



ENVIRONMENTAL STEWARDSHIP DEPARTMENT/

NEW BEDFORD CONSERVATION COMMISSION

CITY OF NEW BEDFORD

SCOTT W. LANG, MAYOR

TRC Reference Number: 115058

June 22, 2010

Kimberly N. Tisa, PCB Coordinator
United States Environmental Protection Agency
5 Post Office Square, Suite 100
Mail Code: OSRR07-2
Boston, Massachusetts 02109-3912

RE: Polychlorinated Biphenyl (PCB) Remediation Notification Letter
Acquired Residential Properties
101, 102, and 111 Greenwood Street and 98, 108, and 118 Ruggles Street
New Bedford, Massachusetts 02740

Dear Ms. Tisa:

This letter serves as notification that the City of New Bedford (City) will conduct a self-implementing disposal action to remove polychlorinated biphenyl (PCB) Remediation Waste at the 102 Greenwood Street (concrete) and 118 Ruggles Street (foundation foam insulation) properties located near or at the intersection with Hathaway Boulevard in New Bedford, Massachusetts consistent with 40 CFR Subpart 761.61(a). The removal will take place during the performance of a Massachusetts Contingency Plan (MCP; 310 CMR 40.0000) Revised Modified Release Abatement Measure (RAM) detailing the approach for anticipated construction activities (demolition of dwellings at six properties) to be undertaken by the City at 101, 102, and 111 Greenwood Street and 98, 108, and 118 Ruggles Street (hereinafter "Acquired Residential Properties") in New Bedford, Massachusetts. This disposal activity will achieve compliance with both 40 CFR Part 761 and the MCP. The activity will center on concrete foundation removal from the 102 Greenwood Street property and sub-grade foam insulation removal from the 118 Ruggles Street property (see Figure 1). The City views the proposed demolition activities as an interim step toward the implementation of a full remedy for the subject parcels, currently in the planning stage, which will be the subject of subsequent regulatory submittals to the United States Environmental Protection Agency (EPA) and Massachusetts Department of Environmental Protection (MassDEP).

Background

As described in the Revised Modified RAM Plan and the original PCB Remediation Notification letter from the City to the EPA dated September 16, 2009, the construction activities include the installation of a perimeter fence (completed in September 2009), excavation and immediate replacement of soils to allow for the disconnection of underground utilities (no soil removal involved), demolition of the structures and disposal of the debris, segregation and disposal of sub-grade foam insulation at the 118 Ruggles Street property, demolition and subsequent management

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of the concrete foundations, breaking of the basement slabs to enable drainage (with the exception of the 102 Greenwood Street property where the entire foundation will be disposed of), disposal of concrete foundation material from the 102 Greenwood Street property, backfilling of the basement space with crushed concrete foundation materials and suitable off-site soil material, and establishment of grass cover. The City views the proposed demolition activities as an interim step toward the implementation of a full remedy for the subject parcels.

The City's knowledge of the nature and extent of soil impacts on these properties is based on technical reports prepared by The BETA Group, Incorporated (BETA) and TRC Environmental Corporation (TRC), specifically:

- *Summary of Analytical Data Volumes I and II, Properties Located on: Greenwood Streets, Ruggles Street, Durfee Street, New Bedford, Massachusetts.* Prepared by BETA Group, Inc., March 15, 2006.
- *Summary of Analytical Data 102 Greenwood Street, New Bedford, Massachusetts.* Prepared by BETA Group, Inc., September 14, 2006.
- *Data Summary Report, 102 Greenwood Street, New Bedford, Massachusetts.* Prepared by TRC Environmental Corporation, July 2008.

The City does not plan to remove any soil from the Acquired Residential Properties at this time. Small amounts of incidental soil disturbance may take place associated with foundation management and the disconnection of buried utility lines. Any source removal associated with any potential PCB impacted soil material (if needed/required) that may constitute a PCB Remediation Waste would be addressed in subsequent regulatory submittals.

Foundation Material Sampling

TRC conducted sampling of concrete from the sub-grade foundations of the six Acquired Residential Properties (and exterior foundation foam insulation at the 118 Ruggles Street property) between March 8, 2010 and April 1, 2010 pursuant to the City's September 16, 2009 notification letter to the EPA and the City's formal addendum to the notification letter submitted to the EPA on February 17, 2010 (see Attachment 1). A summary of the concrete foundation and foam insulation analytical data was submitted in TRC's *Residential Foundation Sampling Results Memorandum* to the EPA dated May 18, 2010. Analytical data packages associated with the concrete foundation and foam insulation sampling were validated by TRC's Lead Chemist consistent with relevant EPA guidance to Tier II and are included as Attachment 2.

Eight concrete samples, all from the 102 Greenwood Street foundation, exhibited total PCB Aroclor concentrations greater than 1 milligram per kilogram (mg/kg). The total PCB Aroclor detections that were greater than 1 mg/kg ranged in concentration from 1.25 mg/kg to 182 mg/kg. Total PCB Aroclors were not detected in any other concrete foundation samples from any of the other five Acquired Residential Properties in excess of 1 mg/kg. The sample results are presented in Tables 1 through 6. Sample locations are identified in Figure 2.

Four exterior sub-grade foam insulation samples collected from the 118 Ruggles Street property exhibited total PCB Aroclors at concentrations above 1 mg/kg. The concentrations in the sub-grade foam insulation samples ranged from 1.26 mg/kg to 2.88 mg/kg. Adjacent soil samples collected from three locations exhibited total PCB Aroclors at concentrations ranging from 1 mg/kg to 5.89 mg/kg. One concrete sample and its corresponding field duplicate sample collected from 118 Ruggles Street exhibited total PCB Aroclors at concentrations of 0.08 mg/kg

and 0.0861 mg/kg, respectively; all other concrete samples were non-detect. The sample results are presented in Table 6. Sample locations are identified in Figure 2.

Foundation Material Management

The following outlines the management of concrete foundation and sub-grade foam insulation material from each of the six Acquired Residential Properties. All materials will be managed as described in the Revised Modified RAM Plan and associated Soil Management Plan (SMP). On-site environmental monitoring during demolition activities, including fugitive dust monitoring and volatile organic compound (VOC) air monitoring with a photoionization detector (PID), will be conducted according to the procedures described in the Revised Modified RAM Plan.

101 and 111 Greenwood Street and 98 and 108 Ruggles Street Properties

The concrete foundation walls and basement slab at the 101 and 111 Greenwood Street and 98 and 108 Ruggles Street properties will be demolished per the MassDEP Site Assignment Regulations for Solid Waste Facilities, specifically the asphalt pavement, brick and concrete recycling operations detailed in 310 CMR 16.05(3)(e). The foundation walls will be broken up to a 6-inch minus size using a suitable excavator attachment (“nibbler”), or other suitable machine/equipment, and be used as backfill in the remaining basement void or to cover the similarly broken-up slab and nearby soil. The basement slabs will be broken up, again to a 6-inch minus size, to enable drainage of the foundation. Additionally, if any rebar is encountered, the rebar will be removed and recycled or disposed of at an approved solid waste management facility. The remainder of the foundation space and crushed foundation material will be backfilled and covered with contaminant free granular material (e.g., soil).

102 Greenwood Street Property

Due to concentrations of total PCB Aroclors in excess of 50 mg/kg in sub-grade foundation concrete at the 102 Greenwood Street property, the concrete foundation walls and basement slab will be broken up as necessary to facilitate off-site transportation and disposal at a permitted off-site disposal facility. The concrete foundation at the 102 Greenwood Street property will be managed as a PCB Remediation Waste and the concrete foundation and basement slab material will be loaded directly into lined roll-offs and transported off-site for disposal to a chemical waste landfill (e.g., Model City in New York or EQ/Wayne Disposal Landfill in Michigan) conforming to the requirements of 40 CFR Part 761.75 following EPA approval. Approximately 1300 cubic feet (approximately 97 tons) of concrete material will be removed from the 102 Greenwood Street property during RAM-related activities.

118 Ruggles Street Property

Four exterior foam insulation samples collected from the foundation of the 118 Ruggles Street property exhibited concentrations of PCBs in excess of 1 mg/kg. As a result, if feasible, the foam insulation material will be removed from the concrete foundation for disposal as PCB Remediation Waste less than 50 mg/kg. The foam insulation will be loaded directly into lined roll-offs and transported off-site for disposal at a Subtitle D landfill permitted to take PCB Remediation Wastes less than 50 mg/kg following approval by the EPA (or may be included with the concrete from 102 Greenwood Street). Approximately 216 cubic feet of sub-grade foam material will be removed from the 118 Ruggles Street property.

As noted above, of the 19 concrete samples collected from the 118 Ruggles Street property, only one concrete sample exhibited a detectable concentration of PCBs, and the detection was below 1 mg/kg. As a result, the concrete foundation walls and basement slab will be demolished to 6-inch minus and used as fill on-site. Following removal of the foam insulation, the foundation walls would be subject to on-site recycling consistent with MassDEP policy (i.e., managed the same as at the 101 and 111 Greenwood Street and 98 and 108 Ruggles Street properties).

If removal of the foam insulation from the concrete foundation is deemed to be infeasible (adhered to the concrete foundation such that removal is impossible and/or time prohibitive), the combined foam insulation and concrete material will be transported off-site for disposal as PCB Remediation Waste less than 50 mg/kg. The combined concrete and foam insulation will be broken up using an excavator to the degree necessary to place the material into lined roll-off containers. The material will be loaded directly into lined roll-offs and transported off-site for disposal at a permitted off-site disposal facility in accordance with 40 CFR Part 761.61 following approval by the EPA. Concrete foundation and/or basement slab material not associated with sub-grade foam insulation would be subject to on-site recycling consistent with MassDEP policy to be employed at the 101 and 111 Greenwood Street and 98 and 108 Ruggles Street properties.

Miscellaneous Structures

The above-ground swimming pool and other miscellaneous aboveground structures will be dismantled and disposed of as solid waste. Pool liner and structure components in contact with potentially contaminated soil that is potentially regulated as a PCB Remediation Waste will be managed in accordance with 40 CFR Part 761.61(a)(5)(ii) and sampled in accordance with 40 CFR Part 761, Subpart P.

Equipment Decontamination

Equipment that comes into direct contact with soil, concrete or foam insulation determined to be actual or potential PCB Remediation Waste will be decontaminated by one of the methods referenced below. This includes those properties (101 and 102 Greenwood Street and 118 Ruggles Street Properties) where it has been documented that soil, concrete or foam insulation containing PCBs at or in excess of a concentration of 50 mg/kg are present:

- Self-Implementing Decontamination Procedures, as set forth under 40 CFR Part 761.79(c); or
- Aqueous cleaning followed by verification sampling as set forth under 40 CFR Part 761, Subpart P.

The City outlined the proposed decontamination procedures, as documented in the memorandum entitled *City-Acquired Property Demolition Management and Decontamination Provisions* submitted by the City to EPA on February 25, 2010, to help ensure expectations are met during the demolition activities. The City proposed a prescriptive decontamination approach per 40 CFR Part 761.79(c)(2)(ii) that will avoid delays due to laboratory turn-around for verification wipe sampling. The actual procedures implemented will be documented in the RAM Status and/or Completion Report, but will rely on the swabbing of moveable equipment, tools and sampling implements that have contacted PCBs/PCB Remediation Waste with a solvent.

Regardless of the selected decontamination method, tools, moveable equipment, and sampling implements that come into direct contact with soil, concrete or foam insulation determined to be actual or potential PCB Remediation Waste will be decontaminated prior to leaving the Site. This includes implementing decontamination procedures prior to leaving any of the six Acquired

Residential Properties. For consistency, these procedures will also be implemented at the properties where PCB Remediation Wastes are not an issue.

Conclusion

All records of the demolition, environmental monitoring, manifests, and certificates of disposal for this self-implementing disposal activity will be maintained and included in either a MCP RAM Status Report or a MCP RAM Completion Report, as appropriate. The RAM-related MCP documents will be available for inspection at any time by a representative of the EPA at the Massachusetts Department of Environmental Protections Office located in Lakeville, Massachusetts or on the City of New Bedford's website.

All RAM-related activities will be performed in accordance with TRC's site-specific health and safety plan (HASp) which outlines the anticipated hazards associated with above referenced properties.

If you have any questions concerning this letter, please do not hesitate to contact me at 508-991-6188.

Sincerely,



Scott Alfonse
Director-Department of Environmental Stewardship

cc. Molly Cote, Massachusetts Department of Environmental Protection (by electronic PDF)
Cheryl Henlin, City of New Bedford (by electronic PDF)
David M. Sullivan, LSP, CHMM, TRC (by electronic PDF)

Attachments

- Addendum to PCB Remediation Notification Letter (February 17, 2010)
- Laboratory Analytical Data Packages

Tables

Table 1
Summary of PCB Results for Concrete Samples
101 Greenwood Street
New Bedford, Massachusetts

Analysis	Analyte	Sample ID:	RD-19-C		RD-20-C		RD-21-C		RD-22-C		RD-23-C		RD-24-C		RD-25-C		RD-26-C	
		Sample Depth (ft.): Sample Date:	0-1 3/8/2010	1-2 3/8/2010	0-1 3/8/2010	1-2 3/8/2010	0-1 3/8/2010	1-2 3/8/2010	0-1 3/9/2010	1-2 3/9/2010	0-1 3/9/2010	1-2 3/9/2010	0-1 3/9/2010	1-2 3/9/2010	0-1 3/9/2010	1-2 3/9/2010	0-1 3/9/2010	1-2 3/9/2010
		TSCA																
PCBs (mg/kg)	Aroclor 1016	1	0.0500 U	0.0752 U	0.0500 U	0.0751 U	0.0500 U	0.0667 U	0.0500 U	0.0812 U	0.0500 U	0.0657 U	0.0576 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1221	1	0.0500 U	0.0752 U	0.0500 U	0.0751 U	0.0500 U	0.0667 U	0.0500 U	0.0812 U	0.0500 U	0.0657 U	0.0576 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1232	1	0.0500 U	0.0752 U	0.0500 U	0.0751 U	0.0500 U	0.0667 U	0.0500 U	0.0812 U	0.0500 U	0.0657 U	0.0576 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1242	1	0.0500 U	0.0752 U	0.0500 U	0.0751 U	0.0500 U	0.0667 U	0.0500 U	0.0812 U	0.0500 U	0.0657 U	0.0576 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1248	1	0.0500 U	0.0752 U	0.0500 U	0.0751 U	0.0500 U	0.0667 U	0.0500 U	0.0812 U	0.0500 U	0.0657 U	0.0576 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1254	1	0.106 J	0.256 J	0.235 J	0.241 J	0.591 J	0.444 J	0.0500 U	0.204 J	0.0500 U	0.0763 J	0.0576 U	0.0703 J	0.0500 U	0.0500 U	0.133 J	0.0500 U
	Aroclor 1260	1	0.0500 U	0.0752 U	0.0500 U	0.0751 U	0.132 J	0.0921 J	0.0500 U	0.0812 U	0.0500 U	0.0657 U	0.0576 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Total PCBs	1	0.106 J	0.256 J	0.235 J	0.241 J	0.723 J	0.5361 J	0.0500 U	0.204 J	0.0500 U	0.0763 J	0.0576 U	0.0703 J	0.0500 U	0.0500 U	0.133 J	0.0500 U

Analysis	Analyte	Sample ID:	RD-27-C		RD-28-C		RD-29-C		RD-30-C		RD-31-C		RD-32-C		RD-33-C	
		Sample Depth (ft.): Sample Date:	0-1 3/9/2010	1-2 3/9/2010	0-1 3/10/2010	1-2 3/10/2010	0-1 3/10/2010	1-2 3/10/2010	0-1 3/11/2010	1-2 3/11/2010	0-1 3/11/2010	1-2 3/11/2010	0-1 3/11/2010	1-2 3/11/2010	0-1 3/11/2010	1-2 3/11/2010
		TSCA														
PCBs (mg/kg)	Aroclor 1016	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1221	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1232	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1242	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1248	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1254	1	0.0728 J	0.115 J	0.211 J	0.255 J	0.118 J	0.506 J	0.174 J	0.445 J	0.541 J	0.553 J	0.127 J	0.137 J	0.183 J	0.390 J
	Aroclor 1260	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Total PCBs	1	0.0728 J	0.115 J	0.211 J	0.255 J	0.118 J	0.506 J	0.174 J	0.445 J	0.541 J	0.553 J	0.127 J	0.137 J	0.183 J	0.390 J

Analysis	Analyte	Sample ID:	RD-34-C				RD-35-C			
		Sample Depth (ft.): Sample Date:	0-1 3/12/2010	0-1 3/12/2010	1-2 3/12/2010	1-2 3/12/2010	0-1 3/12/2010	0-1 3/12/2010	1-2 3/12/2010	1-2 3/12/2010
		TSCA		Field Dup		Field Dup		Field Dup		Field Dup
PCBs (mg/kg)	Aroclor 1016	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1221	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1232	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1242	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1248	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1254	1	0.0941 J	0.0810 J	0.116 J	0.0865 J	0.0500 U	0.135 J	0.176 J	0.148 J
	Aroclor 1260	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Total PCBs	1	0.0941 J	0.0810 J	0.116 J	0.0865 J	0.0500 U	0.135 J	0.176 J	0.148 J

Notes:

mg/kg - milligrams per kilogram or parts per million (ppm).

J - Estimated value.

U - Compound was not detected at specified quantitation limit.

UJ - Estimated non-detect.

Values in **Bold** indicate the compound was detected.

Values shown in **Bold and shaded type** exceed one or more of the listed criteria.

PCBs - Polychlorinated Biphenyls.

TSCA - Toxic Substances Control Act criteria.

(a) - Sample of concrete was from 0.5 feet above the ground surface.

Table 2
Summary of PCB Results for Concrete Samples
102 Greenwood Street
New Bedford, Massachusetts

Analysis	Analyte	Sample ID: Sample Depth (ft.): Sample Date:	RD-88-C		RD-89-C		RD-90-C		RD-91-C		RD-92-C		RD-93-C		RD-94-C	RD-94-CR	RD-95-C		
			0-1	1-2	0-1	1-2	0-1	1-2	0-1	1-2	0-1	1-2	0-1	1-2	0-1	1-2	0-1	1-2	0.5 ^(a)
		TSCA	3/18/2010	3/18/2010	3/18/2010	3/18/2010	3/18/2010	3/18/2010	3/18/2010	3/18/2010	3/18/2010	3/18/2010	3/18/2010	3/18/2010	3/18/2010	4/1/2010	3/19/2010	3/19/2010	4/1/2010
PCBs (mg/kg)	Aroclor 1016	1	0.0500 U	0.0500 U	0.0500 UJ	0.0500 U	0.0500 U	0.0500 UJ	0.0500 U	0.0500 U	0.0500 UJ	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.200 U	0.0500 U
	Aroclor 1221	1	0.0500 U	0.0500 U	0.0500 UJ	0.0500 U	0.0500 U	0.0500 UJ	0.0500 U	0.0500 U	0.0500 UJ	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.200 U	0.0500 U
	Aroclor 1232	1	0.0500 U	0.0500 U	0.0500 UJ	0.0500 U	0.0500 U	0.0500 UJ	0.0500 U	0.0500 U	0.0500 UJ	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.200 U	0.0500 U
	Aroclor 1242	1	0.0500 U	0.0500 U	0.0500 UJ	0.0500 U	0.0500 U	0.0500 UJ	0.0500 U	0.0500 U	0.0500 UJ	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.200 U	0.0500 U
	Aroclor 1248	1	0.0500 U	0.0500 U	0.0500 UJ	0.0500 U	0.0500 U	0.0500 UJ	0.0500 U	0.0500 U	0.0500 UJ	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.200 U	0.0500 U
	Aroclor 1254	1	0.143 J	0.139 J	0.252 J	0.189 J	0.266 J	0.275 J	0.332 J	0.146 J	0.0782 J	0.0743 J	0.758 J	0.117 J	0.180 J	0.263 J	0.329 J	4.79 J	0.0500 U
	Aroclor 1260	1	0.0500 U	0.0500 U	0.0500 UJ	0.0500 U	0.0500 U	0.0500 UJ	0.0500 U	0.0500 U	0.0500 UJ	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.200 U	0.0500 U
	Total PCBs	1	0.143 J	0.139 J	0.252 J	0.189 J	0.266 J	0.275 J	0.332 J	0.146 J	0.0782 J	0.0743 J	0.758 J	0.117 J	0.180 J	0.263 J	0.329 J	4.79 J	0.0500 U

Analysis	Analyte	Sample ID: Sample Depth (ft.): Sample Date:	RD-96-C			RD-97-C			RD-98-C			RD-99-C		RD-100-C		RD-101-C		RD-102-C
			0-1	1-2	0.5 ^(a)	0-1	1-2	0.5 ^(a)	0-1	1-2	0.5 ^(a)	0-1	1-2	0-1	1-2	0-1	1-2	
		TSCA	3/19/2010	3/19/2010	4/1/2010	3/19/2010	3/19/2010	4/1/2010	3/19/2010	3/19/2010	4/1/2010	3/19/2010	3/19/2010	3/19/2010	3/19/2010	3/19/2010	3/19/2010	3/19/2010
PCBs (mg/kg)	Aroclor 1016	1	0.150 U	0.500 U	0.0500 U	1.00 U	4.50 U	0.0500 U	0.500 U	2.00 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1221	1	0.150 U	0.500 U	0.0500 U	1.00 U	4.50 U	0.0500 U	0.500 U	2.00 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1232	1	0.150 U	0.500 U	0.0500 U	1.00 U	4.50 U	0.0500 U	0.500 U	2.00 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1242	1	0.150 U	0.500 U	0.0500 U	1.00 U	4.50 U	0.0500 U	0.500 U	2.00 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1248	1	0.150 U	0.500 U	0.0500 U	1.00 U	4.50 U	0.0500 U	0.500 U	2.00 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1254	1	5.39 J	12.4 J	0.0500 U	32.9 J	182 J	0.0500 U	10.1 J	81.3 J	0.0500 U	0.703 J	0.633 J	0.239 J	1.25 J	0.485 J	0.769 J	0.402 J
	Aroclor 1260	1	0.150 U	0.500 U	0.0500 U	1.00 U	4.50 U	0.0500 U	0.500 U	2.00 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Total PCBs	1	5.39 J	12.4 J	0.0500 U	32.9 J	182 J	0.0500 U	10.1 J	81.3 J	0.0500 U	0.703 J	0.633 J	0.239 J	1.25 J	0.485 J	0.769 J	0.402 J

Analysis	Analyte	Sample ID: Sample Depth (ft.): Sample Date:	RD-103-C		RD-104-C		RD-105-C	
			0-1	1-2	0-1	1-2	0-1	1-2
		TSCA	3/19/2010	3/19/2010	3/19/2010	3/19/2010	3/19/2010	3/19/2010
PCBs (mg/kg)	Aroclor 1016	1	0.0500 U	0.0500 UJ	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1221	1	0.0500 U	0.0500 UJ	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1232	1	0.0500 U	0.0500 UJ	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1242	1	0.0500 U	0.0500 UJ	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1248	1	0.0500 U	0.0500 UJ	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1254	1	0.0660 J	0.0500 UJ	0.0500 U	0.0500 U	0.0500 U	0.0836 J
	Aroclor 1260	1	0.0500 U	0.0500 UJ	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Total PCBs	1	0.0660 J	0.0500 UJ	0.0500 U	0.0500 U	0.0500 U	0.0836 J

Notes:

mg/kg - milligrams per kilogram or parts per million (ppm).

J - Estimated value.

U - Compound was not detected at specified quantitation limit.

UJ - Estimated non-detect.

Values in **Bold** indicate the compound was detected.

Values shown in **Bold and shaded type** exceed one or more of the listed criteria.

PCBs - Polychlorinated Biphenyls.

TSCA - Toxic Substances Control Act criteria.

(a) - Sample of concrete was from 0.5 feet above the ground surface.

Table 3
Summary of PCB Results for Concrete Samples
111 Greenwood Street
New Bedford, Massachusetts

Analysis	Analyte	Sample ID:	RD-01-C	RD-02-C	RD-03-C	RD-04-C	RD-05-C	RD-06-C	RD-07-C	RD-08-C	RD-09-C	RD-10-C	RD-11-C	RD-12-C		RD-13-C	RD-14-C		
		Sample Depth (ft.):	1	1	1	1	1	1	1	1	1	1	1	1	0-1	1-2	1	0-1	1-2
		Sample Date:	3/8/2010	3/8/2010	3/8/2010	3/8/2010	3/8/2010	3/8/2010	3/8/2010	3/9/2010	3/9/2010	3/9/2010	3/9/2010	3/9/2010	3/8/2010	3/8/2010	3/9/2010	3/9/2010	3/9/2010
TSCA																			
PCBs (mg/kg)	Aroclor 1016	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0850 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	
	Aroclor 1221	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0850 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	
	Aroclor 1232	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0850 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	
	Aroclor 1242	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0850 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	
	Aroclor 1248	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0850 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	
	Aroclor 1254	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0850 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	
	Aroclor 1260	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0850 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	
	Total PCBs	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0850 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	

Analysis	Analyte	Sample ID:	RD-15-C		RD-16-C		RD-17-C	RD-18-C	RD-36-C	RD-37-C	
		Sample Depth (ft.):	0-1	1-2	0-1	1-2	0-1	0-1	0-1	0-1	1-2
		Sample Date:	3/10/2010	3/10/2010	3/10/2010	3/10/2010	3/11/2010	3/11/2010	3/11/2010	3/11/2010	3/11/2010
		TSCA	Shed								
PCBs (mg/kg)	Aroclor 1016	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1221	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1232	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1242	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1248	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1254	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1260	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Total PCBs	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U

Notes:

mg/kg - milligrams per kilogram or parts per million (ppm).

J - Estimated value.

U - Compound was not detected at specified quantitation limit.

UJ - Estimated non-detect.

Values in **Bold** indicate the compound was detected.

Values shown in Bold and shaded type exceed one or more of the listed criteria.

PCBs - Polychlorinated Biphenyls.

TSCA - Toxic Substances Control Act criteria.

(a) - Sample of concrete was from 0.5 feet above the ground surface.

Table 4
Summary of PCB Results for Concrete Samples
98 Ruggles Street
New Bedford, Massachusetts

Analysis	Analyte	Sample ID:	RD-71-C		RD-72-C		RD-73-C		RD-74-C	RD-75-C	RD-76-C		RD-77-C		RD-78-C		RD-79-C	
		Sample Depth (ft.): Sample Date:	0-1 3/17/2010	1-2 3/17/2010	0-1 3/17/2010	1-2 3/17/2010	0-1 3/17/2010	1-2 3/17/2010	0-1 3/17/2010	0-1 3/17/2010	0-1 3/17/2010	1-2 3/17/2010	0-1 3/17/2010	1-2 3/17/2010	0-1 3/17/2010	1-2 3/17/2010	0-1 3/17/2010	1-2 3/17/2010
		TSCA																
PCBs (mg/kg)	Aroclor 1016	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1221	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1232	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1242	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1248	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1254	1	0.0801 J	0.239 J	0.0500 U	0.0987 J	0.0500 U	0.115 J	0.0500 U	0.0500 U	0.0646 J	0.217 J	0.118 J	0.248 J	0.170 J	0.404 J	0.253 J	0.291 J
	Aroclor 1260	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Total PCBs	1	0.0801 J	0.239 J	0.0500 U	0.0987 J	0.0500 U	0.115 J	0.0500 U	0.0500 U	0.0646 J	0.217 J	0.118 J	0.248 J	0.170 J	0.404 J	0.253 J	0.291 J

Analysis	Analyte	Sample ID:	RD-80-C		RD-81-C		RD-82-C		RD-83-C		RD-84-C		RD-85-C		RD-86-C		RD-87-C	
		Sample Depth (ft.): Sample Date:	0-1 3/17/2010	1-2 3/17/2010	0-1 3/17/2010	1-2 3/17/2010	0-1 3/17/2010	1-2 3/17/2010	0-1 3/17/2010	1-2 3/17/2010	0-1 3/18/2010	1-2 3/18/2010	0-1 3/18/2010	1-2 3/18/2010	0-1 3/18/2010	1-2 3/18/2010	0-1 3/18/2010	1-2 3/18/2010
		TSCA																
PCBs (mg/kg)	Aroclor 1016	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0619 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1221	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0619 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1232	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0619 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1242	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0619 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1248	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0619 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1254	1	0.375 J	0.217 J	0.181 J	0.161 J	0.277 J	0.255 J	0.109 J	0.256 J	0.156 J	0.102 J	0.117 J	0.303 J	0.195 J	0.0500 U	0.0500 U	0.0903 J
	Aroclor 1260	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0619 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Total PCBs	1	0.375 J	0.217 J	0.181 J	0.161 J	0.277 J	0.255 J	0.109 J	0.256 J	0.156 J	0.102 J	0.117 J	0.303 J	0.195 J	0.0500 U	0.0500 U	0.0903 J

Notes:

mg/kg - milligrams per kilogram or parts per million (ppm).

J - Estimated value.

U - Compound was not detected at specified quantitation limit.

UJ - Estimated non-detect.

Values in **Bold** indicate the compound was detected.

Values shown in Bold and shaded type exceed one or more of the listed criteria.

PCBs - Polychlorinated Biphenyls.

TSCA - Toxic Substances Control Act criteria.

(a) - Sample of concrete was from 0.5 feet above the ground surface.

Table 5
Summary of PCB Results for Concrete Samples
108 Ruggles Street
New Bedford, Massachusetts

Analysis	Analyte	Sample ID:	RD-54-C				RD-55-C		RD-56-C		RD-57-C		RD-58-C		RD-59-C		RD-60-C	
		Sample Depth (ft.):	0-1	0-1	1-2	1-2	0-1	1-2	0-1	1-2	0-1	1-2	0-1	1-2	0-1	1-2	0-1	1-2
		Sample Date:	3/12/2010	3/12/2010	3/12/2010	3/12/2010	3/12/2010	3/12/2010	3/16/2010	3/16/2010	3/16/2010	3/16/2010	3/16/2010	3/16/2010	3/16/2010	3/16/2010	3/16/2010	3/16/2010
		TSCA																
PCBs (mg/kg)	Aroclor 1016	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1221	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1232	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1242	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1248	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1254	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1260	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Total PCBs	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U

Analysis	Analyte	Sample ID:	RD-61-C		RD-62-C		RD-63-C		RD-64-C		RD-65-C		RD-66-C		RD-67-C	RD-68-C	RD-69-C		RD-70-C		
		Sample Depth (ft.):	0-1	1-2	0-1	1-2	0-1	1-2	0-1	1-2	0-1	1-2	0-1	1-2	0-1	0-1	0-1	1-2	0-1	1-2	
		Sample Date:	3/16/2010	3/16/2010	3/16/2010	3/16/2010	3/16/2010	3/16/2010	3/16/2010	3/16/2010	3/16/2010	3/16/2010	3/16/2010	3/16/2010	3/16/2010	3/16/2010	3/16/2010	3/17/2010	3/17/2010	3/17/2010	3/17/2010
		TSCA																			
PCBs (mg/kg)	Aroclor 1016	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	
	Aroclor 1221	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	
	Aroclor 1232	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	
	Aroclor 1242	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	
	Aroclor 1248	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	
	Aroclor 1254	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0642 J	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1260	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	
	Total PCBs	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0722 J	0.0500 U	0.0500 U	0.0500 U	0.0642 J	0.0500 U	0.0500 U	0.0500 U	0.0500 U

Notes:

mg/kg - milligrams per kilogram or parts per million (ppm).

J - Estimated value.

U - Compound was not detected at specified quantitation limit.

UU - Estimated non-detect.

Values in **Bold** indicate the compound was detected.

Values shown in **Bold and shaded type** exceed one or more of the listed criteria.

PCBs - Polychlorinated Biphenyls.

TSCA - Toxic Substances Control Act criteria.

(a) - Sample of concrete was from 0.5 feet above the ground surface.

Table 6
Summary of PCB Results for Concrete, Foam and Soil Samples
118 Ruggles Street
New Bedford, Massachusetts

Analysis	Analyte	Sample ID:	RD-38-C	RD-38-F	RD-39-C	RD-39-F	RD-40-C	RD-40-F	RD-40-S	RD-41-C	RD-41-F	RD-42-C	RD-42-F	RD-42-S	RD-43-C	RD-43-F	RD-44-C	RD-45-C	
		Sample Depth (ft.):	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		Sample Date:	3/11/2010	3/11/2010	3/11/2010	4/1/2010	3/11/2010	3/11/2010	3/11/2010	3/11/2010	3/11/2010	3/11/2010	3/11/2010	3/11/2010	3/11/2010	3/11/2010	4/1/2010	3/11/2010	3/11/2010
		TSCA																	
PCBs (mg/kg)	Aroclor 1016	1	0.0500 U	0.197 U	0.0500 U	0.747 U	0.0500 U	0.272 U	0.0588 UJ	0.0500 U	0.412 U	0.0500 U	0.343 U	0.0572 UJ	0.0500 U	0.0885 U	0.0594 U	0.0500 U	
	Aroclor 1221	1	0.0500 U	0.197 U	0.0500 U	0.747 U	0.0500 U	0.272 U	0.0588 UJ	0.0500 U	0.412 U	0.0500 U	0.343 U	0.0572 UJ	0.0500 U	0.0885 U	0.0594 U	0.0500 U	
	Aroclor 1232	1	0.0500 U	0.197 U	0.0500 U	0.747 U	0.0500 U	0.272 U	0.0588 UJ	0.0500 U	0.412 U	0.0500 U	0.343 U	0.0572 UJ	0.0500 U	0.0885 U	0.0594 U	0.0500 U	
	Aroclor 1242	1	0.0500 U	0.197 U	0.0500 U	0.747 U	0.0500 U	0.272 U	0.0588 UJ	0.0500 U	0.412 U	0.0500 U	0.343 U	0.0572 UJ	0.0500 U	0.0885 U	0.0594 U	0.0500 U	
	Aroclor 1248	1	0.0500 U	0.197 U	0.0500 U	0.747 U	0.0500 U	0.272 U	0.0588 UJ	0.0500 U	0.412 U	0.0500 U	0.343 U	0.0572 UJ	0.0500 U	0.0885 U	0.0594 U	0.0500 U	
	Aroclor 1254	1	0.0500 U	0.583 J	0.0500 U	0.747 U	0.0500 U	1.26 J	0.806 J	0.0500 U	2.88 J	0.0500 U	1.62 J	1.12 J	0.0500 U	0.0885 U	0.0594 U	0.0500 U	
	Aroclor 1260	1	0.0500 U	0.197 U	0.0500 U	0.747 U	0.0500 U	0.272 U	0.194 J	0.0500 U	0.412 U	0.0500 U	0.343 U	0.0572 UJ	0.0500 U	0.0885 U	0.0594 U	0.0500 U	
	Total PCBs	1	0.0500 U	0.583 J	0.0500 U	0.747 U	0.0500 U	1.26 J	1.00 J	0.0500 U	2.88 J	0.0500 U	1.62 J	1.12 J	0.0500 U	0.0885 U	0.0594 U	0.0500 U	

Analysis	Analyte	Sample ID:	RD-45-F	RD-46-C	RD-46-F	RD-47-C	RD-47-F	RD-48-C	RD-48-F	RD-48-S	RD-49-C	RD-49-F	RD-50-C	RD-50-F	RD-51-C	RD-51-F	RD-52-C	RD-52-F	
		Sample Depth (ft.):	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		Sample Date:	3/11/2010	3/11/2010	3/11/2010	3/11/2010	3/11/2010	3/11/2010	3/11/2010	3/11/2010	3/11/2010	3/11/2010	3/11/2010	3/12/2010	3/12/2010	3/12/2010	3/12/2010	3/12/2010	3/12/2010
		TSCA																	
PCBs (mg/kg)	Aroclor 1016	1	0.116 U	0.0500 U	0.0796 U	0.0500 U	R	0.0500 U	R	0.203 UJ	0.0500 U	0.107 U	0.0500 U	R	0.0500 U	R	0.0500 U	0.217 U	
	Aroclor 1221	1	0.116 U	0.0500 U	0.0796 U	0.0500 U	R	0.0500 U	R	0.203 UJ	0.0500 U	0.107 U	0.0500 U	R	0.0500 U	R	0.0500 U	0.217 U	
	Aroclor 1232	1	0.116 U	0.0500 U	0.0796 U	0.0500 U	R	0.0500 U	R	0.203 UJ	0.0500 U	0.107 U	0.0500 U	R	0.0500 U	R	0.0500 U	0.217 U	
	Aroclor 1242	1	0.116 U	0.0500 U	0.0796 U	0.0500 U	R	0.0500 U	R	0.203 UJ	0.0500 U	0.107 U	0.0500 U	R	0.0500 U	R	0.0500 U	0.217 U	
	Aroclor 1248	1	0.116 U	0.0500 U	0.0796 U	0.0500 U	R	0.0500 U	R	0.203 UJ	0.0500 U	0.107 U	0.0500 U	R	0.0500 U	R	0.0500 U	0.217 U	
	Aroclor 1254	1	0.511 J	0.0500 U	0.507 J	0.0500 U	0.606 J	0.0500 U	1.26 J	5.89 J	0.0500 U	0.107 U	0.0500 U	0.494 J	0.0500 U	0.544 J	0.0500 U	0.651 J	
	Aroclor 1260	1	0.116 U	0.0500 U	0.0796 U	0.0500 U	R	0.0500 U	R	0.203 UJ	0.0500 U	0.107 U	0.0500 U	R	0.0500 U	R	0.0500 U	0.217 U	
	Total PCBs	1	0.511 J	0.0500 U	0.507 J	0.0500 U	0.606 J	0.0500 U	1.26 J	5.89 J	0.0500 U	0.107 U	0.0500 U	0.494 J	0.0500 U	0.544 J	0.0500 U	0.651 J	

Analysis	Analyte	Sample ID:	RD-53-C			
		Sample Depth (ft.):	0-1	0-1	1-2	1-2
		Sample Date:	3/12/2010	3/12/2010	3/12/2010	3/12/2010
		TSCA		Field Dup		Field Dup
PCBs (mg/kg)	Aroclor 1016	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1221	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1232	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1242	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1248	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Aroclor 1254	1	0.0500 U	0.0500 U	0.0800 J	0.0861 J
	Aroclor 1260	1	0.0500 U	0.0500 U	0.0500 U	0.0500 U
	Total PCBs	1	0.0500 U	0.0500 U	0.0800 J	0.0861 J

Notes:

mg/kg - milligrams per kilogram or parts per million (ppm).

J - Estimated value.

U - Compound was not detected at specified quantitation limit.

UJ - Estimated non-detect.

Values in **Bold** indicate the compound was detected.

Values shown in **Bold and shaded type** exceed one or more of the listed criteria.

PCBs - Polychlorinated Biphenyls.

TSCA - Toxic Substances Control Act criteria.

(a) - Sample of concrete was from 0.5 feet above the ground surface.

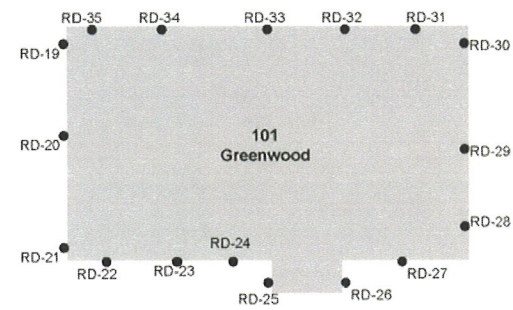
Sample IDs ending "C" indicate concrete samples, Sample IDs ending in "F" indicate foam insulation samples and Sample IDs ending in "S" indicate soil samples.

Figures

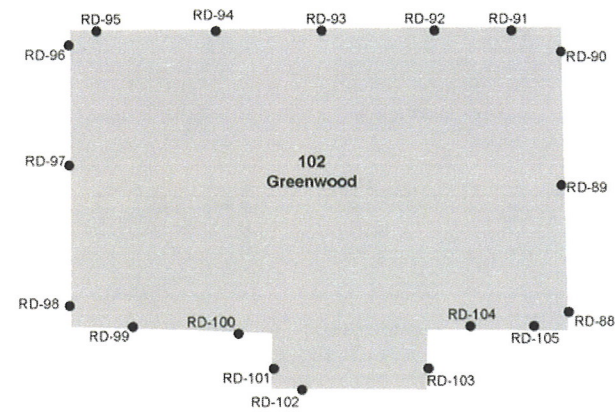


FILE: T:\E_CAD\115058\RESIDENT LOCUS.dwg

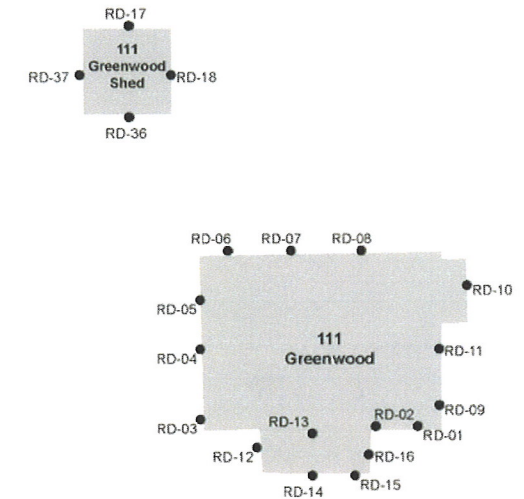
101 Greenwood Street



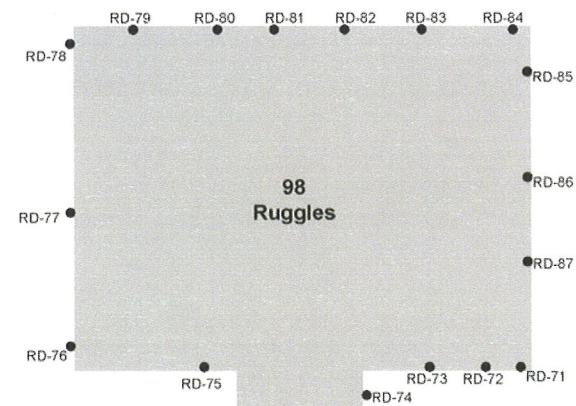
102 Greenwood Street



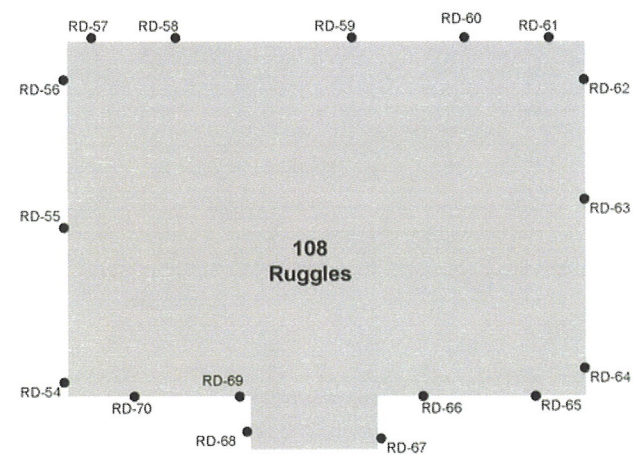
111 Greenwood Street



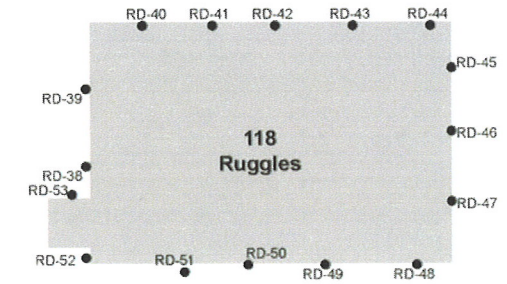
98 Ruggles Street



108 Ruggles Street



118 Ruggles Street



RESIDENTIAL FOUNDATION SAMPLING PROGRAM NEW BEDFORD, MASSACHUSETTS

INDIVIDUAL SAMPLING LOCATIONS



Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
(978) 970-5600

NOT TO SCALE

DRAWN BY: ASW
CHECKED BY: JCM

DATE:
MAY 2010

FIGURE
2

Attachment 1
Addendum to PCB Remediation Notification Letter



ENVIRONMENTAL STEWARDSHIP DEPARTMENT/

NEW BEDFORD CONSERVATION COMMISSION

CITY OF NEW BEDFORD
SCOTT W. LANG, MAYOR

TRC Reference Number: 115058

February 17, 2010

Kimberly N. Tisa, PCB Coordinator
United States Environmental Protection Agency
5 Post Office Square, Suite 100
Boston, Massachusetts 02109

RE: Addendum to Polychlorinated Biphenyl (PCB) Remediation Notification Letter
Related to Residential Building Demolition and Foundation Management
City of New Bedford
101, 102 and 111 Greenwood Street and 98, 108 and 118 Ruggles Street
New Bedford, Massachusetts 02740

Dear Ms. Tisa:

This letter serves as a formal addendum to the notification letter submitted to the United States Environmental Protection Agency (EPA) by the City of New Bedford (City) on September 16, 2009 regarding preparations to commence on-site activities related to building demolition at the above referenced residential properties. This addendum seeks to clarify the technical approach that will be utilized with regard to sampling of the existing concrete foundations. The sampling approach detailed herein will be implemented, pending EPA approval of the plan and review of the resulting analytical sampling data, prior to commencing demolition activities at any of the properties. This addendum in no way changes the views and opinions presented in the September 2009 notification letter.

Technical Approach

As detailed in the September 16, 2009 notification letter, the City is prepared to conduct building demolition activities at six recently acquired properties as an interim step toward the implementation of a full remedy for the subject parcels. The City has proposed to collect samples of concrete to evaluate if the portions of the foundation in contact with soil and subject to demolition and subsequent management have been impacted by contact with any potential PCB contaminated soil. Concrete and corresponding soil sampling will be conducted at each of the six dwellings; however, as you know, concentrations of PCBs in soil in excess of 50 milligrams per kilogram (mg/kg), and therefore constituting a PCB Remediation Waste, have historically only been detected at three out of the six dwellings (i.e., 118 Ruggles Street, 101 Greenwood Street and 102 Greenwood Street discussed in this letter). The analytical results of the concrete sampling will be reviewed in consultation with EPA to determine the regulatory status of the foundations at each dwelling.

The proposed sampling will be conducted by the City's environmental contractor on in-place concrete surfaces prior to initiation of building demolition activities. As discussed during the site visit

conducted with you and representatives of TRC Environmental Corporation and its drilling contractor (New England Geotech, LLC) on January 20, 2010, two different sampling approaches will be implemented depending on the depth to which the dwelling's foundation is installed in the surrounding earth, as outlined below:

- **111 Greenwood Street and 118 Ruggles Street.** The dwellings at these locations have deeper foundation systems. At these locations, samples will be collected using horizontal coring and drilling methods from the inside of the building structures, as described herein.
- **101 Greenwood Street, 102 Greenwood Street, 98 Ruggles Street and 108 Ruggles Street.** The dwellings at these locations are typical of raised ranch/spilt entry ranch construction in that their foundations are installed at shallow depths in the surrounding earth. The concrete samples will be collected from the exterior. Adjacent soil samples will be collected in a manner consistent with previously employed hand-tool methods at the site. The sampling of the concrete foundations of these dwellings will be conducted in accordance with the EPA Region I Standard Operating Procedures (SOP) for Sampling Concrete in the Field (December 1, 1997) and more specifically the SOP for Sampling Porous Surfaces for PCBs (Revision 3, July 22, 2008).

In either case, the scope of work will be sufficient to meet the data quality objectives and for determining compliance with the Toxic Substance Control Act (TSCA) PCB Regulations under 40 CFR Part 761.

Interior (Basement) Horizontal Coring Approach

The collection of samples from the two properties with deeper foundations/basements (111 Greenwood Street and 118 Ruggles Street) will proceed by horizontally coring the foundation concrete. The concrete foundations at each of the properties will be sampled at regular intervals. One sample will be collected per ten linear feet of interior basement foundation wall around the entire perimeter of each dwelling. The foundation perimeters for these properties are estimated to be approximately 120 feet on average, requiring approximately twelve concrete samples per property (excluding quality control samples). Prior to sample collection, the foundation perimeter at each dwelling will be measured in the field and the quantity of samples will be adjusted accordingly, either increased or decreased, based on that measurement and site-specific conditions. Each sample location will be pre-marked along the foundation wall to ensure a relatively even distribution of samples.

A concrete coring machine (e.g., Hilti™ drill equipped with 2 or 3 inch diamond bit) will be used to horizontally core the foundation from the interior basement wall to the exterior foundation face. The concrete core will be removed from the foundation and will immediately be inspected for the presence or absence of any surficial weatherproof coating or sealant. If present, the waterproof coating material will be sampled by a qualified person (e.g., Massachusetts certified asbestos investigator/analyst) and analyzed for asbestos (i.e., approximately one sample per foundation wall). However, this will be a separate sampling effort conducted from the exterior, or through the collection of additional cores. It is anticipated that, if present, approximately 4 to 5 samples will be

collected per property for asbestos analysis. It should be noted that foam material installed as an exterior insulation layer may also be present in association with the foundation walls. If present the foam will be sampled for laboratory PCB Aroclor analysis (SW-846 Method 8082). The outer 0.5 inches of the concrete core (i.e., exterior foundation surface in contact with soil, including any waterproof coating) will be removed for laboratory PCB Aroclor analysis (SW-846 Method 8082). The concrete sample may be pulverized on site or submitted to the laboratory for processing, at the option of the sampling team. No attempt to remove any waterproofing coating will be undertaken for samples submitted for PCB analysis. The top 0.5 inch will be submitted in total whether coated or uncoated.

Following removal of the concrete core, a hammer drill will be used to horizontally advance a 2 inch diameter large bore sampling device for the collection of discrete soil samples. The approximately 2 to 3 inches of soil material formerly in contact with the exterior foundation surface will be collected and held by a qualified laboratory for PCB Aroclor analysis (SW-846 Method 8082) contingent upon the analytical results of the adjacent concrete sample. Analysis of soil samples will be authorized if total concentrations of PCB Aroclors detected in the concrete sample exceed 1 mg/kg total PCBs. The soil material will be geologically logged by a qualified person familiar with the site. Sample locations will correspond to a soil depth of approximately 1 foot below ground surface.

Water will be required throughout the coring activities to cool the diamond bit. Any fluids generated during coring activities will be collected using a ShopVac® and containerized in 55 gallon drums. The drums will be sealed, marked and temporarily stored onsite pending characterization of the fluids for disposal purposes. All drums will be placed in basins as a secondary containment precaution.

Since the dwellings are expected to be demolished and the foundations below grade crushed to 6-inch minus for on-site reuse, the core holes will not be patched following sampling.

Permanently attached structures with footings likely to extend below ground surface (e.g., stairs, masonry porches, decks, etc.) that cannot be horizontally cored from the interior basement will be sampled consistent with the exterior sampling approach below.

Exterior Sampling Approach

The concrete foundations at each of the four subject properties with shallow foundation systems (101 Greenwood Street, 102 Greenwood Street, 98 Ruggles Street and 108 Ruggles Street) will be sampled at regular intervals. One sample will be collected per ten linear feet of exterior foundation wall around the entire perimeter of each dwelling, including permanently attached structures with footings likely to extend below ground surface (e.g., stairs, masonry porches, decks, etc.). In addition, the detached concrete shed located in the rear of the 111 Greenwood Street property will be subject to sampling. The foundation perimeters for these dwellings are estimated to be approximately 120 feet on average, requiring approximately twelve concrete samples per property (excluding quality control samples). Prior to sample collection, the foundation perimeter at each dwelling will be measured in the field and the quantity of samples will be adjusted accordingly, either increased or decreased, based on that measurement and site-specific conditions. Each sample location will be pre-marked along the foundation wall to ensure a relatively even distribution of samples. Samples of soil material

immediately adjacent to each concrete sample location will be collected concurrently. Please note that due to the presence of existing exterior structures and surfaces (e.g., decks, patios, asphalt driveways, etc.) it may not be feasible to collect concrete and corresponding soil samples in certain locations at exact ten foot intervals. In such instances the sample location will be adjusted to the nearest readily accessible foundation surface to attain an equivalent frequency.

Only those portions of the foundation that are in direct contact with subsurface soil material, and therefore potential PCB Remediation Waste, will be sampled. At each pre-marked sample location, the existing soil material will be temporarily pulled back to expose the surface of the foundation to a depth of approximately two feet below ground surface. A decontaminated shovel or equivalent will be used to pull the soil material away from the foundation wall only to the degree necessary to allow for concrete sample collection. The foundation wall will immediately be inspected for the presence or absence of any surficial weatherproof coating or sealant. If present, the waterproof coating material will be sampled by a qualified person (e.g., Massachusetts certified asbestos investigator/analyst) and analyzed for asbestos. It should be noted that foam material may also be present in association with the foundation wall. If present the foam will be sampled for laboratory PCB Aroclor analysis (SW-846 Method 8082).

Samples of the soil material pulled back from the foundation will be collected from 0 to 1 foot and 1 to 2 feet below ground surface to be held by a qualified laboratory for PCB Aroclor analysis (SW-846 Method 8082) contingent upon the analytical results of the adjacent concrete samples. Analysis of soil samples will be authorized if total concentrations of PCB Aroclors detected in the concrete sample exceed 1 mg/kg total PCBs. The soil material will be geologically logged by a qualified person familiar with the site. It should be emphasized that no demolition or soil excavation activities are proposed for implementation of this scope of work.

Following soil and as needed foam insulation board sampling, the exposed concrete foundation surface will be dry brushed to remove any remaining soil material. The concrete foundation will be sampled from 0 to 0.5-inches below the concrete surface, regardless of the presence of a weatherproofing coating, sealant or foam, using an impact hammer drill or equivalent in accordance with the EPA SOP for Sampling Porous Surface for PCBs (Revision 3, July 22, 2008). Samples will be collected from 0 to 1 foot and 1 to 2 feet below ground surface along the foundation wall. Each concrete sample will be submitted to a qualified laboratory for PCB Aroclor analysis (SW-846 Method 8082). Please note that multiple holes may be drilled in close proximity to one another to generate sufficient volume for analytical testing. Soil material moved by shovel to gain access to the exterior wall for concrete sampling will be replaced following concrete sample collection.

General Sampling Procedures

Representative quality control samples will also be collected during implementation of this scope of work. This will include field duplicate, matrix spike and matrix spike duplicate samples collected at a frequency of one per twenty samples. For core sampling, matrix spike and matrix spike duplicate samples may need to be collected from additional cores advanced at adjacent locations.

All sampling equipment will be decontaminated prior to use and between each discreet sample in accordance with the EPA SOP for Sampling Porous Surface for PCBs (Revision 3, July 22, 2008) and self-implementing decontamination procedures as set forth under 40 CFR Part 761.79(c)(2)(ii). This includes a detergent and water wash, water rinse and hexane rinse. Equipment may also be wiped with a hexane soaked cloth as needed. A flow chart outlining the decontamination procedures is attached to this addendum.

Waste generated during the sampling event, including that generated as a result of decontamination procedures, will be handled and disposed of in accordance Federal, State and Local regulations. Non-liquid waste materials (e.g., PPE, rags, gloves, brushes, etc.) will be managed in accordance with 40 CFR Part 761.61(a)(5)(v). Liquid waste, specifically water generated during coring activities and associated with decontamination procedures, will be managed per 40 CFR Part 761.79(b)(ii) and 761.79(b)(iii), with a decontamination standard for water of less than 3 ug/L PCBs for discharge to navigable waters or treatment works and less than 0.5 ug/L PCBs for unrestricted reuse. Evidence of an appropriate permit will be obtained from the City prior to discharge of any wastewater to the treatment works. For wastewater greater than 3 ug/L PCBs, an appropriately licensed waste hauler will be contracted for the disposal of the spent decontamination fluids. A flow chart outlining the waste management and pollution prevention procedures is attached to this addendum.

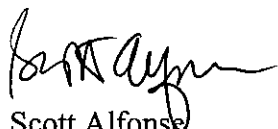
The sampling will be performed in accordance with TRC's site-specific health and safety plan (HASP) which outlines the anticipated hazards associated with above referenced properties.

Conclusion

The City anticipates that the concrete foundation, soil and as needed waterproof coating and insulating foam sampling will begin as soon as possible following your concurrence on this sampling plan and no demolition will start prior to implementation of this sampling. The City understands that based upon the results of this sampling program, EPA approval of the demolition plan may be required. The sampling plan described herein is designed to help facilitate demolition activities in support of an interim step toward a full remedy for the subject parcels. The full remedy will be the subject to subsequent regulatory submittals to the EPA and the Massachusetts Department of Environmental Protection (MassDEP).

If you have any questions concerning this letter, please do not hesitate to contact me at 508-991-6188.

Sincerely,



Scott Alfonso
Director

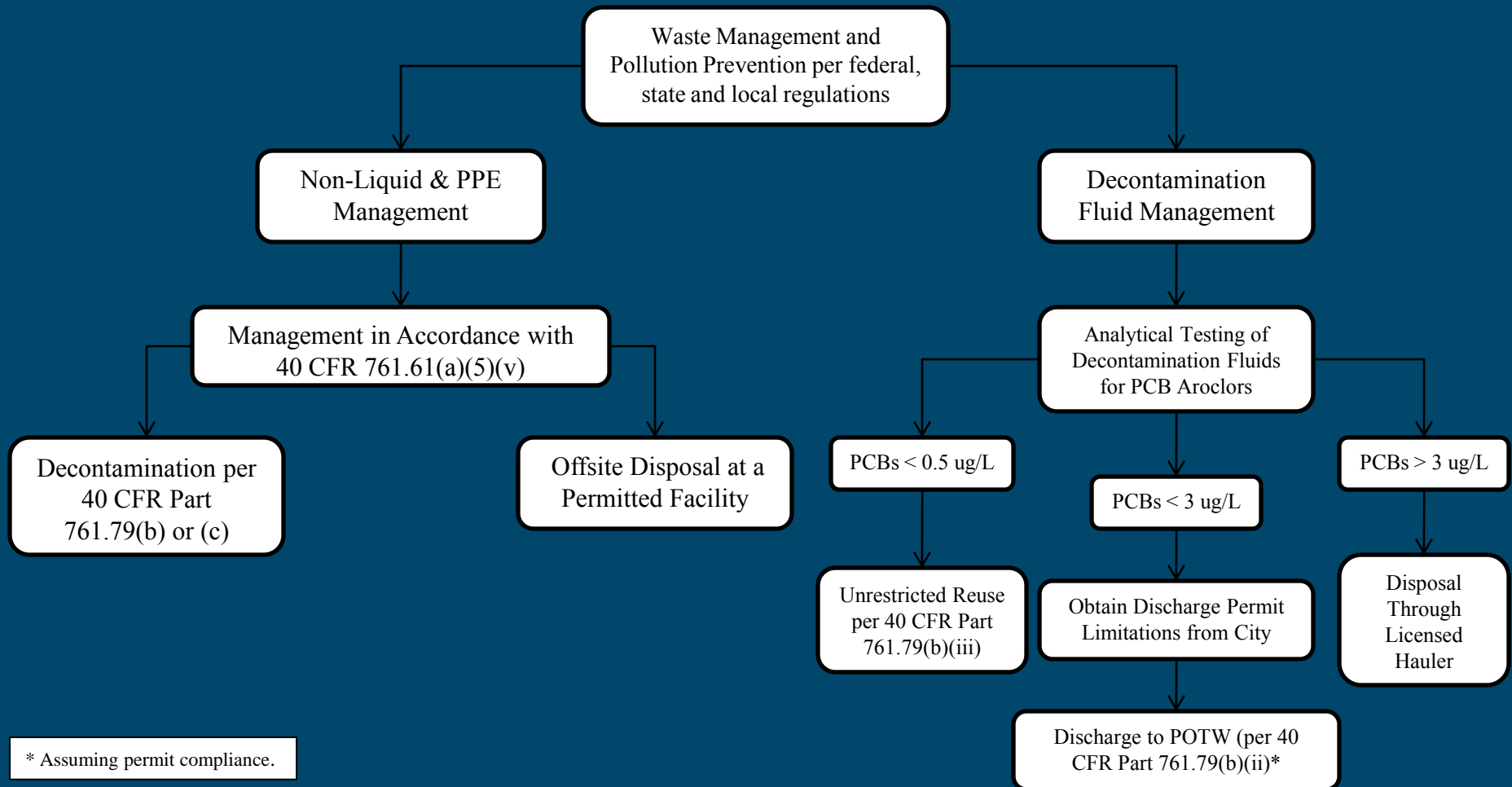
cc. Molly Cote, Massachusetts Department of Environmental Protection (by electronic PDF)
Cheryl Henlin, City of New Bedford (by electronic PDF)
David M. Sullivan, LSP, CHMM, TRC (by electronic PDF)

Attachments

- Flow Chart -- Waste Disposal Procedures
- Flow Chart -- Decontamination Procedures

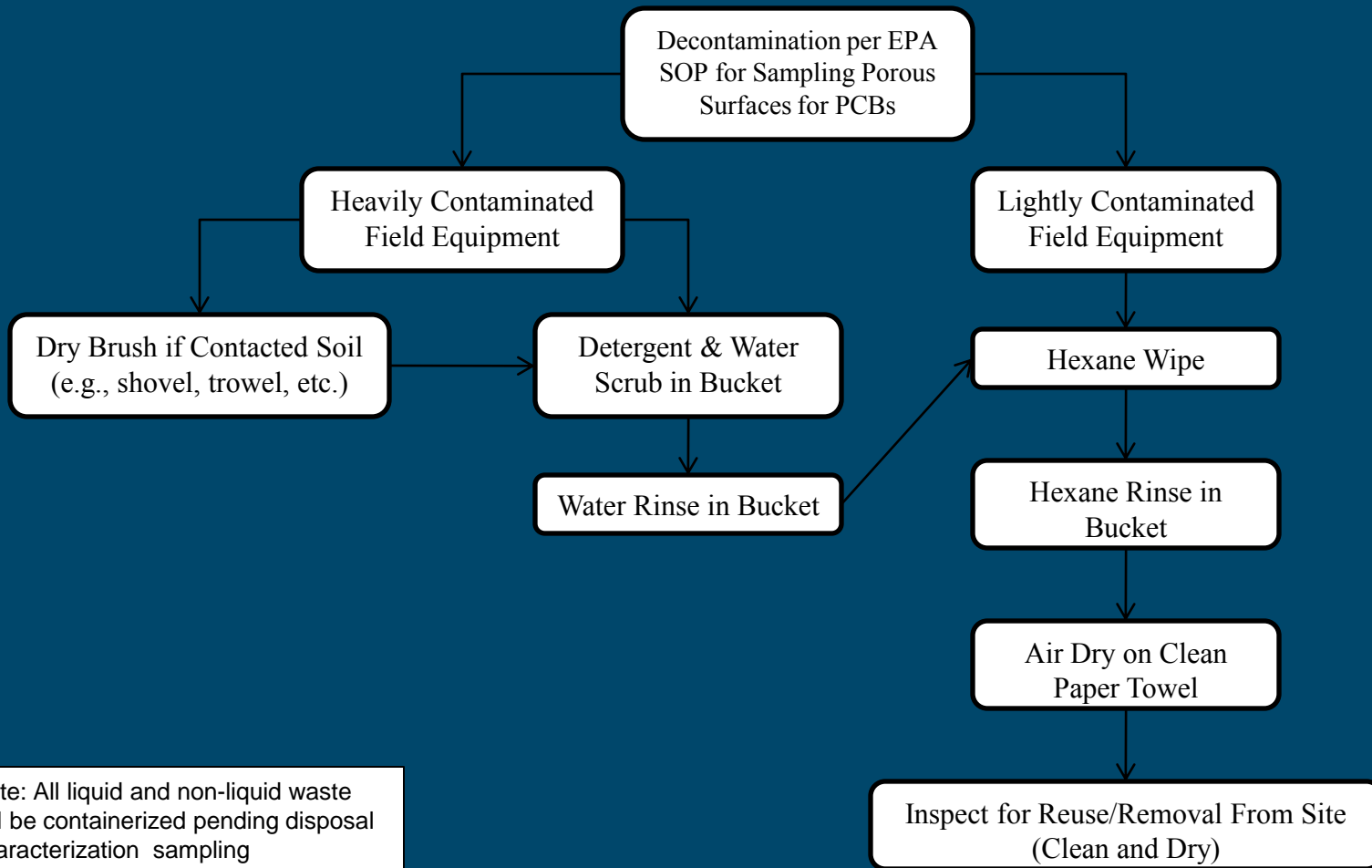
Flow Chart

Waste Disposal Procedures - Residential Concrete Sampling



Flow Chart

Decontamination Procedures - Residential Concrete Sampling



Attachment 2
Laboratory Analytical Data Packages
(Attached on disk)