free draining liquids in most cases. When there is a question whether this standard is met, EPA Method 9095 shall be used to determine the presence of free liquids in a representative sample of the Contaminated Soil.
12. The Contaminated Soil shall be free of solid waste (e.g., construction and demolition debris or other putrescible matter). See 310 CMR 16.05(3)(e) for conditionally exempted rubble processing (crushing) operations.

8.0 Reuse and Disposal of Treated TCLP Soil at Massachusetts Landfills

8.1 General

This Section provides guidance on the reuse and disposal of Treated TCLP Soil (see Section 3) by Massachusetts landfills. The guidance provided by this Policy does not waive, relieve, or limit the responsibility of the generator, treatment facility and landfill owner/operator to comply with all applicable laws and regulations, including but not limited to 310 CMR 16.000, 310 CMR 19.000, 310 CMR 30.000, 310 CMR 40.0000 and Title 40 Code of Federal Regulations Parts 260 through 271 (Federal Hazardous Waste Regulations). This includes, but is not limited to, the

certification, treatment, characterization, notification, and other requirements of 40 CFR Part 268 Land Disposal Restrictions (LDRs or Land Ban Restrictions).

The landfill operator and the TSDf shall obtain sufficient information to demonstrate that the Contaminated Soil may be accepted by the landfill. It is the landfill operator's responsibility to obtain sufficient information from the TSDf to determine and document: the type and quantity of Contaminated Soil it receives, that it meets the Policy's acceptance criteria, and the landfill has complied with 310 CMR 19.130(5). This does not relieve the TSDf of its responsibility to appropriately and adequately characterize its waste and to send it only to facilities that may legally accept it.

8.2 Reuse and Disposal of Treated TCLP-Lead Soil at Lined Landfills

Treated TCLP-Lead Soil (see Section 3.0) may be reused or disposed at Massachusetts lined landfills provided that it is managed consistent with the acceptance criteria, contaminant levels, and the operational and procedural guidelines of this Policy and 310 CMR 19.000. The *Treated TCLP-Lead Soil* also shall comply with the characterization (testing, etc.), procedural and treatment requirements of 310 CMR 30.000 and the provisions of the RCRA Hazardous Waste Regulations, Title 40 Code of Federal Regulations Parts 260 through 271. This includes, but is not limited to the requirements of Title 40 Code of Federal Regulations Parts: 262.11, and 268. Title 40 Code of Federal Regulations Part 268 Subpart D - *Treatment Standards* specifies the applicable Land Disposal treatment standards.

8.3 Reuse and Disposal of Treated TCLP-Lead Soil at Unlined Landfills

The reuse and disposal of Treated TCLP-Lead Soil is prohibited at unlined landfills.

8.4 Treated TCLP-Lead Soil Generated at Commercial Hazardous Waste Treatment, Storage and Disposal Facilities (TSDFs)

TCLP-Lead Soil that has been treated by a TSDf operating as either a Part 265 Interim Status Facility or as a Part 264/Part 270 Permitted Hazardous Waste Facility, may be reused or disposed at Massachusetts landfills provided that it is managed consistent with the acceptance criteria, operational, and procedural guidelines of this Policy. The TSDf shall provide the landfill operator receiving the treated Contaminated Soil with sufficient documentation, including the original source and site of the spill or release of the Contaminated soil, to demonstrate that the reuse or disposal of the treated Contaminated Soil at the Massachusetts landfill is in accordance with this Policy.

The landfill operator shall utilize the guidance provided in **Section 5.0, Testing and Characterization** in evaluating the adequacy of the information submitted to it by a TSDf. Documentation by the TSDf that the Contaminated Soil no longer fails the TCLP test for lead is not sufficient for demonstrating the Contaminated Soil may be managed under this Policy. The documentation submitted by the TSDf shall be consistent with that described in **Section 5.5, Documentation**.

The landfill operator in evaluating the adequacy of the post treatment analytical testing by the TSDf, may consider the degree to which the TSDf's waste analysis plan sufficiently documents that the Contaminated Soil meets the acceptance criteria of this Policy. The level of post-treatment analytical testing necessary beyond that required in a TSDf's waste analysis plan shall be a function of the degree to which the TSDf's waste analysis plan reflects and provides the information described in **Section 5.0**.

Treated TCLP-Lead Soil that has been treated at and is generated from a TSDf (see Section 3) shall be shipped from the TSDf to a Massachusetts lined landfill using a Material Shipping Record. The QEP for purposes of the MSR may be the individual at the TSDf responsible for implementation of the TSDf's waste analysis plan.

8.5 Management of Treated TCLP Non-Lead Soil at Massachusetts Landfills

Treated TCLP Non-Lead Soil, as defined in Section 3, is Contaminated Soil that failed the TCLP for a TC constituent other than lead and that has subsequently been treated to remove the characteristic (e.g., pass TCLP) and meets the **LDRs**, and as a result under RCRA may be managed as a solid waste. Treated TCLP Non-Lead Soil may be accepted by Massachusetts lined landfills for reuse or disposal only if the Department has issued the landfill a Special Waste Determination (BWP SW 14 or BWP SW 31 permit), Beneficial Use Determination (BWP SW 13 or BWP SW 30 permit), Landfill Minor Modification (BWP SW 22 permit) or Other Approval under 310 CMR 19.000, regardless of whether or not the contaminant levels *do not exceed* those in Table 1. Treated TCLP Non-Lead Soil is *prohibited* from reuse or disposal in unlined Massachusetts landfills.

9.0 Reuse and Disposal of Residential Lead Soil at Massachusetts Landfills

9.1 General

Residential Lead Soil, as defined in Section 3, is lead-Contaminated Soil originating from a location which qualifies as a household under Section 310 CMR 30.104(6), of the Massachusetts Hazardous Waste Regulations, and for which the generator has also determined, using due diligence as discussed in **Department Policy HW93-01**, that there is no affirmative evidence that the lead contamination results from an industrial source (e.g., lead paint). Such Contaminated Soil may be managed, under EPA's application of the household hazardous waste exemption (see Section 3), as a solid waste.

9.2 Reuse of Residential Lead Soil at Lined Landfills

Residential Lead Soil may be accepted for reuse by Massachusetts **lined landfills** in accordance with the procedures described in **Section 4.2, Reuse of Contaminated Soil at Lined Landfills** providing it is managed in accordance with and meets **all** the other requirements of this Policy. As described in **Section 5.4, Residential Lead Soil, Residential Lead Soil** intended for reuse at a lined landfill **need not** be tested using the TCLP to determine if it is a D008 (lead) TC Waste.

9.3 Reuse of Residential Lead Soil at Unlined Landfills

Residential Lead Soil may be accepted for reuse by Massachusetts **unlined landfills** in accordance with the procedures described in **Section 4.3, Reuse of Contaminated Soil at Unlined Landfills** providing it is managed in accordance with and meets **all** the other requirements of this Policy. As described in **Section 5.4, Residential Lead Soil**, Residential Lead Soil intended for reuse at a unlined landfill **need not** be tested using the TCLP to determine if it is a D008 (lead) TC Waste if the total lead level **does not exceed** 1000 mg/kg. The Department may require TCLP testing for Residential Lead Soil containing lead at total levels **exceeding** 1000 mg/kg when reviewing requests for the reuse of such soil at unlined landfills.

9.4 Disposal of Residential Lead Soil at Lined and Unlined Landfills

A Special Waste Determination (BWP SW 14 or BWP SW 31) or Other Department approval shall be obtained prior to the disposal of Residential Lead Soil at a lined or unlined landfill. An unlined landfill shall also have either a Department approved closure plan or have entered into an agreed upon closure schedule with the Department (e.g., Administrative Consent Order).

ATTACHMENT I: ADDRESSES OF DEPARTMENT REGIONAL OFFICES

Web page

ATTACHMENT II: BIBLIOGRAPHY OF RELATED DOCUMENTS

1. Massachusetts Department of Environmental Protection, Policy BWP-94-092, *Reuse and Disposal of Street Sweepings Department of Environmental Protection Bureau of Waste Prevention, Final Policy # BWP-94-092*, April 15, 1997.
2. Massachusetts Department of Environmental Protection, 310 CMR 30.000, *Hazardous Waste Regulations*.
3. Massachusetts Department of Environmental Protection, 310 CMR 40.0000, *Massachusetts Contingency Plan*.
4. Massachusetts Department of Environmental Protection, 310 CMR 4.00, *Timely Action Schedule and Fee Provisions*.
5. United States Environmental Protection Agency - Region I, Letter to Mr. Philip O'Brien, Ph.D., New Hampshire Department of Environmental Services, *Applicability of the Household Hazardous Waste Exclusion to Lead Contaminated Residential Soil*, April 21, 1995.

6. Massachusetts Department of Environmental Protection, Policy #WSC-94-400, *Interim Remediation Waste Management Policy for Petroleum Contaminated Soils*, April 21, 1994.
7. Massachusetts Department of Environmental Protection, *Interim Policy HW 93-01, Regarding the Regulatory Status of Soil Contaminated with Waste Oil of Unknown Origin*, Memorandum from Thomas Powers, Deputy Commissioner, January 11, 1993.
8. Massachusetts Department of Environmental Protection, 310 CMR 16.00, *Site Assignment Regulations for Solid Waste Facilities*.
9. Massachusetts Department of Environmental Protection, 310 CMR 19.000, *Solid Waste Management Facility Regulations*.
10. Massachusetts Department of Environmental Protection, Policy #WSC-91-401, *Policy for the Investigation, Assessment, and Remediation of Petroleum Releases: Interim Site Investigation Protocol Document*, April 9, 1991.
11. Massachusetts Department of Environmental Protection, Policy #WSC-310-91, *Standard References for Monitoring Wells*, April 1991.

ATTACHMENT III: MATERIAL SHIPPING RECORD AND INSTRUCTIONS

The Material Shipping Record is available in fillable Word format
MS Word

Material Shipping Record

Summary Sheet Questions and Answers

1. What is the purpose of the Material Shipping Record?

The Material Shipping Record is to be used as the tracking document for oil contaminated soil, fill, and dredge materials not subject to management requirements of 310 CMR 40.0034 and 40.0035 of the Massachusetts Contingency Plan (MCP) or manifesting as a hazardous waste under 310 CMR 30.000 the Massachusetts Hazardous Waste Regulations.

2. What type of material and levels of contaminant does this include?

This includes materials such as soil, sediment, and dredge materials generated within the Commonwealth that are contaminated with oil below the Reportable Concentrations under the MCP and any soil, sediment, and dredge materials with any level of oil contamination that are generated from a state other than Massachusetts and shipped to a facility in Massachusetts for recycling, reuse or disposal. It may also include other materials specifically identified by the Department.

3. May this document be used in lieu of a hazardous waste manifest?

No, it may not be used in lieu of a hazardous waste manifest for the shipment of hazardous wastes subject to management under 310 CMR 30.000 or Federal RCRA.

4. Who must use this form?

Anyone shipping oil contaminated soil, fill or dredge materials from out-of-state to any facility in Massachusetts for recycling, reuse, or disposal must use this form. Any generator in Massachusetts must use this form if it is shipping oil contaminated soils that are not subject to the requirements of 310 CMR 40.0034 and 310 CMR 40.0035, or manifesting under 310 CMR 30.000, to any facility either within or outside of Massachusetts for purposes of recycling, reuse or disposal.

5. **Are any other permits or notifications required in addition to this form?**

Yes, receiving facilities within Massachusetts may require a Class A Recycling Permit or a permit from the Department's Division of Solid Waste Management (Beneficial Reuse, or Special Waste Determination). The receiving facility should be contacted to assure that the proper additional permits and approvals are obtained.

6. **Where may copies of this form be obtained?**

Copies of this form may be obtained from the receiving facility in Massachusetts from DEP's Boston office and the Regional Service Centers.

Material Shipping Record

Instructions

The Material Shipping Record records the transportation and final destination of soil and dredge materials that contain levels of oil and/or hazardous materials (OHMs) or hazardous constituents that are not subject to management under the Massachusetts Contingency Plan (MCP) at 310 CMR 40.0034 and 40.0035 or manifesting under the Massachusetts Hazardous Waste Regulations, 310 CMR 30.000. These include, but are not necessarily limited to:

- Soils and dredge materials that are contaminated with OHMs shipped from out-of-state locations to soil recycling facilities and landfills in Massachusetts for recycling or reuse as landfill cover;
- Soils and dredge materials that are contaminated with OHMs generated within Massachusetts shipped to Massachusetts facilities for recycling or reuse as landfill cover; and
- Any other materials identified by the Department for shipment using this document.

These **do not** include such materials as municipal solid waste, process wastes or hazardous waste subject to the requirements of a hazardous waste manifest under 310 CMR 30.000 or the "Bill of Lading" requirements under 310 CMR 40.0034 and 40.0035. **The use of this document by any party for the shipment of hazardous waste subject to manifesting under 310 CMR 30.000 or materials subject to a "Bill of Lading" under 310 CMR 40.0030 can result in significant administrative and/or criminal penalties including fines and imprisonment for the generator, transporter and receiving facility.**

Prior to field use of the document, complete Sections A through H and submit the completed document, with original signatures in Sections G and H to the receiving facility. Either an original copy of Sections A through G or a reproduction must accompany each truck load of waste moved. The truck driver and a receiving facility representative must all sign their acknowledgement of the shipment and delivery of each load on the Material Shipping Log Sheet. The Log can accommodate signatures for up to four loads of material, and there is no limit on the number of Log Sheets that may be attached to a single Material Shipping Record. Upon receipt of the last load a receiving facility representative must sign the Acknowledgement of Receipt in Section I. The receiving facility will then send copies of the signed Material Shipping Record and Log Sheets to the generator maintaining the original facility records.

A separate Material Shipping Record must be used if any of the following parties change:

- The receiving facility;
- The transporter or common carrier; or
- The Qualified Environmental Professional.

A Qualified Environmental Professional must certify the Material Shipping Record, unless the document is approved by the Department. An employee of the receiving facility may sign as the Qualified Environmental Professional provided that the employee fulfills the definition of a Qualified Environmental Professional. A Qualified Environmental Professional is an individual who:

- Is knowledgeable about the procedures and methods for characterizing wastes and contaminated media;
- Is familiar with the receiving state, Massachusetts, and federal regulations applicable to the management of such materials;
- Performs or oversees such activities as an integral part of his or her professional duties; and
- Is professionally licensed or certified in a discipline related to environmental assessment (i.e., engineering, geology, soil science, LSP, or environmental science) by a state or recognized professional organization.

Please complete the Material Shipping Record (first four pages of form) in ink. Note that documents submitted to the facility must include original signatures.

Top of each page, upper right-hand corner:

Tracking Number: Unique Tracking Number assigned by the receiving facility to the location of origin.

A. Location Information

Record the location from which the material is being generated in this section. If the material is being generated from multiple contiguous properties that comprise a single remedial site, use the Material Shipping Record to record the address or location of the single most contaminated property or source location. Append a list of other affected properties to the form.

1. **Location Name:** May be the company or facility name or the CERCLA or State name for the site. Examples might be ABC Widgets Inc., Double Death Superfund Site, or Skyview Turnpike Mile 78.

Street: Note the street address of the location, or indicate a mile marker or similar highway designation.

Location Aid: Provide additional geographical or descriptive information to identify the location (e.g., cross-street, transformer or pole number, business name, landmark or geographical feature).

City/Town/State/Zip Code: Identify the location's municipality. Include the state and zip code.

2. **Date/Period of generation:** State the date or period during which material shipment using the Material Shipping Record was generated at the disposal site.
3. **U.S. EPA Identification Number:** If available, state the EPA or State Hazardous Waste Identification Number for the location of generation.
4. **21E Site:** If this material is being generated at a location which has had a release subject to 310 CMR 40.0000, check the yes box; if not, check no. Do not check this box if the response to the release has been completed and the location has achieved a permanent solution pursuant to 310 CMR 40.0000, and the material is unrelated to that solution. If this box is checked, the Site History attached to this record should describe the relationship of the material to the release, including the reason the material is not subject to management under 310 CMR 40.0034 and 40.0035.
5. **Additional Tracking Documents:** List any other tracking documents required for the shipment of this material, such as DOT documents or those required by the State within which the material was generated.

B. Generator Information

1. **Name of Organization:** If an organization is the generator of the material state the name (e.g., company, municipal department, public authority, etc.).

Contact Name/Title: Provide the name and title of a representative of the organization who has knowledge of the Material Shipping Record and whom may be contacted for further information. The person listed must be the highest ranking individual having day-to-day responsibility for

submittal of the Material Shipping Record. If an individual is assuming responsibility for the Material Shipping Record, state his or her name.

Street Address: Provide the street address of the generator, which may differ from the location of generation.

City/Town/State/Zip Code/Telephone: Provide the remainder of the mailing address for the generator. State a telephone number, including area code and any extension, where the generator contact may be reached.

C. Owner and/or Operator Information

1. **Owner and/or Operator:** Check all that apply.

Name of Organization: If an organization is the owner/operator state the name (e.g., company, municipal department, public authority, etc.). If the owner/operator is the same as the generator enter "Same as Generator Section B" and go to Section D.

Contact Name: Provide the name and title of a representative of the organization who may be contacted for further information.

Street: Provide the street address of the contact named above.

City/Town/State/Zip Code: Provide the remainder of the owner/operator's mailing address.

Telephone: State a telephone number, including area code and any extension, where the contact named above may be reached.

D. Transporter/Common Carrier Information

1. **Transporter/Common Carrier Name:** Record the name of the individual or organization who will transport the material. Note that only one such individual or organization may use a particular Material Shipping Record.

License Number & State: If the transporter is a licensed hazardous waste transporter the transporter's hazardous waste license number and licensing state.

Contact Person: Provide the name and title of a transporter representative who may be contacted for further information.

Street: Provide the street address of the transporter.

City/Town/State/Zip Code: Provide the remainder of the transporter mailing address.

Telephone: State a telephone number, including area code and any extension, for the transporter.

E. Receiving Facility

1. **Operator/Facility Name:** Record the name of the operator of the facility planned to receive the material tracked by the Material Shipping Record. Also record the name of the receiving facility, if different.

Contact Person: Provide the name and title of a representative of the receiving facility who may be contacted for further information.

Street: Provide the street address of the individual named above. This may not be the actual address of the receiving facility.

City/Town/State/Zip Code: Provide the remainder of the mailing address of the receiving facility contact.

Telephone: State a telephone number, including area code and any extension, where the receiving facility contact may be reached.

2. **Type of Facility:** Indicate the type of facility receiving the material based on the type of management planned for those materials. If selecting "other", specify the facility type.
3. **Permit Number:** If applicable, state the DEP Division of Hazardous Materials Hazardous Waste Class A Recycling Permit or Division of Solid Waste Management Facility number for the receiving facility.

F. Description of Material

1.
 - a. **Soil/Dredge Material/Fill:** If the material is soil, dredge material or fill check the appropriate box(es).
 - b. **Description:** Describe the physical characteristics of the material with regards to size, type, and composition. If the contaminated media is soil, indicate the soil type.
 - c. **Classification:** If soil indicate the classification method(s): MIT = M.I.T and British Standards Institute, AASHO = American Association of State Highway Officials, USDA = U.S. Dept. of Agriculture, USAEC = Unified Soil Classification System, ASEE = American Society for Engineering Education (Burmeister).
2. **Other:** If a material other than soil, dredge material, or fill describe here.
3. **Type of Contamination:** Check all that apply to the material.
4. **Constituents of Concern:** Specify the type of oil and/or hazardous material contaminating the material intended for transport by checking the applicable blocks. The abbreviations correspond to the following: As = Arsenic; Cd = Cadmium; Cr = Total Chromium; Pb = Lead; Hg = Mercury; Na = Sodium; PCBs = polychlorinated biphenyls; HVOCS = chlorinated compounds (eg. chlorinated solvents); PATH = pathogens; VOCs = Volatile organic compounds other than chlorinated compounds this includes benzene, ethylbenzenes, toluene, and xylenes; PAHs = polyaromatic hydrocarbons; BNAs = Acid/Base/Neutral extractables; and TPH = Total Petroleum Hydrocarbons.
5. **Analyses Performed:** Specify the analytical tests that were performed on the material by checking the applicable box(es).
6. **Screening Performed:** Indicate any screening tests that were performed in characterizing the material, the type of instrument used, and constituents screened.
7. **Estimated Volume of Materials:** State the estimated volume in cubic yards and weight in tons of the material intended for transport. If providing another measure of volume, state the unit of measurement.
8. **Contaminant Source:** Indicate the source of contamination found in the material.
9. **Supporting Documentation:** Indicate the type of supporting documentation included with the Shipping Record.

G. Qualified Environmental Professional Opinion

Name of Qualified Environmental Professional Organization: Provide the name of the employer of the Qualified Environmental Professional who prepared the Material Shipping Record, if applicable.

Qualified Environmental Professional Name/Title/Telephone: Provide the name, title and telephone number, including area code and any extension, of the Qualified Environmental Professional who prepared the Material Shipping Record.

Signature/Date: The Qualified Environmental Professional who prepared the Material Shipping Record must sign and date the Material Shipping Record.

License Number: Record the license or certification number of the Qualified Environmental Professional (eg. Professional Engineer, Professional Geologist).

Seal: The Qualified Environmental Professional who prepared the Material Shipping Record must stamp the Material Shipping Record with his or her official seal.

H. Generator Certification

Signature/Date/Name: The individual who is named in Section B as the contact must legibly sign and print his or her name, state a title, if any, and date the Material Shipping Record. The Qualified Environmental Professional who prepared the Material Shipping Record may sign only when authorized in writing by the individual or organization assuming responsibility. A copy of the written authorization must be attached to the Material Shipping Record.

I. Acknowledgement of Receipt by Receiving Facility

Receiving Facility Representative: The highest ranking official at the receiving facility having day-to-day responsibility for receipt of the material must sign and date the Summary Sheet to certify the delivery to the facility of all contaminated material recorded on the Log Sheet(s).

Material Shipping Record Log (Page 5 of form)

Make additional copies of this page if you have more than 4 loads.

Release Tracking Number: Repeat the Release Tracking Number from the first page of the Material Shipping Record.

J. **Load Information:** Each Log Sheet can record the movement of up to four truck loads of contaminated materials.

Transporter: The driver of the truck transporting the material must sign the Log Sheet for the appropriate Load and record the license number of the trailer, date and time of shipment.

Receiving Facility Representative: A representative of the receiving facility must sign and date the Log Sheet for the appropriate Load and record the load size of the material in cubic yards or another pertinent measure.

K. Log Sheet Volume Information

Total Loads This Page: State the total volume of material whose delivery to the receiving facility is recorded on the Log Sheet. If you have more than 4 loads, make additional copies of this page.

Total Carried Forward: State the total volume of material whose delivery is recorded on prior Log Sheets, i.e., if the current sheet is the third of four, state the combined totals for the first two Log Sheets.

Material Shipping Record Total: State the total volume of material transported using the Material Shipping Record, i.e., using the example in Item 60, state the total for all four Log Sheets. This quantity will likely differ from the estimated amount recorded at Item 43.

Page Number: Indicate the sheet number and the total number of Log Sheets attached to the Material Shipping Record.