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Responses to USEPA 6/23/12 TSCA-Related Questions

1. **Question:** *What is the current proposed management of the drainage swale sediments? Is it still proposed to manage these sediments in CAD-2? If so, how does the concentration of all cocs in the drainage swale sediments compare to the cocs concentrations in the harbor sediments that will be dredged during the ST project?*

   Response: The Commonwealth currently anticipates that the drainage swale sediments will be placed into CAD Cell #2. The Constituents of Concern in the Stormwater Drainage Swale Mitigation Area are generally higher in concentration than other sediments to be dredged associated with the New Bedford Marine Commerce Terminal; however, please note that the New Bedford Marine Commerce Terminal sediments are to be placed within CAD Cell #3. The concentrations of Constituents of Concern in the Stormwater Drainage Swale Mitigation Area are generally the same or lower than the concentrations of Constituents of Concern for other sediments that have previously been dredged during the Phase III Navigational Dredge project under the State Enhanced Remedy process and placed within CAD Cell #2. A drawing showing the concentration of PCBs within the Stormwater Drainage Swale Mitigation Area as well as the average concentration of PCBs (7.67 mg/kg) for sediments within the Stormwater Drainage Swale Mitigation Area as well as a summary of the material that has historically been placed within CAD Cell #2 is included as **Attachment A.**

   Analytical data for samples collected within the Stormwater Drainage Swale Mitigation Area (including samples collected below Mean High Water, labeled "CANAL" and samples collected above Mean High Water, labeled "UP") is contained within Appendix 73 of the Commonwealth's January 18, 2012 submittal to EPA. Please note that a report from 2007 was also included within Appendix 73 of the Commonwealth's January 18, 2012. Conversations with EPA personnel have indicated that there is some confusion regarding the object and content of this report, in particular the pictures associated with the report. The photos contained within this document are not indicative of the section of the Stormwater Drainage Swale under consideration for mitigation. The area under consideration is only the area between Cove and Gifford Street. Although one photograph (the bottom photograph on the second page) shows the southern portion of that area at a distance, none of the photographs are wholly representative of the area. The existing conditions of the area in question is best represented by the cross-section on Figure 16 of the Commonwealth's January 18, 2012 submittal to EPA.

   The cross-section in question shows the hurricane barrier to the far right, an area that is generally flooded immediately to the left of the hurricane barrier, a rip-rap slope to the left of the flooded area, and an upland portion to the far left. Dredging and disposal of dredge materials into CAD Cell #2 is currently planned for material within the flooded area shown in the cross-section ("CANAL" material). Material above Mean High Water ("UP" material) will be excavated and disposed of off-site. Should additional samples

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collected from material above Mean High Water for offsite disposal indicate concentrations above 1 mg/kg, the Commonwealth will contact EPA for guidance on handling of that material.

2. **Question:** *During dredging and disposal (i.e., placement) of sediments, it is unclear if a silt curtain will be employed. It appears that the plan is to comply with the performance standards as specified in Appendix 75, but these standards only indicate that a silt curtain "may" be employed. Further, the plan only appears to specifically reference dredging, so clarification on how these performance standards and turbidity monitoring frequencies will be employed during disposal operations is requested. In the revised June 2012, the Commonwealth's response to Q5L appears to indicate that silt curtains will be used at all times around any filling area that is not complete enclosed or around any capping, dredging, or other construction activity b/t January 15 and June 15. In addition, in the first paragraph to the response it is indicated that the Commonwealth will monitor turbidity around all dredging, capping, and bulkhead construction work areas, regardless of the time of year. Please clarify if this is correct. Please also clarify if any monitoring for Total Suspended Solids will be conducted.*

Response: The Performance Standards listed by the Commonwealth are intended to be utilized for both disposal and dredging operations, and will also be utilized to determine water quality impacts associated with filling

Silt curtains will be used at all times around any filling area that is not completely enclosed. Silt curtains will be used around any capping, dredging, or other construction activity between January 15 and June 15. The Commonwealth will monitor turbidity around all dredging, capping, and bulkhead construction work areas, regardless of the time of year.

The Commonwealth does not currently plan to collect samples for measurement of Total Suspended Solids.

These procedures are consistent with the Performance Standards utilized by the Commonwealth of Massachusetts during the State Enhanced Remedy process for Phase II and Phase III of Navigational Dredging.

3. **Question:** *What was the sampling depth for the PCB sampling that was done on the drainage swale sediments versus the depth of proposed excavation of the sediments? It is not clear what the proposed PCB cleanup standard is for this area and what is the proposed post-excavation sampling to document remaining PCB concentrations?*

Response: Samples within the Stormwater Drainage Swale Mitigation area below Mean High Water were collected for vertical delineation on a 1 foot basis to refusal. The bottom of the Stormwater Drainage Swale is lined with rip-rap, and therefore refusal was clearly evident in the field. In cases where greater than 1 foot of existing sediment

was present within the Stormwater Drainage Swale Mitigation Area, one sample was collected within surficial sediment (between 0 and 1 foot below the mudline) and one sample was collected within one foot of refusal (between 0 and 1 foot above refusal). In the cases where greater than 1 foot of material was present, the surficial samples were labeled "T" and the samples within one foot of refusal were labeled "B".

The goal of the mitigation measure is to remove the largest quantity possible of impacted sediment from the Stormwater Drainage Swale Mitigation Area without damaging the rip-rap surface below the sediment. However, due to the limitations of conventional construction equipment, it is doubtful that all of the sediment will be able to be removed. The residual material (the material that cannot be removed from the Stormwater Drainage Swale Mitigation Area) with "Parent" material from the navigational channel of the New Bedford Marine Commerce Terminal (stipulated as "Bottom of Dredge" material within the draft construction plans within Appendix A of the Commonwealth's June 18, 2012 submission).

As it is extremely difficult to determine exactly what quantity of sediment will be removed and how much will remain within the Stormwater Drainage Swale Mitigation Area (it is currently assumed that at least a few inches of material will remain), it is the Commonwealth's opinion that at any location, the representative sample, or the "B" sample from locations where more than 1 foot of sediment is currently present, represents the worst-case post-remediation concentration within sediment prior to capping. The Commonwealth may collect post-dredge samples from within the Stormwater Drainage Swale Mitigation Area prior to capping.

After work has been completed, the Commonwealth will work with the City of New Bedford to note on the parcel deed that residual PCB concentrations are present within the Stormwater Drainage Swale.

4. **Question:** *In the Q1 Response to TSCA 6/20 email, it was indicated that upland soil which was not suitable geotechnically would be disposed of off-site. Please clarify how these materials would be managed as based on the current information, it would not appear that sufficient information exists to readily classify the PCB concentrations in upland soils for off-site disposal, unless all generated soils will be managed in accordance with 40 CFR 761.61(b). Thus, clarification is requested.*

Response: The Contractor is obligated within the specifications to conduct sampling as necessary to characterize the material prior to disposal offsite for any material deemed to be geotechnically unsuitable. Material within test pits and soil borings reviewed to date have indicated that most material will be reused within the facility; however, the geotechnical engineers associated with design of the facility are reserving the right to identify material that would be unsuitable (geotechnically) for reuse and will order that soil to be stockpiled separately for offsite disposal. As the facility has not been fully

delineated, and as the location of potentially geotechnically unsuitable material is currently unknown, it will not be possible to pre-characterize this material before it is excavated and segregated. Once the material is identified as geotechnically unsuitable, the Contractor will be required to stockpile the material separately, and a sampling and analysis plan will be prepared to adequately characterize any geotechnically unsuitable material prior to offsite disposal. This sampling plan will be submitted to EPA for review prior to implementation and offsite disposal.

5. **Question:** *With respect to the upland area, the current plan proposes to removal and dispose of PCB-contaminated soils with > 25 ppm in 2 areas. There is also mention about the possibility of additional excavation of Pb-contaminated soils, which is still under review by the Commonwealth. Other that the Pb issue, is any additional sampling and/or site characterization proposed in the upland area for purposes of compliance with the MCP requirements?*

Response: The Commonwealth does not currently anticipate any additional sampling for delineation and/or site characterization for the purposes of compliance with MCP requirements.

Previous assessment activities have revealed impacts to soil and groundwater along the New Bedford waterfront area as a result of historic widespread urban filling. This fill material has resulted in the contamination of subsurface soils with a variety of constituents including, petroleum hydrocarbons, polynuclear aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs) and lead. PAH and lead contamination has been detected at the site consistent with Massachusetts Department of Environmental (MassDEP) published background concentrations. However, localized areas (due to soil heterogeneities) of PAH and lead are present at the site above background.

Based on discussions with the MassDEP and EPA, it has been concluded that environmental response actions in association with the historic impacts to soil and groundwater to be implemented at the site will be performed in accordance with the Massachusetts Contingency Plan (MCP) 310 CMR 40.0000 (and also in accordance with TSCA as outlined below). Specifically, these activities will be conducted either as Comprehensive Response Actions (CRA) MCP 310 CMR 40.0800 or as a Release Abatement Measure MCP 310 CMR 40.0440.

Environmental assessment activities have documented the presence of PCBs in soil at concentrations exceeding 50 parts per million (ppm). Response actions to address this impact will be performed in accordance with the United States Department of Environmental Protection Agency Toxic Substances Control Act under 40 C.F.R. Parts 700-766.

Environmental testing at the site has also revealed the presence of leachable lead in soil. Concentrations of Toxicity Characteristic Leaching Procedure (TCLP) lead have been detected above the 5 milligrams per liter hazardous waste level. This material is a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) and is subject to RCRA Land Disposal Regulations if it is "generated".

A guidance document issued by MassDEP indicates that, so long as the soils are being re-graded onsite (which they are), will not be treated ex-situ (they will not) or otherwise placed into containers, tanks or a treatment or RCRA-regulated unit (they will not), and will remain within the defined Area of Contamination (AOC) onsite (they will), these soils will not be "generated", exempting them from the Land Disposal Regulations, which will allow them to be managed under the MCP and TSCA alone. The boundaries of the AOC (under RCRA) or the disposal site (under the MCP), which are coincident with the area which will require a TSCA determination, are shown on the figure included within **Attachment B**. For more details on the interface between RCRA and the MCP in the Commonwealth, please refer to "MassDEP Technical Update August 2010: *Considerations for Managing Contaminated Soil: RCRA Land Disposal Restrictions and Contained-In Determinations",* included as **Attachment C**.

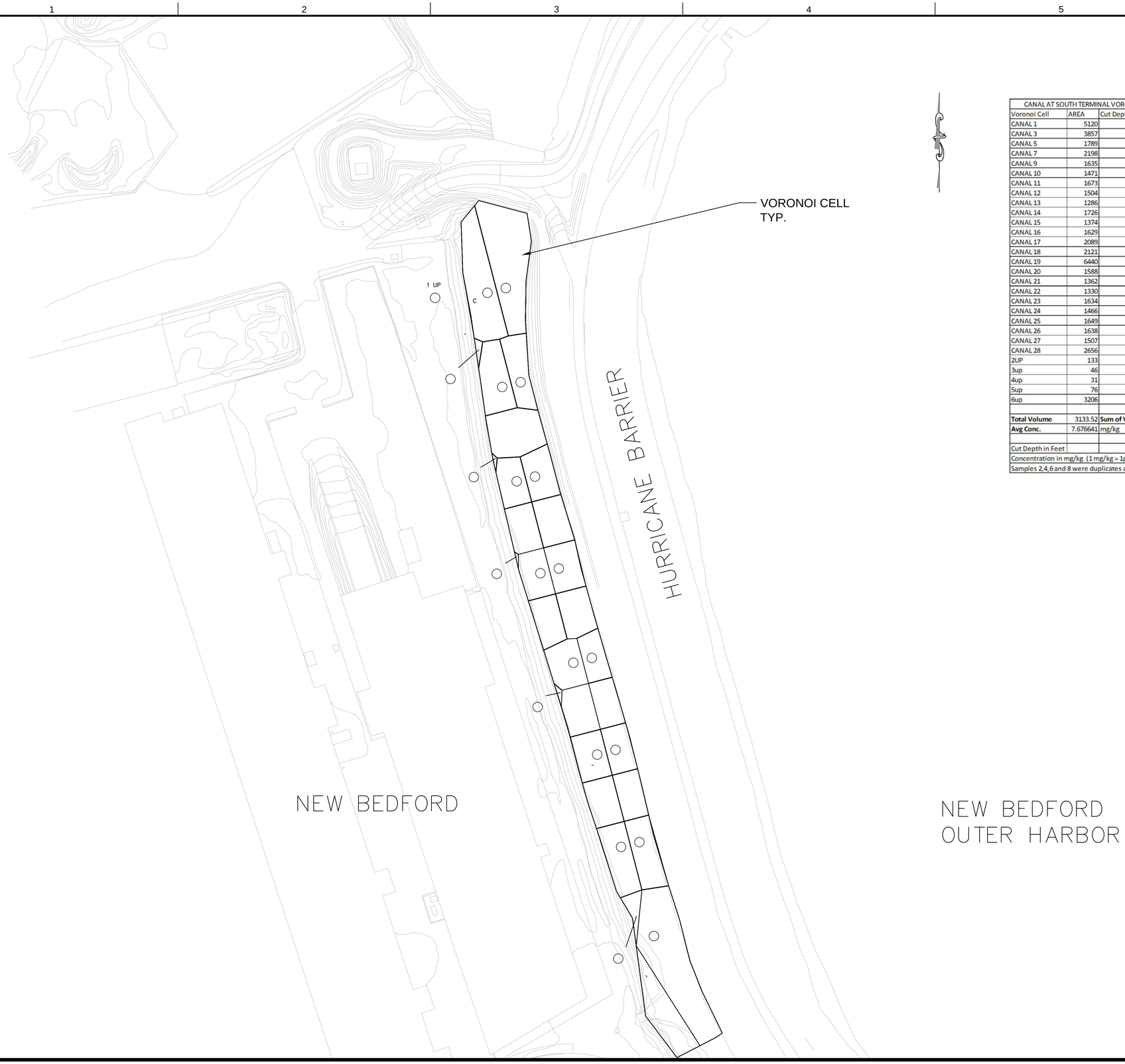
The overall area of the site comprises multiple properties, at least two of which are MassDEP listed sites. The source of contamination at these locations is attributable to historic urban fill. Response actions at these sites have been undertaken under the supervision of one or more Licensed Site Professionals (LSP). At several of these locations a condition of No Significant Risk (NSR) has been achieved; therefore, it appears likely that the Commonwealth will similarly be able to achieve a condition of NSR at the New Bedford Marine Commerce Terminal.

The Commonwealth currently anticipates that, due to the absence of Pb-impacted groundwater onsite that the primary risk from Pb-impacted soil is from direct contact. Therefore, consistent with MCP standard practices, the Commonwealth plans to manage Pb-impacted soils onsite via: the re-grading of onsite soils; implementation of a 3-foot thick cap of granular material; and a deed restriction that will minimize direct contact with that material via an Activity and Use Limitation. This remedy will be assessed for its potential and future risk to current and future receptors via a Method 3 Risk Assessment, which will be completed prior to closure of the site. If any significant unanticipated risk to future receptors is identified during the Method 3 Risk Assessment, consistent with MCP standard practices, the proposed remedy will be re-evaluated.

The work to be performed at the New Bedford Marine Commerce site will be managed and supervised by a LSP under the regulations defined in 310 CMR 40.0000. The LSP will work closely with project team members, contractors, representatives from the City of New Bedford, EPA and the MassDEP. All documentation required under the MCP will be prepared and submitted to ensure and maintain regulatory compliance. Response

actions undertaken under the supervision of the LSP will be performed to achieve a condition of No Significant Risk (NSR) at the site as defined under the MCP. Achieving a condition of NSR may require the implementation of one or more Activity and Use Limitations (AUL).

Attachment A



CANAL AT SOUTH TERMINAL VORONOI CELL DISTRIBUTION AND PCB CONCENTRATION					
Voronoi Cell	AREA	Cut Depth	Volume (V)	Concentration (Con)	V*Con
CANAL 1	5120	1.56	295.82	4.32	1277.95
CANAL 3	3857	1.56	222.85	4.9	1091.96
CANAL 5	1789	1.56	103.36	6.1	630.52
CANAL 7	2198	1.56	127.00	2	253.99
CANAL 9	1635	1.56	94.47	12.76	1205.39
CANAL 10	1471	1.56	84.99	30	2549.73
CANAL 11	1673	1.56	96.66	25.055	2421.87
CANAL 12	1504	1.56	86.90	9.61	835.09
CANAL 13	1286	1.56	74.30	9.05	672.44
CANAL 14	1726	1.56	99.72	10.78	1075.03
CANAL 15	1374	1.56	79.39	18.925	1502.39
CANAL 16	1629	1.56	94.12	8.07	759.55
CANAL 17	2089	1.56	120.70	1.89	228.12
CANAL 18	2121	1.56	122.55	11.18	1370.07
CANAL 19	6440	1.56	372.09	3.62	1346.96
CANAL 20	1588	1.56	91.75	15.29	1402.87
CANAL 21	1362	1.56	78.69	10.415	819.59
CANAL 22	1330	1.56	76.84	6.94	533.30
CANAL 23	1634	1.56	94.41	2.89	272.84
CANAL 24	1466	1.56	84.70	12.68	1074.02
CANAL 25	1649	1.56	95.28	3.41	324.89
CANAL 26	1638	1.56	94.64	8.26	781.73
CANAL 27	1507	1.56	87.07	6.71	584.25
CANAL 28	2656	1.56	153.46	6.58	1009.75
2UP	133	1.56	7.68	0.48	3.69
3up	46	1.56	2.66	0.603	1.60
4up	31	1.56	1.79	0.229	0.41
5up	76	1.56	4.39	0.69	3.03
6up	3206	1.56	185.24	0.118	21.86
Total Volume	3133.52	**Sum of V*Con**	24054.91		
Avg Conc.	7.676641	mg/kg			
Cut Depth in Feet					
Concentration in mg/kg (1 mg/kg = 1ppm)					
Samples 2,4,6 and 8 were duplicates and were removed from the data set.					

APEX
ROCKVILLE, MD
SOUTH WINDSOR, CT - BOSTON, MA - NEW BEDFORD, MA - HOLYOKE, MA

184 HIGH STREET, SUITE 502
BOSTON, MA 02210

58H CONNECTICUT AVENUE
SOUTH WINDSOR, CT

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DRAFT

PROJECT
NEW BEDFORD
MARINE COMMERCE
TERMINAL

OWNER
MASSACHUSETTS CLEAN ENERGY CENTER
55 SUMMER STREET, 9TH FLOOR
BOSTON, MASSACHUSETTS

NO.	DATE	DESCRIPTION	BY
1.	12-23-11	- 、CONSTRUCTION	CHM

PROJECT NO.	6690
CADD FILE	TSCA_DETERMINATION
DESIGNED BY	JER
DRAWN BY	JER
CHECKED BY	
DATE	05/30/2012
DRAWING SCALE	1"=50'

GRAPHIC SCALE
SCALE: 1"=50'
0 25 50 100

SHEET TITLE
STORMWATER DRAINAGE SWALE MITIGATION AREA VORONOI CELL DISTRIBUTION

DRAWING NO.
V-5.3

2 OF 2

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PCB Concentration Ranges in CAD Cell #2 and Dredge Locations

Dredge Location	Est. Final Volume Dredged (cubic yards)	PCB Pre-Dredge Conc. Average [1,2] (ppm)	PCB Pre-Dredge Conc. Range (ppm)	Total Number of Samples / PCB Concentrations in Samples ≥ 50 ppm	Post-Dredge Conc.[3] (ppm)
South Terminal	2,691	8	8	1	2
Union Warf	1,109	11	5 - 17	2	5
Tonnessen Park	1,266	22	22	1	0.03
Gifford St. Boat Ramp	10,880	7	7	1	2
Olde North Wharf	1,295	9	4 - 13	3	2
Warren Alexander	2,142	13	0.2 - 18	5	3
Olde North Wharf	108	5	4 - 13	3	2
Niemiec Marine	2,312	1	1	1	N/S
Fairhaven Shipyard	344	Not Sampled (N/S)	Not Sampled	Not Sampled	N/S
Linberg Marine	1,773	Not Sampled	Not Sampled	Not Sampled	N/S
Packer Marine	2,288	59	57 - 61	2 57 & 61 ppm	0.1
Sawyer St Rowing[2]	4,190	Estimated 27 (see Note)[2]	(see Note)[2]	(see Note)[2]	12
Steamship Authority	5,686	13	7 - 18	2	3
Steamship Authority	16,695	0.2	0.21 – 0.23	2	0.2
Total in Cell #2	52,779	8 (Avg. in Cell)	0.2 - 61	23	

[1] Concentration averages were determined by averaging total number of samples at each location.

[2] Sediment PCB concentrations were obtained from EPA 2002 and Apex 2010 pre-dredge sampling data, except for the Sawyer St. pre-dredge concentration. The Sawyer St. area actually dredged was smaller than the area in the original planned dredged footprint. As a result of this change in size of this area, there was no pre-dredge PCB concentration from the dredged area. An estimated pre-dredge average concentration was calculated using sediment concentrations (7 sample locations) currently next to the Sawyer St. dredged area using EPA 2010 data.

[3] Post-dredge conc. was not required. One sample was typically collected at each dredged location.

Attachment B

APEX

184 HIGH STREET
SUITE 502
BOSTON MA 02110
(617) 728-0070

REVISIONS

NO.	DATE	DESCRIPTION

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PREPARED FOR:

COMMONWEALTH
OF
MASSACHUSETTS

DRAWING TITLE:

NEW BEDFORD MARINE
COMMERCE TERMINAL
AREA FOR TSCA
DETERMINATION

Scale: 1"=80'

0 40 80 160 240 FEET

Date 6/19/12	Drawing No.
Proj. Mgr.	
Design	
Check GCD	
Drawn JER	
Job. No. 6615	
Last Rev. 7/7/10	

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Attachment C

Technical Update

Massachusetts Department of Environmental Protection

Considerations for Managing Contaminated Soil: RCRA Land Disposal Restrictions and Contained-In Determinations

The information contained in this Technical Update is intended solely as guidance. This document does not create any substantive or procedural rights, and is not enforceable by any party in any administrative proceeding with the Commonwealth. Parties using this guidance should be aware that there may be other acceptable alternatives for achieving and documenting compliance with the applicable regulatory requirements and performance standards of the Massachusetts Contingency Plan ("MCP").

1.0 Summary

This Technical Update revises and expands a November, 2002 MCP Q&A question on the implications and application of the U.S. Environmental Protection Agency ("USEPA") Land Disposal Restrictions ("LDR") regulations under the Resource Conservation and Recovery Act ("RCRA") to soil managed under the Massachusetts Contingency Plan ("MCP", 310 CMR 40.0000). This Technical Update provides guidance on managing contaminated soil to meet the requirements of several applicable regulatory programs administered by both MassDEP and USEPA.

The focus of this Technical Update is the determination of whether contaminated soil must be managed as a hazardous waste subject to RCRA requirements and the process an LSP/PRP can use to make and document that determination, subject to MassDEP's presumptive approval.

2. .0 USEPA Land Disposal Restrictions (LDR)

The USEPA LDR program is designed to ensure that wastes are properly treated prior to land disposal, by immobilizing the harmful constituents or reducing the waste toxicity or by destroying or removing the harmful constituents. The LDR requirements stipulate treatment standards that apply to all hazardous wastes and also provide for optional *alternative treatment standards* for some specific wastes. Importantly, alternative treatment standards are available for contaminated soil - commonly identified at Massachusetts disposal sites being assessed and remediated pursuant to the MCP. USEPA has published an extensive summary of the LDR requirements in an August 2001 guidance document, "Land Disposal Restrictions: Summary of Requirements" (EPA530-R-01-007), available online at: http://www.epa.gov/osw/hazard/tsd/ldr/ldr-sum.pdf.

Massachusetts Department of Environmental Protection
One Winter Street
Boston, MA 02108-4746

Commonwealth of Massachusetts
Deval L. Patrick
Governor

Executive Office of Environmental Affairs
Ian A. Bowles
Secretary

Department of Environmental Protection
Laurie Burt
Commissioner

Bureau of Waste Site Cleanup
Janine Commerford
Assistant Commissioner
August, 2010.

This information is available in alternate format by calling our ADA Coordinator at (617) 574-6872.

MassDEP has received authorization from USEPA for the implementation of the LDR requirements effective August 23, 2010.

USEPA has stated that soil is generally subject to the RCRA Land Disposal Restrictions (LDR) program under Title 40, Part 268 of The Code of Federal Regulations, (40 CFR 268), including the LDR treatment standards, if the following conditions are met:

- the soil is generated; ***and***
- the soil contains a hazardous waste regulated under RCRA.

Each of these conditions is discussed in more detail below.

When is contaminated soil considered to be "generated"?

Soil is considered generated for purposes of the LDR requirements when it is excavated and accumulated/placed in containers (drums, roll-offs, etc.), tanks or other RCRA regulated units, treated ex-situ, or removed from the Area of Contamination ("AOC")[1].

USEPA has stated that the LDR treatment standards do not apply to *in-situ* soils left in place, nor do they force soil to be excavated. If the contaminated soil is re-graded and/or consolidated within an AOC, the soil would not be considered generated, and the LDR requirements do not apply, even if the soil had been "removed from the land" within the AOC. As long as excavated soils are not treated *ex-situ* and/or not placed into containers, tanks, or a treatment or other RCRA-regulated unit, or moved outside of the AOC, they will not be considered generated.

When is contaminated soil considered to contain a hazardous waste?

Soil is considered to contain a hazardous waste (hazardous waste soil) under RCRA and 310 CMR 30.000, the Massachusetts Hazardous Waste Regulations, if, when generated, it meets either or both of the following two conditions:

- the soil exhibits one or more of the characteristics of a hazardous waste pursuant to 310 CMR 30.120 [such as exhibiting a characteristic of toxicity under 310 CMR 30.125B (TCLP)]; or
- the soil contains hazardous constituents from a listed hazardous waste identified in 310 CMR 30.130 or Title 40, Chapter I, Part 261 (Identification and Listing of Hazardous Waste) of the Code of Federal Regulations.

This is known as EPA's Contained-In Policy.

How can hazardous waste soil be considered "non-hazardous"?

Soil that would be considered to contain a hazardous waste can become (or be considered) "non-hazardous" under certain conditions, depending upon the factors that originally would make it a hazardous waste.

[1] In Massachusetts, the Area of Contamination is equivalent to the disposal site, as defined under 310 CMR 40.0006.

In the first case above, (that is, the soil is a *characteristic* hazardous waste), the soil ceases to be a hazardous waste when it is treated and no longer exhibits a characteristic of a hazardous waste under 310 CMR 30.120.

In the second case (that is, the soil contains a *listed* hazardous waste), the soil is no longer considered a hazardous waste when a site-specific determination concludes that the soil does not contain the hazardous constituents for which the waste was listed at concentrations that require it to be regulated as a hazardous waste. USEPA reasserted in the November 30, 1998 final Hazardous Waste Identification Rule for Contaminated Media that under the contained-in policy, authorized states have the authority to establish concentrations below which environmental media (such as soil) may be determined to not contain hazardous waste and therefore such soils do not require management as a listed hazardous waste. Application of the Contained-In Policy at M.G.L. c.21E disposal sites in Massachusetts is discussed in detail below.

Do the LDR treatment standards apply to formerly hazardous waste soils?

The Land Disposal Restrictions apply to the soil *if* the soil was considered to contain a hazardous waste at the time of generation. In other words, if (a) the treatment that removes the characteristic of a hazardous waste from the soil, or (b) the contained-in determination that the soil does not contain a hazardous waste occurs *after* the soil is generated, then the LDR treatment standards apply.

Table 1, reproduced directly from USEPA's 2001 LDR guidance, summarizes the applicability of the LDR treatment standards to soil containing listed hazardous waste.

Table 1
Application of Land Disposal Treatment Standards To Soil Containing Listed Hazardous Waste[1]

If LDRs:	And if LDRs	And If:	Then You:
Applied to the listed waste when it contaminated the soil	Apply to the listed waste now	____	Must comply with the LDRs
Did not apply to the listed waste when the waste contaminated the soil	Apply to the listed waste now	No contained-in determination has been made prior to the generation of the contaminated soil	Must comply with LDR treatment standards
Did not apply to the listed waste when it contaminated the soil	Apply to the listed waste now	The soil has been determined not to contain the listed hazardous waste prior to the soils first being generated	Do not need to comply with LDR treatment standards
Did not apply to the listed waste when it contaminated the soil	Do not apply to the listed waste now	____	Do not need to comply with the LDR treatment standards

[1] Table from U.S. Environmental Protection Agency's August 2001 guidance document, "Land Disposal Restrictions: Summary of Requirements" (EPA530-R-01-007), page 4-13.

This document may be obtained electronically at http://www.epa.gov/osw/hazard/tsd/ldr/ldr-sum.pdf.

3.0 Contained-In Determinations in Massachusetts

At the present time (August, 2010), MassDEP has received authorization from USEPA to regulate most of the RCRA hazardous constituents and wastes commonly encountered at Massachusetts disposal sites. Under the authorized state RCRA program, MassDEP has established specific criteria for making determinations consistent with the USEPA Contained-In Policy for sites undergoing assessment and cleanup under the Massachusetts Contingency Plan.

MassDEP policy provides for the use of the MCP Category S-1 standards promulgated at 310 CMR 40.0975(6)(a) to make contained-in determinations by the LSP-of-Record conducting work at a disposal site where the soil is managed as part of a Response Action. Such determinations are subject to review and presumptive approval by MassDEP and the documentation supporting the determination must accompany the submittal.

While alternative approaches for making contained-in determinations may be considered (e.g., a contained-in determination is sought by a person other than the LSP-of–Record for a disposal site, a method other than a comparison to the S-1 soil standards is proposed, or S-1 soil standards do not currently exist for the hazardous constituents at issue) such approaches fall outside the scope of this policy and such determinations must be submitted directly to the MassDEP hazardous waste management program for explicit written approval.

Criteria and Conditions for Making Contained-In Determinations

Soil that contains hazardous constituents derived from a listed hazardous waste is not considered to be a hazardous waste if ***all*** of the following criteria are met:

- the source of the hazardous constituents is a listed hazardous waste under 310 CMR 30.130 that Massachusetts is authorized to regulate under RCRA by USEPA;
- the soil is not a characteristic hazardous waste, pursuant to 310 CMR 30.120;
- the concentrations[2] of the hazardous constituents in the soil are less than or equal to the MCP Method 1 Category S-1 soil standards (S-1/GW-1, S-1/GW-2, and S-1/GW-3) listed at 310 CMR 40.0975(6)(a);
- the soil is appropriately characterized by representative sampling; this includes the identification, segregation and sampling of "hot spots" (note: hot spots will be handled as a hazardous waste, rather than being included in a contained-in determination, if treatment does not lower the concentration of listed wastes within the hot spots to less than or equal to the MCP Method 1 Category S-1 soil standards);
- the concentrations are achieved either by removal or treatment and not by dilution;

[2] The calculation of constituent concentration for comparison to the MCP Method 1 Category S-1 soil standards shall be conducted consistent with the requirements of 310 CMR 40.0926, including separate concentration calculations for Hot Spots.

- the activities are performed in accordance with the requirements of 310 CMR 40.0000; and
- any excavated soil is managed in accordance with the requirements of 310 CMR 40.0030, Management Procedures for Remediation Wastes, including those of 310 CMR 40.0032(2) and 310 CMR 40.0032(3) and any other applicable laws and regulations.

Submittal and Review of Contained-In Determinations

LSPs must demonstrate that all of the above criteria are met in order to make a "contained-in" determination. An LSP must submit a contained-in determination petition to MassDEP for review at least 21 days *prior to* managing the soil as a non-hazardous waste. The petition and all related documentation must be made by written request using a Transmittal Form (BWSC126) provided by the Department. (See Appendix A for a sample petition letter.)

The LSP must wait 21 days after submitting a petition *before* proceeding to manage the soil as a non-hazardous waste. The petition is subject to review by MassDEP during this 21 day period. If MassDEP objects to the "contained-in determination" by the end of the 21 day period, then the soil may not be handled as a non-hazardous waste, pending further review by MassDEP. If MassDEP does not object by the end of the 21 days, then the soil may be handled as a non-hazardous waste. (As with all MCP submittals, a "contained-in" determination is still subject to later audit by MassDEP.)

Documentation Required for a "Contained-In" Determination

The "contained-in" determination petition must document that:

- the source of the hazardous constituents is a listed hazardous waste under 310 CMR 30.130 that Massachusetts is authorized to regulate under RCRA by EPA;
- the soil is not a characteristic hazardous waste, pursuant to 310 CMR 30.120;
- the concentrations of the hazardous constituents in the soil are less than or equal to the MCP Method 1 Category S-1 soil standards;
- the soil is appropriately characterized by representative sampling; this includes the identification, segregation and sampling of "hot spots" and quantification of the soil volume subject to the determination;
- the concentrations are achieved either by removal or treatment and not by dilution.

All records of contained-in determinations, including records of analytical testing of the soil, and the determination petition must be kept for a minimum of three years, in compliance with 310 CMR 30.331(4).

Subsequent Management of Contaminated Soil

Any excavated soil must be managed in accordance with the requirements of 310 CMR 40.0030, Management Procedures for Remediation Wastes, including those of 310 CMR 40.0032(2) and 310 CMR 40.0032(3) and any other applicable laws and regulations.

Considerations for Out-of-State Management of Excavated Soil

Note that this policy regarding "contained-in" determinations made for soil generated within Massachusetts does not limit the responsibility of generators to comply with the applicable requirements of other states.

Before shipping the soil out of Massachusetts, an LSP or generator must contact both the operator of the landfill or other receiving facility and the relevant state agency (or the relevant USEPA region, if the state does not administer the RCRA program) to determine if they are willing to accept the determination by the LSP that the soil does not contain a listed hazardous waste. The LSP or generator should explain the Massachusetts process of making "contained-in" determinations to the relevant parties and keep records of any such conversations.

Appendix A
Sample Contained-In Determination Petition

DATE

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
REGIONAL OFFICE
ADDRESS

Re: Contained-In Determination for Soil from Site RTN-X-YYYYYYY

Dear Program Manager,

I have made a "contained-in" determination regarding soil from the following M.G.L. c. 21E disposal site:

RTN: ___ - _____
Site Name: _____
Street Address: _____
City/Town: _____
Zip Code: _____

The soil contained the listed hazardous waste(s) with waste codes: _____, which MassDEP is authorized to regulate under the Resource Conservation and Recovery Act (RCRA) by the U.S. Environmental Protection Agency (USEPA). However, the soil (check one):

- ☐ Met all applicable S-1 standards upon removal; or
- ☐ Was treated through a method of treatment other than dilution so as to meet all applicable S-1 standards.

The levels of the listed hazardous waste constituents in the generated soil are:

[*Provide summary of listed hazardous waste constituents and concentrations existing prior to and/ or after treatment, in the soil, and the applicable S-1 standards.*]

[*If the soil was treated, describe the date(s) and type(s) of treatment implemented.*]

In addition, the soil does not exhibit any characteristics of hazardous waste, pursuant to 310 CMR 30.120.

These determinations were made through the testing of _____ soil samples. The soil from which the samples were taken had a volume of _____. The soil was sampled on _____. The soil was sampled in a representative manner that adequately demonstrated the levels of hazardous material present in the soil. It was also appropriately characterized, including the identification, segregation and sampling of "hot spots." I have attached documentation of the methods and results of the sampling and testing of the soil that corroborates the above statements. This documentation includes the location of samples within the soil.

I understand that my "contained-in" determination is subject to a 21-day holding period, during which the determination is subject to review by the MassDEP and that the soil cannot be handled as non-hazardous waste until the 21 day review period passes without objection from MassDEP or USEPA.

I also understand that if the soil is to be transported out-of-state, it must first be determined if the operator of the landfill or other receiving facility and the relevant state agency (or the relevant USEPA region, if the state does not administer the RCRA program) are willing to accept contained-in determinations performed by a Massachusetts Licensed Site Professional. In doing so, the process by which "contained-in" determinations are performed in Massachusetts will be explained to the relevant parties and proper documentation of all conversations will be retained.

I, _____, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this submittal, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the person or entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate or incomplete information.

By: _____ _____
Signature Date

LSP #: _____
LSP Name: _____
Telephone: _____ ext: _____ fax: _____

For: _____
Name of person or entity

_____
Title