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August 15, 2012

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: Request for Concurrence on Regulatory Opinion
Remediation of Polychlorinated Biphenyl (PCB) Impacted Soils**
Subset of the Acquired Residential Properties
101 and 102 Greenwood Street and 118 Ruggles Street
New Bedford, Massachusetts

Dear Ms. Tisa:

This purpose of this letter is to seek concurrence on a regulatory opinion from the United States Environmental Protection Agency (EPA) for the regulatory classification of polychlorinated biphenyl (PCB) impacted soil targeted for potential remedial actions by the City of New Bedford (City) at the three above-referenced properties (Subject Properties). The remedial actions are proposed to be conducted as part of the performance of a Massachusetts Contingency Plan (MCP; 310 CMR 40.0000) Release Abatement Measure (RAM), or other MCP-compliant response action, to address soil impacts. Consistent with certain past soil remedies performed by the City with joint MCP/Toxic Substances Control Act (TSCA) jurisdiction, the intent of the remediation activity would be to conduct the work per both 40 CFR Part 761 and the MCP, subject to EPA concurrence for the TSCA components.

The remedial actions are currently in the planning stages and will be overseen by the City's Licensed Site Professional (LSP) and the Massachusetts Department of Environmental Protection (MassDEP). EPA's concurrence on the approach set forth herein will allow the City to efficiently integrate the planning for soil remediation under joint MassDEP/EPA jurisdiction.

Background

The City's understanding of the nature and extent of soil contamination on these properties is based on technical reports prepared by The BETA Group, Incorporated

(BETA) and work performed by TRC Environmental Corporation (TRC) as cited below, 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.
- *Memorandum. Residential Foundation Sampling Results, Acquired Residential Properties, New Bedford, Massachusetts.* Prepared by TRC Environmental Corporation, May 18, 2010.
- *Phase II Comprehensive Site Assessment, Acquired Residential Properties and Nemasket Street Lots Portion of the Parker Street Waste Site, New Bedford, Massachusetts.* Prepared by TRC Environmental Corporation, January 2012.

Technical Approach

Some of the anticipated soil remediation activities at the three Subject Properties may potentially be subject to EPA jurisdiction under the Federal PCB regulations under 40 CFR Part 761. The following information for the three Subject Properties is provided in Table 1 (see below) to facilitate EPA's evaluation of potential regulatory applicability, particularly with regard to the application of the definition of PCB Remediation Waste with respect to the soil under 40 CFR Part 761.3.

Table 1 – Information Summary for the Three Subject Properties							
Location	Number of PCB soil samples	Number of soil samples >50 mg/kg	Max. PCB Conc. (mg/kg)	Depth of Max. Detected (feet)	Last Date of Parcel Ownership by City*	Date of Residence Construction	Foundation Type
118 Ruggles St.	39	1	59.1	2.75-4	1941**	1988	Basement
101 Greenwood St.	105	4	976	3-6	1949	2000	SLG
102 Greenwood St.	113	6	8,280	5-7	N/A	1986	SLG

Notes:

mg/kg – milligrams per kilogram

*- Before the City's recent re-acquisition of the parcels in 2008.

**-. Tax title issues in 1992/1993. The parcel had been developed by others as a residence by that time.

SLG – slab on grade

N/A – Not applicable. Not in chain of title until acquisition by the City in 2008.

As noted in the above table, the three Subject Properties each have at least one detection of total PCBs (as Aroclors) in soil at a concentration greater than 50 milligrams per kilogram (mg/kg): 118 Ruggles Street at one sample location (A15); 101 Greenwood Street at four sample locations (H2, SB-101-6B, TP101-H, and TP101-I); and 102 Greenwood Street at six sample locations SB-185, SB-102-6, SB-102-8A, SB-102-8B, SB-102-8C, and SB-102-8D. The soil sample locations are illustrated on Figures 1 through 3 (attached). All other soil sample results are below the 50 mg/kg total PCB TSCA threshold. Note that all soil characterization data for these properties is contained



in the January 2012 *Phase II Comprehensive Site Assessment, Acquired Residential Properties and Nemasket Street Lots Portion of the Parker Street Waste Site, New Bedford, Massachusetts* listed above.

A thorough review of all available information (maps, aerial photographs, etc) indicates that soils located at the Subject Properties were in place by or before 1965.

The available information indicates that the soils impacted at 50 mg/kg total PCBs or above at the Subject Properties have remained in place undisturbed since before April 1978 (other than potential disturbance during the investigative and/or other response action activities conducted with EPA and/or MassDEP acknowledgment and/or oversight such as the building demolitions and exploratory test pits, or in one case by contractors working on behalf of EPA), and the properties are not believed to be impacted by unauthorized PCB uses.

As noted in Table 1, all of the residences were constructed post-1978. Two out of the three residential structures (those formerly present on the 101 and 102 Greenwood Street parcels) were of slab-on-grade construction (abbreviated as "SLG" in Table 1 and hereinafter). The former 118 Ruggles Street residence had a basement.

The SLG residences were formerly located at 101 Greenwood Street and 102 Greenwood Street. As a result, the degree of post-1978 disturbance of PCB impacted soil at these parcels due to residence construction was non-existent due to the shallow depth of foundation slab placement. The principally impacted stratum (i.e., fill), located at depth, was not disturbed during foundation construction. In addition, excavations for buried utilities at 101 and 102 Greenwood Street all originated on the western sides of the residential buildings and are not near, nor do they run through, the areas of PCB soil impacts at concentrations over 50 mg/kg as illustrated on Figures 1 through 3. Photographs illustrating utility mark-outs and infrastructure for the buried utilities at 101 and 102 Greenwood Street are provided as an attachment. Even if the buried utilities were located in the areas of impact noted herein, any trenching for water, sewer or natural gas service connections would have been limited, narrow, localized, and singular events, and therefore inconsequential for any perceived concentration dilution. However, since they are not located in the areas of impact noted herein, there has been no utility-related post-1978 disturbance of TSCA regulated PCB impacted soil at these locations.

The 118 Ruggles Street residence had a basement foundation system. However, at 118 Ruggles Street, based on a total of 39 soil samples analyzed, the total PCB concentrations in soil range from undetected to 59.1 mg/kg. The one soil result that was greater than 50 mg/kg is located in the northwest corner of the lot at a depth of 2.75 to 4 feet below grade, approximately 25 feet from the location of the foundation for the former residence. TRC understands that EPA concurs that TSCA jurisdiction at 118 Ruggles Street applies only to this northwest corner of the parcel since it is in a relatively remote location in the yard of the former residence that could not have been disturbed by residence construction.

Based on the lines of evidence presented in this letter and summarized in Table 2 (see below), a PCB Remediation Waste cut-off of 50 mg/kg is applicable to the impacted

soil/fill at these three locations (101 and 102 Greenwood Street and the northwest corner of the 118 Ruggles Street lot).

Table 2 – Summary of Regulatory Classification Opinion for Soil					
Location	Pre-1978 Disposal?	Number of soil samples >50 mg/kg	Associated with unauthorized use?	Post-1978 Disturbance of PCB Deposition?	Notations
118 Ruggles St.	Yes	1	No	None (PCBs impact localized to NW corner)	<ul style="list-style-type: none"> ▪ One localized detection >50 mg/kg. ▪ Remote location in former yard (approx. 25 feet from former building foundation).
101 Greenwood St.	Yes	4	No	None (No impacts from post-1978 utility and/or SLG foundation excavations)	<ul style="list-style-type: none"> ▪ Shallow SLG foundation system. ▪ No disturbance of impacted fill.
102 Greenwood St.	Yes	6	No	None (No impacts from post-1978 utility and/or SLG foundation excavations)	<ul style="list-style-type: none"> ▪ Shallow SLG foundation system. ▪ No disturbance of impacted fill.

Notes:
mg/kg – milligrams per kilogram
PCB – polychlorinated biphenyl
SLG – slab on grade
NW - northwest

PCB Soils Confirmatory Sampling and Excavation Approach

The following outlines the approach to the confirmatory sampling and excavation of TSCA regulated PCB soil. This approach has been designed to be consistent with the confirmatory sample collection and excavation approach utilized at the New Bedford High School (NBHS) at the HF-31 soil sample/excavation location (documented in MCP reports for NBHS). The City is proposing this approach to expedite the work and to avoid leaving open excavations in a residential area (albeit on fenced lots) while post-excavation analytical results are being processed. In addition, the City will also be able to examine the laboratory data to evaluate its validity and usability before starting the excavation work.

All records of the excavation, confirmatory sampling, waste manifests, and certificates of disposal for this remedial 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 MassDEP Office located in Lakeville, Massachusetts or on the City's website.

Representative quality control samples will also be collected during implementation of this approach. This will include field duplicate, matrix spike and matrix spike duplicate samples collected at a frequency of one per twenty samples.

All sampling equipment will be decontaminated prior to use and between each discreet sample in accordance with the self-implementing decontamination procedures set forth

under 40 CFR Part 761.79(c)(2)(i), consisting principally of a solvent swab of tools, moveable equipment, and sampling instruments that come into direct contact with potentially contaminated soil. Under the self-implementing decontamination approach, spent solvents and solvent-soaked rags from decontamination activities will be managed for disposal via incineration at an appropriately permitted facility per 40 CFR Part 761.79(g)(3), (4) or (5).

Confirmation samples will be taken in accordance with 40 CFR §761.283 to evaluate excavation limits sufficient to remove all PCB Remediation Waste soils as follows and submitted for laboratory analysis of PCBs by SW-846 Method 8082A using extraction method 3540C.

118 Ruggles Street

A total PCB concentration greater than 50 mg/kg was detected at sample location A15 at 2.75 to 4 feet deep. Based on a review of information supplied by EPA, this location was previously excavated by EPA during a removal action performed at the adjacent property at 128 Ruggles Street. The City requests all documentation and supporting laboratory data to evaluate post-removal conditions and support closure under the MCP process.

101 Greenwood Street

Total PCB concentrations greater than 50 mg/kg were detected at sample locations H2 at 3-6 feet, at sample location SB-101-6B at 1-3 feet, at sample location TP101-H at 3-6 feet, and at sample location TP101-I at 5-7 feet. At sample location H2, PCBs were detected at a concentration of 3.7 mg/kg at 6-8.5 feet. A sample was not taken below 3 feet at sample location SB-101-6B. At sample location TP101-H, PCBs were detected at a concentration of 1.3 mg/kg at 6.5-7 feet. At sample location TP101-I, PCBs were undetected in native material at 9 feet.

At test pits TP101-A, TP101-B, TP101-C, TP101-D, TP101-E, and TP101-F, the test pit logs indicate the potential presence of potential PCB containing materials. Confirmatory grab samples will therefore be taken from the test pit sidewalls.

At test pit TP101-J, sampling results did not indicate the detection of total PCBs at a concentration warranting excavation.

Pre-excavation confirmatory “grab” samples will be taken from the sidewalls of the excavation of sample location H2 at a frequency of one sample per 1.5 meters of sidewall, as identified on Figure 2. Additional pre-excavation confirmatory samples will be collected based on a 1.5 x 1.5 meter grid if any confirmatory sample results indicate a concentration greater than or equal to 50 mg/kg total PCBs.

A pre-excavation confirmatory grab sample will be taken at sample location SB-101-6B at a depth of 4 feet, and at additional intervals if the confirmatory sample results indicate a concentration greater than or equal to 50 mg/kg total PCBs.

At sample location SB-101-6B, the excavation will over excavated 6 inches below acceptable confirmatory results. Lateral limits will be determined to be where sidewall confirmatory sampling results are less than 50 mg/kg. Where field conditions allow, sidewalls will be over-excavated 6 inches beyond the aforementioned limits as a conservative measure.

At each excavation location on the 101 Greenwood Street parcel (i.e., sample location H2 and the adjacent test pit TP101-A, and test pits TP101-B, TP101-C, TP101-D, TP101-E, TP101-F, TP101-H, and TP101-I), the excavations depth will be to 6 inches into native material at an approximate depth of 9 feet. Lateral limits will be determined to be where sidewall confirmatory sampling results are less than 50 mg/kg. Where field conditions allow, sidewalls will be over-excavated 6 inches beyond the aforementioned limits as a conservative measure.

Additional samples will be taken at sample locations SB-101-4D and SB-101-6A in light of previous sample results approaching 50 mg/kg total PCBs (49.2 mg/kg and 42.4 mg/kg, respectively). At each of the locations, three borings will be placed surrounding the locations indicated on Figure 2. Samples will be taken at 3-5 feet, 5-7 feet, and 7-9 feet and analyzed for total PCBs. If any of these samples indicate a concentration greater than or equal to 50 mg/kg total PCBs, the locations will be excavated. If this scenario occurs, confirmatory grab samples will be taken from the sidewalls at a frequency of one sample per 1.5 meters of sidewall. Additional pre-excavation confirmatory samples would be collected if any confirmatory sample results indicate a concentration greater than or equal to 50 mg/kg total PCBs. Lateral limits will be determined to be where sidewall confirmatory sampling results are less than 50 mg/kg. Where field conditions allow, sidewalls will be over-excavated 6 inches beyond the aforementioned limits as a conservative measure.

102 Greenwood Street

Total PCB concentrations greater than 50 mg/kg were detected at sample locations SB-185, SB-102-6, SB-102-8A, SB-102-8B, SB-102-8C, and SB-102-8D. Native material was observed at a depth of approximately 7.5 feet at each location, and PCB concentrations range from undetected to 0.32 mg/kg in the native material.

At test pit TP102-C, the test pit log indicated the potential presence of PCB containing materials; however, no soil samples from this test pit were analyzed for PCBs. Confirmatory “grab” samples will therefore be taken from the test pit sidewalls.

Pre-excavation confirmatory “grab” samples will be taken from the sidewalls at a frequency of one sample per 1.5 meters of sidewall, as identified on Figure 1. Additional pre-excavation confirmatory samples based on a 1.5 x 1.5 meter grid will be collected if any confirmatory sample results indicate a concentration greater than or equal to 50 mg/kg total PCBs.

A confirmatory grab sample will be taken at sample location SB-102-6 at 4 feet deep, and at additional intervals if the confirmatory sample results indicate a concentration greater than or equal to 50 mg/kg total PCBs.

At sample location SB-102-6, the excavation will over excavated 6 inches deeper than acceptable confirmatory results. Lateral limits will be determined to be where sidewall confirmatory sampling results are less than 50 mg/kg. Where field conditions allow, sidewalls will be over-excavated 6 inches beyond the aforementioned limits as a conservative measure.

At sample locations SB-185, SB-102-8A, SB-102-8B, SB-102-8C, SB-102-8D, and at test pit TP102-C, the excavation depth will be 8.5 feet (over excavating 6 inches deeper than prior acceptable sampling results in the 8-10 foot interval). Lateral limits will be determined to be where sidewall confirmatory sampling results are less than 50 mg/kg. Where field conditions allow, sidewalls will be over-excavated 6 inches beyond the aforementioned limits as a conservative measure.

We look forward to discussing this letter at your earliest convenience. If you have any questions, please call me at 978-656-3565.

Sincerely,

TRC Environmental Corporation



David M. Sullivan, LSP
Sr. Project Manager

cc: Michele S.W. Paul, Cheryl Henlin; City of New Bedford
Molly Cote; Massachusetts Department of Environmental Protection (by electronic PDF)

GREENWOOD STREET

HATHAWAY BOULEVARD

SB-102-9 12/16/10	Constituent	0.00 - 1.00	Field Dup 0.00 - 1.00	1.00 - 3.00
Total PCBs		0.058 U	0.178 J	0.246 J

SB-102-9

SB-102-8A 12/16/10	Constituent	0.00 - 1.00	1.00 - 3.00	5.00 - 6.00	7.00 - 9.00
Total PCBs		0.3622 J	3.14 J	529 J	0.0869 J

TP102-C

SB-102-8A

SB-102-8D
MW-36

SB-102-8B

SB-102-8D 12/16/10	Constituent	0.00 - 1.00	1.00 - 3.00	5.00 - 7.00	8.00 - 10.00
Total PCBs		0.0931 J	3.562 J	8280 J	0.52 U

SB-187

SB-187 06/09/08	Constituent	4.00 - 4.00	6.00 - 6.00
Total PCBs		0.2699 J	5.88 J

SB-102-12

SB-186

SB-102-6

SB-185 06/09/08	Constituent	2.00 - 2.00	4.00 - 4.00	6.00 - 6.00
Total PCBs		68.3 J	45.7 J	10.7 J

SB-102-8B 12/16/10	Constituent	0.00 - 1.00	1.00 - 3.00	5.00 - 6.00	7.00 - 9.00
Total PCBs		6.22 J	83.3 J	37.4 J	0.0561 U

SB-195

SB-102-12 12/15/10	Constituent	0.50 - 1.50	3.00 - 5.00	7.00 - 9.00
Total PCBs		0.657 J	0.984 J	0.0571 U

SB-102-8C 12/16/10	Constituent	0.00 - 1.00	1.00 - 3.00	5.00 - 7.00	8.00 - 10.00
Total PCBs		0.578 J	32.8 J	80.3 J	0.32 J

SB-186 06/09/08	Constituent	2.00 - 2.00	3.40 - 3.40
Total PCBs		1.2 J	1.011 J

SB-102-6 12/16/10	Constituent	0.00 - 1.00	1.00 - 3.00
Total PCBs		1.583 J	243 J

SB-102-7 12/16/10	Constituent	0.00 - 1.00	1.00 - 3.00	Field Dup 1.00 - 3.00
Total PCBs		34 J	1.77 J	5.63 J

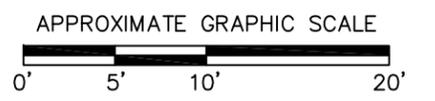
SB-195 06/10/08	Constituent	1.00 - 1.00	7.50 - 7.50	9.00 - 9.00	11.00 - 11.00
Total PCBs		2.45 J	4.34 J	0.141 J	0.0515 U

LEGEND:

- ● SOIL SAMPLE LOCATION
- ⊕ EXISTING MONITORING WELL
- X— EXISTING FENCE
- - - - - PROPERTY LINE
- TSCA SAMPLING GRID
- TEST PIT LOCATION

SAMPLE LOCATION SAMPLE DATE	H1	12/19/05	SAMPLE DEPTN INTERVAL IN FEET
	Constituent	1.00 - 3.00	
	Total PCBs	0.207 U	

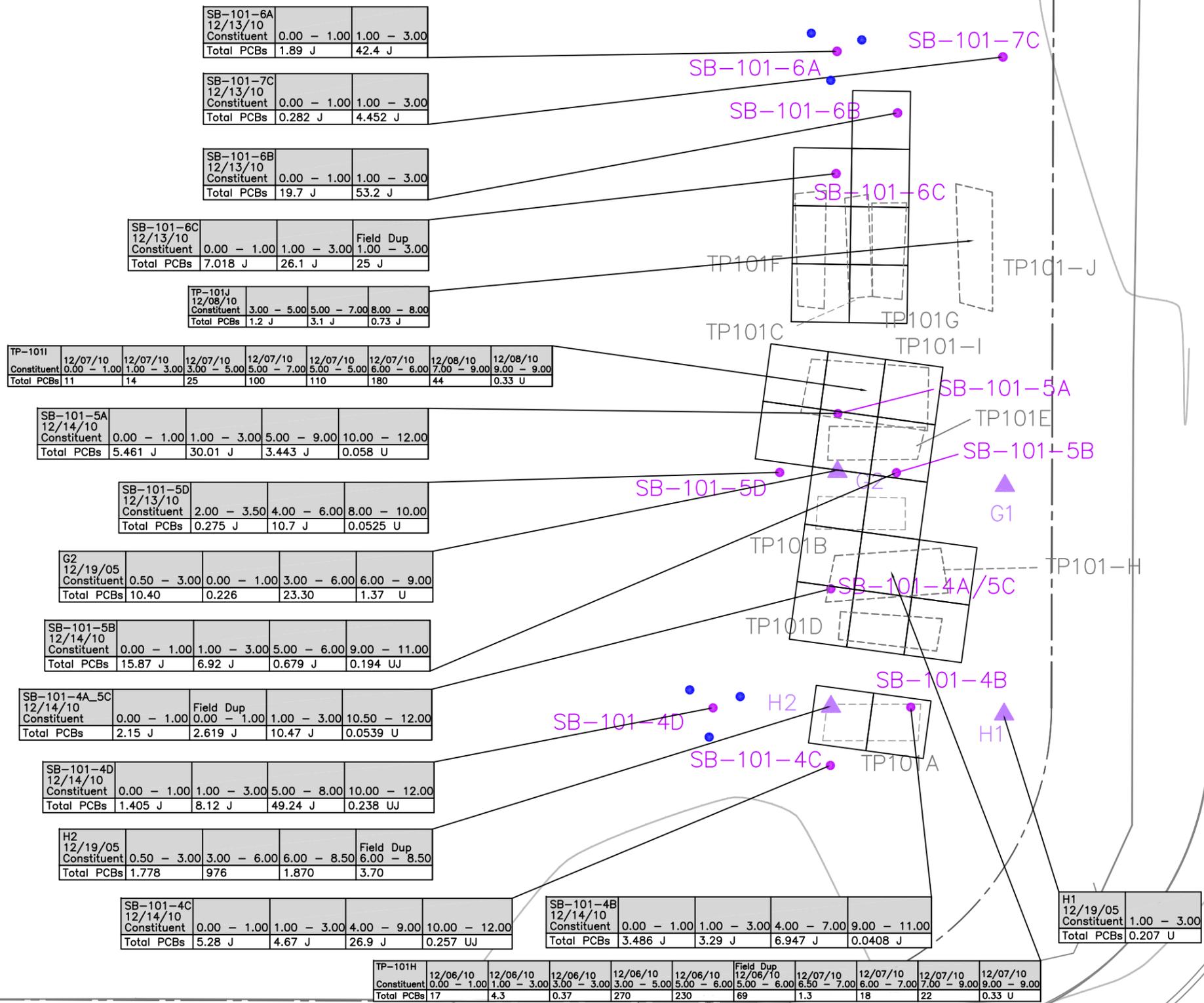
NOTE:
 J - ESTIMATED VALUE.
 U - COMPOUND WAS NOT DETECTED AT SPECIFIED QUANTITATION LIMIT.
 UJ - ESTIMATED NON-DETECT.



**ACQUIRED RESIDENTIAL PROPERTIES
NEW BEDFORD, MASSACHUSETTS**

**SOIL SAMPLE TOTAL PCBs RESULTS
102 GREENWOOD STREET**

Wannalancit Mills 650 Suffolk Street Lowell, MA 01854 (978) 970-5600	FIGURE 1
DRAWN BY: PZ	DATE: JULY 2012
CHECKED BY: DMS	

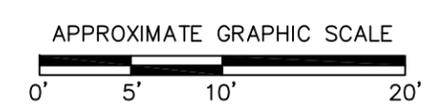


LEGEND:

- ▲ SOIL SAMPLE LOCATION
- PROPOSED INVESTIGATIVE SAMPLE LOCATION
- X— EXISTING FENCE
- - - - - PROPERTY LINE
- TSCA SAMPLING GRID
- ▭ TEST PIT LOCATION

SAMPLE LOCATION	H1	12/19/05	Constituent	1.00 - 3.00	SAMPLE DEPTH
SAMPLE DATE					INTERVAL IN FEET
Total PCBs					0.207 U

NOTE:
 J - ESTIMATED VALUE.
 U - COMPOUND WAS NOT DETECTED AT SPECIFIED QUANTITATION LIMIT.
 UJ - ESTIMATED NON-DETECT.



ACQUIRED RESIDENTIAL PROPERTIES
 NEW BEDFORD, MASSACHUSETTS

SOIL SAMPLE TOTAL PCBs RESULTS
 101 GREENWOOD STREET

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

FIGURE 2

DRAWN BY: PZ DATE:
 CHECKED BY: DMS JULY 2012



GREENWOOD STREET

HATHAWAY BOULEVARD

RUGGLES STREET 118



SB-118-1A

SB-118-1A 12/08/10	Constituent	0.00 - 1.00	1.00 - 3.00	4.00 - 5.00
Total PCBs		3.132 J	17.46 J	0.0567 U

A15

SB-118-1B/
MW-34

SB-118-1B 12/08/10	Constituent	0.00 - 1.00	1.00 - 3.00	3.00 - 4.00	6.00 - 7.00
Total PCBs		1.487 J	9.17 J	13.64 J	0.055 U

A14

SB-118-1C

A14 12/20/05	Constituent	2.00 - 3.00	3.00 - 4.50
Total PCBs		2.40	0.964

SB-118-1C 12/08/10	Constituent	0.00 - 1.00	1.00 - 3.00	3.00 - 4.50	5.00 - 6.00
Total PCBs		0.955 J	1.987 J	3.576 J	0.0546 U

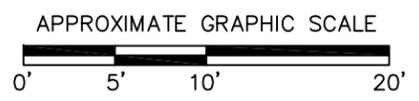
A15 12/20/05	Constituent	2.75 - 4.00
Total PCBs		59.1

LEGEND:

- SOIL SAMPLE LOCATION
- EXISTING MONITORING WELL
- EXISTING FENCE
- PROPERTY LINE
- TSCA SAMPLING GRID
- TEST PIT LOCATION

SAMPLE LOCATION SAMPLE DATE	H1 12/19/05	SAMPLE DEPTH INTERVAL IN FEET	
	Constituent		1.00 - 3.00
	Total PCBs		0.207 U

NOTE:
 J - ESTIMATED VALUE.
 U - COMPOUND WAS NOT DETECTED AT SPECIFIED QUANTITATION LIMIT.
 UJ - ESTIMATED NON-DETECT.



ACQUIRED RESIDENTIAL PROPERTIES NEW BEDFORD, MASSACHUSETTS	
SOIL SAMPLE TOTAL PCBs RESULTS 118 RUGGLES STREET	
Wannalancit Mills 650 Suffolk Street Lowell, MA 01854 (978) 970-5600	FIGURE 3
DRAWN BY: PZ CHECKED BY: DMS	DATE: JULY 2012

Subsurface Utility Location Photos
101 and 102 Greenwood Street
New Bedford, Massachusetts



Photo 1 – Subsurface utility locations on south side of property (101 Greenwood Street)



Photo 2 – Location of gas line on west side of property (101 Greenwood Street)

Subsurface Utility Location Photos
101 and 102 Greenwood Street
New Bedford, Massachusetts



Photo 3 – Subsurface utility locations (102 Greenwood Street)



Photo 4 – Location of gas line on west side of property (102 Greenwood Street)