Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Southeast Regional Office • 20 Riverside Drive, Lakeville MA 02347 • 508-946-2700

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September 1, 2011

Steven R. Novick, Chief
Emergency Response & Removal
USEPA Region 1
5 Post Office Square
Boston, Massachusetts 02109-3912

RE: NEW BEDFORD
Release Tracking Number 4-0015685
Parker Street Waste Site
Property P-046
SAP Data Risk Evaluation – Request for Removal Action

Dear Mr. Novick:

As you are aware, on April 26, 2010, the United States Environmental Protection Agency (USEPA), in coordination with the Massachusetts Department of Environmental Protection (MassDEP), began field implementation of a Sampling and Analysis Plan (the SAP), dated April 2010, to determine if contaminants of concern (COCs) associated with the Parker Street Waste Site (PSWS) were present on approximately 71 privately owned properties in the vicinity of the PSWS. The SAP was prepared jointly by the USEPA, MassDEP and the City of New Bedford, in coordination with Roux Associates, Inc. and E^2 Inc. c/o Citizen's Leading Environmental Action Network and Weston Solutions.

As described in the SAP, the USEPA, MassDEP and their environmental contractors collected soil samples from borings installed at the 71 properties and submitted the soil samples for analysis at fixed laboratories. The soil samples were analyzed for COCs typically associated with the PSWS, including polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), arsenic, barium, cadmium, chromium and lead. Soil borings were advanced to a depth of approximately 12 feet below ground surface (bgs). The following vertical horizons were analyzed: 0 – 1' bgs, 1 – 3' bgs, and 3 – 12' bgs.

PSWS SAP Data Evaluation: As the SAP analytical results were received from the laboratory and validated, MassDEP and its Site Assessment Remediation Support Services (SARSS) contractor MACTEC have been performing evaluations of the data to determine whether remedial action is required under the MassDEP Waste Site Cleanup requirements contained in 310 CMR 40.0000, the Massachusetts Contingency Plan (the MCP). The MCP establishes numerical and performance standards for addressing releases of oil and/or hazardous materials to the environment. On August 19, 2010, MassDEP requested USEPA assistance to address properties where an Imminent Hazard may exist and/or where COC concentrations in the top 3 feet of soil exceeded the applicable MCP Method 1 S-1 soil standards, meaning a Condition of No Significant Risk did not exist. This request was made based on the information available at the time and was followed-up with property by property risk evaluations for the purpose of typology chart development and risk communication with property owners.

Property P-046 Preliminary Risk Evaluation and Typology Chart Development Guidance: Enclosed is a copy of the results from the risk evaluation conducted by MACTEC for the property identified as P-046. These results were the basis for MassDEP's communication with you regarding typology chart development for this property. This preliminary evaluation compared the sample results from the soil samples collected from the five boring locations on this property to the MCP category S-1 soil standards and to either potential Imminent Hazard values listed in the MCP or site-specific Imminent Hazard (IH) values. Given that each property was evaluated separately, without consideration of data from surrounding properties that could inform whether the data was adequately representative of site conditions, and because additional sampling was not planned as part of this effort, both the average concentration and the 95% upper confidence limit of the average concentration (95% UCL) of COCs detected for each depth zone (0-1 ft. bgs, 0-3 ft. bgs and >3 ft. bgs) were evaluated. The 95% UCL provides a conservative approach to estimating the average concentration when the data set is limited and highly variable. If either the average concentration or the 95% UCL for a given depth zone exceeded the applicable S-1 soil standard or IH value, then the communication was made, for the purpose of developing the typology chart for the property, that an IH existed and/or a Condition of No Significant Risk did not exist. For property P-046, MassDEP provided you the following preliminary determinations:

- A condition of No Significant Risk, as defined in the MCP, was determined not to exist for current use of the property for the soil located between the ground surface and 3 feet in depth. Specifically, the average concentration, and the boring-specific concentrations, of one of the PAHs detected in samples collected from the top 3 feet in three borings are above the applicable MCP Method 1 S-1 soil standard. The MCP requires actions to be taken to address this condition, which may include removal of part or all of this soil layer and replacing it with clean soil or covering part, or all, of this soil layer with an appropriate cap material. No activities should occur at the property that will disrupt soil located from the ground surface to a depth of 3 feet until removal or cover measures are complete.

- Furthermore, a condition of No Significant Risk, as defined in the MCP, for foreseeable future use of the property was determined to exist for the soil located between 3 feet and 12 feet below the ground surface. This is because both the average concentration of all COCs and the 95% UCL, which were calculated based on the analytical data from soils collected from greater than 3 feet bgs, were below the applicable MCP Method 1 S-1 soil standard. No further action is required for the soil at this interval.

Property P-046 Final Risk Evaluation and Response Action Recommendations: For the purpose of making final risk evaluation determinations, MassDEP evaluated data from individual properties along with data from surrounding properties so that data consistency and COC distribution could be taken into account to determine whether it was necessary to apply the 95% UCL as part of the final risk evaluation. In cases where MassDEP determined the data from individual properties was consistent with data from surrounding properties and was adequately representative of likely COC distribution on the property in question, the 95% UCL was not applied for final risk evaluation decision-making. Based on this evaluation, MassDEP has determined the following for Property P-046:

- MassDEP has verified its previous request for USEPA assistance to address that a Condition of No Significant Risk does not exist for the 0 to 3 foot interval. However, MassDEP has refined its request as a result of additional evaluation, as follows: The average concentration of one of the PAHs in the 0-3 foot interval is above the applicable MCP Method 1 S-1 soil standard. The soil samples that exhibit concentrations of this PAH above the applicable standard are identified as

P-046-SB-01A, P-046-SB-02A and P-046-SB-05A, which were all collected from the 0-1 foot bgs interval. Response actions are only necessary to address the COC contamination in the 0-1 foot interval in the area of these three soil borings. Both the average concentrations and boring-specific concentrations in the 1-3 foot interval from samples collected on P-046 are below the applicable MCP Method 1 S-1 soil standards and no further response actions are required for the soil at this interval.

- Furthermore, MassDEP has verified its Preliminary Risk Evaluation Finding that a condition of No Significant Risk to human health, as defined in the MCP, for foreseeable future use of the property was determined to exist for the soil located between 3 feet and 12 feet below the ground surface. No further response actions are necessary for this soil.

USEPA has informed MassDEP that the determinations and recommendations provided in this letter will be used for response action decision-making as the USEPA works with the Potentially Responsible Parties, MassDEP and landowners in planning and conducting appropriate removal actions when necessary to address COC contamination related to the PSWS. MassDEP will continue to coordinate with USEPA throughout the response action alternative review process and will also work with the Potentially Responsible Parties and land owners to address conditions associated with PSWS COC contamination present at a depth greater than 3 feet below the ground surface not addressed by EPA.

The information and determinations contained herein are based solely on review of the data available from SAP implementation and do not apply to any other actions or aspects of the PSWS not reviewed as part of the SAP. Additional sampling or inclusion of existing sample data generated by others as part of the risk evaluations could impact or refine the findings of the risk-based analysis performed by MassDEP and MACTEC.

MassDEP's findings do not preclude future audits and/or review of past, current, or future actions related to the PSWS nor do they in any way constitute a release from any liability, obligation, action or penalty under M.G.L. c. 21E, 310 CMR 40.0000, or any other law, regulation, or requirement. Finally, these findings do not limit MassDEP's authority to take or arrange, or to require any Responsible Party or Potentially Responsible Party to perform, any response action authorized by M.G.L. c. 21E which MassDEP deems necessary to protect health, safety, public welfare, or the environment

Please feel free to contact me at the letterhead address, or by calling 508.946.2708 if you have any questions related to the information provided herein. MassDEP appreciates the opportunity to collaborate with you on this important effort.

Sincerely,

David Johnston, Acting Regional Director

J/mc

Enclosure

ec: MassDEP – SERO
Attn: Millie Garcia-Serrano, Deputy Regional Director-Bureau of Waste Site Cleanup
Len Pinaud, Chief, State & Federal Site Management Section, Bureau of Waste Site Cleanup

Molly Cote, State & Federal Site Management Section, Bureau of Waste Site Cleanup
Lara Goodine, Data Entry

CLEAN, Vice President – Tom Derosier cputom@gmail.com

City of New Bedford, Office of Environmental Stewardship scott.alfonse@newbedford-ma.gov

cc: Owner, Property P-046

Table P-046
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

				0-1 ft [1]				1-3 ft [1]				0-3 ft [1, 2]				3+ ft [1]			
Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	Frequency of Detection	Range of Detected Concentrations	Average	95% UCL [3]	Frequency of Detection	Range of Detected Concentrations	Average	95% UCL [3]	Frequency of Detection	Range of Detected Concentrations	Average	95% UCL [3]	Frequency of Detection	Range of Detected Concentrations	Average	95% UCL [3]
PAHs (mg/Kg)																			
2-Methylnaphthalene	61,000	300	5,000	0 / 5	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Acenaphthene	180,000	1,000	10,000	3 / 5	0.53 - 1.42	0.71	1.4 NP [c]	1 / 5	0.15 - 0.15	0.15	NC [b]	4 / 10	0.15 - 1.42	0.33	0.70 NP [c]	0 / 9	All ND	NA	NC [a]
Acenaphthylene	180,000	1,000	10,000	0 / 5	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Anthracene	920,000	1,000	10,000	3 / 5	1.38 - 3.58	1.8	3.6 NP [c]	2 / 5	0.3 - 0.4	0.23	0.40 NP [c]	5 / 10	0.3 - 3.58	0.73	1.4 NP [e]	0 / 9	All ND	NA	NC [a]
Benzo(a)anthracene	160	7	3,000	5 / 5	0.26 - **13.9**	6.2	**12.2** N [j]	3 / 5	0.23 - 1.5	0.62	1.5 NP [c]	8 / 10	0.23 - **13.9**	2.5	**7.5** NP [f]	2 / 9	0.21 - 0.25	0.18	0.27 NP [d]
Benzo(a)pyrene	16	2	300	5 / 5	0.28 - **13.7**	**5.9**	**11.8** N [j]	5 / 5	0.14 - 1.52	0.62	1.2 N [j]	10 / 10	0.14 - **13.7**	**2.4**	**13.2** NP [g]	5 / 9	0.17 - 0.3	0.20	0.28 NP [d]
Benzo(b)fluoranthene	160	7	3,000	5 / 5	0.38 - **19.9**	**8.5**	**16.9** N [j]	3 / 5	0.34 - 2	0.76	2.0 NP [c]	8 / 10	0.34 - **19.9**	3.3	**13.2** NP [h]	5 / 9	0.16 - 0.35	0.21	0.30 NP [d]
Benzo(g,h,i)perylene	120,000	1,000	10,000	5 / 5	0.18 - 2.85	1.4	2.5 N [j]	3 / 5	0.19 - 0.76	0.35	0.76 NP [c]	8 / 10	0.18 - 2.85	0.69	1.6 NP [f]	3 / 9	0.16 - 0.25	0.18	0.25 NP [d]
Benzo(k)fluoranthene	1,600	70	10,000	5 / 5	0.19 - 4.02	2.0	3.8 N [j]	2 / 5	0.52 - 0.67	0.32	0.67 NP [c]	7 / 10	0.19 - 4.02	0.89	1.6 NP [e]	0 / 9	All ND	NA	NC [a]
Chrysene	16,000	70	10,000	5 / 5	0.3 - 13.3	5.8	11.5 N [j]	3 / 5	0.24 - 1.62	0.63	1.6 NP [c]	8 / 10	0.24 - 13.3	2.4	7.0 NP [f]	3 / 9	0.15 - 0.24	0.18	0.25 NP [d]
Dibenz(a,h)anthracene	16	0.7	300	3 / 5	0.36 - **1.02**	0.46	**1.0** NP [c]	2 / 5	0.16 - 0.22	0.16	0.25 NP [d]	5 / 10	0.16 - **1.02**	0.26	0.40 NP [d]	0 / 9	All ND	NA	NC [a]
Fluoranthene	120,000	1,000	10,000	5 / 5	0.54 - 27.3	12.3	24 N [j]	3 / 5	0.56 - 3.02	1.2	3.0 NP [c]	8 / 10	0.54 - 27.3	4.9	18.9 NP [h]	5 / 9	0.17 - 0.57	0.25	0.38 NP [c]
Fluorene	120,000	1,000	10,000	3 / 5	0.59 - 1.61	0.79	1.6 NP [c]	1 / 5	0.18 - 0.18	0.15	NC [b]	4 / 10	0.18 - 1.61	0.37	0.79 NP [c]	0 / 9	All ND	NA	NC [a]
Indeno(1,2,3-cd)pyrene	160	7	3,000	5 / 5	0.19 - 3.29	1.6	3.0 N [j]	3 / 5	0.19 - 0.8	0.37	0.80 NP [c]	8 / 10	0.19 - 3.29	0.79	1.9 NP [f]	2 / 9	0.17 - 0.25	0.18	0.28 NP [d]
Naphthalene	61,000	100	10,000	1 / 5	0.16 - 0.16	0.15	NC [b]	0 / 5	All ND	NA	NC [a]	1 / 10	0.16 - 0.16	0.15	NC [b]	0 / 9	All ND	NA	NC [a]
Phenanthrene	120,000	500	10,000	5 / 5	0.24 - 19.8	8.8	17.6 N [j]	3 / 5	0.37 - 2.09	0.80	1.7 NP [d]	8 / 10	0.24 - 19.8	3.5	10.7 NP [f]	3 / 9	0.17 - 0.36	0.19	0.36 NP [c]
Pyrene	92,000	1,000	10,000	5 / 5	0.48 - 22.6	10.0	19.9 N [j]	3 / 5	0.47 - 2.66	1.1	2.7 NP [c]	8 / 10	0.47 - 22.6	4.1	12.2 NP [f]	5 / 9	0.16 - 0.4	0.23	0.32 NP [d]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 5	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 5	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 5	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 5	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 5	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Aroclor-1254	10	2	100	0 / 5	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Aroclor-1260	10	2	100	0 / 5	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Aroclor-1262	10	2	100	0 / 5	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 5	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
PCBs (Total)	10	2	100	0 / 5	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]

Table P-046
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

				0-1 ft [1]				1-3 ft [1]				0-3 ft [1, 2]				3+ ft [1]			
Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	Frequency of Detection	Range of Detected Concentrations	Average	95% UCL [3]	Frequency of Detection	Range of Detected Concentrations	Average	95% UCL [3]	Frequency of Detection	Range of Detected Concentrations	Average	95% UCL [3]	Frequency of Detection	Range of Detected Concentrations	Average	95% UCL [3]
Inorganics (mg/Kg)																			
Aluminum		NS	NS	5 / 5	4210 - 5950	5074	5841 N [j]	5 / 5	3760 - 4940	4224	4660 N [j]	10 / 10	3760 - 5950	4507	4829 G [m]	9 / 9	2370 - 8380	4450	5493 N [j]
Antimony		20	300	0 / 5	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Arsenic	40	20	200	5 / 5	2.1 - 3.7	2.8	3.4 N [j]	5 / 5	1.6 - 2.3	1.9	2.2 N [j]	10 / 10	1.6 - 3.7	2.2	2.5 G [m]	9 / 9	0.87 - 4.4	2.1	2.8 N [j]
Barium	200,000	1,000	10,000	5 / 5	14 - 63.4	48	68 N [j]	5 / 5	18.7 - 37.9	27	34 N [j]	10 / 10	14 - 63.4	34	42 N [j]	9 / 9	14.3 - 162	46	86 G [m]
Beryllium		100	2,000	0 / 5	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Cadmium	60	2	300	0 / 5	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	1 / 9	0.12 - 0.12	0.21	NC [b]
Calcium		NS	NS	5 / 5	641 - 3410	2008	3214 N [j]	5 / 5	574 - 2380	1118	2519 LN [l]	10 / 10	574 - 3410	1415	2506 NP [l]	9 / 9	414 - 1590	927	1172 N [j]
Chromium	200	30	2,000	5 / 5	8.5 - 13.6	10.9	13.0 N [j]	5 / 5	6 - 7.5	6.6	7.2 N [j]	10 / 10	6 - 13.6	8.0	9.2 N [k]	9 / 9	4.5 - 11.5	7.4	8.6 N [j]
Cobalt		NS	NS	0 / 5	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Copper		NS	NS	0 / 5	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Iron		NS	NS	5 / 5	7180 - 15100	9416	12568 N [j]	5 / 5	5560 - 8640	6860	7937 N [j]	10 / 10	5560 - 15100	7712	8834 N [k]	9 / 9	2730 - 9050	5863	7309 N [j]
Lead	1,000	300	3,000	5 / 5	266 - **424**	**359**	**422** N [j]	5 / 5	53.4 - 192	100	152 N [j]	10 / 10	53.4 - **424**	186	269 G [m]	9 / 9	4.5 - **460**	93	260 G [m]
Magnesium		NS	NS	5 / 5	1220 - 1690	1424	1611 N [j]	5 / 5	1280 - 1530	1418	1534 N [j]	10 / 10	1220 - 1690	1420	1483 N [j]	9 / 9	662 - 1740	1247	1462 N [j]
Manganese		NS	NS	0 / 5	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Mercury		20	300	0 / 5	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Nickel		20	7,000	0 / 5	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Potassium		NS	NS	0 / 5	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Selenium		400	8,000	0 / 5	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Silver		100	2,000	0 / 5	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Sodium		NS	NS	0 / 5	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Thallium		8	800	0 / 5	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 5	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 5	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 5	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]

mg/Kg = milligrams per kilogram
NA = Not applicable
ND = Not detected
NS = No Standard Available

[1] One-half the detection limit is used for all non-detects for all average calculations.
[2] Average and 95% UCL values are calculated based on a weighted average due to depth.
[3] 95% UCL is calculated using ProUCL software (V. 4.00.04).

NC - Not Calculated
[a] All values non detect
[b] Only one distinct data value was detected

NP - Non-Parametric Distribution
[c] 95% KM (Percentile Bootstrap) UCL
[d] 95% KM (t) UCL
[e] 95% KM (BCA) UCL
[f] 95% KM (Chebyshev) UCL
[g] 99% Chebyshev (Mean, Sd) UCL
[h] 97.5% KM (Chebyshev) UCL
[i] 95% Chebyshev (Mean, Sd) UCL

N - Normal Distribution
[j] 95% Student's-t UCL
[k] 95% Modified-t UCL

LN - Log Normal Distribution
[l] 95% H-UCL

G - Gamma Distribution
[m] 95% Approximate Gamma UCL

Bold values exceed MCP S-1 or MCP UCL.
Bold-shaded values exceed the Draft Recommended Parker Street IH Value.

Prepared by / Date: BJR 9/17/10
Checked by / Date: KJC 9/17/10