PARKER STREET WASTE SITE
(Site Identification Code – 01GB)

REMOVAL ACTION
ADMINISTRATIVE RECORD FILE
AND

INDEX

Prepared For:

U.S. Environmental Protection Agency
Region I
Emergency Planning and Response Branch
5 Post Office Square, Suite 100
Boston, Massachusetts 02109-3912

CONTRACT NO. EP-W-05-042

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TASK NO. 0651

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3rd Revision May 2012
4th Revision September 2012

INTRODUCTION

This document is the Index to the Administrative Record File for the Parker Street Waste Site Removal Action. The Index cites site-specific documents and guidance documents used by U.S. Environmental Protection Agency (EPA) staff in selecting a removal action at the site. Under the Action Memorandum signed 26 August 2010, activities performed as part of a Fund-lead removal action by EPA include the following:

1.) Conducting face-to-face meetings with property owners and tenants to discuss the scope of this proposed removal action.

2.) Conducting a site walk with the Emergency Rapid Response Services (ERRS) contractor.

3.) Establishing a command post and staging area, and connecting necessary utilities.

4.) Documenting existing property conditions for subsequent restoration.

5.) Documenting with each property owner the extent of removal and restoration activities to be accomplished.

6.) Removing, to the extent practicable, interference for excavation such as shrubbery, trees, outbuildings, playground equipment, or other items as required.

7.) Implementing erosion control measures as determined necessary by the EPA On-Scene Coordinator (OSC).

8.) Conducting air monitoring, and implementing dust control measures as appropriate.

9.) Excavating polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and/or metals-contaminated surface soils; and removing and disposing of contaminated surface soil as determined necessary by EPA. Performance standards for this removal action are based upon cleanup standards established pursuant to the Massachusetts Contingency Plan (MCP). The extent of the removal action will achieve cleanup standards to eliminate Imminent Hazard conditions and attain a level of No Significant Risk within the 0- to 3-foot depth, as defined in the MCP.

10.) Conducting extent-of-contamination sampling to determine the extent of landfill material to be removed; and conducting confirmation sampling as determined necessary by the EPA OSC.

11.) Packaging, documenting, and shipping cleanup-generated wastestreams off site for disposal at EPA/Massachusetts Department of Environmental Protection (MassDEP)-approved facilities. Wastes will be staged in a secure area on site while awaiting shipment to Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)-compliant off-site disposal facilities to the extent practicable. Live-loading contaminated soils from the properties into dump trucks for disposal may be necessary given the lack of staging areas. Depending on anticipated storage duration prior to shipment for ultimate disposal, the OSC will determine whether waste will be staged on site or shipped to a properly permitted temporary storage facility. Waste staging options will be evaluated based on cost and safety considerations.

12.) Installing a geotextile fabric as a visual marker to delineate contaminated soils (if any) which may remain at depth (beyond 3 feet below surface grade) or which cannot otherwise be excavated.

13.) Repairing response-related damages, including backfilling with clean fill material, grading, and re-establishing vegetation in areas affected by response-related activities.

14.) Demobilizing all personnel and equipment from the Site.

15.) Referring the Site to MassDEP for any long-term remedial measures (including institutional controls and long-term operation and maintenance of any cap that is constructed) that may be required to address remaining Site risks.

Under an Action Memorandum Addendum signed on 23 September 2011, the goals of the removal action remain the same as those described in the Action Memorandum signed on 26 August 2010: to conduct sampling to define the full extent of the boundaries of the Site and to remove contaminated surface soils from properties at the Site. However, objectives specific to this addendum are as follows:

- Conducting additional sampling, as necessary, to define the boundaries of the Site.
- For the New Bedford Housing Authority's (NBHA)'s Westlawn property, which has activity and use limitations imposed it by the NBHA, addressing surface soils contaminated with hazardous substances within the top foot of soil, through response actions consistent with the National Contingency Plan (NCP).
- Removing surface soils contaminated with elevated levels of hazardous substances from additional properties.
- Restoring properties to pre-excavation conditions, to the extent practicable.
- Transporting and disposing of all contaminated material.

The remaining proposed actions remain as described in the original Action Memorandum of 26 August 2010.

The Administrative Record File is available for public review, by appointment, at the U.S. EPA Records Center, 5 Post Office Square, Suite 100, Boston, Massachusetts, 02109-3912; and at the New Bedford Free Public Library, 613 Pleasant Street, New Bedford, Massachusetts, 02740. Questions concerning the Administrative Record File should be addressed to Wing Chau, EPA On-Scene Coordinator.

The Administrative Record File is required by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9613 (k), and EPA's implementing regulations, 40 CFR § 300.800.-825.

PLEASE NOTE:
THE DOCUMENTS COMPILED IN THIS ADMINISTRATIVE RECORD FILE HAVE BEEN REPRODUCED FROM THE BEST AVAILABLE COPIES, OR AS PROVIDED IN ELECTRONIC FILES.

SITE-SPECIFIC DOCUMENTS

ADMINISTRATIVE RECORD FILE INDEX
for the
Parker Street Waste Site Removal Action

REMOVAL

Correspondence (Site File 2.01)

1. Letter from David Johnston, Acting Regional Director, Massachusetts Department of Environmental Protection (MassDEP), to Steven R. Novick, Chief, US EPA Region I, regarding New Bedford, Release Tracking Number 4-0015685, Parker Street Waste Site, Request for USEPA Assistance, dated 19 August 2010.

2. Memorandum from Wing Chau, On-Scene Coordinator, Emergency Response and Removal Section II, Emergency Planning and Response Branch (EPRB), Office of Site Remediation and Restoration (OSRR), EPA Region I, through Steven Novick, Chief, Emergency Response and Removal Section II, EPRB, OSRR, EPA Region I, to Parker Street Waste Site File, regarding the Site Investigation Closure at the Parker Street Waste Site, Parker Street, New Bedford, MA, dated 19 August 2010.

Removal Reports (Site File 2.02)

3. "Removal Program Site Investigation Summary Report for the Parker Street Waste Site Properties, New Bedford, Bristol County, Massachusetts, 26 April 2010 Through 8 June 2010" (for Phase I Properties P-001, P-002, P-003, P-004, P-005, P-006, P-007, P-008, P-009, P-010, P-011, P-012, P-013, P-014, P-015, P-016, P-017, P-018, P-019, P-020, P-021, P-022, P-023, P-024, P-025, P-026, P-027, P-028, P-029, P-030, P-031 and P-031A, P-032, P-033, P-034, P-035, P-036, P-037, P-038, P-039, P-040, P-041, P-042, P-043, P-044, P-045, P-046, P-047); prepared by Weston Solutions, Inc., Superfund Technical Assessment and Response Team III (START) for EPA Region I, dated July to September 2010. *There are 47 Individual Property Reports included as part of this entry. These reports are provided in the Administrative Record File in Compact Disc (CD) format. (Certain property information has been redacted in consideration of residential privacy.)*

4. "Removal Program Site Investigation Summary Report for the Parker Street Waste Site Properties, New Bedford, Bristol County, Massachusetts, 7 September 2010 Through 7 October 2010" (for Phase II Properties P-048, P-049, P-050, P-051, P-052, P-053, P-054, P-055, P-056, P-057, P-058, P-059, P-060, P-061, P-062, P-063, P-064, P-065, P-066, P-067, P-068, P-069, P-070, P-071); prepared by Weston Solutions, Inc., Superfund Technical Assessment and Response Team III (START) for EPA Region I, dated March 2011. *There are 24 Individual Property Reports included as part of this entry. These reports are provided in the Administrative Record File in Compact Disc (CD) format. (Certain property information has been redacted in consideration of residential privacy.)*

5. "Removal Program Site Investigation Summary Report for the Parker Street Waste Site, New Bedford, Bristol County, Massachusetts, 26 April 2010 Through 8 June 2010, and 14 and 15 July 2010", Phase I, Volumes I, II, III, and IV, prepared by Weston Solutions, Inc., Superfund Technical Assessment and Response Team III (START) for EPA Region I, May 2011. *The four volumes of this Site Investigation Summary Report are included as companion volumes to this Administrative Record File. In addition, all four volumes of the entire Site Investigation Summary Report are also provided in the Administrative Record File in Compact Disc (CD) format.*

6. "Removal Program Site Investigation Summary Report for the Parker Street Waste Site Properties, New Bedford, Bristol County, Massachusetts", 25 October 2011 and 26 October 2011 (for Phase III Properties P-077 and P-078); prepared by Weston Solutions, Inc., Superfund Technical Assessment and Response Team III (START) for EPA Region I, dated December 2011. *There are two Individual Property Reports included as part of this entry. These reports are provided in the Administrative Record File in Compact Disc (CD) format. (Certain property information has been redacted in consideration of residential privacy.)*

7. "Removal Program Site Investigation - Phase II and III, Summary Report for the Parker Street Waste Site, New Bedford, Bristol County, Massachusetts, 30 August 2010 Through 7 October 2010, and 25 and 26 October 2011", prepared by Weston Solutions, Inc., Superfund Technical Assessment and Response Team III (START) for EPA Region I, May 2012. *This Site Investigation Summary Report is provided in the Administrative Record File in Compact Disc (CD) format.*

Sampling and Analysis Data (Site File 2.03)

8. Sampling and Analysis Plan (SAP) for the Parker Street Waste Site, New Bedford, Massachusetts, prepared by U.S. EPA Region I, Emergency Planning and Response Branch (EPRB); Massachusetts Department of Environmental Protection (MassDEP), Southeast Regional Office, Bureau of Waste Site Cleanup; Roux Associates, Inc., and E2, Inc., c/o Citizens Leading Environmental Action Network; and Weston Solutions, Region I, Superfund Technical Assessment & Response Team III, dated April 2010.

Pollution Reports (POLREPS) (Site File 2.04)

9. POLREP #1, Initial, Parker Street Waste Site, 01GB, New Bedford, MA, from Wing Chau, On-Scene Coordinator (OSC), reporting period 10/29/2010 to 12/03/2010, dated 15 December 2010.

10. POLREP #2, Progress, Parker Street Waste Site, 01GB, New Bedford, MA, from Wing Chau, On-Scene Coordinator (OSC), reporting period 12/6/2010 to 2/17/2011, dated 17 February 2011.

11. POLREP #3, Progress, Parker Street Waste Site, 01GB, New Bedford, MA, from Wing Chau, On-Scene Coordinator (OSC), dated 1 July 2011.

12. POLREP #4, Progress, Parker Street Waste Site, 01GB, New Bedford, MA, from Wing Chau, On-Scene Coordinator (OSC), reporting period 7/27/2011 to 9/9/2011, dated 9 September 2011.

13. POLREP #5, Progress, Parker Street Waste Site, 01GB, New Bedford, MA, from Wing Chau, On-Scene Coordinator (OSC), reporting period 9/12/2011 to 9/30/2011, dated 30 September 2011.

14. POLREP #6, Progress, Parker Street Waste Site, 01GB, New Bedford, MA, from Wing Chau, On-Scene Coordinator (OSC), reporting period 10/3/2011 to 11/25/2011, dated 30 November 2011.

15. POLREP #7, Progress, Parker Street Waste Site, 01GB, New Bedford, MA, from Wing Chau, On-Scene Coordinator (OSC), reporting period 11/28/2011 to 12/30/2011, dated 3 January 2012.

16. POLREP #8, Progress, Parker Street Waste Site, 01GB, New Bedford, MA, from Wing Chau, On-Scene Coordinator (OSC), reporting period 1/3/2012 to 2/10/2012, dated 23 February 2012.

17. POLREP #9, Progress, Parker Street Waste Site, 01GB, New Bedford, MA, from Wing Chau, On-Scene Coordinator (OSC), reporting period 2/13/2012 to 3/23/2012, dated 23 March 2012.

18. POLREP #10, Parker Street Waste Site, 01GB, New Bedford, MA, from Wing Chau, On-Scene Coordinator (OSC), dated 29 June 2012.

19. POLREP #11, Final, Parker Street Waste Site, 01GB, New Bedford, MA, from Wing Chau, On-Scene Coordinator (OSC), reporting period 7/2/2012 to 8/24/2012, dated 28 August 2012.

Action Memorandum (Site File 2.09)

20. Memorandum from Wing Chau, On-Scene Coordinator, Emergency Response and Removal Section II, EPA Region I, through Steven R. Novick, Chief, Emergency Response and Removal Section II, EPA Region I, and Arthur V. Johnson III, Chief, Emergency Planning & Response Branch, EPA Region I, to James T. Owens III, Director, Office of Site Remediation and Restoration, EPA Region I, regarding a Request for a Removal Action at the Parker Street Waste Site, New Bedford, Bristol County, Massachusetts, Action Memorandum and Exemption from the Statutory $2,000,000 and 12-Month Limits on Removal Actions, dated 26 August 2010, and signed by James T. Owens, III, on 26 August 2010. (The Enforcement Section of the Memorandum is withheld as being CONFIDENTIAL.)

21. Memorandum from Dana Tulis, Deputy Director, Office of Emergency Management, US EPA, to Mathy Stanislaus, Assistant Administrator, Office of Solid Waste and Emergency Response, US EPA, regarding Region 1 Request for a Ceiling Increase at the Parker Street Waste Site, New Bedford, MA, Headquarters Addendum, dated 15 September 2011, and signed by Mathy Stanislaus on 23 September 2011. *(See the following entry for the Action Memorandum Addendum, dated 15 September 2011*

and signed 23 September 2011, which is an attachment to the Headquarters Addendum.)

22. Memorandum from James T. Owens III, Director, Office of Site Remediation and Restoration, USEPA Region I, through Dana Tulis, Deputy Director, Office of Emergency Management, USEPA, to Mathy Stanislaus, Assistant Administrator, Office of Solid Waste and Emergency Response, USEPA, Attn: Gilbert Irizarry, Director, Program Operations and Coordination Division, USEPA, regarding a Request to Continue a Removal Action, Change in Scope of Response, an Exemption from the Statutory 12-Month and $2 Million Limits for the Removal Action, and Ceiling Increase at the Parker Street Waste Site, New Bedford, Bristol County, Massachusetts, Action Memorandum Addendum, dated 15 September 2011, and signed by Mathy Stanislaus, on 23 September 2011. (The Enforcement Section of the Memorandum is withheld as being CONFIDENTIAL.)

STATE COORDINATION

Correspondence (Site File 9.01)

23. Letter from David Johnston, Acting Regional Director, Massachusetts Department of Environmental Protection (MassDEP), to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-021, concerning MassDEP data analysis/risk evaluation (preliminary) for the property and verifying that MassDEP's previous request for US EPA assistance on this property was appropriate, dated 3 December 2010.

24. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-029, concerning MassDEP data analysis/risk evaluation (preliminary) for the property and verifying that MassDEP's previous request for US EPA assistance on this property was appropriate, dated 3 December 2010.

25. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-011, concerning MassDEP data analysis/risk evaluation (preliminary) for the property and verifying that MassDEP's previous request for US EPA assistance on this property was appropriate, dated 21 December 2010.

26. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-047, concerning MassDEP data analysis/risk evaluation (preliminary) for the property and verifying that MassDEP's previous request for US EPA assistance on this property was appropriate, dated 21 December 2010.

27. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-004, concerning MassDEP data analysis/risk evaluation (preliminary) for the property and verifying that MassDEP's previous request for US EPA assistance on this property was appropriate, dated 22 December 2010.

28. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-003, (Final SAP Data Risk Evaluation/Request for Removal Action), dated 17 May 2011.

29. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-040, (Final SAP Data Risk Evaluation/Request for Removal Action), dated 17 May 2011.

30. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-042, (Final SAP Data Risk Evaluation/Request for Removal Action), dated 17 May 2011.

31. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-004, (Final SAP Data Risk Evaluation) Request for Removal Action, dated 20 May 2011.

32. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-011, (Final SAP Data Risk Evaluation) Request for Removal Action, dated 20 May 2011.

33. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-020, (Final SAP Data Risk Evaluation) Request for Removal Action, dated 20 May 2011.

34. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-012, (Final SAP Data Risk Evaluation) Request for Removal Action, dated 27 May 2011.

35. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-010, SAP Data Risk Evaluation - Request for Removal Action, dated 15 June 2011.

36. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-030, Request for Removal Action, dated 15 June 2011.

37. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-006, SAP Data Evaluation Status - Additional Analysis or USEPA Remedial Action Recommended, dated 17 June 2011.

38. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-002, SAP Data Risk Evaluation - Request for Removal Action, dated 23 June 2011.

39. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-027, SAP Data Evaluation - Request for Removal Action, dated 23 June 2011.

40. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-001, SAP Data Risk Evaluation - Request for Removal Action, dated 24 June 2011.

41. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-033, SAP Data Risk Evaluation - Request for Removal Action, dated 24 June 2011.

42. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-055, SAP Data Risk Evaluation - No USEPA Action Recommended, dated 24 June 2011.

43. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW

BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-005, SAP Data Risk Evaluation - Request for Removal Action, dated 30 June 2011.

44. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-023, SAP Data Evaluation Status - Additional Analysis or USEPA Remedial Action Recommended, dated 30 June 2011.

45. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-039, SAP Data Risk Evaluation - Request for Removal Action, dated 30 June 2011.

46. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-013, SAP Data Risk Evaluation - Request for Removal Action, dated 8 July 2011.

47. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-066, SAP Data Risk Evaluation - No USEPA Action Recommended, dated 8 July 2011.

48. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-068, SAP Data Risk Evaluation - Request for Removal Action, dated 8 July 2011.

49. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-008, SAP Data Risk Evaluation - No USEPA Action Recommended, dated 14 July 2011.

50. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-018, SAP Data Risk Evaluation - No USEPA Action Recommended, dated 14 July 2011.

51. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site,

Property P-037, SAP Data Risk Evaluation - USEPA Action Recommended, dated 20 July 2011.

52. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-043, SAP Data Risk Evaluation - No USEPA Action Recommended, dated 20 July 2011.

53. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-009, SAP Data Risk Evaluation - No USEPA Action Recommended, dated 27 July 2011.

54. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-024, SAP Data Risk Evaluation - No USEPA Action Recommended, dated 27 July 2011.

55. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-031, SAP Data Risk Evaluation - No USEPA Action Recommended, dated 27 July 2011.

56. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-041, Request for Removal Action, dated 27 July 2011.

57. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-007, SAP Data Risk Evaluation - No USEPA Action Recommended, dated 5 August 2011.

58. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-015, SAP Data Risk Evaluation - No USEPA Action Recommended, dated 5 August 2011.

59. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-016, SAP Data Risk Evaluation - No USEPA Action Recommended, dated 5 August 2011.

60. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-019, SAP Data Risk Evaluation - No USEPA Action Recommended, dated 5 August 2011.

61. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-032, SAP Data Risk Evaluation - No USEPA Action Recommended, dated 5 August 2011.

62. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-036, SAP Data Risk Evaluation - No USEPA Action Recommended, dated 5 August 2011.

63. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-034, SAP Data Risk Evaluation - No USEPA Action Recommended, dated 10 August 2011.

64. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-038, SAP Data Risk Evaluation - No USEPA Action Recommended, dated 10 August 2011.

65. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-044, SAP Data Risk Evaluation - No USEPA Action Recommended, dated 10 August 2011.

66. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-045, SAP Data Risk Evaluation - No USEPA Action Recommended, dated 10 August 2011.

67. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-028, SAP Data Evaluation Status - Additional Analysis or USEPA Remedial Action Recommended, dated 19 August 2011.

68. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-052, SAP Data Risk Evaluation - Request for Removal Action, dated 25 August 2011.

69. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-053, SAP Data Risk Evaluation - Request for Removal Action, dated 25 August 2011.

70. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-058, SAP Data Risk Evaluation - Request for Removal Action, dated 25 August 2011.

71. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-046, SAP Data Risk Evaluation - Request for Removal Action, dated 1 September 2011.

72. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-051, SAP Data Risk Evaluation - Request for Removal Action, dated 1 September 2011.

73. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-061, SAP Data Risk Evaluation - Request for Removal Action, dated 1 September 2011.

74. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-048, SAP Data Risk Evaluation - Request for Removal Action, dated 16 September 2011.

75. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-049, SAP Data Risk Evaluation - Request for Removal Action, dated 16 September 2011.

76. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-054, SAP Data Risk Evaluation - Request for Removal Action, dated 16 September 2011.

77. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-057, SAP Data Risk Evaluation - No USEPA Action Recommended, dated 16 September 2011.

78. Letter from David Johnston, Acting Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-067, SAP Data Risk Evaluation - No USEPA Action Recommended, dated 16 September 2011.

79. Letter from David Johnston, Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-022, SAP Data Risk Evaluation - No USEPA Action Recommended, dated 12 October 2011.

80. Letter from David Johnston, Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-050, SAP Data Risk Evaluation - No USEPA Action Recommended, dated 26 October 2011.

81. Letter from David Johnston, Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-056, SAP Data Risk Evaluation - Request for Removal Action, dated 26 October 2011.

82. Letter from David Johnston, Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-070, SAP Data Risk Evaluation - Request for Removal Action, dated 26 October 2011.

83. Letter from David Johnston, Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-063, SAP Data Risk Evaluation - No USEPA Action Recommended, dated 20 January 2012.

84. Letter from David Johnston, Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-065, SAP Data Risk Evaluation - No USEPA Action Recommended, dated 20 January 2012.

85. Letter from David Johnston, Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-071, SAP Data Risk Evaluation - No USEPA Action Recommended, dated 20 January 2012.

86. Letter from David Johnston, Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-064, SAP Data Risk Evaluation - No USEPA Action Recommended, dated 1 February 2012.

87. Letter from David Johnston, Regional Director, MassDEP, to Steven R. Novick, Chief, Emergency Response & Removal, EPA Region I, regarding NEW BEDFORD, Release Tracking Number 4-0015685, Parker Street Waste Site, Property P-069, SAP Data Risk Evaluation - Request for Removal Action, dated 1 February 2012.

ENFORCEMENT/NEGOTIATION

EPA Administrative Orders (Site File 10.07)

88. Administrative Settlement Agreement and Order on Consent for Removal Action. U.S. EPA Region 1 Docket No. CERCLA-01-2011-0044. In the matter of Parker Street Waste Site, New Bedford, Massachusetts. C.P. Properties, LLC, Respondent. Agreed (and signed) by Craig H. Campbell, Counsel to C.P. Properties, LLC; and Ordered and Agreed, and signed by James T. Owens, III, Director, Office of Site Remediation & Restoration, U.S. Environmental Protection Agency, on 28 June 2011. Effective Date: 11 July 2011.

89. Administrative Settlement Agreement and Order on Consent for Removal Action. U.S. EPA Region 1 Docket No. CERCLA-01-2011-0045. In the matter of Parker Street Waste Site, New Bedford, Massachusetts. M.P. Properties, LLC, Respondent. Agreed (and signed) by Craig H. Campbell, Counsel to M.P. Properties, LLC; and Ordered and Agreed, and signed by James T. Owens, III, Director, Office of Site Remediation & Restoration, U.S. Environmental Protection Agency, on 28 June 2011. Effective Date: 11 July 2011.

90. Letter from Mia Pasquerella, On-Scene Coordinator, EPA Region I, to Antonio J. Pereira, Manager, C.P. Properties, LLC, M.P. Properties, LLC, P.O. Box 2062, New Bedford, MA 02741, regarding certification of completion for C.P. Properties, LLC, 169 Hunter Street, New Bedford, Massachusetts, Parker Street Waste Site, Administrative Order on Consent for Removal Action, Docket Number: CERCLA-

01-2011-0044; and M.P. Properties, LLC, 157/159 Hunter Street, New Bedford, Massachusetts, Parker Street Waste Site, Administrative Order on Consent for Removal Action, Docket Number: CERCLA-01-2011-0045, dated 30 January 2012.

POTENTIALLY RESPONSIBLE PARTY (PRP)

PRP-Specific Documents (Site File 11.09)

91. Letter from Arthur V. Johnson, III, Chief, Emergency Planning and Response Branch, EPA Region I, to City of New Bedford, Attn: Irene Schall, Esq., City Solicitor, 100 8th Street, New Bedford, MA 02740, regarding Notice of Potential Liability and Invitation to Perform or Finance Proposed Cleanup Activities for the Parker Street Waste Site, New Bedford, MA, dated 29 September 2010.

92. Letter from Arthur V. Johnson, III, Chief, Emergency Planning and Response Branch, EPA Region I, to New Bedford Housing Authority, Attn: Steven A. Beauregard, Acting Executive Director, P.O. Box 2081, New Bedford, MA 02741, regarding Notice of Potential Liability and Invitation to Perform or Finance Proposed Cleanup Activities for the Parker Street Waste Site, New Bedford, MA, dated 29 September 2010.

93. Letter from Arthur V. Johnson, III, Chief, Emergency Planning and Response Branch, EPA Region I, to C.P. Properties, LLC, M.P. Properties, LLC, c/o Craig H. Campbell, Attorney-at-Law, 60 State Street, Suite 700, Boston, MA, 02109, regarding Notice of Potential Liability and Invitation to Perform or Finance Proposed Cleanup Activities for the Parker Street Waste Site, New Bedford, MA, dated 29 September 2010.

COMMUNITY RELATIONS

News Clippings/Press Releases (Site File 13.03)

94. "EPA Begins Clean Up at the Parker Street Waste Site in New Bedford, Mass.", EPA Press Release, dated 17 November 2010.

95. "Administrative Record File Available for the Parker Street Waste Site Removal Action," text of the display announcement as it was requested to appear in *The Standard-Times,* New Bedford, Massachusetts.

96. "Amended Administrative Record File Available for the Parker Street Waste Site Removal Action," text of the display announcement as it was requested to appear in *The Standard-Times,* New Bedford, Massachusetts.

Please see the following website for more information regarding this site:

http://www.epa.gov/region1/parkerstreet/ .

SELECTED KEY GUIDANCE DOCUMENTS

EPA guidance documents may be reviewed at the U.S. EPA Records Center, 5 Post Office Square, Suite 100, Boston, Massachusetts.

1. Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. § 9601 et seq.

2. "National Oil and Hazardous Substances Pollution Contingency Plan," Code of Federal Regulations (Title 40, Part 300) 1990.

3. "Revised Guidance on Compiling Administrative Records for CERCLA Response Actions", U.S. EPA, Office of Site Remediation Enforcement, Office of Superfund Remediation and Technology Innovation, Office of Emergency Management, September 2010.

4. Superfund Amendments and Reauthorization Act of 1986.

COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
SOUTHEAST REGIONAL OFFICE

August 19, 2010

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
REQUEST FOR USEPA ASSISTANCE

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 for the Parker Street Waste Site (the SAP), dated April 2010, to determine if contaminants of concern (COCs) associated with the Parker Street Waste Site (PSWS) were present on approximately 63 adjacent land parcels, which comprise 47 privately owned properties. The SAP was prepared jointly by the USEPA, MassDEP, Roux Associates, Inc. and E^2 Inc. c/o Citizen's Leading Environmental Action Network and Weston Solutions, Superfund Technical Assessment & Response Team III.

As described in the SAP, the USEPA, MassDEP and their environmental contractors collected soil samples from borings installed throughout locations within the 63 parcels and submitted the soil samples for analysis at fixed laboratories. The soil samples were analyzed for Contaminants of Concern associated with the Parker Street Waste Site, including polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), arsenic, barium, cadmium, chromium and lead. Soil borings were advanced down to approximately 12 feet below ground surface (bgs). The following vertical horizons were analyzed: 0 – 1' bgs, 1 – 3' bgs, and 3 – 12' bgs.

As the SAP analytical results are 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 Commonwealth of Massachusetts Waste Site Cleanup requirements contained in 310 Code of Massachusetts Regulations (CMR) 40.0000, known as the Massachusetts Contingency Plan (the MCP). The MCP establishes numerical and performance standards including processes for addressing releases of oil and/or hazardous materials to the environment.

MassDEP and MACTEC have reviewed the analytical results and conducted a risk-based analysis of the validated results from the soil samples collected from the first 25 of the 47 private properties. MassDEP has determined the following: 20 of the first 25 properties have elevated levels of contamination in the top three feet of soil that, in accordance with the MCP, trigger either an Imminent Hazard Condition or a condition that does not support a determination of No Significant Risk. Accordingly, actions are required on these properties to reduce the level of risk posed to human health by the presence of this contamination at these levels. The MCP requires elimination and/or control of immediate risks and requires actions to address any conditions that pose unacceptable risk to human health.

Given the findings above, MassDEP hereby requests assistance from EPA to address conditions in the top three feet of soil on these properties that pose an unacceptable level of risk to human health.

MassDEP and MACTEC will continue to evaluate available data and conduct risk-based evaluations for the remaining 22 properties. MassDEP will provide you, under separate cover, property-specific information, including a risk-based analysis and MassDEP's findings for each of the 47 private properties.

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

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
5 Post Office Square, Suite 100
Boston, MA 02109-3912

DATE: August 19, 2010

SUBJ: Site Investigation Closure Memorandum
Parker Street Waste Site
Parker Street
New Bedford, MA

FROM: Wing Chau, On-Scene Coordinator W.C.
Emergency Response and Removal Section II

THRU: Steven Novick, Chief
Emergency Response and Removal Section II

TO: Parker Street Waste Site File

In accordance with section 300.410 of the National Contingency Plan (NCP), a Removal Site Evaluation, consisting of a Preliminary Assessment and Site Investigation (PA/SI), has been undertaken at the Parker Street Waste Site ("Site") in New Bedford, Massachusetts. The findings of the Removal Site Evaluation have been evaluated under the criteria set forth in section 300.415 of the NCP, section 104(a) and (b) of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), 42 U.S.C. § 9604(a) and (b) and Clean Water Act (CWA) § 311(c)(i) as amended by the Oil Pollution Act (OPA) § 4201(a). The Removal Site Evaluation has led to the determination that a Removal Action **is** appropriate at this time.

The findings of the Removal Site Evaluation are outlined below.

1. Source and nature of the release or threat of release

   a. The Removal Site Evaluation consisted of the following actions:

      i. Review of analytical results generated by the City of New Bedford, TRC Summary Data Reports.

      ii. Review of historical aerial imagery.

iii. The Phase I Site Investigation initiated on April 26, 2010.

iv. Generating property specific PA/SI reports by EPA's contractor, titled "Removal Program Site Investigation Summary Report for the Parker Street Waste Site Properties New Bedford, Bristol County, Massachusetts 26 April 2010 Through 8 June 2010."

v. The Massachusetts Department of Environmental Protection (MassDEP) and its Site Assessment Remediation Support Services (SARSS) contractor, MACTEC, performed an evaluation of the analytical data for the properties sampled during this PA/SI to determine whether response action is required under the Commonwealth of Massachusetts Waste Site Cleanup requirements contained in 310 Code of Massachusetts Regulations (CMR) 40.0000, known as the Massachusetts Contingency Plan (MCP).Currently, 25 of the 47 properties tested to date have been evaluated and 20 properties have been determined to contain either an Imminent Hazard and/or Significant Risk condition. Evaluations of the other remaining properties are on-going.

b. Based on the information available at this time, the principal hazardous substances or pollutants or contaminants that are being released or for which there is threat of release include but are not necessarily limited to the list below.

Hazardous Substances or Pollutants or Contaminants	Media
Metals – Lead, Chromium Cadmium, Barium, Arsenic	soil
PCBs	soil, sediment
PAHs	soil

2. Evaluation of the threat to public health, welfare and the environment

a. Federal Agency for Toxic Substances and Disease Registry:

Threat☐ No Threat☐ Evaluation Not Necessary **X**

b. Endangerment to the ecosystem:

Threat☐ No Threat☐ Evaluation Not Necessary **X**

MassDEP and its Site Assessment Remediation Support Services (SARSS) contractor, MACTEC, performed an evaluation of the analytical data for the properties sampled during this PA/SI to determine whether response action is required under the Commonwealth of Massachusetts Waste Site Cleanup requirements contained in 310 Code of Massachusetts Regulations (CMR) 40.0000, known as the Massachusetts Contingency Plan (MCP). The MCP establishes numerical and performance standards including processes for addressing releases of oil and/or hazardous materials to the environment. Currently, 25 of the 47 properties tested to date have been evaluated and 20 properties have been determined to contain either an Imminent Hazard and/or Significant Risk condition. Evaluations of the other remaining properties are on-going.

3. The Removal Site Evaluation was terminated pursuant to section 300.410(f) of the NCP for the following reason(s).

- ☐ There is no release.
- ☐ The source is neither a "vessel" nor a "facility" as defined in section 300.5 of the NCP.
- ☐ The release involves neither a hazardous substance, nor a pollutant or contaminant that may present an imminent and substantial danger to public health or welfare of the United States.
- ☐ It is subject to the limitations on response specified in §300.400(b)(1) through (3). The release is
  - ☐ of a naturally occurring substance in its unaltered form, or altered solely through naturally occurring processes or phenomena, from a location where it is naturally found.
  - ☐ from products that are part of the structure of, and result in exposure within, residential buildings or businesses or community structures.
  - ☐ into public or private drinking water supplies due to deterioration of the system through ordinary use.
- ☐ The amount, quantity, or concentration released does not warrant a Federal response.

☐ A party responsible for the release, or any other person, is providing appropriate response, and on-scene monitoring by EPA is not required.

X The Removal Site Evaluation is complete.

4. As reflected in Section 3, above, the Removal Site Evaluation was terminated due to its completion, and not for other reasons.

   a. The factors listed below, found in Section 300.415(b)(2) of the NCP, are applicable to this Site.

X Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants.

X Actual or potential contamination of drinking water supplies or sensitive ecosystems.

☐ Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release.

X High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate.

X Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.

☐ Threat of fire or explosion.

X The availability of other appropriate Federal or State response mechanisms to respond to the release.

☐ Other situations or factors that may pose threats to public health or welfare of the United States or the environment.

   b. The existence of the conditions specified in Section 4.a., above, indicate that a Removal Action under section 300.415 of the NCP **is** necessary. Based upon analytical results from soil and sediment samples collected during the PA/SI initiated by EPA on April 26, 2010, the detection of elevated levels of hazardous substances and contaminants in the surface soils indicate that a release of hazardous substances has already occurred. Currently, 25 of the 47 properties tested to date have been evaluated and 20 properties have been determined to contain these site conditions. Evaluations of the other remaining properties are on-going.

c. In light of the magnitude of the threat or potential threat to health, welfare, or the environment, the appropriate categorization of a Removal Action at this Site is:

Emergency☐ Time-Critical **X** Non Time-Critical☐

5. As reflected in Section 3, above, the Removal Site Evaluation was terminated due to its completion, and not for other reasons.

a. As found in section 300.410(e)(1) of the NCP, the OSC shall determine whether a release governed by CWA section 311(c)(1), as amended by OPA section 4201(a), has occurred.

☐ There is a release, or potential threat of release, as governed by the CWA as amended by OPA.

X There is not a release, or potential threat of release, as governed by the CWA as amended by OPA.

b. The absence of the conditions specified in Section 5.a., above, indicate that an Oil Spill Response under Appendix E to Part 300 of the NCP **is not** necessary.

cc: Steven Novick, Chief, Emergency Response and Removal Section II, OSRR (w/o enclosures)
Meghan Cassidy, Chief, Technical Support & Site Assessment Section, OSRR (w/o enclosures)
Patti Ludwig, Technical Support & Site Assessment Section, OSRR (w/o enclosures)
Molly Cote, MassDEP
Scott Alfonse, City of New Bedford (w/o enclosures)

Encl: PA/SI Reports

<u>Administrative Record File Note No. 1</u>

"Removal Program Site Investigation Summary Report for the Parker Street Waste Site Properties, New Bedford, Bristol County, Massachusetts, 26 April 2010 Through 8 June 2010" (for Properties P-001, P-002, P-003, P-004, P-005, P-006, P-007, P-008, P-009, P-010, P-011, P-012, P-013, P-014, P-015, P-016, P-017, P-018, P-019, P-020, P-021, P-022, P-023, P-024, P-025, P-026, P-027, P-028, P-029, P-030, P-031 and P-031A, P-032, P-033, P-034, P-035, P-036, P-037, P-038, P-039, P-040, P-041, P-042, P-043, P-044, P-045, P-046, P-047); prepared by Weston Solutions, Inc., Superfund Technical Assessment and Response Team III (START) for EPA Region I, dated July to September 2010.

There are 47 Individual Property Reports included as part of this entry. These reports are provided in this Administrative Record File on the enclosed Compact Disc (CD). (Certain property information has been redacted in consideration of residential privacy.) Hard copies are available upon request from EPA Region I.

Administrative Record File Note No. 1A

"Removal Program Site Investigation Summary Report for the Parker Street Waste Site Properties, New Bedford, Bristol County, Massachusetts, 7 September 2010 Through 7 October 2010" (for Properties P-048, P-049, P-050, P-051, P-052, P-053, P-054, P-055, P-056, P-057, P-058, P-059, P-060, P-061, P-062, P-063, P-064, P-065, P-066, P-067, P-068, P-069, P-070, P-071); prepared by Weston Solutions, Inc., Superfund Technical Assessment and Response Team III (START) for EPA Region I, dated March 2011.

There are 24 Individual Property Reports included as part of this entry. These reports are provided in this Administrative Record File on the enclosed Compact Disc (CD). (Certain property information has been redacted in consideration of residential privacy.) Hard copies are available upon request from EPA Region I.

Administrative Record File Note No. 2

“*Removal Program Site Investigation Summary Report for the Parker Street Waste Site, New Bedford, Bristol County, Massachusetts, 26 April 2010 Through 8 June 2010, and 14 and 15 July 2010*”, Volumes I, II, III, and IV, prepared by Weston Solutions, Inc., Superfund Technical Assessment and Response Team III (START) for EPA Region I. The four volumes of this Site Investigation Summary Report are included separately (in hard copy format) as companion volumes to this Administrative Record File.

In addition, all four volumes of the entire Site Investigation Summary Report are also provided in this Administrative Record File on the enclosed Compact Disc (CD).

Administrative Record File Note No. 1B

"Removal Program Site Investigation Summary Report for the Parker Street Waste Site Properties, New Bedford, Bristol County, Massachusetts", 25 October 2011 and 26 October 2011 (for Properties P-077 and P-078); prepared by Weston Solutions, Inc., Superfund Technical Assessment and Response Team III (START) for EPA Region I, dated December 2011.

There are two Individual Property Reports included as part of this entry. These reports are provided in this Administrative Record File on the enclosed Compact Disc (CD). (Certain property information has been redacted in consideration of residential privacy.)

Administrative Record File Note No. 3

"Removal Program Site Investigation - Phase II and III, Summary Report for the Parker Street Waste Site, New Bedford, Bristol County, Massachusetts, 30 August 2010 Through 7 October 2010, and 25 and 26 October 2011", prepared by Weston Solutions, Inc., Superfund Technical Assessment and Response Team III (START) for EPA Region I, May 2012.

This Site Investigation Summary Report is provided in this Administrative Record File on the enclosed Compact Disc (CD).

Sampling and Analysis Plan

for the
Parker Street Waste Site
New Bedford, Massachusetts

Prepared by:

United States Environmental Protection Agency,
Region I Office of Site Remediation & Restoration
Emergency Planning & Response Branch

Massachusetts Department of Environmental Protection
Southeast Regional Office, Bureau of Waste Site Clean-Up

Roux Associates, Inc and E2, Inc c/o
Citizens Leading Environmental Action Network

Weston Solutions, Region I, Superfund Technical Assessment & Response Team III

April 2010

1.0 APPROVAL PAGE

U.S. EPA New England

____________________________	______________
On-Scene Coordinator	Date
____________________________	______________
On-Scene Coordinator	Date
____________________________	______________
On-Scene Coordinator	Date
____________________________	______________
Program Manager	Date
____________________________	______________
QA Chemist	Date

Weston Solutions, Inc.

____________________________	______________
Project Leader	Date
____________________________	______________
Site Leader	Date
____________________________	______________
Quality Assurance Officer	Date

Mass DEP

____________________	______________
Project Manager	Date
____________________________	______________
Program Manager	Date

Community Technical Representatives

____________________________	______________
LSP	Date
____________________________	______________
PE	Date

Preface and Instructions

This Sampling and Analysis (SAP) was prepared in conjunction with the *U.S. Environmental Protection Agency New England (EPA) Emergency Planning and Response Branch (EPRB) Generic Program Quality Assurance Project Plan (QAPP)* [1]. This SAP describes technical and quality control activities specific to the data collection operations, and will reference back to the *QAPP* for routine technical and quality assurance procedures that will be employed.

A copy of the SAP will be maintained in the site file and field. Also, a copy of the SAP may be forwarded to the Regional Sample Coordinator at the Office of Environmental Measurement and Evaluation (OEME) instead of the Data Quality Objective (DQO) Summary Form.

<u>**Acronyms**</u>

ADR	Automated Data Review
AL	Action Level
ATSDR	Agency for Toxic Substances and Disease Registry
CAM	Compendium of Analytical Methods
CBI	Confidential Business Information
CGI/O_2	Combustible Gas Indicator/Oxygen Meter
CLEAN	Community Leading Environmental Action Network, Inc.
CLP	Contract Laboratory Program
CO	Contracting Officer
COC	Contaminant of Concern and Chain of Custody
COI	Conflict of Interest
CPR	Cardio-pulmonary Resuscitation
CRQL	Contract Required Quantitation Limit
DAS	Delivery of Analytical Services
DOT	Department of Transportation
DPW	Department of Public Works
DQI	Data Quality Indicators
DQO	Data Quality Objectives
EM	Equipment Manager
EPA	U.S. Environmental Protection Agency
EPRB	Emergency Planning and Response Branch
ERT	Environmental Response Team
FASTAC	Field and Analytical Services Teaming Advisory Committee
FID	Flame Ionization Detector
FORMS2L	Field Operations and Records Management System II Lite
HASP	Health and Safety Plan
HAZWOPER	Hazardous Waste Operations
HSO	Health and Safety Officer
IATA	International Air Transportation Agency
ICS	Incident Command System
IDW	Investigative-derived Waste
ID/IQ	Indefinite Delivery/Indefinite Quantity
KMS	Keith Middle School
LFB	Laboratory Fortified Blank
MassDEP	Massachusetts Department of Environmental Protection
MCP	Massachusetts Contingency Plan, 310 CMR 40.0000
MDL	Method Detection Limit
MPC	Measurement Performance Criteria
MS	Matrix Spike
MSD	Matrix Spike Duplicate
MS/Dup	Matrix Spike/Duplicate
NB	City of New Bedford, MA
MSDS	Material Safety Data Sheet
NCP	National Contingency Plan
NIST	National Institute of Standards and Technology
OEME	Office of Environmental Measurement and Evaluation
OSC	On-Scene Coordinator
OSHA	Occupational Safety and Health Administration

PAH	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyl
PE	Performance Evaluation Sample
PID	Photoionization Detector
PL	Project Leader
PM	Program Manager
PO	Project Officer
PPE	Personal Protective Equipment
PQL	Practical Quantitation Limit
PQO	Project Quality Objectives
QA	Quality Assurance
QAO	Quality Assurance Officer
QAPP	Quality Assurance Project Plan
QATS	Quality Assurance Technical Support
QC	Quality Control
QL	Quantitation Limit
RAL	Removal Action Level
RAS	Routine Analytical Services
RCRA	Resource Conservation and Recovery Act
RM	Reports Manager
RPD	Relative Percent Difference
RSCC	Regional Sample Control Coordinator
RSD	Relative Standard Deviation
SAP	Sampling and Analysis Plan
SDG	Sample Delivery Group
SEDD	Staged Electronic Data Deliverable
SERAS	Scientific, Engineering, Response, and Analytical Services Contract
SMO	Sample Management Office
SOP	Standard Operating Procedure
SOW	Statement of Work
START	Superfund Technical Assessment and Response Team
SVOC	Semivolatile Organic Compound
TAT	Turn-around-time
TDD	Technical Direction Document
TPO	Technical Project Officer
TR	Traffic Report
TRC	TRC Environmental Corp.
Weston	Weston Solutions, Inc.
WSC	MassDEP Bureau of Waste Site Cleanup
VOA	Volatile Organic Analysis
VOC	Volatile Organic Compound
XRF	X-Ray Fluorescence

SAMPLING AND ANALYSIS PLAN
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2.0 INTRODUCTION

This SAP was developed by EPA and the Massachusetts Department of Environmental Protection (MassDEP) in consultation with the City of New Bedford. The SAP identifies the data collection activities and associated Quality Assurance/Quality Control (QA/QC) measures specific to the Parker Street Waste Site, located in New Bedford, Bristol County, Massachusetts. Data will be generated in accordance with the quality requirements described in the *QAPP,* dated June 16, 2005; applicable MassDEP Bureau of Waste Site Cleanup (WSC) Compendium of Analytical Methods (CAMs); and modified EPA Contract Laboratory Program (CLP) Laboratory methods. The purpose of this SAP is to describe site-specific tasks that will be performed in support of the stated objectives. The SAP will reference back to the *QAPP* for "generic" tasks common to all data collection activities including routine procedures for sampling and analysis, sample documentation, equipment decontamination, sample handling, data management, assessment and data review. Additional site-specific procedures and/or modifications to procedures described in the *QAPP* are described in the following SAP elements.

This SAP is prepared, reviewed, and approved in accordance with the procedures detailed in the *QAPP*, Section 3. Any deviations or modifications to the approved SAP will be documented using SAP Table 1, SAP Revision Form.

3.0 PROJECT ORGANIZATION, MANAGEMENT, AND RESPONSIBILITIES

Major project participants for the sampling activities at the Parker Street Waste Site include the EPA Region 1, EPA Environmental Response Team (ERT), Region I Weston Solutions, Inc., (Weston) Superfund Technical Assessment and Response Team (START), MassDEP, and City of New Bedford. Project organization and lines of communication for the participants are presented in Figure 1. When two or more prime contractors are tasked to work on the same project, the On-Scene Coordinator (OSC) coordinates technical issues between the contractors. One prime contractor may not direct the work of another prime contractor, nor can a contractor make site decisions that impact another contractor without authorization from the OSC, although routine communication between contractors is permissible. Only the roles and responsibilities for START are discussed in the following sections, while roles and communication lines are discussed for EPA, MassDEP, the City of New Bedford, and the Community Leading Environmental Action Network, Inc. (CLEAN) consultants. See Figure 1, Project Organization Chart. Field sampling teams are illustrated in Figure 2.

3.1 U.S. Environmental Protection Agency, Region 1 New England

The Organization Charts and lines of communication are shown in Figure 1. The EPA EPRB Section Chief for the project is Mr. Steve Novick. The EPA Lead OSC for the Parker Street Waste Site is Mr. Wing Chau, who will be assisted by OSC Mr. Marcus Holmes and OSC Ms. Sarah DeStefano. The EPA Contracting Officer (CO) is Ms. Hilary Kelley and the Project Officer (PO) is Mr. John Carlson.

FIGURE 1
PROJECT ORGANIZATIONAL CHART

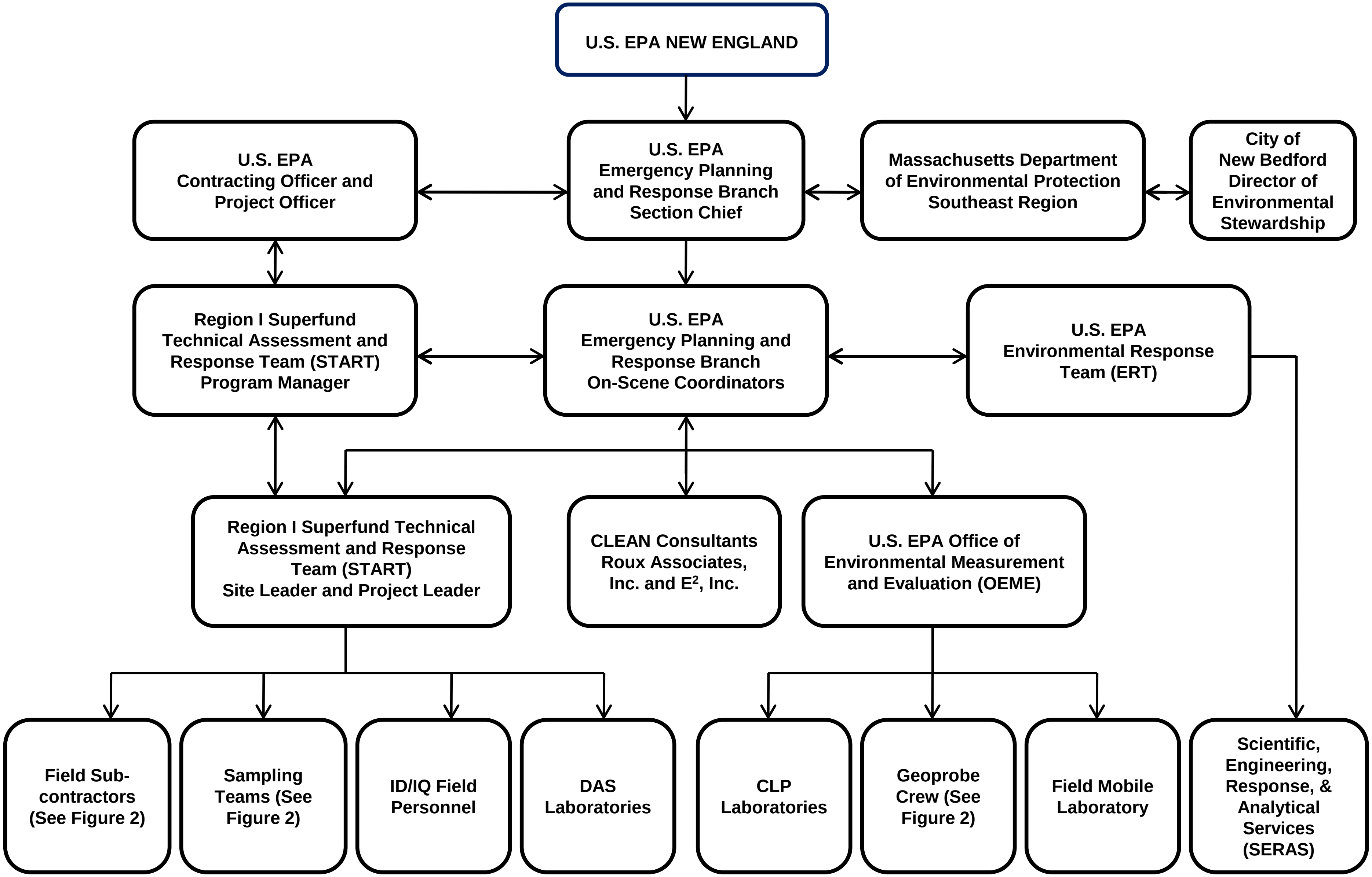
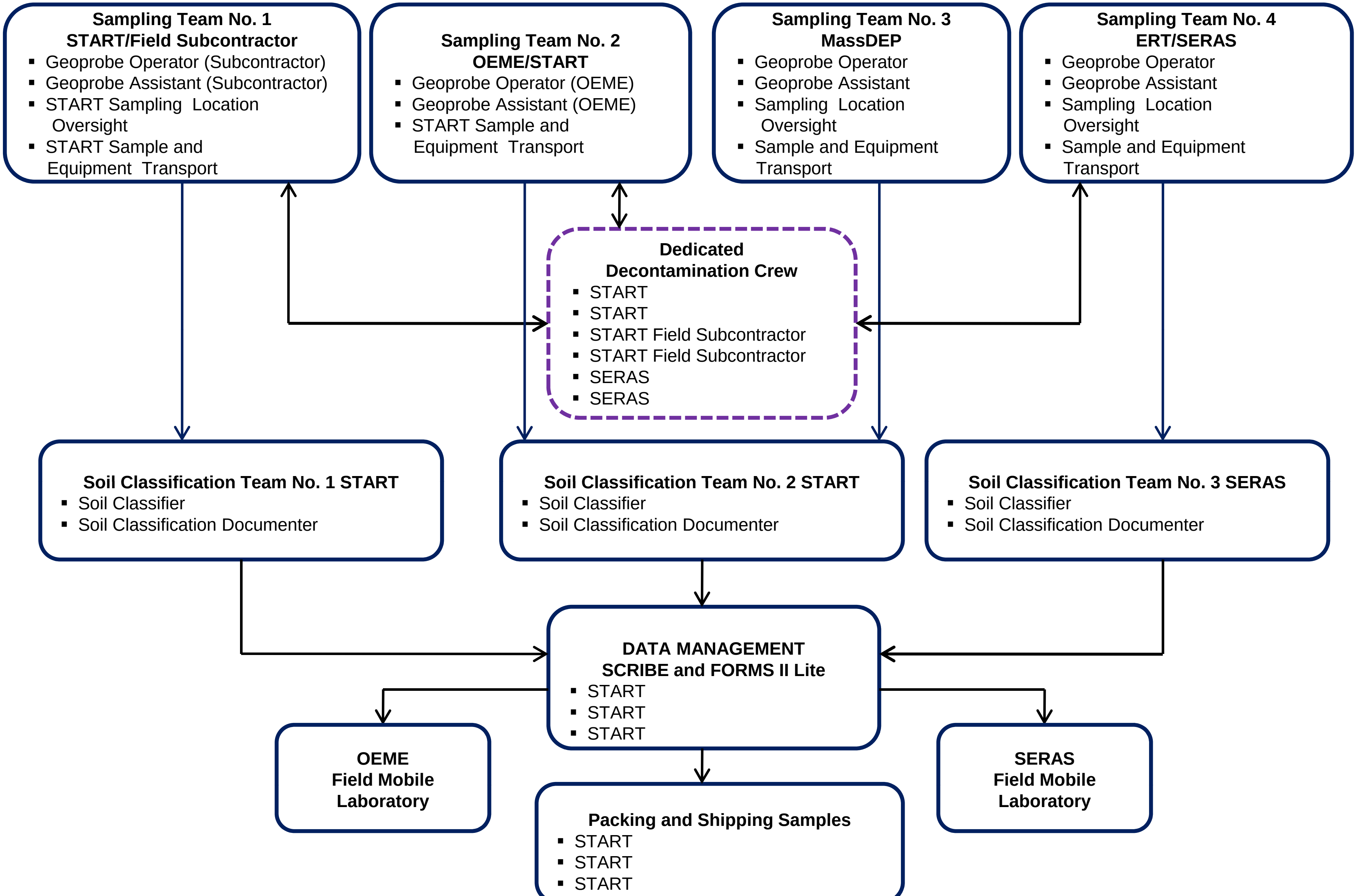


FIGURE 2
SAMPLING TEAMS



EPA Emergency Planning and Response Branch (EPRB) Emergency Response and Removal Section II Chief - The EPA EPRB Section Chief for the project is Mr. Steve Novick. The EPRB OSCs report directly to Mr. Novick.

EPA Project Officer - The EPA CO is Ms. Hilary Kelley and the EPA PO is Mr. John Carlson. Ms. Kelley and Mr. Carlson will issue Technical Direction Documents (TDDs) and Task Orders (TOs) to START as requested by the OSCs. TDDs and TOs describe the projected work, budgeted costs, and schedule. TDDs and TOs are submitted directly by Ms. Kelley and Mr. Carlson to the START Program Manager (PM). The START PM reviews and accepts the TDD and TOs and assigns them to a START Project Leader (PL). The START PL then executes the TDD and TO assignments with the support of a Site Leader (SL).

EPA EPRB On-Scene Coordinator - The EPRB OSCs are Mr. Wing Chau, Mr. Marcus Holmes, and Ms. Sarah DeStefano. The OSCs will manage site activities, coordinate and communicate with other federal, state, and local agencies, and community groups; and initiate requests for contractor TDDs and TOs and provide technical direction to contractors under issued TDDs and TOs. The OSCs serve as the site Heath and Safety Officers for their assigned sites; direct data collection and use, and coordinate the release of data to other federal agencies, states, local health departments and to the public; review, approve and implement site-specific SAPs; perform enforcement-related duties; prepare and/or oversee proper documentation as required by the Superfund Program; arrange for and secure site access from property owners; and manage and direct EPA contractors. The OSCs will be supported by Sharon Fennelly, EPRB Removals Section II Enforcement Coordinator.

EPA OEME Geoprobe® Sampling Team – The EPA OEME Geoprobe® Sampling Team [Sampling Team Number (No.) 2] provides direct technical support to EPA EPRB. OEME will be one of the three EPA sampling teams (one Geoprobe® Operator and one Geoprobe® Assistant) that will advance borings and obtain soil cores from the site.

EPA ERT Geoprobe® Sampling Team – The EPA ERT Geoprobe® Sampling Team (Sampling Team No. 4) provides direct technical support to the EPA EPRB. ERT will be one of the three EPA sampling teams (one Geoprobe® operator and one Geoprobe® assistant) that will advance borings and obtain soil cores from the site. ERT will also provide a geologist and an assistant to the geologist to classify the soil cores and personnel to decontaminate their equipment.

EPA ERT Field Mobile Laboratory - The EPA ERT Field Mobile Laboratory will provide an on-site chemist to field screen soil samples collected from borings for polychlorinated biphenyls (PCBs) and selected metals analyses following EPA OEME methods and protocols.

EPA OEME Field Mobile Laboratory - The EPA OEME Field Mobile Laboratory will provide an on-site chemist to field screen soil samples collected from borings for polychlorinated biphenyls (PCBs) and selected metals analyses following EPA OEME methods and protocols.

EPA Contract Laboratory Program (CLP) Laboratories – CLP laboratories established by the Sample Management Office (SMO) of OEME will be utilized to perform analyses on soil samples. CLP laboratories will conduct metals analyses utilizing a method modification for arsenic, barium, cadmium, chromium, and lead. The CLP method modification will incorporate some changes to more closely align the analysis with the QC requirements found in Table III A-1 in CAM-IIIA. Throughout the remainder of this SAP, the generic term "metals" will be used to refer to the five metals for CLP analyses and field screening analyses by the EPA Field Mobile laboratory.

Delivery of Analytical Services (DAS) – DAS laboratories will be procured by START and utilized to perform confirmation analyses on soil samples. DAS laboratories will perform PCB analysis and semivolatile organic compound analysis (SVOC) for polycyclic aromatic hydrocarbons (PAHs) compounds only.

3.2 EPA Special Technical Training and Certifications

EPA New England has an established QA training program designed to ensure that regional management and staff, prime contractors, and other federal agency and state personnel are qualified to perform their quality-related responsibilities (*e.g.* chain-of-custody, record keeping, data review and evaluation, auditing) and assigned tasks. EPA New England complies with the National Training Policy as documented in the "Professional Development and Training Plan Guidelines for U.S. EPA On-Scene Coordinators", July 2002 (Attachment J): "On-Scene Coordinators must participate in exercises and be trained as required by federal statutes, regulations, Agency directives, and regional policies to carry out their official duties. OSCs also participate in advanced exercises and training which enhance their knowledge, skills, and abilities of the OSC and those of the response community."

3.3 Massachusetts Department of Environmental Protection (Southeast Regional Office)

The MassDEP Project Manager will be Molly Cote. Ms. Cote is the main point of contact for MassDEP and will provide direct oversight to the MassDEP contractor field sampling team members. The MassDEP field sampling team (Sampling Team No. 3) will be responsible for performing sampling activities consistent with this SAP at the Hetland Memorial Skating Rink property (Area 9). The Hetland Memorial Skating Rink property is owned by the Commonwealth of Massachusetts and operated by a private entity.

MassDEP is tasked with:

- Sampling activities at the Hetland Memorial Skating Rink property (Area 9);
- Providing sampling oversight and assistance to EPA, START, ERT, and OEME Sampling Teams at Areas 1-4, 7,8, and 11;
- Providing sampling oversight and assistance to the City of New Bedford at Area 5;
- Accepting and preserving soil samples from areas under investigation by Sampling Teams 1, 2, 3 and 4, for possible future dioxin laboratory analysis, as appropriate; and

- Providing assistance to EPA with regard to applicable state requirements and community support.

3.3.1 Hetland Memorial Skating Rink Property (Area 9)

MassDEP contractor assistance will be procured for the purpose of performing sampling activities consistent with this SAP. MassDEP contractors will prepare a Health and Safety Plan prior to the commencement of any field activities. MassDEP and contractors will determine sampling locations and mobilize/operate direct push (Geoprobe) drilling equipment in accordance with sections 6.0 - 9.0 of this SAP. A MassDEP Work Plan is located in Appendix D.

Sampling activities for dioxin may also be performed as described in Section 3.3.4 and Appendix D.

Activities to be conducted by MassDEP and its contractors may include:

- Site preparation: clearing of trees and shrubs to allow access to the rear portion of the property (wooded lot). Also determining appropriate sample collection locations.
- Sample collection, preservation, and delivery: collecting soil samples [utilizing direct push (Geoprobe)] and sediment samples (hand auger) from wetland portion of the lot. Samples will be appropriately prepared and delivered to START in the field.
- Survey: appropriate surveying of sample locations using a Global Positioning System (GPS).
- Data Analysis & Review: evaluating incoming data related to the proposed sampling effort.
- Securing of any necessary local/State permits.

3.3.2 Oversight of Sampling Activities by EPA/START Sampling Teams

MassDEP and its contractors will provide assistance to the EPA, START, ERT, and OEME Sampling Team members (Sampling Teams 1, 2 and 4) by way of field oversight and technical assistance during the course of the sampling activities at Areas 1 - 4, 7, 8, and 11.

3.3.3 Oversight of Sampling Activities by the City of New Bedford

MassDEP and its contractors will provide assistance to the City of New Bedford by way of field oversight and technical assistance during sampling activities at the Nemasket Street (former Bethel AME) property (Area 5). Please refer to section 3.6.

3.3.4 Dioxin Sample Collection and Preservation

MassDEP's contractor will be responsible for acceptance and preservation of soil and sediment samples from the EPA, ERT, and START sampling teams for possible future dioxin analysis. Soil samples will be collected for future analysis as part of this sampling effort as a way to defray and offset the cost of future mobilization should the determination be made that expanded dioxin sampling and analysis is necessary at the Parker Street Waste Site. Please refer to Section 5.4 and Appendix D.

3.3.5 Evaluation of Applicable State Requirements and Community Support

MassDEP will assist the EPA/START teams via review of existing and new (incoming) field and analytical data generated during the course of the sampling activities. It is anticipated that the Parker Street Waste Site investigation will generate over 2,000 soil and sediment samples by the end of May, 2010. MassDEP will evaluate validated data packages in consideration of MassDEP Massachusetts Contingency Plan 310 CMR 40.0000 (MCP) risk-based standards and risk assessment algorithms. MassDEP will also support community involvement activities for the Parker Street Waste Site.

3.3.6 Other MassDEP Site Activities

MassDEP will continue to provide regulatory oversight of the ongoing sampling and evaluation of volatile organic compounds (VOCs) in indoor air at the New Bedford High School property. MassDEP will execute initial mitigation measures, which include a seepage mitigation evaluation, crack sealing in areas unaffected by groundwater seepage, and an evaluation of intrusion through and around floor drains and infrequently used sinks. Also, air flow adjustments will be made and sub-slab soil gas and groundwater monitoring will be conducted. Please refer to Section 5.1.

3.4 Superfund Technical Assessment and Response Team (START)

The START team consists of a multi-disciplinary technical staff including chemists, geologists, engineers, biologists, environmental scientists, and administrative support personnel. The organization charts and lines of communication for START are shown in Figures 1 and 2. The START PM is responsible for the overall management of the START contract. A START PL and SL will be assigned to provide overall technical support to the project. START will directly support three sampling teams comprised of START, EPA OEME, EPA ERT, and START subcontracted personnel. START will also support MassDEP as necessary. In addition to the START PL and SL, START and Indefinite Delivery/Indefinite Quantity (ID/IQ) staff will include approximately 17 field personnel to ensure that field activities will be successfully completed. If the scope of work increases or decreases, START will, with EPA approval, adjust the number of personnel to meet the EPA's objectives for the project. START roles, responsibilities, and lines of communication are provided below and illustrated in Figures 1 and 2. The following section details the responsibilities and duties of START personnel.

Program Manager - The START PM is Mr. Mark J. McDuffee. Mr. McDuffee will be responsible for ensuring the quality of work performed by START at the Parker Street Waste Site. The PM interfaces directly with the EPA CO (Ms. Hilary Kelley), PO (Mr. John Carlson), EPRB Section Chief (Mr. Steve Novick), and OSCs Wing Chau, Marcus Holmes, and Sarah DeStefano. Mr. McDuffee is supported by technical and administrative staff in the Andover, MA START office, and Weston staff in other regional and national offices.

Project Leader - The Region I START PL is Mr. Eric Ackerman. Mr. Ackerman reports directly to the START PM. Mr. Ackerman will provide direct oversight to the START SL and field sampling team members. Mr. Ackerman will also be responsible for providing staffing resources to the project, assisting the SL with cost management, and reviewing and approving project deliverables. Mr. Ackerman is the main point of contact with the EPRB OSCs and START PM. Mr. Ackerman is directly responsible for preparing site-specific SAPs, health and safety plans (HASPs), coordinating field sampling activities, ensuring that staff adhere to the site-specific HASP and SAP, conducting air monitoring, maintaining field notes via a field log book and field notes, tracking START costs, ensuring that proper chain-of-custody documentation is maintained, conducting START safety and management audits, and preparing deliverables as requested by the OSCs.

Site Leader – The Region I START SL is Mr. Dennis Willette. The SL supports the PL as a main point of contact within the START team and with the EPA OSCs. Mr. Willette reports directly to the START PL and is directly responsible for assisting the PL in preparing site-specific SAPs, HASPs, coordinating field sampling activities, ensuring that staff adhere to the site-specific HASP and SAP, conducting air monitoring, maintaining field notes via a field log book and field notes, tracking START costs, ensuring that proper chain-of-custody documentation is maintained, and preparing deliverables as requested by the OSCs. The START SL is supported by the PL, Quality Assurance Officer (QAO), Health and Safety Officer (HSO), Subcontracts/Equipment Manager (EM), Lead Chemist, and Reports Manager (RM).

Sampling Teams – START will support a total of four field sampling teams. Direct support will be given to three of these teams. Sampling Team No. 1 will include two START subcontracted personnel (one Field Subcontractor Geoprobe® Operator and one Field Subcontractor Geoprobe® Assistant). In addition, START will provide one staff member for sampling location oversight to the Field Subcontractor Geoprobe® crew and one staff member for sample and equipment transport. Therefore, Sampling Team No. 1 will consist of four total staff. Sampling Team No. 2 will consist of two EPA OEME staff (one Geoprobe® Operator and one Geoprobe® Assistant) and one START staff member for sample and equipment transport. Sampling Team No. 4 will consist of EPA ERT personnel and its Scientific, Engineering, Response, & Analytical Services (SERAS) Contractor. Sampling Team No. 4 will consist of two ERT/SERAS staff (one Geoprobe® Operator and one Geoprobe® Assistant) and one ERT/SERAS staff member for sample and equipment transport. Sampling Team No. 3 will consist of MassDEP and their subcontractor personnel. START will indirectly support the MassDEP sampling crew by classifying the soil, collecting samples, and shipping the samples to various laboratories.

Decontamination Team – Two START staff, two START field subcontractor personnel, and two SERAS personnel will be dedicated entirely to operating a decontamination area, decontaminating various sampling equipment and tools, and collecting rinsate (equipment) blank samples for laboratory analysis to ensure that equipment is being decontaminated effectively.

Soil Classifiers and Samplers – START will provide two soil classifiers (Geologists or qualified staff) and two soil classification documenters for Sampling Team No. 1 (START), Sampling Team No. 2 (OEME), and Sampling Team No. 3 (MassDEP). ERT/SERAS will provide a soil classifier and documenter for Sampling Team No. 4 and to support other sampling teams as necessary. The soil classifiers will be responsible for screening macro-cores with a photoionization detector (PID) or flame ionization detector (FID), measuring the amount of recovery, and classifying the soil. The soil classification documenters will be responsible for recording the soil descriptions provided by the soil classifiers and for collecting the soil samples from the cores.

Data Management (SCRIBE and FORMS II Lite Staffers) - START will provide three staff members for providing chain-of-custody documentation and data management using SCRIBE and Field Operations and Records Management System (FORMS) II Lite software. These three staff members will be responsible for receiving soil samples from the three soil classification teams.

Shippers - START will provide three staff members for packaging and preparing START, MassDEP, and ERT/SERAS samples for dangerous goods shipment via Federal Express (FedEx) to EPA CLP Laboratories and/or for pick up by DAS Laboratory couriers.

3.5 START Special Technical Training Requirements/Certifications

Technical training of the START team is provided to ensure that technical, operational, and quality requirements are understood. The team has received general training including, but not limited to, the following: Health and Safety Training [40-hour Occupational Safety and Health Administration (OSHA) Hazardous Waste Operations (HAZWOPER), 8-hour annual refresher OSHA, 8-hour supervisor, cardio-pulmonary resuscitation (CPR), first aid, and bloodborne pathogens training; and dangerous goods shipping training); field sampling methods, Incident Command System (ICS) 100/200, equipment proficiency, and log book training; conflict of interest (COI) and confidential business information (CBI) training; procurement integrity/business ethics training; and software training (including EPA SCRIBE and FORMS II Lite data management tools). Certain START staff are proficient Geoprobe® operators and soil classifiers. START Team Members and ID/IQ personnel who conduct data validation of laboratory analytical data shall be qualified in accordance with EPA Region I Guidelines.

3.6 City of New Bedford

City of New Bedford personnel will be the lead agency investigating the city-owned properties and will assist the OSCs with addressing applicable statutes, regulations, policies, and community relations. The City of New Bedford and their contractor are responsible for sampling activities at Area 5 [Nemasket St. Property (former Bethel A.M.E. Property)], Area 6 [Right of Way (ROW) on Summit St. between Auburn St. and Hapwell St. (completed)], Area 7[data gap in the ROW on Durfee St. (completed)], and the site boundary near Area 10 (City of New Bedford Department of Public Works (DPW) Operations Facility). The City of New Bedford's proposed Work Plan is located in Appendix C and includes a complete description of their proposed scope of work. The proposed City of New Bedford's Work Plan is attached to this SAP to provide an overall view on how the Parker Street Waste Site boundaries and data gaps will be investigated. The attachment of these documents is to be used for informational purposes and does not constitute approval under this SAP. Approval of the proposed City of New Bedford's Work Plan will be conducted under the MassDEP and TSCA regulatory frameworks.

3.7 Citizens Leading Environmental Action Network (CLEAN)

CLEAN will be represented by their two consultants: Ian Phillips, Roux Associates, Inc. and Terry Boguski, E^2, Inc., Their responsibilities shall include attendance at meetings; distributing and interpreting information that describes EPA, MassDEP, City of New Bedford and their subcontractors' activities, progress, and results; and contributing SAP modifications.

4.0 SAP DISTRIBUTION

4.1 Project Team Members List

The following personnel were involved in planning and/or technical activities performed for this data collection activity.

Steve Novick	EPA EPRB Section II Chief
Wing Chau	EPA OSC
Marcus Holmes	EPA OSC
Sarah DeStefano	EPA OSC
Sharon Fennelly	EPA Enforcement Coordinator
Mark McDuffee	START PM
Eric Ackerman	START PL
George Mavris	START QAO
John Burton	START (Lead) Chemist
Dennis Willette	START SL
Dave Johnston	MassDEP Regional Director
Millie Garcia-Serrano	MassDEP Deputy Regional Director

Leonard Pinaud	MassDEP Site Management Chief
Molly Cote	Mass DEP Project Manager
Nora Conlon	OEME QA Chemist
Jerry Keefe	OEME Investigations and Analysis
Ed Gilbert	EPA ERT Project Manager
Scott Alfonse	New Bedford, Director of Environmental Stewardship
Terrie Boguski	E^2, Inc.
Ian Phillips	Roux Associates, Inc.

4.2 SAP Distribution List

Each person listed below may receive a copy of the **approved** SAP. A copy of the SAP will also be retained in the site file.

Steve Novick	EPA EPRB Section II Chief
Wing Chau	EPA OSC
Marcus Holmes	EPA OSC
Sarah DeStefano	EPA OSC
Mark McDuffee	START PM
Eric Ackerman	START PL
George Mavris	START QAO
John Burton	START (Lead) Chemist
Dennis Willette	WESTON® START SL
Molly Cote	MassDEP Project Manager
Nora Conlon	OEME QA Chemist
Ed Gilbert	EPA ERT Project Manager
Scott Alfonse	New Bedford, Director of Environmental Stewardship
Terrie Boguski	E^2, Inc.
Ian Phillips	Roux Associates, Inc.
Anne Shoemaker	New Bedford Housing Authority

5.0 PLANNING AND PROBLEM DEFINITION

5.1 Problem Definition

The Parker Street Waste Site is an approximately 105-acre area located in New Bedford, Bristol County, Massachusetts (See Appendix A: Figure 3, Site Location Map)] [3]. The site is located at Latitude 41° 38′ 33″ north and Longitude 70° 56′ 44″ west, as measured from the approximate center of the site. The estimated extent of the Parker Street Waste Site is believed to be bounded to the north by Durfee Street, to the east by Liberty Street and the Oak Grove Cemetery, to the south by Maxfield Street, and to the west by Summit Street. Located within the estimated bounds of the former waste site is the New Bedford High School campus, the recently constructed Keith Middle School (KMS), the Hetland Memorial Skating Rink property, Walsh Field, the new Andre McCoy Field (which is currently under construction), residential properties, Carabiner's

Indoor Climbing Facility, and two private apartment complexes (See Appendix A: Figure 4, Site Diagram).

In 2000, during an environmental due diligence investigation of the former McCoy field as a possible location for the new KMS, PCB levels above regulatory reporting limits were detected. BETA Group Inc., working on behalf of the City of New Bedford, remediated the site by removing PCB-contaminated soil and sediment and installing a 3-foot cap over the contaminated areas. The KMS was then constructed over the resulting 3-foot cap [2].

Throughout the course of the remediation, BETA Group, Inc. conducted several subsurface environmental investigations between 2004 and 2006. These investigations yielded a total of 447 sample locations, and suspected waste site fill material was identified at 350 locations [2].

Following the remediation of the former Andre McCoy field/current KMS location, TRC Environmental Corp. (TRC) was contracted by the City of New Bedford to conduct site investigations at 27 locations within the estimated bounds of the previous waste area. TRC conducted investigations at the New Bedford High School campus, Walsh Field area, McCoy Field area, 16 residential properties, one church, five city-owned right-of-way areas, one privately-owned commercial property, and one city-owned lot on Durfee St. Most of the investigatory work was completed throughout 2007 and 2008, with portions of the final reports completed by the end of year 2008 [4].

On September 30, 2009, EPA and MassDEP conducted a public meeting during which concerns regarding the scope and pace of the environmental assessment and cleanup of the waste site were voiced by residents and community leaders. As a result of these concerns, EPA and MassDEP committed to reviewing and evaluating the data collected by the City of New Bedford to identify areas warranting further investigation. In addition, EPA and MassDEP met with community representatives on October 16, 2009 to gather their comments prior to developing this SAP. Consistent with previous data collection efforts at the Site, data collected from this sampling effort will be evaluated to determine whether immediate remedial action is necessary at the Site. The sampling effort will focus resources in the 11 specific areas identified as data gap areas where further investigation is needed in order to expedite and refine the extent of contamination associated with the Parker Street Waste Site.

On January 29, 2010, MassDEP received notification of a release and/or threat of release of VOC in a groundwater monitoring well located on the New Bedford High School campus. Both vinyl chloride, at a concentration of 3.4 micrograms per liter [µg/L or parts per billion (ppb)], and tetrachloroethylene (PCE), at 63 µg/L, were detected in monitoring well MW-7 located on the New Bedford High School property. Additionally, vinyl chloride was detected in a sample of standing water collected from a groundwater seep in the floor of the maintenance room inside the High School. The maintenance room floor is lower in elevation than adjacent areas frequented by students and faculty. Initial response actions taken by the City of New Bedford included a seepage mitigation evaluation, crack sealing in areas unaffected by groundwater seepage, and an evaluation of vapor intrusion through and around floor drains and infrequently used sinks. Air flow adjustments to the ventilation system and sub-slab soil gas and groundwater monitoring were conducted. A written Immediate Response Action Plan for determination of the nature and extent of the release will be submitted to MassDEP for review by March 22, 2010 and will indicate if additional sampling for VOCs is necessary.

5.2 Site History and Background

According to historical topographical maps, the waste site was a wetland area linked to the Apponagansett Swamp prior to 1936. Subsequent maps revealed that the southern end of the site (Walsh Field area) was the first to be developed and was displayed as dry land in historical maps. The majority of activity suspected to be associated with the current waste site occurred in the 1950s and early 1960s and was located in the current New Bedford High School campus area. This waste material is suspected to have been spread while construction of the New Bedford High School's foundation occurred between 1968 and 1972 [4]. Further spread of fill-related material occurred during the construction of the former Andre McCoy field. The environmental hazards and contaminants of concern were brought to attention during more recent construction projects such as the construction of the new KMS and the new Andre McCoy field (currently under construction). A more extensive site history and background can be found in the TRC report entitled, *Interim Phase II Comprehensive Site Assessment, Parker St. Waste Site, New Bedford, MA, TRC Environmental Corp*., July 2009, available on the City of New Bedford website. This document, as well as several other documents, may be downloaded from the City of New Bedford's website at http://www.newbedford-ma.gov/McCoy/Keithmiddleschool.html.

The current location of KMS is a historical wetland, and there is a small wetland located north of KMS across Durfee St. and behind the Hetland Memorial Skating Rink. There are approximately 15,000 persons within one half-mile of the site.

5.3 Contaminants of Concern

The contaminants of concern (COC) related to the Parker St. Waste Site are PCBs, PAHs, and the metals: arsenic, barium, cadmium, chromium, and lead. See SAP Table 2, Contaminants of Concern. Quality control acceptance limits and quantitation limits, for some analytical methods, are listed in Tables 1-7 of the *QAPP*. QC and method quantitation limits for other methods are addressed in Section 12.2.2 of the *QAPP*.

PCBs and metals are the primary COCs and the main indicators that contamination originating from the original landfill is present at various locations. PAHs are evaluated as a COC based on information gathered to date, but because PAHs are ubiquitous in developed or urban areas, the presence of PAHs alone in sampling results will not be used as an indicator of Site boundaries.

5.4 Other Target Analytes

At the time this SAP is being prepared, the contaminants of concern are limited to PCBs, PAHs, and metals which will be used to define the site boundaries. Dioxin can be associated with locations where burning occurred involving chlorinated compounds such as PCBs. Past evaluation for dioxin during the assessment of the Keith Middle School Site indicated the presence of dioxin at levels slightly above the typical urban background concentration. Prior to remediation, the Keith Middle School Site exhibited higher PCB concentrations as compared to most other areas of the Site. The City of New Bedford has developed a draft dioxin sampling approach for the Parker Street Waste Site. The results from the implementation of the draft dioxin sampling plan proposed by the City of New Bedford will help determine whether there is a need for additional dioxin sampling at the Parker Street Waste Site

Soil samples for potential future dioxin compound analysis from each soil sampling location will be collected from the 0-1 foot sample interval and from the 1 -3 foot sample interval to evaluate current risk and the potential for Imminent Hazard conditions under the MCP. The samples will be received by MassDEP contractors from the EPA, OEME, ERT, and START Sampling Teams and will be stored securely for potential future analysis. Please refer to Appendix D.

5.5 Pre-Sampling/Scoping Meeting

EPA/START will conduct a pre-sampling/scoping meeting to discuss project objectives, field planning, analytical and QA/QC activities; establish schedules; and determine roles and responsibilities. START will maintain constant communication with the OSCs during the pre-sampling stage to ensure that sampling objectives will be met and representative data will be collected. EPA personnel will include the OSCs, OEME, and ERT/SERAS personnel, and may include the EPA Section Chief, and human health and ecological risk assessors. START personnel attending this meeting will include the PM, PL, SL, QAO, Lead Chemist, EM, HSO, and sampling team. MassDEP personnel may include the Project Manager and sampling team. The City of New Bedford personnel may include Director of Environmental Stewardship and his assistant. CLEAN personnel may include their two consultants: Ian Phillips, Roux Associates, Inc. and Terry Boguski, E^2, Inc.

The pre-sampling/scoping meeting will be held at least one week prior to sampling activities and all attendees will be required to sign an attendance sheet. During the pre-sampling/scoping meeting, the START PL, START SL, and OSCs will discuss, at a minimum, the following items:

- Site background and operational history.
- Contaminants of concern.
- Sampling methodology, sample preservation, QC samples [rinsate, duplicates, matrix spike/matrix spike duplicate (MS/MSD), performance evaluation (PE)].
- Archiving of soil and sediment samples for potential future analyses.
- Team member roles and responsibilities.
- Lines of communication and logistics (lead person/point of contact, distribution of phone/pager numbers to appropriate personnel, coordinating meeting/departure times, expected duration/lodging issues, food/water availability, number and type of vehicles, field subcontractors, and budget management).
- Sample shipment and delivery (environmental vs. dangerous goods, identifying primary and secondary FedEx Offices).

- Documentation (log books, Chain of Custody forms, and modifications to site-specific SAP).
- Documentation roles and responsibilities (*i.e* preparing reports, boring logs, *etc.*).
- Health and safety issues (chemical, physical, biological, and radiological hazards; levels of protection; decontamination; investigation-derived waste (IDW) issues; DigSafe notification requirements; air monitoring).
- Equipment Issues (sufficient quantity, types of instruments and equipment).
- Sampling teams providing their own sampling equipment, containers, etc.
- Data Validation.
- Other site-specific concerns.

Any issues or concerns discussed during the pre-sampling/scoping meeting will be addressed prior to initiation of field activities. Prior to conducting any on-site activities, all EPA, START, MassDEP, and START field subcontractors will review and sign the site-specific HASP. The EPA/START field team will establish a command post upwind of suspected source areas, if possible. START members will perform calibration and/or verification checks of air monitoring instruments and document background ambient air monitoring levels. Samples will be collected following the site-specific SAP and HASP. Any modifications to these guidelines will be documented in the SAP, field log books, or on Field Data Sheets, by START and EPA personnel.

6.0 Project Description and Schedule

Sampling activities by EPA OEME, EPA ERT/SERAS, START, START Field Subcontractors, and MassDEP are projected to occur over a 4 to 6 week period. There will be three EPA sampling teams: Sampling Team No. 1 will be comprised of START and START field subcontractor personnel, Sampling Team No. 2 will be comprised of EPA OEME and START personnel, and Sampling Team No. 4 will be comprised of EPA ERT/SERAS personnel. Sampling Team No. 3 will be comprised of MassDEP and its subcontractors.

The four sampling teams may advance borings at up to 425 sample locations (boring locations); however, based on a review of aerial maps, it has been calculated that approximately 347 primary sample stations will be advanced using Geoprobe® units. An additional 19 sediment boring locations will be advanced to approximately 3 ft below the sediment/water interface or ground surface (bgs) (if wetland is dry) using hand augers in a wetland area. Soil borings will be advanced to approximately 12 feet bgs using Geoprobe® units, and soil cores will be collected at 4-foot intervals using macro-core sleeves. Due to the amount of soil volume required for performing the necessary laboratory analyses, for storing (archiving) soil samples for potential future analysis, for providing split samples that may be requested from individual property owners, and for conducting field screening analysis, a minimum of two borings may required at each sample location to obtain sufficient soil volume. The depths of these borings may be shallower or deeper than 12 ft bgs depending on the material (fill and native soil) encountered. Based on field screening results (for PCBs and metals) by on-site EPA and ERT/SERAS field chemists, or visual confirmation of fill material present in soil borings, additional borings may be advanced at 78 secondary sample locations by the sampling teams in Areas 1, 2, 3, and 11. During the first week of Geoprobe® operations, each team will monitor the ambient air around the work area to ensure that there are no elevated levels of dust in the air. If after the first week of air monitoring there are no elevated levels of dust, air monitoring will be discontinued. Air monitoring may be re-implemented at the discretion of the OSCs.

After the macro-cores are removed from each 4-foot boring interval, macro-cores will be capped, labeled, and transported to a centralized area where they will be screened with a PID or FID and the soil classified using the Burmeister Soil Classification System. A minimum of five soil samples will be collected from each sample location. One sample will be collected from the 0- to 1-foot interval, one sample from the 1- to 3-foot interval, one sample from fill material, and if native material is encountered beneath the fill, two samples will be collected from the native material (one sample from the top interval of the native material and one sample from the bottom interval of the fill material). The samples collected from the bottom interval of native material will be stored at the laboratories performing the analyses and analyzed only if contaminants are detected in the soil sample collected from the top interval of the native material.

Samples collected from the 0- to 1-foot, 1- to 3-foot interval, fill material, and the top interval of native soil will be submitted to a CLP laboratory for metals analyses and a DAS laboratory for PCB and PAH analyses. Following analysis for PCBs and PAHs, the remaining soil from the 8-oz soil PAH and PCB sample containers from each interval will be consolidated into one 8-oz soil container from the interval by the laboratories and stored (archived) at the laboratories performing the analyses in accordance with EPA SW-846 Chapter 4. The samples may be analyzed in the future for additional parameters, including dioxin.

START will collect additional samples in 8-oz sample containers from the 0- to 1-foot and 1- to 3-foot intervals, at all sample locations, to be archived by MassDEP for potential future dioxin analyses.

At four areas (Areas 1, 2, 3, and 11), soil borings will be advanced and samples will be collected at the same intervals described above. All samples will be submitted to a CLP laboratory for metals analyses and to a DAS laboratory for PCB and PAH analyses. An additional soil sample will be collected from the top two sample intervals in these areas and sent to either the OEME or ERT mobile laboratory for field screening for PCBs and metals. A sample from the third interval, fill material, may be analyzed by an on-site mobile lab as determined necessary by an OSC. Based on field screening results and whether there was visual confirmation of fill material present in corresponding soil borings, an OSC, in consultation with MassDEP, will determine whether or not additional soil borings will be advanced on these properties.

Approximately 57 sediment samples will be collected from 19 locations in the wetland north of Durfee St. (Area 8) using hand augers. Sediment samples will be collected at the following intervals: 0 to 6-inches (in), 6-in to 2-feet, and 2- to 3-feet. These samples will be analyzed for PAHs, PCBs, and metals.

Soil and sediment samples will also be packaged and shipped as Dangerous Goods samples using an overnight carrier (FedEx) to EPA CLP Laboratories and/or picked up on site by a courier from the DAS laboratory performing the analysis.

A more detailed discussion of soil and sediment sampling activities may be found in Section 8.0.

6.1 Schedule and Time Line

Field activities are anticipated to last for approximately 4- to 6-weeks and will commence on 26 April 2010. Field activities will be dependent on weather conditions. In April 2010, EPA (EPRB, OEME, and ERT/SERAS personnel), START and START field subcontractor personnel, and MassDEP sampling teams will mobilize to the site to advance borings using four different Geoprobe® (direct push drill rig) units and will collect surface and subsurface soil samples. OEME and ERT/SERAS will also each mobilize one on-site mobile laboratory and chemist to conduct field screening for PCBs and metals. START will collect soil samples from a minimum of five intervals per sample location. Sediment samples will also be collected from a wetland area using hand augers. Sampling activities are discussed in detail in Section 8.0 of this document. Throughout site activities, START will conduct ambient air monitoring using a MultiRAE Plus PID, a FID/PID combination unit, combustible gas indicator/oxygen meter (CGI/O_2), and a radiation meter. Personal Data Ram (PDR) dust meters will be used during the first week of Geoprobe® operations at each location to monitor for levels of dust in the air.

Work conducted by the City of New Bedford is described in the City's site specific work plan located in Appendix C of this document.

Samples submitted to DAS and CLP laboratories will have a 21-day turn-around-time (TAT). A Tier II Data Validation will be performed by START and ERT on a minimum of 10% of the sample delivery groups (SDG) received by each laboratory. The remaining 90% of the SDG's will be validated at an enhanced Tier I level through the use of electronic data review (SEDD/ADR) and/or manual evaluation of QC items listed in section 15.2 to support qualification of results. The TAT for data validation packages will be 21 days from the time the data are received from the laboratory.

6.2 Identifying Applicable Action Levels and Quantitation Limits

Site Action Levels and supporting quantitation limits (QLs) will be established prior to selecting sampling and analytical methods. To compensate for potential analytical inaccuracy at the quantitation limit, project QLs will be set at 3 to 10 times lower than the site Action Levels (ALs). See Figure below for a graphical relationship of method detection limits, quantitation limits, and Action Levels.

Relationship of Method Detection Limits, Quantitation Limits and Action Levels

I----|---------------------|--|—----------------

0 MDL QL Action Level

Statistical Laboratory Method Quanititation Limit (QL) should be: Action Level (AL)

Detection Limit (MDL) determined to be the laboratories' "best case" sensitivity for a given analytical Method.	· 3 - 10 times lower than AL · 3 - 10 times higher than MDL · Verified by the analysis of a standard at that concentration in the calibration curve.	may be based on regulatory standard, a referenced-based Clean up goal, technological limitation, etc.

To arrive at a site-specific action level, EPRB will consider existing Action Levels at the state and federal levels, and will consult with EPA and MassDEP risk assessors.

7.0 Project Quality Objectives

7.1 Project Objectives

Sufficient data will be obtained from soil and sediment samples collected at the site to support defensible decisions as to whether additional investigation and/or response actions pursuant to the applicable state and federal regulations are necessary and/or appropriate. Modifications to the number of soil and sediment samples collected will be approved through the OSC in consultation with MassDEP.

Project quality objectives (PQO) describe typical environmental decisions that need to be made at sites, and describe the level of data quality necessary to ensure those decisions are based on sound data. Typically, a systematic planning approach is used to define project objectives. In addition, the Data Quality Objectives (DQO) process as described in EPA QA/G-4 *Data Quality Objective Process* will be utilized to plan time-critical actions as determined by the EPA OSC. In those situations, statisticians may be included as members of the planning team.

All TDD and TO assignments that require measurement data will define the quantitative limits that the data are expected to meet in a site-specific SAP. These limits are established as part of the DQO determination process during the planning stages with the OSCs. This process includes the design and evaluation of equipment systems where the system is expected to perform within certain limits; *i.e.* environmental measurements that are traditionally associated with analytical laboratories.

7.1.1 Project Quality Objective Statements

The type, quantity and quality of data necessary to support a response action depend on the nature of the incident and the associated urgency of the response. All data collected for time-critical actions will be of adequate quality to support project objectives.

The following project objectives apply to this site investigation:

☒ To expedite the sampling process in order to adequately define the site boundaries with respect to the extent of contamination.

☒ To determine whether a removal action is warranted and if so whether the response should be classified as an emergency, time-critical, or non-time critical removal action.

☒ To determine if an imminent hazard exists at the site.

☒ To meet requirements for additional work under the MCP.

☒ To support a potential listing as a NPL site.

7.2 Measurement and Performance Criteria

Generic measurement and performance criteria described in Table 7-2 of the *QAPP* will be used to ensure that data are sufficiently sensitive, precise, accurate, and representative to support site decisions.

7.3 Decision Statements

Decision statements are the link between sample results and site actions. A decision statement describes what actions will be taken at the site when a removal AL is exceeded. Method quantitation limits will be low enough to ensure accurate quantitation at the removal AL. Refer to Table 7-1 of the *QAPP*. Table 7-1: Generic Decision Statements and Actions. EPA will utilize the *QAPP* for decision statements and EPA removal actions in consultation with MassDEP and the City of New Bedford.

7.4 Data Quality Indicators

The quality of organic and inorganic data used in to make decisions during a removal action will meet the generic measurement performance criteria (MPC) described in Table 7-2 of the *QAPP*. Data quality indicators (DQIs) are used to determine whether performance criteria are satisfied. Typical DQIs assessed are precision, accuracy, completeness, representativeness, comparability, and sensitivity. The basis for assessing each of these elements of data quality is discussed in the following subsections.

The criteria and QC samples will apply to most data collection activities conducted by EPRB. OSCs will select sampling and analytical procedures having QC acceptance limits that support the generic measurement performance criteria. When alternate MPC are required to support a Removal Action, they will be documented in the site-specific SAP. Also, when MPC are developed for measurement parameters other than chemistry parameters such as biological, radiological, or physical parameters, they will be documented in the SAP. The following subsections describe the DQIs used to characterize the quality of data that will be used by EPRB.

7.4.1 Sensitivity

Sensitivity is the ability of the method or instrument to detect the contaminant of concern and other target analytes at the level of interest. The analytical method and instruments used, and the action level or concentration of concern will determine whether detected and non-detected data are usable. Measurement sensitivity is critical to supporting appropriate site decisions. Project QL should be established at 3 to10 times lower than the site action levels to compensate for potential errors at the QL, and 3 to 10 times greater than the laboratory method detection limit MDL.

Method sensitivity is demonstrated on an annual basis by determining the MDL per instrument by matrix per method. MDL values are included in Inorganic Data Packages on CLP Form 9, and are available for organic analyses from SMO. Method sensitivity is evaluated routinely through the analysis of Laboratory Fortified Blanks (LFB) spiked at the QL, Contract Required Quantitation Limit (CRQL) standards for Inorganics CLP Form 2B, and inclusion of a calibration standard at the PQL level for Organics.

7.4.2 Precision

Precision is a measure of the closeness of agreement among individual measurements. Precision is determined by relative percent difference (RPD) and/or standard deviation calculations.

Overall Precision - Precision associated with the entire sampling and analysis system will be evaluated. Overall precision will be determined by analysis of duplicate or replicate field samples. Duplicate sample precision data will be reported as RPD between the duplicate sample results. Sample precision for more than two replicates will be reported as relative standard deviation (RSD). For duplicate results x_1 and x_2, the RPD is calculated as:

$$RPD = \left(\frac{|(x_1 - x_2)|}{(x_1 + x_2)/2} \right) x \quad 100\%$$

The following equations are used to calculate the **mean** ($\bar{x}$) and the **relative standard deviation** (RSD).

$$\% \ RSD = \frac{S}{\bar{x}} \ x \ 100 \ \%$$

and

$$S = \sqrt{\frac{\sum_{i=1}^{n} (x_i - \bar{x})^2}{n - 1}}$$

where:

x_i = each individual value used for calculating the mean
$\bar{x}$ = the mean of *n* values
S = the standard deviation of the data set for x, and
n = the total number of values.

Matrix spike/matrix spike duplicate (MS/MSD) analyses are typically performed to determine the precision and accuracy of organic analytical methods while MS/Duplicates (MS/Dups) are performed to determine the accuracy and precision for inorganic methods. The results of sample spiking are used to calculate the quality control parameter for accuracy evaluation or the %R. The %R is defined as 100 times the spike sample result minus the unspiked sample result, divided by the spike added:

$$\%R = \frac{SSR - SR}{SA} x100\,\%$$

where:

%R	=	the percent recovery,
SSR	=	the observed spiked sample concentration,
SR	=	the sample concentration, and
SA	=	the true concentration of the spike.

The RPDs for each compound are calculated using the following equation:

$$\text{RPD} = \left| \frac{MSR - MSDR}{(MSR + MSDR)/2} \right| \text{x}\,100$$

where:

MSR	=	Matrix Spike result, or first replicate sample result.
MSDR	=	MSD result, or second replicate sample result.

Laboratory Precision - Precision specific to the analytical system will also be assessed. Laboratory duplicate samples and MS/MSD samples will be analyzed to evaluate precision for inorganic and organic analyses, respectively. Reproducibility requirements for biological identifications will be discussed in the SAP.

7.4.3 Accuracy/Bias

Accuracy is a measure of the agreement between an observed value and an accepted reference value. It is a combination of the random error (precision) and systematic error (bias), which are due to sampling and analytical operations. Accuracy is determined by percent recovery (%R) calculations. Performance Evaluation (PE) samples will be used, in accordance with the EPA New England PE Program to provide information to assess the accuracy of the analytical data generated. In addition, analytical accuracy will be measured by comparing the percent recoveries of analytes spiked into a laboratory control sample to method control limits. For volatile and semivolatile organic compounds, surrogate compound recoveries will also be used to assess accuracy and method performance for each sample analyzed. In addition, inorganic laboratory matrix spikes and organic MS/MSD samples will be analyzed to assess the impact of matrix interferences.

The results of sample spiking are used to calculate the quality control parameter for accuracy evaluation or the %R. The %R is defined as 100 times the spike sample result minus the unspiked sample result, divided by the spike added:

$$\%R = \frac{SSR - SR}{SA} x100\,\%$$

where:

%R	=	the percent recovery,
SSR	=	the observed spiked sample concentration,
SR	=	the sample concentration, and
SA	=	the true concentration of the spike.

The RPDs for each compound are calculated using the following equation:

$$\mathrm{RPD} = \left| \frac{MSR - MSDR}{(MSR + MSDR)/2} \right| \mathrm{x}\,100$$

where:

MSR	=	Matrix Spike result, or first replicate sample result.
MSDR	=	MSD result, or second replicate sample result.

The results of these calculations are used in conjunction with other QC criteria to aid the data reviewer in applying professional judgment as necessary.

7.4.4 Representativeness

Representativeness is a measure of the degree to which data accurately and precisely represents a characteristic of a population, parameter variations at a sampling point, or an environmental condition. Simply, this is the degree to which samples represent the conditions for which they were taken. Sample representativeness will be achieved through appropriate sampling design and use of the standard sampling and analytical procedures. Representativeness will be evaluated through the use of field QA assessments.

7.4.5 Completeness

Completeness is a measure of the amount of valid data obtained compared to the amount of data that was planned to be collected. Completeness for critical samples must be 100%. Completeness will be calculated and reported for each analytical method, sample matrix and analyte combination. The number of valid results divided by the number of possible individual analyte results, expressed as a percentage, determines the completeness of the data set. For completeness requirements, valid results will be all results not qualified with an “R” flag. The “R” flag indicates the data are rejected and considered unusable for making site decisions. The requirement for completeness is 90 percent for soil samples. When samples cannot be analyzed for any reason (holding time violations in which resampling and analysis were not possible, samples spilled or broken, etc.), the numerator of this calculation becomes the number of valid results minus the number of possible results not reported. The formula for calculation of completeness is:

$$\%Complete = \frac{ValidSample\,\mathrm{Re}\,sults}{PlannedSample\,\mathrm{Re}\,sults}\,x100\,\%$$

$$\%Complete = \frac{ValidSample\,\mathrm{Re}\,sults - \mathrm{Re}\,sultsnot\,\mathrm{Re}\,ported}{PlannedSample\,\mathrm{Re}\,sults}\,x100\,\%$$

7.4.6 Comparability

Comparability is the confidence with which one data set can be compared to another data set. The number of matrices that are sampled and the range of field conditions encountered will be considered in determining comparability. Modifications to the number of matrices sampled will be approved through the OSCs in consultation with MassDEP. Comparability will be achieved by using standard methods for sampling and analysis, reporting data in standard units, normalizing results to standard conditions and using standard and comprehensive reporting formats. Complete field documentation using standardized data collection forms will support the assessment of comparability. Analysis of PE samples and reports from audits will also be used to provide additional information for assessing the comparability of analytical data produced among laboratories.
Historical comparability will be achieved through consistent use of methods and documentation procedures throughout the project. The need for comparable data generated by different Agencies and local governments responding to the same emergency will be taken into account when choosing sampling and analytical methods.

7.4.7 Field Screening/Confirmatory Samples

Full protocol analysis will be performed to confirm field screening results. Screening/confirmatory comparability criteria will be established by the EPA OEME on-site mobile laboratory chemist and documented prior to data collection. Comparability will be determined for each matrix, analytical parameter, and concentration level. Comparability of field screening data to fixed laboratory results is critical in determining whether the field data will meet project objectives and support defensible site decisions. All samples screened in the field will be submitted for fixed laboratory confirmatory analysis to support field analytical screening procedures. Refer to Section 13.2 of the *QAPP* for further discussion.

8.0 SAMPLING DESIGN

Field personnel performing sampling activities will follow OSHA and EPA-specific health and safety procedures and protocols. Sampling activities will be conducted in accordance with this site-specific SAP. At a minimum, this site-specific SAP will include proper sampling design;

field procedures; reference to applicable SOPs; documentation; data objectives; analytical methods; sample container preparation; and sample volume, collection, preservation, holding times, chain of custody logs, and shipping requirements. The site-specific SAP will also detail the types and number of samples to be collected, matrices and parameters, and will provide a schedule for all activities, including field sampling.

Soil and sediment sampling activities will be conducted in accordance with the following EPA SOPs:

- EPRB SOP for Surface and Limited Subsurface Soil Sampling, EPRB SOP- 001, August 2002
- EPRB SOP for Sediment Sampling, EPRB SOP- 003, August 2002
- OEME SOP for Soil Core Sampling Using the Geoprobe®, OEME EIA SOP-2, June 2002

Sample preparation methods (including the use of sample containers and reagents for sample collection and preservation, transport, and storage) will be performed in accordance with the procedures and protocols described in this site-specific SAP, unless otherwise approved by the OSCs, with consultation of MassDEP, and specified in Table 1 of this SAP. Sample containers, preservatives, holding times, and other pertinent information for each of the matrices and laboratory analytical methods which are anticipated under this project are listed in Tables 2 through 4 of this SAP.

Sampling activities will be conducted by EPA OEME, ERT/SERAS, START (including ID/IQ), START Subcontractors, and MassDEP, over a 4 to 6 week period. There will be three EPA sampling teams. Sampling Team No. 1 will be comprised of START and START field subcontractor personnel, Sampling Team No. 2 will be comprised of EPA OEME and START personnel, and Sampling Team No. 4 will be comprised of ERT personnel and subcontractors. In addition, Sampling Team No. 3 will be comprised of MassDEP and their subcontractors.

A staging area will be established at a central fixed location yet to be determined. Decontaminated or disposable sampling equipment will be available in the staging area for the START, OEME, and MassDEP sampling teams, along with the necessary certified-clean sample bottles, sample coolers, and any required preservatives for the samples. ERT/SERAS will be providing their own sampling equipment and certified-clean sample bottles. As samples are collected from the macro-cores, they will be transferred to a sampling bowl, homogenized, and then transferred to the appropriate sample container directly from the sampling bowl into the sample container. Homogenization of soil samples is discussed in detail in Section 9.2. This will limit the possibility of the sample coming in contact with potentially contaminated surfaces in the immediate vicinity of the sample collection area. Sediment samples will be collected by placing the sediment from each of the three intervals directly into three separate large re-sealable plastic bags. The bags will be properly labeled and brought to the soil classification area, placed into stainless steel bowls, and homogenized. Sediment samples will be homogenized following the same procedures described for soil samples. Non-dedicated sampling scoops will then be used to transfer the sediment from the sampling bowls directly into the appropriate sample containers. Any reusable (non-dedicated) sampling tools used will be decontaminated prior to re-use.

Borings will be advanced at approximately 347 sample locations by the four sampling teams to approximately 12 feet below ground surface (bgs) using different Geoprobe® units. Soil cores will be collected at 4-foot intervals using macro-core sleeves. Approximately 19 locations have been selected in a wetland area where sediment samples will be collected from 0-6 inches, 6 inches to 2 feet, and 2 to 3 feet intervals using hand augers. Grab soil samples will be collected from each of the five soil boring intervals, and three grab sediment samples will be collected from each sediment boring interval. Additional soil borings may be advanced at 78 sample locations by the Geoprobe® units depending on field screening results or visual confirmation of the presence of fill material in certain areas.

The number of samples collected will depend upon field conditions, urgency of the response action, real or potential threat to human health and/or the environment, and cost of sampling and analysis in conjunction with available funding. However, based on the number of the primary and secondary borings, between 1,735 and 2,125 soil samples will be collected from these borings. An additional 57 sediment samples will be collected from the hand augered locations in the wetland. These numbers do not include quality control (QC) [field duplicates, rinsate blanks, matrix spike/matrix spike duplicates (MS/MSD), or performance evaluation (PE) samples].

Refer to SAP Table 3, Sampling Locations and Sampling and Analysis Summary.

9.0 SAMPLING PROCEDURES AND REQUIREMENTS

In April 2010, the four separate sampling teams (e.g., three EPA and one MassDEP) will mobilize to the site to advance soil borings using different Geoprobe® (direct push drill rig) units and to collect surface and subsurface soil samples, and sediment samples. Smaller Geoprobe® units and hand augering methods will be used in areas where access is restricted to larger Geoprobe® units (see Figure 2, Sampling Teams). OEME and ERT/SERAS will also each mobilize an on-site mobile laboratory and chemist to conduct field screening.

PCBs and metals are the primary COCs and the main indicators that contamination originating from the original landfill is present at various locations. PAHs are evaluated as a COC based on information gathered to date, but because PAHs are ubiquitous in developed or urban areas, the presence of PAHs alone in sampling results will not be used as an indicator of Site boundaries.

The following table provides a breakdown of the areas and subareas to be sampled and the type of Geoprobe® units that can access the properties. Each specific area delineated on this table was selected by EPA and MassDEP as areas requiring further sampling and characterization to fill existing data gaps.

Soil borings will be advanced at approximately 347 sample locations, and approximately 1,735 (not including QC) soil samples will be collected for fixed laboratory analyses by CLP and DAS Laboratories. Sample location maps, showing the 11 areas and proposed soil boring locations, are included as attachments to this SAP (Appendix A). These areas include private residences, public and private housing, and private businesses (these areas are not listed in order of priority):

- Area 1 – The southern boundary of the Parker Street Landfill footprint which includes sampling residential properties along Maxfield Street and Florence Street. Area 1 also includes the southwestern boundary of the Parker Street Landfill footprint which includes sampling residential properties along Hunter Street.

- Area 2 – The private housing complexes located on Parker Street and Hunter Street. The Carabiner's Indoor Climbing facility.

- Area 3 – The New Bedford Housing Authority Complex named Parkdale. The housing frontage along Hathaway Blvd and triangular area within the complex. This triangular shaped area, approximately 160,000-square-feet, is located between Parker St., Summit St., and Hathaway Blvd.

- Area 4 - The residential/private properties on Hathaway Blvd, Ruggles Street, Greenwood Street, Summit Street, and Parker Street.

- Area 5 - The Nemasket Street (former Bethel A.M.E.) Property. The City of New Bedford will be conducting the site investigation and sampling of this area as described in their proposed Workplan.

- Area 6 - The ROW on Summit Street between Auburn Street and Hapwell Street. The City of New Bedford has already completed the sampling in this area.

- Area 7 – The Durfee Street residential properties and data gap in the ROW area on Durfee Street. The City of New Bedford has already completed the sampling of the ROW in this area.

- Area 8 – The wetland area between Durfee Street and Potter Street.

- Area 9 – The Hetland Memorial Skating Rink. North and northeastern Site footprint boundary: ROWs on Durfee and Liberty Streets. MassDEP will be the lead agency to collect soil and/or sediment samples from this area.

- Area 10 – The City of New Bedford DPW Operations Facility bordered by Liberty, Parker and Smith Streets. *The City has not proposed sampling for Area 10 as part of the SAP and instead will be including all of Area 10 as part of the Parker Street Waste Site. Additional sampling of Area 10 may be necessary as part of the continuing investigation and assessment of the site.*

- Area 11 – The southeast corner of the Parker Street Landfill footprint which includes the New Bedford Housing Authority complex named Westlawn.

Soil borings will be advanced to a depth of 12 feet unless site conditions dictate shallower or deeper depths to achieve project objectives. Soils will be classified using the Burmeister Soil Classification System. Soil samples will be collected from a minimum of five intervals from each sample location. As previously mentioned, due to the amount of soil volume required to perform the necessary laboratory analyses, storing (archiving) soil samples for potential future analysis, split samples that may be requested from property owners, and field screening analysis, a minimum of two borings may required at each sample location to obtain sufficient soil volume.

One sample will be collected from the 0- to 1-foot interval, one from the 1- to 3-foot interval, one from fill material, and two from different intervals (top and bottom of the core) within native soil beneath the fill. The bottom samples collected from the native material will be stored at the laboratories performing the analyses and analyzed only if contaminants are detected in the top native soil sample. Bottom native material samples will only be collected for PCBs and Metals.

Samples collected from the 0- to 1-foot, 1- to 3-foot interval, fill material, and top of the native soil will be submitted for PCBs, PAHs, and metals analyses. The remaining soil from the 8-oz soil PAH and PCB sample containers from each interval will be consolidated into one 8-oz soil container from the interval by the laboratories and stored (archived) at the laboratories performing the analyses in accordance with EPA SW-846 Chapter 4. The samples may be analyzed in the future for additional parameters, including dioxin.

START will collect additional samples in 8-oz sample containers from the 0- to 1-foot and 1- to 3-foot intervals, at all sample locations, to be archived by MassDEP for potential future dioxin analyses.

At four areas (Areas 1, 2, 3, and 11), soil borings will be advanced and samples will be collected at the same intervals described above. All samples will be submitted to a CLP laboratory for metals analyses and a DAS laboratory for PCB and PAH analyses. An additional soil sample will be collected from the top two intervals at all sample locations in these areas and sent to either the OEME or ERT mobile laboratory for field screening for PCBs and metals. A sample from the third interval, fill material, may be analyzed by an on-site mobile lab as determined necessary by an OSC. Based on field screening results or visual confirmation of the presence of fill material, the OSCs, in consultation with MassDEP, will determine whether or not additional soil borings will be advanced in these four areas (Areas 1, 2, 3, and 11).

To ensure the safety of personnel during sampling activities, the buddy system, periodic air monitoring, and caution will be used throughout field activities. To minimize risks due to chemical exposure, dermal and respiratory protection may be required if air monitoring equipment indicates that the environment is unsafe. Field activities will follow the Site-Specific HASP, which further addresses the safety considerations of the property. Hazards identified in or around the site may include physical hazards (slips, trips, and falls). Additional potential hazards exist in association with advancing borings and cutting macro-core sleeve.

Since this project will consist mainly of extensive intrusive activities, subsurface utilities in the investigation areas must be identified. Each Geoprobe sampling crew will be required to contact DigSafe and the local water and sewer boards to have these utilities marked, at least 3 working days before any subsurface work is initiated. DigSafe Authorization Numbers for each property will then be recorded in the HASP.

PARKER STREET WASTE SITE
EPA SAMPLE BORING NUMBER/LOCATION/DESCRIPTION ESTIMATE
REVISION 4.0 DATED 17 FEBRUARY 2010

AREA	SUB-AREA DESCRIPTION	TRUCK-MOUNT SAMPLE BORING LOCATIONS	TRACK-MOUNT GEOPROBE SAMPLE BORING LOCATIONS	TOTAL NUMBER OF SAMPLE BORING LOCATIONS	TOTAL NUMBER OF QUALITY CONTROL SAMPLES (MS/MSD, MS/MSDUP, FIELD DUPLICATES, RINSATE BLANKS, PEs)	TOTAL NUMBER OF SAMPLES (NOT INCLUDING QC SAMPLES)	NOTES
1	**P-001**	7	7	14	18	70	
1	**P-002**	4	4	8	9	40	
1	**P-003**	2	5	7	9	35	
1	**P-004**	6	19	25	33	125	
1	**P-005**	4	10	14	18	70	
1	**P-006**	4	10	14	18	70	
1	**P-007**	4	10	14	18	70	
1	**P-008**	6	3	9	15	45	
1	**P-009**	3	4	7	9	35	
1	**P-010**	11	18	29	36	145	
1	**P-011**	3	5	8	9	40	
1	**P-012**	6	16	22	27	110	
2	**P-013**	18	2	20	21	100	
2	**P-014**	18	7	25	33	125	
3	**P-015 Tier I**	4	6	10	15	50	
3	**PT-015 Tier II**	14	22	36	42	180	
4	**P-016**	3	5	8	9	40	
4	**P-017**	5	7	12	15	60	
4	**P-018**	3	6	9	15	45	
4	**P-019**	3	5	8	9	40	
4	**P-020**	4	4	8	9	40	
4	**P-021**	7	4	11	15	55	
4	**P-022**	14	0	14	18	70	
7	**P-023**	2	6	8	9	40	
7	**P-024**	4	8	12	15	60	
8	**P-025**				21	171	Estimated 19 additional hand-auger sample locations
9	**P-026**	15	20	35	42	175	State owned/ sampled. EPA will process and ship sampling for analyses.
11	**P-027 Tier I**	8	4	12	15	60	
11	**PT-027 Tier II**	14	28	42	51	210	
TOTALS:		**196**	**245**	**441**	**573**	**2376**	

	Truck-Mount	Track-Mount	TOTAL Boring Locations	TOTAL QC Samples	Total Samples (Including QC Samples)*
Current Projected Number of Soil Borings/Samples/QC Samples in Sampling Plan	**168**	**195**	**363**	**480**	**2466**

* = Assumes 5 samples per boring location. A 5th sample, of native soil, will be collected as a contingency from every boring location. In the case that none of the contingency samples are sent for laboratory analyses the total sample number would be 1,388.

9.1 Advancement of Soil Borings

Subsurface soil samples will be collected using different Geoprobe® systems soil probing machines. These are truck and/or track-mounted, piston-driven devices which can be used to advance borings and collect soil in 4-ft sleeves. The sampling teams will advance borings in approximately 347 sample locations to approximately 12 bgs using these Geoprobe® units. Individual areas and properties will be assigned to the four Geoprobe® crews.

Prior to operation of the Geoprobe® machine, a thorough physical inspection of the carrier vehicle and unit should be conducted to ensure that the machine is in proper operating condition. Units will be inspected for hydraulic fluid leaks, and improperly stored or shifted equipment. The location of underground and overhead hazards, including high-tension utility lines, should be identified prior to extension of the Geoprobe® from the carrier vehicle. Knowledge of local, State, or Federal laws should be obtained regarding minimum distances from utility lines prior to intrusive activities. In addition, the location of private on-site septic systems, leach fields, and other sensitive areas should be obtained, when possible, to reduce potential hazards to sampling personnel and equipment and to minimize disturbance to the property condition.

Prior to conducting any on-site activities, all EPA and START personnel and field subcontractor employees will review and sign the site-specific HASP. The START field team will establish a command post upwind of suspected source areas, if possible. START members will perform calibration checks of air monitoring instruments and document background ambient air monitoring levels. The dedicated sampling teams will decontaminate all Geoprobe® sampling equipment prior to use [NOTE: Each Geoprobe team should mark/stamp their own equipment so that it can be tracked from the field, through the decontamination process, and back to the field]. Decontamination will be conducted in accordance with the HASP and applicable SOPs. Decontamination generally consists of an Alconox solution and a water wash, followed by a water rinse, isopropanol wash, and followed by a de-ionized water rinse. A hexane wash followed by a de-ionized water rinse will also be included in the decontamination procedure. The use of hexane will be discussed with the OSC and adequately addressed in via the HASP and SAP amendment/revision process.

Prior to beginning any subsurface activities, the Geoprobe® crews will inspect the property and locate markings identifying any subsurface utilities. The Geoprobe® crew will take steps to ensure that minimal damage is done to the ground. If necessary, plywood will be laid out to minimize any lawn damage. Prior to laying out any plywood, plastic sheeting will be placed directly on the ground surface to prevent direct contact between the plywood and surface. The plastic sheeting will be disposed of according the site-specific HASP and the plywood will be re-used as necessary. Proposed boring locations will be pre-marked using wooden stakes. Prior to any sample collection, the surface area at the sample location will be cleared of any extraneous material considered to be not relevant for sample analysis. If the sample location is on a lawn, the grass (divot) above where the boring will be advanced will be carefully removed and set aside to later be replaced. Additional measures may be required to advance the borings through pavement surfaces. It is anticipated that borings will be advanced to approximately 12 feet bgs; however, total depths may vary depending on meeting the objectives of the investigation. Since one of the objectives of the investigation is to determine the lateral and vertical extent of the landfill materials, borings will be advanced until native soil is encountered. If refusal is encountered in any one location, **two** additional attempts will be made to advance the boring before abandoning the location and moving to a different location.

During the first week of Geoprobe® operations, each team will monitor the ambient air around the work area to ensure that there are no elevated levels of dust in the air. If after the first week of air monitoring there are no elevated levels of dust, air monitoring will be discontinued. Air monitoring may be re-implemented at the discretion of the OSCs.

Each Geoprobe® crew will maintain documentation in a log book and record information including, but not limited to: weather conditions, Geoprobe® type, Geoprobe® Operator, Geoprobe® Assistant, START Sampler/Oversight, START sample/equipment transporter, property location, boring number, time for beginning and ending borings, total depths reached, difficulties encountered (i.e. refusal etc.), depth to water table, ambient air monitoring readings, and PID/FID screening results on each core. It is anticipated that additional co-located (within a 2-ft radius of original boring) borings will be advanced to obtain the adequate volume for sample collection for all five sampling intervals.

Two end caps will be placed on each macro-core by the Geoprobe® crews and each macro-core will be clearly labeled with the following information: top and bottom of core, sample number (each property will be assigned a unique sample numbering scheme) and depth interval. Following the successful completion of each boring, the START Sampler Transporter will deliver the macro-cores to the START Soil Classifiers. Downhole Geoprobe® equipment will be taken to a decontamination area by the equipment transporters where it will be processed through the decontamination process and then returned to the Geoprobe® crew.

Prior to moving onto the next boring location, the completed borehole will be plugged using certified clean sand from the bottom of the borehole up to approximately 12 inches bgs, clean topsoil from 6 to 12 inches, and the divot (if one was removed) from 0 to 6 inches. If no divot was removed, clean topsoil will be placed from 0 to 12 inches bgs. The crew will periodically tamp the sand to ensure that it is packed into the hole. The topsoil will be tamped and brought to an even grade with the surrounding area. If groundwater is encountered, bentonite will be placed in the borehole to approximately 2 ft above the water level, and then the same procedure described above will be followed. If the Geoprobe® location is on pavement, the borehole will be filled with clean sand from the bottom of the borehole to approximately 3 inches bgs and with asphalt patch from 0 to 3 inches bgs. The Geoprobe® crew will then move to the next location and advance the next boring in the same manner described previously. If any damage occurs to individual lawns on properties where the START subcontracted Geoprobe was used, START will use the services of a subcontracted landscaper to repair the damages [NOTE: These services will only be available for the START Geoprobe crew, each Geoprobe crew should make their own arrangements to provide this type of service if deemed necessary]. Prior to leaving each individual property, the Geoprobe unit will be cleaned by brushing off any soil from the borehole they may have come into contact with any of the Geoprobe unit. If brushing the Geoprobe does not sufficiently clean the unit, then a tap sprayer and minimal amounts of water will be used to clean off any remaining soil

In some locations where space is limited, it may be necessary to manually advance the soil borings. If this necessary, borings will be advanced using either hand augers or an electric jack hammer. A GPS unit will be used to record the locations all Geoprobe® boring locations.

9.2 Sample Collection Procedures for Macro-cores

The START sample/equipment transporters will deliver the capped and marked macro-cores to the START and ERT/SERAS Soil Classifiers and Documenters who will be set up in a fixed area (yet to be determined). Since geologic information will be recorded during this activity, START and ERT/SERAS Geologists or qualified members will be assigned as Soil Classifiers. There will be three Soil Classification teams, two START and one ERT/SERAS (Figure 2). The macro-core will placed on a table covered with polyethylene (poly) sheeting. The markings on the macro-core (property and depth interval) will be recorded on Field Data Sheets by the START Soil Classification Documenters. The vinyl end caps will be removed from the macro-core and the ends screened using a PID and/or FID. These readings will be recorded on the Field Boring Data Sheets. The macro-core will then be placed in a horizontal position on a macro-core liner holder which is clamped securely to the table. The macro-core liner is then cut using a liner cutting tool and screened along its entire length using a PID and/or FID. This reading is then recorded on the Field Boring Data Sheet. The soil within the macro-core is visually inspected and the amount of recovery is measured. The amount of recovery is divided into four equal sections, each section representing a 1-foot interval, and the four sections are marked on the macro-core with a sharpie. The top layer of the soil along the horizontal will be scraped using a clean sampling scoop or stainless steel knife to expose the true nature of the soil. A photograph will be taken of the macro-core and the Soil Classifier will then describe the soil in the macro-core using the Burmeister Soil Classification System. During the classification process, any discrete layers within the soil will be measured. Soil description (color, texture, materials, moisture content, odors, etc.) will be provided to the Soil Classification Documenter who will scribe the information onto a Field Boring Data Sheet.

Soil samples will be collected from five intervals in each of the borings. After the completion of soil description, the Soil Classification Documenter will take the 0 – 1 ft fraction of soil from the core and place it into a stainless steel bowl where it will be homogenized using a stainless steel (or disposable) scoop.

To increase data comparability, the soil sample interval (s) will be manually homogenized. The soil from each specific depth interval (or material, i.e. fill, native soil) will be placed into a stainless-steel bowl or other appropriate homogenization container, and mixed thoroughly using a non-dedicated, stainless steel scoop to obtain a homogeneous sample representative of the entire sampling interval. Homogenization will involve thoroughly mixing the soil in the stainless steel bowl, forming a cone, re-mixing to form a new cone, flattening cone, dividing soil into four quarters, re-mixing opposite quarters, reforming a cone, and repeating previous steps a minimum of five times until the soil is visually homogenized. Extraneous materials (rocks, leaves, twigs, glass, etc.) not relevant or vital for characterizing the sample will be removed from the soil and discarded.

Once thorough homogenization has been achieved for the soil from the 0 – 1 ft interval, the soil will be divided into four approximately equal piles. A non-dedicated sampling scoop will then be used to fill the sample containers. A grab sample will then be placed into two 8-oz (PCB and PAH analyses) and one 4-oz (metals). For locations where field screening will be conducted by the mobile laboratories, an additional 4-oz sample will be collected. The sample number, collection date, and collection time will be written on the container tops (jar lids). The sample collection date and times will also be recorded on the Field Boring Data Sheets. The sample container for PAHs shall be filled first by scooping a small aliquot of soil from each of the four piles and placing the soil into the appropriate container until it is filled. This process shall then be repeated for the PCB and metals.

The 1 – 3 ft fraction of soil will then be placed into another stainless steel bowl and the process described for the 0 – 1 ft interval will be repeated. The next sampling interval will be determined by the presence of fill material. The fill material will be placed it into a stainless steel bowl and the process described for the previous intervals will be repeated. The next two soil samples will be collected from native soils. One soil sample will be collected from the top of core from the native soil material and one from the bottom of the core from the native soil. The sample collected from the bottom of the core will be kept in storage pending the results of the native soil material collected from the top of the core. If contamination is detected in top sample of native soil, then the bottom sample will be analyzed. After the samples are placed in jars, they will be placed in re-sealable plastic bags and stored on ice in a cooler until they are packaged for shipment or courier pickup. The macro-core sleeves will be cut into smaller sections and disposed of in accordance with the site-specific HASP.

Collection of soil samples for field duplicates, MS/MSD, and MS/Duplicates will be at a rate of 1 per 40 samples per property (see Section 13.1).

The samples collected from each sample location will be submitted to a CLP laboratory for metals analysis and a DAS laboratory for PCB and PAH analyses.

START and ERT/SERAS will obtain certified clean sample containers from commercial vendors for all sampling activities. The containers provided will be those described in *Specifications and Guidance for Contaminant-Free Sample Containers, EPA540/R-93/051, December 1992*. These containers are cleaned in accordance with EPA protocols. The appropriate number and type of sample bottles will be identified by START as specified by the proposed analyses for each sampling event. The sample volumes and types of containers for the analytes of interest are listed in Table 2, along with the holding times and preservatives required for each analysis. The certificates of cleanliness for the certified clean sample containers will be retained in the site file. Other sampling supplies will be clean and visually inspected prior to use.

Certificates of Cleanliness provided with boxes of certified-clean bottleware shall be filed in the site file as documentation that samples were collected into clean bottleware. Opened boxes of bottleware not accompanied by a Certificate of Cleanliness shall not be used for sampling. Sample collection documentation and the use of certified-clean bottleware are also discussed during pre-sampling meetings.

9.3 Hand Augering Procedures and Sediment Sample Collection

Sediment samples will be collected using hand augers. Hand augers consist of a series of extensions, "T" handle, and thin-wall tube sampler. If water is present in the wetland, surface water quality parameters (pH, temperature, specific conductance, and turbidity) will be recorded prior to sample collection. The surface of the sample area will be cleared of any debris, and the auger will be used to bore a hole to a desired sampling depth, and is then withdrawn, retaining the sediment from the desired depth. Sediment will be collected from the following depths: 0 to

6 inches, 6 inches to 2 feet, and 2 feet to 3 feet. Once the auger is withdrawn, the retained sediment will be placed into a 12 inch by 15 inch re-sealable polyethylene bag. The bags will be labeled with sample location number and the depth at which it was collected. This process will be repeated for all three depth intervals. A clean hand auger will be used at each discrete depth interval.

The bags containing the retained sediment will be transported to the soil classification area to be classified and sampled. Sampling and identification will consist of a geologist or qualified staff homogenizing the sediment in a stainless steel bowl. The same process described for homogenizing the soil samples will be used for the sediment samples. The sediments will also be classified using the Burmeister classification system. After classification is completed, samples will be transferred directly from the bowl to the sample containers and submitted for PAH, PCB, and metals analyses only. Samples for PAH and PCB analysis will be sent to DAS laboratories and samples for metals analysis will be sent to CLP laboratories. QC samples will be collected from the sediment samples at a rate of 1 per 40 samples.

The hand augers will be transported to the decontamination area and will undergo the same decontaminated procedures outlined for the Geoprobe® equipment.

9.4 Cleaning and Decontamination of Equipment/Sample Containers

Both dedicated and non-dedicated sampling equipment may be used during sampling activities. Decontamination of sampling equipment will be kept to a minimum in the field, and wherever possible, dedicated sampling equipment will be used.

Equipment decontamination will prevent the cross-contamination of samples. Preventing cross-contamination is important for avoiding the introduction of error and protecting the health and safety of personnel. Physical removal, washing, rinsing, and drying procedures will vary according to the sample parameters and equipment types. Non-dedicated equipment, such as down hole Geoprobe® parts, augers, stainless steel spatulas, and bowls, will be decontaminated before and after use at a dedicated decontamination area. Dedicated and/or disposable equipment, which does not require decontamination, may be utilized whenever possible to avoid the need for rinsate blanks, to prevent the cross-contamination of samples, and to reduce the volume of liquid waste generated on site.

All material and equipment will arrive on site in a clean condition. All non-dedicated equipment involved in field sampling activities will be decontaminated prior to and subsequent to collecting samples. During sampling activities, the decontamination teams will decontaminate the sampling equipment. Decontamination will be conducted in accordance with the applicable SOPs and the site-specific HASP. Decontamination generally consists of an Alconox™ and water wash followed by a deionized water rinse, followed by an isopropanol rinse, followed by a deionized water (DI) rinse, hexane wash, followed by a deionized water rinse and air drying. Recommended procedures for equipment decontamination, described below, will be followed where applicable. At the conclusion of each sampling location, the equipment will be brought to the designated decontamination area and thoroughly decontaminated using the following procedures.

- A physical removal technique will be used to remove any gross contamination present on the equipment. Typically, paper towels and brushes will be used for this purpose

- After removal of gross contamination, equipment will be washed with a non phosphate detergent solution (such as a 2% liquid Nox^{TM} and tap water solution). The washed equipment will be rinsed with tap water (typically from a garden sprayer) to remove all the soap solution

- After removal of gross contamination, equipment will be washed with hexane. Typically, a squeeze bottle will be used to dispense the hexane.

- The equipment will be then be rinsed with isopropanol.

- The equipment will be rinsed a final time with DI water and allowed to air dry completely

- The equipment will be visually inspected

If the equipment is to be stored before use, the equipment will be sealed in a plastic bag for inorganics or aluminum foil for organics to prevent contamination before use. Equipment decontamination fluids and personal protective equipment (PPE) generated during sampling activities will be containerized and secured on site. Separate containers will be used for the aqueous wastes and for flammable, non-chlorinated solvents (hexane) wastes. Proper personal protection will be worn during decontamination procedures and will include gloves, eye protection, and splash-resistant protective clothing.

The effectiveness of the decontamination procedure will be documented through the use of equipment rinsate blanks, which will be collected at a frequency of one per property per day, or at a frequency of one per 40 samples per property.

Equipment decontamination fluids generated during sampling activities will be collected in properly labeled containers and staged in a secure area until final disposal. Separate containers will be used for aqueous wastes and for flammable, non-chlorinated solvents (hexane) wastes. Proper personal protective equipment (PPE) will be worn during decontamination procedures and will include gloves, eye protection, and splash-resistant protective clothing. Off-site disposal of decontamination wastes and contaminated PPE will be conducted through the Subcontract Agreement established by Region I START for disposal of investigation-derived wastes (IDW). Non-contaminated wastes will be tightly sealed, double-bagged, and disposed of in accordance with the site HASP.

9.5 Field Equipment Maintenance and Calibration

Field instruments and equipment must be calibrated or verified at prescribed intervals or as part of the operational use of the equipment. Calibration or verification information will be recorded in Field Data Sheets or log books maintained by each of the four sampling team. Equipment to be used in the field is calibrated or verified prior to the commencement of daily activities, and as needed in accordance with manufacturer's specifications as outlined in the owner's manual. Frequency of calibration or verification will be based on the type of equipment, inherent stability, manufacturer's recommendations, EPA requirements, intended use, effect of error upon the measurement process, prior experience, or other criteria as directed by the PL or SL. Calibration and verification records will be documented and maintained in Field Data Sheets or bound log books which accompany staff in the field and in the site-specific HASP. Field personnel shall immediately report equipment failure or malfunction to their respective Equipment Managers.

Field equipment will be properly protected against inclement weather conditions during field activities. Each instrument is specially designed to maintain its operating integrity during variable temperature ranges that are representative of ranges that will be encountered during cold-weather working conditions. At the end of each working day, field equipment will be taken out of the field and placed in a secure cool, dry room for overnight storage.

The following paragraphs discuss the field equipment (sampling equipment and air monitoring instruments) used, and calibration or verification procedures and frequencies for the field equipment used in conjunction with the site HASP (air quality screening equipment) or for field screening purposes.

Calibration or verification failures will be documented by the field crews in the log books, and the equipment will not be used until it is re-calibrated or -verified successfully or the equipment is sent to the vendor for repair. If equipment fails or becomes inoperable during use, it will be removed from service and sent to the vendor for repairs.

Standard equipment that will be used on site includes the following:

- MultiRAE multi gas meter
- Thermo-Environmental Instruments, Model TVA-1000B FID/PID
- Ludlum Model 19 MicroR Meter
- Trimble™ Pathfinder Pro XRS GPS with TSCI Data Logger
- PDR dust monitors

Field Instrument Calibration - Field sampling teams will be responsible for calibrating or verifying each instrument accompanying the teams into the field. The following information, at a minimum, will be recorded in Field Data Sheets or log books for each instrument:

- Name, model number, and manufacturer of device and/or instrument
- Instrument serial and/or identification (ID) number and date purchased or leased
- Frequency of calibration or verification
- Date of calibration or verification
- Results of calibration or verification, including initial setting, adjustments made, and final setting
- Calibration gases used, serial numbers, and expiration dates
- Name of person performing the calibration.

Calibration Failure - Equipment that fails calibration or verification or becomes inoperable during use will be removed from service and segregated to prevent inadvertent use. The equipment will be tagged to indicate that it is inoperable/out of calibration. The malfunctioning equipment will be sent to the vendor for repairs. The equipment will be not returned to active service until it is functioning properly. Calibration failure will be recorded in the Field Data Sheets or instrument-specific log book. Such equipment must be repaired and satisfactorily recalibrated before further use.

Calibration Records – Field Data Sheets or log books must be monitored for each piece of equipment subject to calibration and maintenance. Records demonstrating the traceability of reference standards must also be maintained. The field staff performing the calibration must record all instrument calibration data in the Field Data Sheets or in a log book.

Records for all calibrated equipment must include the unit number and type of equipment; the date calibration was performed; the identity of the Team Member performing the calibration; the calibration standard used, including concentration, manufacturer, and lot numbers.

10.0 SAMPLE HANDLING, TRACKING, AND CUSTODY REQUIREMENTS

The sampling teams performing a particular sampling activity are required to maintain a field log book. The bound, numbered, and paginated logbook shall be filled out at the location where the borings are advanced. Field Data Sheets (Boring Logs) will be used at the location where the samples will be collected from the macro-cores. The log book and/or Field Data Sheets will contain the following sampling information: sample location map, sample numbers, sample collection times, sample locations, sample descriptions, sampling methods, weather conditions, field measurements, name of sampler (s), site-specific observations, and any deviations from protocols established in site-specific SAP or SOPs. All log book and Field Data Sheet entries will be entered legibly in permanent ink. If errors are made when completing the log book and/or Field Data Sheets, the errors will be crossed out with a single line, initialed, and dated by the sampler.

10.1 SAMPLE COLLECTION DOCUMENTATION

The containers with the soil samples collected from the macro-cores will be placed on ice in a sample cooler. The START data management team will utilize SCRIBE and Field Operations and Records Management System (FORMS) II Lite software programs to complete chain-of-custody documentation. SCRIBE is a software tool developed by the EPA's Environmental Response Team (ERT) to assist in the process of managing environmental data and FORM II Lite is a step-by-step program that generates labels, creates and customizes CLP Traffic Reports (TR) and COC reports, and electronically documents data needed prior to, during, and after field sampling activities.

SCRIBE outputs include labels for collected samples, COC generation and analytical laboratory result data reports. SCRIBE provides a flexible user interface to manage, query and view all this information. SCRIBE supports exporting electronic data for user services such as GIS tools and spreadsheets so that sampling data may be further analyzed and incorporated into report writing and deliverables.

The purpose of sample custody procedures is to document the history of sample containers and samples from the time of preparation of sample containers through sample collection, shipment, and analysis. Sample custody is maintained when a sample is in a secure area or in view of, or under the control of, an authorized individual. Personnel responsible for maintaining sample custody will be identified in the site-specific SAP. For large sampling events, dedicated personnel will be responsible for sample management and custody. An item is considered to be in one's custody if any or all of the following apply:

- The sample is in the physical possession of an authorized party and the sample is in the view of the responsible party.
- The sample is secured by the responsible party to prevent tampering.
- The sample is secured by the responsible party in a restricted area.

The samples collected at the site will be shipped to pre-designated laboratories in accordance with either Department of Transportation (DOT) Hazardous Materials Regulations or International Air Transport Association (IATA) Dangerous Goods Regulations. Samples will be transported in a manner that will maintain their integrity, as well as protect against detrimental effects from sample breakage or leakage. The Weston Solutions, Inc. *Manual of Procedures for Shipping and Transporting Dangerous Goods* will be followed whenever samples are shipped.

START personnel will transport the cardboard boxes or plastic coolers to an overnight delivery service carrier, such as FedEx, for next-day delivery to the appropriate laboratories; or will arrange for a courier or the overnight delivery service carrier to pick up the cardboard boxes or plastic coolers on site.

10.1.1 Sample Numbering

In order to ensure proper chain-of-custody (COC) for each analytical mechanism, sample identification procedures will be used to ensure that each sample is assigned a unique identification number. Correct sample numbering ensures sample authenticity. A unique number will be assigned to each property to maintain anonymity, and soil boring locations for each area of the site will be assigned an SB-xx designation indicating the sequence of borings advanced. Unique numbers will range from P-01 to P-25 and are shown in the table in Section 9.0, Sampling Procedures and Requirements. Soil samples collected from the 0 – 1 foot interval will be designated with an "A", those from the 1 – 3 foot interval a "B", those from fill a "C", and native soil top a "D", and native soil bottom an "E". For example, the five soil samples collected from the first boring advanced on property P-01 would designated as *P-01-SB-01A* (0 – 1 ft), *P-01-SB-01B* (1 – 3 ft), *P-01-SB-01C* (fill), *P-01-SB-01D* (top native soil), and *P-01-SB-01E* (bottom of native soil).

On the two properties (Properties 15 and 25) where sampling may occur in two tiers, the unique numbers for Tier II will be PT-15 and PT-25. For example, the five soil samples collected from the first boring location on the second tier on property P-15 would designated as *PT-15-SB-15A* (0 – 1 ft), *PT-15-SB-01B* (1 – 3 ft), *PT-15-SB-01C* (fill), *PT-15-SB-01D* (top native soil), and *PT-15-SB-01E* (bottom of native soil).

In addition, unique CLP numbers will be assigned to each sample. START will use SCRIBE and FORMS II Lite software to electronically generate sample tags, labels and chain of custody documentation.

10.1.2 Sample Labels

Samples will be identified with a label that will be attached directly to the container. Sample labels will be completed using waterproof ink. **[Note: Only the CLP or DAS number will be on the sample label. None of the other information will be on the sample label. All this information will be on the Sample TAG.]** The sample tags will contain the following information:

- Sample number
- Time and date of collection
- Parameters to be analyzed
- Preservative (if any)
- Sample source/location (Station Location)

10.1.3 Transfer of Custody and Shipment

Prior to sample shipment, the Traffic Record (TR)/COC record will be signed and dated by a member of the sampling team who verifies that the samples listed on the TR/COC are included in the cooler. **[Note: sampling personnel also sign the TR/COC].** After packaging has been completed, custody seals, signed and dated by a member of the sampling team, will be placed on the sample cooler across the space between the lid and the body of the sample cooler. Samples shall generally be shipped via courier or overnight delivery service within 24 hours of the conclusion of the day's sampling activities. START will make arrangements with DAS laboratories for weekend sample deliveries and EPA will do the same for CLP laboratories.

10.1.4 Chain-of-Custody Procedures

The COC documents will be shipped with the sample containers. These forms will be completed by field personnel with acknowledgment of time and date of transfer to the carrier or courier service, and will be placed within the shipping container. In addition, PE instructions and other pertinent documents will be included with the COC as part of the sample shipment. Laboratory custody procedures associated with sample receipt, storage, preparation, and analysis, as well as general security procedures, will be implemented in accordance with EPA requirements.

COC records must be prepared to accompany samples from the time of collection and throughout the shipping and analytical process. A COC record will be maintained from the time the sample is collected until its delivery to the laboratory. To maintain a record of sample collection, transfer between personnel, shipment, and receipt by the laboratory, a COC record will be filled out for each sample at each sampling location. Each individual in possession of the samples must sign and date the sample COC document. Each time the samples are transferred, the signatures of the persons relinquishing and receiving the samples, as well as the date and time, will be documented. A copy of the COC is retained in the site file. When samples (or groups of samples) are not under direct control of the individual responsible for them, they must be stored in a locked container sealed with a custody seal. Specific information regarding custody of the samples projected to be collected on the weekend will be noted in the field log book. The COC record will be considered completed upon receipt at the laboratory. The COC Record should not identify field duplicate QC samples to the laboratory. The COC record should include (at minimum) the following:

- Type (s) of analysis(ses) to be performed
- Sample ID number
- Sample information
- Sample station location
- Sample collection dates and times
- Name(s) and signature(s) of sampler(s)
- Signature(s) of any individual(s) with control over samples
- Sample preservatives
- Type of samples (grab or composite)
- Remarks
- OSC contact information

A separate COC form must accompany each cooler for each daily shipment. Within the laboratory, the person responsible for sample receipt must sign and date the COC form; verify that custody seals are intact on shipping containers; compare samples received against those listed on the COC form; examine all samples for possible shipping damage, leakage, and improper sample preservation; note on the COC record or laboratory receiving documentation that specific samples were damaged; notify sampling personnel as soon as possible so that appropriate samples may be re-sampled; verify that sample holding times have not been exceeded; maintain laboratory COC documentation; and place the samples in appropriate laboratory storage. The laboratory may submit internal COC documentation with the data package, but does not provide START with the final disposition date of the samples.

11.0 Field Analytical Methods and Procedures

Field analytical tasks are those analytical activities that are performed on or near the site of investigation, not in a fixed commercial laboratory facility. Field analytical tasks for this project will include environmental sample analyses. Field analytical tasks generate either screening or definitive data; the difference being, definitive data are typically generated using standard EPA methods and are supported by prescribed quality control. Definitive data are suitable for final decision-making. Definitive data can be generated on-site in fully equipped field mobile laboratories. In contrast, screening data are typically semi-quantitative and/or semi-qualitative data that are used to support an intermediary or preliminary decision but eventually must be supported by definitive data before a project is complete, i.e. PCB screening data generated using screening methodologies. This section describes all field analytical methods and procedures that will be used routinely by OSCs. EPRB and OEME field analytical SOPs may be found in Appendix 5 and 6, respectively of the *QAPP*.

11.1 Field Analytical Methods and Standard Operating Procedures

For this project, the OSC has requested field analytical assistance from OEME and ERT/SERAS. Two field mobile laboratories and field analysts will be mobilized to the site to screen samples for PCBs and metals. All screened samples will be submitted for confirmatory analysis.

Field analytical methods and SOPs developed and used by EPRB and OEME to analyze commonly requested analytical parameters and matrices will be used. These SOPs summarize the method, list achievable quantitation limits and specify the frequency of calibration, acceptance criteria, QC samples, corrective action, maintenance, testing and inspection procedures, and supplies. Field screening for PCBs and metals in soils will be conducted by EPA Chemist Scott Clifford using the following methods:

- EIASOP-FLDXRFNITON4 Environmental Metals Screening
- EIASOP-FLDPCB2 PCB Field Testing for Soil

The ERT/SERAS on-site chemist will also adhere to these SOPs. All modifications to field screening or definitive methods and SOPs and an explanation for those modifications will be documented by the field chemist. Modifications may include, but are not limited to:

- Modified target compound lists
- Modified quantitation limits
- Sample volume
- Solvent volume
- Dilution volume/factor

11.2 Field Instrument Calibration and Frequency

Field instruments shall be calibrated to establish quantitation limits and the range over which sample concentrations can be accurately quantitated. In general, instrument calibration procedures, frequency, quality control, acceptance criteria and corrective actions will be described in the specific SOP. In addition, calibration procedures are summarized for OEME and EPRB field analytical methods in Table 13-3 to 13-7 of the *QAPP*. At a minimum, instruments shall be calibrated initially prior to running any samples and at the end of the run sequence. A zero check with an analyte-free method blank will also be performed whenever applicable. A standards check with a calibration standard from a secondary source will be analyzed whenever necessary.

11.3 Calibration Standards

All standards used to calibrate field monitoring instrumentation will be certified by the manufacturer. Commercial standard solutions for field and laboratory uses will be traceable to NIST materials and must be obtained with their accompanying documentation. Any standards made from neat materials will be made from materials of at least 96 percent purity using balances with readability of at least 0.001 grams.

All standards made from neat materials will be made based upon weight. Standards from liquid neat materials will be made by adding the liquid to a tared volumetric flask at least half-filled with solvent and then adjusting the final volume. Standards will not be made based upon density. All standards and dilutions shall be made from pesticide or purge & trap grade solvents or ASTM Type II reagent grade water.

All standards are assigned unique tracking numbers and be entered into a bound standards notebook. All standards are labeled with the following:

- Standard number
- Description/concentration
- Initials of person who made the standard
- Date standard was made

- Expiration date

Standards will be stored and maintained in accordance with Table 11-4 of the *QAPP*.

11.4 Field Instrumentation/Equipment Maintenance, Testing and Inspection

EPRB and ERT/SERAS field equipment and instruments will be maintained, tested and inspected to ensure proper operating conditions at the time of deployment by the OSCs. Schedules and frequency of testing, maintenance and inspection of field analytical equipment and instrumentation are described in the appropriate SOPs. In addition, the SOPs describe the criteria for acceptable operating conditions and corrective actions. Maintaining, testing and inspecting field instrument is the responsibility of the field chemist. If the instrument is not functioning properly (i.e., the instrument will not zero, calibrate, hold a charge), it will be returned to the vendor for either repair or replacement.

Routine maintenance procedures, such as cleaning the PID lamp, are described in the manufacturer's operator's manual, pertinent sections of which are attached to instrument SOPs**.** All field instruments will be visually inspected prior to use. This includes an inspection of sensors, cables and associated connections to meters, corrosion at cable and/or battery ports, and battery power capacity. Any problems identified during the visual inspection are fixed prior to instrument use.

Instrument testing is performed during calibration activities. Any instruments that are not calibrated will be re-calibrated. If subsequent re-calibrations fail, then corrective actions outlined in the SOP are implemented. An instrument maintenance/inspection log is maintained and documents the date of inspection/maintenance, name of instrument, description of problem/maintenance activity and description of repair.

11.5 Field Analytical Inspection and Acceptance Requirements for Supplies

Field analytical supplies for commonly used field analytical procedures are itemized in the attached SOPs. The OSCs or OEME field chemist, and ERT/SERAS are responsible for ordering and maintaining their own supplies. In general, all field analytical supplies and reagents received at the site will be checked against the original purchase orders to make sure they are correct. Reagents will be inventoried and their use tracked in a Reagent/Standard logbook. The date that the calibration standards and reagents are opened will also be recorded. Reagent lot numbers, vendor, purity grade, and expiration dates will be tracked in the logbook. Certificates of analysis will be maintained in the analytical site file. Reagent blanks and/or method blanks will be routinely analyzed to monitor reagent quality. If reagents or standards have degraded or are contaminated, they will be replaced with new reagents and standards that meet criteria. Expiration dates will be checked at the end of each calendar quarter, and expired standards and reagents will be disposed of properly.

Other analytical supplies such as syringes can be checked visually to make sure they are acceptable for use. Extra supplies will be on hand to minimize down time of project operations.

11.6 Screening/Confirmatory Analyses

Confirmatory analysis will be performed by a DAS and CLP laboratories on all soil samples collected during this sampling event. Screening and confirmatory data will be evaluated as described in OSWER Directive 9360.4-10 November 1991. Field screening for PCBs and metals in soils will be conducted by EPA Chemist Scott Clifford and ERT/SERAS using the following methods:

- EIASOP-FLDXRFN3 Environmental Metals Screening
- EIASOP-FLDPCB2 PCB Field Testing for Soil

Confirmatory analysis will be conducted by CLP or DAS laboratories using:

- Aroclors by CAM-VA(Rev 1 9/14/2009)/ SW-846 Method 8082A
- Metals by ILM05.4 ICP-AES Modified

12.0 Fixed Laboratory Analytical Methods and Procedures

Analytical services shall be obtained from CLP laboratories for metals analyses utilizing a CLP method modification procedure, and DAS laboratories for PAH and PCB analyses. The DAS laboratories shall be experienced with Compendium of Analytical Methods (CAM). The DAS laboratories will provide validatable data packages that exceed the deliverable specifications found in CAM-VA, CAM-IIB and provide a SEDD electronic data deliverable in XML format. In accordance with the EPA Region I Data Validation Guidelines, a fully validatable data package must be provided for all analyses. CLP laboratories routinely provide this type of data deliverable.

The EPA OSCs ultimately determine whether a government laboratory shall provide analytical services in accordance with the Agency's Field and Analytical Services Teaming Advisory Committee (FASTAC) Strategy. The FASTAC strategy is EPA's Tiered approach to obtaining analytical services, with the Region's laboratory (OEME) as Tier 1 (i.e., primary laboratory services provider); the EPA's CLP RAS and NRAS laboratories as Tier 2; the Regional OEME analytical contracts as Tier 3; and the Regional Field Sampling Contractor subcontracted laboratory services (DAS laboratories) as Tier 4. The decision on which tier will be selected will be decided by the EPA OSCs and may be based on laboratory capacity, available extraction technologies, funding, turnaround time, and or detection limits.

Most of the time, the data are not time critical; therefore, a 21-day turnaround time is selected. CLP laboratories are routinely used because the methods used have firmly defined QC acceptance criteria and reporting criteria and the performance of the laboratory is monitored by EPA to ensure compliance. The DAS laboratories used for this project will provide validatable data packages that exceed the required analytical deliverables specified in CAM method VA (Rev 1 9/14/2009), IIB (Rev 1 9/9/2009), and a SEDD/ADR electronic data deliverable. Analyses for PAHs and PCBs will be performed in accordance with CAM-IIB (Rev 1 9/9/2009), and CAM-VA respectively (Rev 1 9/14/2009).

12.1 Fixed Laboratory Methods and Standard Operating Procedures

CLP analytical services are available to the OSC through OERR's Analytical Operations and Data Quality Center. Analytical services are described in the most current SOWs and are scheduled through the Regional Sample Control Coordinator (RSCC) located at OEME. CLP laboratories are pre-qualified and laboratory SOPs are reviewed prior to contract award. SOPs to be used will be laboratory specific. Laboratory performance is monitored by the regional CLP Technical Project Officer (CLP-TPO) network and through the use of PE samples and laboratory audits. Low/medium inorganic analyses and low/medium organic analyses are available through the routine analytical services. The CLP TPO notifies OSRR by memorandum when new analytical services are available from Headquarters. Quality control acceptance limits, calibration requirements, contract required quantitation limits and applicable matrices are described at the following website: www.epa.gov/superfund/programs/clp/. EPA has determined that a method modification for ILM05.4 will be requested for this project. Alternatively DAS may be used to procure laboratory services to support EPA site work. The analytical services are described in the most recent CLP SOWs and or EPA methods and are scheduled through the use of FASTAC and an EPA contractor.

12.2 Selection of Fixed Laboratory Analytical Methods and Modifications

The most current version of CLP methods will be used to support the inorganic site data needs. The most current version of the Routine Analytical Services (RAS) CLP inorganic method is ILM05.4 (Inorganic). For this project EPA has determined that a contract method modification for ILM05.4 will be requested. The most current versions of CAM Methods IIB (Rev 1 9/9/2009), and VA (Rev 1 9/14/2009) will be used to support the PAH and PCB site data needs respectively. The updated CAM methods are currently in draft form and are based upon updated EPA SW-846 methods. Older versions of analytical methods or protocols may be selected on a site-by-site basis, and only after consultation with the OSCs, and approval of the site-specific SAP. Older methods and protocols may be desired when comparing current data to historical data. However, use of older protocols is not generally desired, and sufficient rationale must be provided to justify their use.

Analytical methods are selected based on the intended use of the data. Whenever possible, RAS CLP analytical services will be utilized and are the methods of choice for sample analyses. The CLP contract required quantitation limits (CRQLs) are below the action levels generally needed for removal site actions.

The laboratory methods to be used for inorganic analyses are described in the Inorganic Statement of Work ILM05.4. The organic analyses will be performed in accordance with CAM Methods IIB (Rev 1 9/9/2009), and VA (Rev 1 9/14/2009) which are based upon EPA-SW846 methods 3545A/8270D, and 3540C/8082A respectively. The following methods will be used:

- Metals by ILM05.4 ICP-AES
- Aroclors by CAM-VA (Rev 1 9/14/2009)/ EPA-SW846 method 8082A
- SVOC (PAHs) by CAM-IIB (Rev 1 9/9/2009)/ EPA-SW846 method 8270D

The identity, names, addresses, names of contact person, telephone numbers and fax numbers of the Individual Laboratories performing the analysis have not yet been determined, but will be included in this SAP once the RAS and DAS procurements have been completed.

12.3 Fixed Laboratory Instrument Calibration/Sensitivity

Inorganic instrument calibration criteria are to be met for CLP analyses, and may be verified during the data validation process. These criteria are specified in ILM05.4, and include calibration frequency, acceptance criteria, and corrective actions.

Organic instrument calibration criteria are to be met for DAS analyses, and may be verified during the data validation process. These criteria are specified in CAM-IIB (Rev 1 9/9/2009), and CAM-VA (Rev 1 9/14/2009), and include calibration frequency, acceptance criteria, and corrective actions.

Instrument sensitivity for a fixed laboratory method is demonstrated by MDL studies. MDL studies for non-CLP analyses are included as part of the data deliverables. Complete MDL studies are not required as a deliverable for CLP analyses, however inorganic MDL values are provided on Form 9.For low-level analyses where sensitivity must be evaluated at low levels using MDL studies, START shall request the laboratory MDL studies through the CLP PO. Instrument sensitivity is evaluated during data validation according to the "Region I Tiered Organic and Inorganic Data Validation Guidelines". Sample results may be qualified based on this parameter.

12.4 Instrument Calibration Standards

All purchased standards used to calibrate laboratory instruments will be certified by the manufacturer. Commercial standard solutions will be traceable to National Institute of Standards and Technology (NIST) materials and obtained with verifying documentation. Any standards made from neat materials will be made from materials of at least 96 percent purity using balances with readability of at least 0.001 grams.

All standards made from neat materials will be made based upon weight. Standards from liquid neat materials will be made by adding the liquid to a tared volumetric flask at least half-filled with solvent and then adjusting the final volume. Standards will not be made based upon density. All standards and dilutions will be made from pesticide or purge & trap grade solvents or ASTM Type II reagent grade water.

All standards will be assigned unique tracking numbers and be entered into a bound standards notebook. All standards must be labeled with:

- Standard number
- Description/concentration
- Initials of person who made the standard
- Date standard was made
- Expiration date

Standards will be stored and maintained in accordance with Table 12-4 of the *QAPP*.

12.5 Instrument Maintenance, Testing and Inspection

Laboratory SOPs describe procedures including frequency, operating criteria, corrective action and documentation activities that will be performed to verify that all equipment and instrumentation are maintained, tested and inspected to ensure that they are available and in working order, and that all supplies are available and contaminant free.

13.0 Quality Control Activities

Quality control activities will be performed to ensure sampling and analytical tasks are conducted within specified acceptance ranges. This section describes the type and frequency of QC activities that will be performed to support data collection operations. It also describes acceptance criteria and corrective actions for when those criteria are not met.

13.1 Field Quality Control

Field QC samples will be collected and analyzed to ensure sample results are representative, accurate and precise. Table 13-1 of the *QAPP* describes the required type, frequency, QC criteria and associated corrective action for field QC samples that are typically used during environmental sample collection activities. The number of QC samples collected for each analytical parameter and concentration level are listed in Table 4 - Field Quality Control Summary, of this SAP.

At a minimum, the following field QC samples will be collected and analyzed when definitive data are generated:

- Field Duplicates - Environmental duplicate samples are collected to demonstrate the reproducibility of sampling technique and the variability of the sample matrix. The field duplicate analysis is in addition to the laboratory duplicate analysis. At a minimum, one field duplicate sample will be collected per each matrix at a frequency of 1 per 40 samples or per property, whichever is more frequent, for organic analyses and at a frequency of 1 per 20 samples for inorganic analyses. Field duplicates will be used to evaluate sampling precision.

- Equipment (Rinsate) Blanks - Equipment (rinsate) blanks are collected to assess cross-contamination brought about by improper decontamination procedures between sampling stations. Equipment rinsate blanks are required for non-dedicated sampling equipment. Daily equipment (rinsate) blanks will be collected for each type of sampling equipment. Rinsate blanks will be collected after field use of sampling equipment by pouring the appropriate rinsate solvent (e.g., DI water) over decontaminated sampling equipment. The rinsate is collected into appropriate sampling containers, preserved, and analyzed for the same parameters as the associated environmental samples (excluding physical parameters such as pH). Equipment rinsate blanks will be shipped with the samples collected the same day. The frequency of equipment rinsate blank collection is usually 1 blank per decontamination event per type of equipment per property, or 1 per 40 field samples per property.

- MS/MSD Analyses - To evaluate the effect of the sample matrix on the analytical methodology, samples for MS/MSD analysis will be collected at the minimum rate of 1 per batch of 40 or fewer samples in a case. These samples are spiked in the laboratory with the analyte(s) of interest and analyzed at the same dilution as the original sample. The %R and the RPD for each spiked compound is then calculated. MS/MSD analyses will be used to evaluate accuracy (via %R) and precision (via RPD). MS/MSD frequency will be modified to reflect the field sampling effort and will be modified to a frequency of 1 per property or one per 40 samples per property, and should reflect different interval sampling depths (e.g. 0 – 1 ft, 1 – 3 ft, fill material depth, and native soils) and amount of recovery.

- MS/DUP Analyses - To evaluate the effect of the sample matrix on the analytical methodology, samples for MS/DUP analysis will be collected at the minimum rate of 1 per batch of 20 or fewer samples in a case. These samples are spiked in the laboratory with the analyte(s) of interest and analyzed at the same dilution as the original sample. The %R and the RPD for each spiked compound is then calculated. MS/DUP analyses will be used to evaluate accuracy (via %R) and precision (via RPD). MS/DUP frequency will be performed at a frequency of 1 per property or one per 20 samples per property, and should reflect different interval sampling depths (e.g. 0 – 1 ft, 1 – 3 ft, fill material depth, and native soils) and amount of recovery.

- Performance Evaluation Samples - Single-blind PE samples will be analyzed by the fixed laboratory at a frequency of one per matrix, per analytical parameter, per case, per laboratory. The PEs will be obtained from either the EPA Region I QA office or from a commercial vendor. The results of the laboratory analysis will be scored against the established limits. The PE sample is used to evaluate accuracy and bias. PE failure by the laboratory may trigger a Tier II validation.

13.2 Analytical Quality Control

Analytical quality control will include both field and fixed laboratory analytical QC checks. These include analysis of method blanks, reagent blanks, storage blanks, instrument blanks, laboratory duplicates, laboratory matrix spike and/or matrix spike duplicates, LCS, Laboratory Fortified Blanks (LFB), surrogates, and internal standards. Screening data differ from definitive data in the analytical methods, level of quality control performed and the degree of uncertainty associated with the sample results. In general, screening data has less rigorous QC and a greater degree of uncertainty. Only definitive data can be used by EPA for final site decisions documented in an Action Memorandum, Closure Memorandum, risk assessment, or site closure. Screening data are used for preliminary and intermediary site decisions.

All field screened samples will be analyzed using a confirmatory method at DAS and CLP laboratories. The following equation will be used to calculate the percent difference between screening and confirmatory data:

$$\text{\% Difference (Confirmatory Analysis)} = \frac{C_1 - C_2}{C_1} \times 100\%$$

C_1 = Concentration determined by Confirmatory Analysis
C_2 = Concentration determined by Screening Analysis

Table 13-2 of the *QAPP* describes the required type, frequency, QC criteria and associated corrective action for typical QC samples analyzed to support field screening and definitive analytical activities. Additional QC activities required by the analytical method or procedures will also be performed. Field and fixed laboratories will generate their own control limits and implement corrective actions when laboratory-specific control limits are not met. The use of laboratory-specific control limits will be evaluated and implemented on a project by project basis. The site-specific SAP will specify the type and number of QC samples that will be collected. In addition to tuning and calibration standards, the following QC samples will be analyzed:

- Laboratory duplicates
- Method and instrument blanks
- Laboratory Control Spikes, and Laboratory Control Spike Duplicates
- Laboratory fortified blank spiked at the quantitation limit
- Matrix spikes for inorganic and organic samples
- Matrix spike duplicates for organic samples
- PE samples
- Surrogate spikes for organic samples

13.3 Performance Evaluation Samples

Performance Evaluation (PE) samples will be analyzed for the following parameters:

- Aroclors - soil
- SVOC (PAHs) - soil
- Metals – soil

Refer to Attachment B of this SAP for a list of available PE samples. Based upon the number of PEs needed for a large sampling event, the QA unit should be consulted early in the planning stages to ensure that PE samples will be available.

14.0 Secondary Data Requirements

EPRB only uses data which have been directly generated during the site activity to support site decisions. EPRB does not use secondary data to make regulatory site decisions, such as whether a site meets National Contingency Plan (NCP) criteria for a removal response. However, historical site information is routinely used during preliminary assessments and site investigations to help define the scope of removal activities. When used, EPRB will ensure that these data are of known and documented quality.

Types of secondary data include:

- Historical site data - obtained from organization/facility records, and federal/state/local records pertaining to previous monitoring events, site assessments, investigations, site inspection reports, spill notification reports, legal actions, deeds and titles.
- Background information - obtained from organization/facility records, and federal/state/local records pertaining to site-specific industrial processes including hazardous manifests, MSD.
- Sheets, purchase orders (for chemicals), bill receipts, permits for discharge, etc.
- Geologic and topographic maps.
- Soil conservation surveys.
- Photographs, including aerial photographs.
- Literature file searches.

- Data bases (e.g., STORET, Dunn and Broadstreet, etc.).

The SAP will cite the title and date of the report, document, or data base from which any secondary data are obtained. The data generator, organizational affiliation, and data collection dates will also be documented.

14.1 Use of Secondary Data

Typically, secondary data will be used to develop a sampling and analysis plan or conceptual site model. A conceptual site model predicts how chemicals were released at a site, their transport mechanisms, and exposure routes for both ecological and human receptors. For example, historical data will be used to determine matrices, contaminants and other target analytes of concern and general geographic boundaries of the investigation site. Secondary data will also be used to make interim decisions such as where to sample and where to place monitoring wells.

14.2 Limitations on the Use of Secondary Data

Secondary data will be used at the discretion of the OSCs, taking into account the quality objectives of the current project and those under which the secondary data were collected. In general, the use of older historical data will be used with caution. Biased data can lead to decision errors; therefore the OSCs will assess the reliability and usefulness of previously collected data by reviewing associated quantitation limits, precision and accuracy QC information when time permits. Moreover, site conditions may have changed. If limitations on the use of secondary data exist, they will be documented in the appropriate reports.

15.0 DOCUMENTATION, RECORDS, AND DATA MANAGEMENT

Documentation, record keeping, and data management activities will be conducted in accordance with the *QAPP*, Section 15. A Data Information and Management Plan (DIMP) will be prepared by EPA and will discuss the collection, documentation, and use of the data collected.

Project information generated by START and ERT/SERAS will be documented in a format that is usable by project personnel. Project data and information will be tracked and managed from its inception in the field to its final storage area. Documents and records that will be managed include, but are not limited to, the following:

- Sample Collection Records (log books, Field Data Sheets, boring logs, bottle certification of cleanliness, field notes, data collection sheets, COC records, custody seals, sample tags, phone conversation records, airbills, and corrective action reports). Final boring logs will be prepared by START and ERT/SERAS for their respective soil borings.
- Field Analysis Records (COC, sample receipt forms/sample tracking forms, preparation and analysis forms and/or log books, tabulated data summary forms and raw data for field samples, standards, QC checks and QC samples).

- Project Data Assessment Records (field sampling audit checklists, field analytical audit checklists, fixed laboratory audit checklists, PE sample results, data validation reports, telephone conversation records, and corrective action reports).

Log books will be used for a variety of activities during the course of this project including, field notes; equipment maintenance, testing and inspection and calibration; analytical instrumentation maintenance, testing and inspection; and field testing instrumentation calibration and sample analysis.

Logbooks will be bound, field survey books or notebooks. Individual logbooks may be assigned to field personnel to a specific activity (e.g., Geoprobe® activities, instrument calibration, etc.). Log books will be properly identified with either the owner's name or site activity. Alternatively, when multiple or START personal log books are used, log book pages will be photocopied and included in the site file. All log book entries will be made in indelible ink and legibly written. Erasures are not permitted. If an incorrect entry is made, the error will be crossed out with a single strike mark, initialed, and dated. At a minimum the following information will be recorded in the logbook:

- Site name and location
- Dates (month/day/year) and times (military) of all entries made in logbooks/forms and user signatures
- Description of technical activity
- SOPs followed and description and explanation of any deviation from or modification to standard procedures
- Contractor and Subcontractor information

For specific field logbook procedures refer to Section 10.1.1.1 of the *QAPP*.

15.1 Field Laboratory Data Deliverables

Complete data packages will not be generated for field screening data. Laboratory data generated by the OEME field chemist will be retained by OEME and archived in accordance with standard procedures. Field analytical deliverables may include the following:

- Raw data (properly labeled with sample IDs, and any manual calculations)
- Daily Field QA/QC Form (summarizing duplicate results, LCS results and acceptable limits, and standard traceability form)
- Summary Table of results (listing sample ID, reporting units, and detection limits)

15.2 Fixed Laboratory Data Package Deliverables

All data packages obtained from fixed laboratories will require a Complete SDG File (CSF) inventory sheet, analytical narrative, EPA shipping/receiving documents and internal laboratory COC records, raw sample data, standards data, QC data, and miscellaneous data. The TAT for the data package will be 21 days from the date the samples were received by the laboratory.

The data reporting formats will be site-specific, and may include spreadsheets showing the laboratory results, text and tables summarizing analytical results, daily summary tables, and tables comparing screening results to laboratory results. Typical data reporting formats are discussed in the following sections.

The initial data deliverables from each laboratory will be evaluated at a Tier II level. The remainder of the analytical data will be validated at a Tier I plus level. Any additional SDGs in which there is a data anomaly or PE samples fail Action Low or High will be selected for a Tier II validation. The organic data validated at a Tier I plus level will be qualified using SEDD stage 2A l XML file that will be loaded into ADR software. The inorganic data validated at a Tier I plus level will be evaluated manually. The ADR or manual review will evaluate the following items:

- Holding Times
- Temperature upon sample receipt
- Reporting Limits
- LCS/LCSD recoveries and precision
- MS/MSD/Dup recoveries and precision
- Method Blanks
- Surrogates

START, qualified ID/IQ personnel, and/or subcontractors will perform the organic data validation. The Quality Assurance Technical Support (QATS) contractor for the EPA will perform the inorganic data validation. The validators for both the organic and inorganic samples will prepare data validation memoranda and spreadsheets summarizing the analytical data. The START PL and SL will review the data validation memoranda and spreadsheets of analytical data for each SDG and prepare a summary of the analytical results and tables summarizing the data. This information is generally included in Site File Memorandum.

Since a large number of samples will be collected and field screening will be conducted for PCBs and metals, the screening data will be incorporated into summary tables along with the confirmation data, allowing for a comparison of the screening and analytical data.

15.3 Data Handling and Management

Inorganic data packages will be tracked by the START Lead Chemist or his designee. Validation of the data packages is tracked on the Region I START III Data Package and Validation Report. Data packages are separated into organic and inorganic SDGs. The inorganic analyses will be performed by EPA CLP laboratories using a method modification to satisfy WSC-CAM-IIIA criteria, and will be validated by QATS personnel at the level and frequency previously noted. The inorganic SDGs (hard copy data) will be shipped from EPA Region I directly to QATS for validation. START will be notified by EPA Region I that data were received for a specific SDG and sent to QATS to ensure that data are tracked appropriately. QATS will provide Data Validation Memoranda to the following personnel: Region I RSCC (Christine Clark), the laboratory designated TPO (varies by CLP laboratory), and the EPA site OSC's Wing Chau, Marcus Holmes, and Sarah DeStefano. EPA personnel will notify START that the inorganic DV memorandum for a specific SDG has been received for tracking purposes.

The organic data packages will be received and tracked by START personnel. The organic analyses will be performed by DAS laboratories, and will be validated by START, ID/IQ personnel, and/or subcontractors. All data will be electronically reviewed with qualifications to Tier I data based solely upon the electronic review. The electronic data review will be performed by START personnel, qualified ID/IQ personnel, and/or subcontractors. The Lead Chemist will assign an SDG for validation to a START chemist (ID/IQ or subcontractor), who completes the Data Validation Memorandum and the data validation worksheets per the deliverables requirement of the Region I, *EPA New England Data Validation Functional Guidelines for Evaluating Environmental Analyses*, December 1996.

Upon receipt of organic data packages data summary tables will be created by START staff or ID/IQ personnel. The organic data packages will be evaluated by START and EPA to determine if any action levels have been exceeded. These data summary tables display sample results for multiple samples on a single page. Data summary tables are matrix- and level-specific, and are included as attachments to the Data Validation Memorandum. The START chemist verifies the information presented on the data summary tables. Verified data include, but are not limited to, EPA and Laboratory Sample IDs, Station Location, SQLs/SDLs (sample results adjusted for sample size and percent moisture), dilutions, and contract required quantitation limits (CRQLs). Data qualifiers are applied by the Data Validator to the sample data displayed on the data summary tables during Tier II validation or as the result of the enhanced Tier I validation. The Data Validation Memorandum and the data summary tables are stored in the START local area network (LAN).

The Data Validation Memorandum and the data validation worksheets completed by the START Data Validator or ID/IQ personnel are assigned to an experienced START chemist for technical review. The Technical Reviewer discusses with the Data Validator any revisions to the Data Validation Memorandum as well as any corrections and/or clarifications. After the technical review is completed, the Data Validation Memorandum and associated deliverables go through a final review. The START Lead Chemist (or designee) conducts the final review prior to delivery of the completed Data Validation Memorandum to the EPA RSCC. Copies of the finalized Data Validation Memorandum are distributed to the EPA OSC.

15.4 Data Tracking and Control

Data generated by the OEME and ERT/SERAS field laboratories will be tracked by the START SL. Data generated by a fixed laboratory will be tracked by the Lead Chemist on the Region I START III Data Package and Validation Tracking Report.

In order to safeguard electronic data generated in the field, START personnel utilizing laptop computers at off-site locations will back up all files on at least a daily basis. While working at off-site locations, files will be backed up on a flash drive. The flash drives will be scanned for viruses before use on the laptop computers and especially before copying to the LAN. Flash drives will be kept in a secure location, separate from the laptop computers. Files generated in the field will be downloaded from laptop computers to the LAN when personnel return to the START Office.

15.5 Report/Deliverable Identification and Format

Each report and deliverable to EPA produced by START is assigned a unique five-digit Document Control Number (DCN) for tracking and identification purposes. A DCN log book is maintained by the START clerical staff that identifies each deliverable by document type (letter, memorandum, report, or other), task number, START member preparing the document, document submittal date, document description, EPA personnel receiving the document, document file name, and DCN. DCNs for Removal Program reports and deliverables are designated by R-xxxx.

15.6 Project Records

START will use its records management system to maintain, collect, and retrieve records. Project records will be maintained in the project TDD directory on the LAN system. Removal Program TDD files are established according to Region I START III protocols. A file folder, listing the TDD number and project name, will be created for each TDD (and subsequent TDD amendments) issued by the EPA PO or CO. Overall project records will include, but not limited to, the following:

- Technical Directive Documents (TDDs)
- Task Orders (TOs)
- Health and Safety Plan (HASP)
- Sampling and Analysis Plan (SAP)
- Photographs
- Field Notes, Drawings, Tabulations, etc
- Boring logs
- Correspondence (sent/received)
- Data Validation Memoranda
- Maps/Graphics
- Sample Documentation (chain-of-custody, airbills, shipping tags, cards, etc.)
- Analytical Results (raw data
- Phone Conversation Records
- Electronic Data Files (CDs, diskettes, etc.)
- Reports (residential, Assessment, etc.)

The START Computer Officer maintains the computer database and has controls in place to back up Removal electronic files daily.

16.0 QUALITY ASSURANCE ASSESSMENTS AND CORRECTIVE ACTIONS

QA assessments are used to check that data collection activities are being conducted as planned, and will generate data that can support site decisions. The type, frequency and number of QA assessment activities performed will be described in the site-specific SAP. In response to QA assessment findings, timely and effective corrective actions will be implemented to ensure compliance with the SAP.

QA assessments for the OEME mobile laboratory will be conducted by regional QA Unit personnel and OEME-EIA chemists in accordance with the *Region 1, EPA New England England Assessment Program*, February 2002. To initiate a QA assessment the OSCs will submit an electronic Request for Assistance (RFA) Form to the RQAM, who will then forward it to the QA Assessment Coordinator. The QA Assessment Coordinator will contact the OSCs to determine the type of QA assessment needed and to schedule a mutually agreed upon date. A Lead Assessor is assigned to prepare a QA assessment plan and checklist, conduct the QA assessment, and provide verbal debriefings and document findings and response recommendations in a report to the OSC. The OSCs are responsible for ensuring that all deviations from the *QAPP* and critical deficiencies are addressed in a timely manner.

A minimum of one field analytical Technical System Audits (TSAs) will be performed by EPA for all projects that involve generation of field analytical measurements. Generally, a review of the field analytical procedures is combined with a field sampling TSA, described above. The following items will be checked:

- Field analytical technician personnel and training
- Analytical methods and procedures
- Analytical instrumentation and supplies
- Data handling, tracking and reporting
- Data verification and review
- Compliance with SOPs

Findings will be documented in a report to management. Corrective actions in response to audit findings will be initiated, implemented and checked according to the *QAPP*, Section 16.

Self-assessments will be conducted for START and its subcontractors, and prompt and effective corrective actions will be implemented if necessary to ensure that site activities are conducted as described in the approved site-specific SAP. A Site File Memorandum will be generated discussing results of the assessment and corrective actions taken. The Site File Memorandum will be submitted to the PO and OSCs.

16.1 Corrective Action Process

The corrective action process provides for detection and correction of deficiencies and deviations that may adversely impact data quality. Corrective action measures will address the root cause of the problem and focus on preventing recurrences. The following describes the steps in initiating, documenting, and implementing corrective actions and the personnel responsible.

Corrective actions may be initiated by the OSCs, or their designee, upon receipt of a formal assessment report or when a deviation or deficiency is discovered while performing data activities. START personnel are responsible for identifying and documenting deficiencies noted in the work of organizational personnel or their subcontractors and for taking immediate steps to initiate corrective actions. START will report deficiencies and corrective actions in a Site File Memorandum that will be submitted to the PO and OSC. The corrective action process is further discussed in the *QAPP*, Section 16.

17.0 Reports to Management

Project reports ensure that the OSCs and EPRB management are kept informed and periodically updated on the status of the on-going data collection activity, site decisions, and results of QA activities. Typical QA reports that will be generated include are listed in Table 17-1 of the *QAPP*. All QA and other reports to management are retained in the site file and subsequently sent to the regional Records Center where they are compiled and maintained in accordance with the *File Structure Guidance for Region 1 Superfund NPL Site Files, Superfund Removal Site Files and Federal Facility Site Files,* September 1997.

QA Management Reports will be prepared by START to ensure that START management and appropriate EPA representatives (OSCs) are periodically updated on the project status. These reports will include but are not limited to:

- Verbal status updates

- Daily sampling summaries
- Site File Memoranda
- Removal Assessment Reports
- Data Validation Memoranda

18.0 DATA REVIEW STEP 1: Verification

In order to ensure defensible site decisions, data will be reviewed for accuracy and precision prior to use. Data review includes three sequential steps (verification, validation and data usability assessment) and results in data of known and documented quality. During data review, sample results are qualified as either accepted or estimated, or they are rejected. Rejected data will not be used in making site decisions. Data qualifications and limitations on the use of the data will be documented in data validation reports and other reports to management. The TAT for data validation packages will be 21 days from the time the data are receive from the laboratory.

Data collection activities, including sample collection and data generation, will be verified in accordance with the *QAPP*, Section 18.

18.1 Verification Procedures

Verification is the process of checking to make sure each step of the data collection activity is complete and conforms to planned and contractual requirements. Typical verification activities performed during an EPRB project and responsible entities are listed in Table 18-1 of the *QAPP*. Most verification checks for time-critical removal activities will be accomplished during routine contractor oversight by the OSCs. Corrective actions will be initiated as soon as possible to ensure data usability. Items that routinely undergo verification may also be selected for formal assessments based on the project quality objectives, refer to Section 16, of the *QAPP*.

Qualified staff (e.g., chemists and others) on the START staff are responsible for the external verification and validation of fixed laboratory analytical data in accordance with the validation criteria set forth in the *Region I, EPA-New England Data Validation Functional Guidelines for Evaluating Environmental Analyses, December 1996.* These guidelines specify a tiered system of data validation that allows the user to select a level of validation appropriate to the project quality objectives.

19.0 DATA REVIEW STEP 2: Validation

Data validation, the second step in the data review process, extends the qualification of data beyond completeness and contractual compliance to determine the quality of a specific data set. Data validators use QC sample results to evaluate the precision, accuracy and sensitivity of the reported data set. The validation process results in data being accepted, qualified, or rejected. Sample results are flagged accordingly.

The START Lead Chemist will assign validation of individual organic data packages to chemists on the staff. Inorganic data validation will be conducted by an ERT subcontractor, QATS. The START Lead Chemist is responsible for data validation performed by START personnel, ID/IQ personnel, and/or subcontractors used to help support the START contract, and documents review of the Data Validation Memorandum and data tables, with a signature on the Data Validation Memorandum. All organic data generated by the Region I START III office will be reviewed by a qualified START member.

Data generated by a fixed laboratory will be reviewed in accordance with the *Region I, EPA-New England Data Validation Functional Guidelines for Evaluating Environmental Analyses.* The DQOs will state which level (Tier) validation will be required. The results of the validation will be summarized in a Data Validation Memorandum, and will be reviewed by the Lead Chemist for compliance with the *Region I, EPA-New England Data Validation Functional Guidelines for Evaluating Environmental Analyses*, *December 1996.* The data validator and Lead Chemist shall document the review of the sample data by signing and dating the Data Validation Memorandum and worksheets.

A Tier II data validation will be performed for a minimum 10% of the data for this project and will be required for all initial laboratory submittals. Tier II validation requires that calibrations, QC samples and PE sample results be assessed and applied to the data set. A Tier II validation results in qualification flags being applied to the data. A Data Validation Report will be prepared by the validator and provided to the OSCs. Data will also be validated at a Tier I plus level. Tier I plus level validation requires package completeness review, evaluation of QC items found in section 15.2, and the evaluation of the sample PE results. A Tier I plus validation results in the application of qualification flags to the data, and may trigger a Tier II validation as directed by the OSCs due to data anomalies, and/or PE failure. Refer to table 19-1 of the *QAPP* for tier level required for different types of projects. All site-specific tier modifications will be noted in the SAP. The TAT for data validation packages will be 21 days from the time the data are received from the laboratory.

Data will be validated in accordance with the *QAPP*, Section 19.

20.0 DATA REVIEW STEP 3: Data Usability Assessment

20.1 Assessing Data Usability

Prior to use, the OSCs will determine whether site data can support defensible site decisions. This usability determination is the final step in data review and involves assessing all the collected data against the project quality objectives that were initially set for sensitivity, precision, accuracy/bias, comparability, completeness and representativeness. Specifically, the OSC will determine if the right chemical, biological, radiological and physical parameters and matrices were tested, sufficient amount of data were collected, and whether data were sufficiently sensitive and representative to support a scientifically-based decision regarding the site. Data deficiencies will be weighed against project objectives, and a determination as to the usability of the data will be made and documented in a final report in accordance with the NCP. The need for additional sampling and/or changes in the sample design, sampling protocol, analytical protocol, and/or associated QC procedures for subsequent data collection activities will be described. The following steps will be performed: Data will be reviewed with respect to sampling design. Data anomalies will be investigated. The OSCs will determine if the data make sense from the point of view of the sample locations, background sample data, and previous use of the site.

- A preliminary review of field and QC sample results will be performed. Data validation and audit reports will be reviewed. The OSCs will determine whether validation and/or audit reports indicate any limitations in the use of field data.

- The matrices and parameters that were sampled will be reviewed. The OSCs will determine whether the appropriate affected matrices were sampled and the right type (parameters) of data were collected (i.e., chemical, biological, physical and/or radiological parameters)

- A completeness review will be performed, refer to "Completeness" on Table 20-1. The OSCs will determine if sufficient data were collected to support an Action or Closure memorandum and will determine whether critical data gaps require additional sampling .

- Statistical tests will be applied by data validators, data reviewers or contractors to determine whether the data quality indicators (accuracy, precision and sensitivity) meet measurement performance criteria set for project, refer to Table 20-1 of the *QAPP* for formulae that will be used to evaluate precision, accuracy/accuracy and sensitivity. If applicable, field and QC data will be tabulated, mapped and/or graphed to show trends and localized areas of contamination.

The OSCs, in consultation with MassDEP will determine whether site data adequately represents current site conditions to support decision-making. Conclusions will be drawn from the data and site decisions made.

The extent of the data usability assessment will depend on the exigencies and complexity of the project. Generally, data usability evaluations for EPRB activities will be summarized in a final report, as described in Section 17.1 of the *QAPP*

For certain high-profile response actions including incidents of regional, national or international significance, formal data assessment reports will be generated within 6 months of the response. These reports will outline the steps taken to evaluate the data and the conclusions drawn from that process.

When necessary, contractor support will be obtained to statistically analyze site data. The following software may be used to analyze and interpret data:

- Geostatistical Environmental Assessment Software (GeoEAS) is a collection of interactive software tools for performing two-dimensional geostatistical analyses of spatially distributed data.

- DataQUEST is designed to provide a quick and easy way for managers and analysts to perform baseline data quality assessment. The goal of the system is to allow those not familiar with standard statistical packages to review data and assumptions that are important in implementing the formal DQO Process.

- ASSESS is a software tool designed to calculate variances for quality assessment samples in a measurement process. The software performs the following functions; transforming the entire data set; producing scatter plots of the data; displaying error bar graphs that demonstrate the variance, and generating reports of the results and header information.

- S PLUS, a commercially available statistical software program, designed to calculate variances for quality assessment samples in a measurement process. The software performs the following functions; transforming the entire data set; producing scatter plots of the data; displaying error bar graphs that demonstrate the variance; and generating reports of the results and header information.

20.2 Reconciling Data with User Needs

The OSCs will meet with technical personnel including hydrogeologists, risk assessors, ATSDR, and QA personnel to determine if the results of the data collection activity will support defensible actions. Typically, most final determinations regarding data usability will be made by the OSC with concurrence from their immediate supervisor. Data evaluation and determination of limitations of the data will be described in a final report.

The data obtained during this investigation will be evaluated to determine whether they satisfy the DQOs for the project. The validation process determines if the data satisfy the QA criteria. After the data pass the data validation process, comparison of the results with the DQOs is done. For example, if the DQOs specify that the data are to be compared to MCP cleanup criteria, the results can then be used to determine whether additional sampling is necessary to complete this investigation.

There will be times when the data do not meet the intended DQOs. These situations may be due to failure of the laboratory to adjust the extraction weight on high-moisture-content soil; failure of the detection limits of secondary contaminants of concern to meet the Action Limits; or poor correlation between field screening and laboratory results. In these situations, START will discuss with the EPA OSCs corrective action. These actions may include:

- Resampling for all or some of the parameters.
- Preparing a technical memorandum to the site file, detailing limitations to the data.
- Validating the data at a higher tier level to better qualify the results.
- Preparing a technical memorandum determining the bias of field results.

Statistical evaluation may be beneficial for Removal sites involving extensive environmental sampling and analysis. Confirmation samples are typically sent to a fixed laboratory for analysis, at a 10% frequency. Field analytical results can then be compared with fixed laboratory confirmation results to determine analytical bias. For these extensively sampled Removal sites, the site-specific SAP shall address the mathematical and/or statistical criteria for evaluating screening and confirmatory data comparability. All samples that undergo field screening analyses will have corresponding split samples analyzed at a fixed off-site laboratory.

SAP Table 1 - SAP Revision Form

Site: Parker Street Waste Site, New Bedford, Massachusetts
OSCs: Wing Chau, Marcus Holmes, and Sarah DeStefano

Date	Rev. #	Proposed Change to SAP/*QAPP*	Reason for Change of Scope/Procedures	SAP Section Superseded	Requested By	Approved By

SAP Table 2 - Contaminants of Concern
(Reference Limit and Evaluation Table)

1) Complete separate table for each matrix. 2) List all Contaminants of Concern that will be analyzed for the project.
3) Identify any Project Action Limits/Removal Action Limits (RALs). 4) List the Project Quantitation Limits/Reporting Limits required to meet project objectives.
5) List the MDLs and QLs of the published method and the MDLs and QLs achievable by the laboratory.
6) Check to make sure that the achievable laboratory QLs are less than or equal to the Project Quantitation Limits and that Project Quantitation Limits are at least two to five times less than the Project Action Levels. (Refer to *QAPP* Section 6 for guidance.)

Matrix: Soil
Fixed Laboratory Method/SOP: CAM-VA (Rev 1 9/14/2009)/ EPA-SW846 method 8082A

Contaminant of Concern	**Project Action Level (Units) (wet or dry weight) or Removal Action Limits (RALs)**	**Project Quantitation Limit (PQLs) (Units) (wet or dry weight)** *PQLs should be 3-10 times less than the RALs*	**Analytical Method**		**Achievable Laboratory Limits**	
			Published Method MDLs[1]	Published Method QLs[1]	Laboratory MDLs[2]	Laboratory QLs[2] *Lab QLs should be less than or equal to the PQLs*
PCB Aroclors 1016 1221 1232 1242 1248 1254 1260 1262 1268	2 milligrams per Kilogram (mg/Kg)	33 micrograms per Kilogram (µg/Kg)	5 – 20 µg/Kg	33 µg/Kg	To Be Determined. Will vary by Laboratory	33 µg/Kg

SAP Table 2 - Contaminants of Concern (Continued)
(Reference Limit and Evaluation Table)

Matrix: Soil
Fixed Laboratory Method/SOP: CAM-IIB (Rev 1 9/9/2009)/ EPA-SW846 method 8270D

Contaminant of Concern	Project Action Level (Units) (wet or dry weight) or Removal Action Limits (RALs)	Project Quantitation Limit (PQLs) (Units) (wet or dry weight) *PQLs should be 3-10 times less than the RALs*	Analytical Method		Achievable Laboratory Limits	
			Published Method MDLs[1]	Published Method QLs[1]	Laboratory MDLs[2]	Laboratory QLs[2] *Lab QLs should be less than or equal to the PQLs*
Semivolatile Organic Compounds (PAH's) Naphthalene 2-Methylnaphthalene Acenaphthylene Acenaphthene Fluorene Phenanthrene Anthracene Fluoranthene Pyrene Benzo (a) anthracene Chrysene Benzo (b) fluoranthene Benzo (k) fluoranthene Benzo (a) pyrene Indeno (1,2,3-cd) pyrene Dibenzo (a,h) anthracene Benzo (g,h,i) perylene	700 micrograms per Kilogram (µg/Kg) to 1000 milligrams per Kilogram (mg/Kg)	330 µg/Kg	35 – 92 µg/Kg	330 µg/Kg	To Be Determined. Will vary by Laboratory	330 µg/Kg

SAP Table 2 - Contaminants of Concern (Completed)
(Reference Limit and Evaluation Table)

Matrix: Soil
Fixed Laboratory Method/SOP: ILM05.4 ICP-AES modification number xxxxxx

Contaminant of Concern	**Project Action Level (Units) (wet or dry weight)** **or** **Removal Action Limits (RALs)**	**Project Quantitation Limit (PQLs)** **(Units) (wet or dry weight)** *PQLs should be 3-10 times less than the RALs*	**Analytical Method**		**Achievable Laboratory Limits**	
			Published Method MDLs[1]	Published Method QLs[1]	Laboratory MDLs[2]	Laboratory QLs[2] *Lab QLs should be less than or equal to the PQLs*
Metals						
Arsenic	20 mg/Kg	1 mg/Kg	0.5 mg/Kg	1 mg/Kg		1 mg/Kg
Barium	1000 mg/Kg	20 mg/kg	0.16 mg/Kg	20 mg/kg	To Be	20 mg/kg
Cadmium	2mg/Kg	0.5 mg/kg	0.05 mg/Kg	0.5 mg/kg	Determined. Will	0.5 mg/kg
Chromium	30 mg/Kg	1 mg/kg	0.16 mg/Kg	1 mg/kg	vary by	1 mg/kg
Lead	300 mg/Kg	1 mg/kg	0.34 mg/Kg	1 mg/kg	CLP Laboratory	1 mg/kg

[1]Analytical method MDLs and QLs documented in validated methods. QLs are usually 3-10 times higher than the MDLs.
[2]Achievable MDLs and QLs are limits that an individual laboratory can achieve when performing a specific analytical method.

Figure 6-1: Relationship of Method Detection Limits, Quantitation Limits and Action Levels

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MDL QL Action Level

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Statistical Laboratory Method Detection Limit (MDL) determined to be the laboratories' "best case" sensitivity for a given analytical Method.

Quantitation Limit (QL) should be:
- 3 - 10 times lower than AL
- 3 - 10 times higher than MDL
- Verified by the analysis of a standard at that concentration in the calibration curve.

Action Level (AL) may be based on regulatory standard, a referenced-based Clean up goal, technological limitation, etc.

SAP Table 2 - Contaminants of Concern
(Reference Limit and Evaluation Table)

1) Complete separate table for each matrix. 2) List all Contaminants of Concern that will be analyzed for the project.
3) Identify any Project Action Limits/Removal Action Limits (RALs). 4) List the Project Quantitation Limits/Reporting Limits required to meet project objectives.
5) List the MDLs and QLs of the published method and the MDLs and QLs achievable by the laboratory.
6) Check to make sure that the achievable laboratory QLs are less than or equal to the Project Quantitation Limits and that Project Quantitation Limits are at least two to five times less than the Project Action Levels. (Refer to *QAPP* Section 6 for guidance.)

Matrix: Sediment
Fixed Laboratory Method/SOP: CAM-VA (Rev 1 9/14/2009)/ EPA-SW846 method 8082A **(Final Volume 2mL)**

Contaminant of Concern	**Project Action Level (Units) (wet or dry weight) or Removal Action Limits (RALs)**	**Project Quantitation Limit (PQLs) (Units) (wet or dry weight)** *PQLs should be 3-10 times less than the RALs*	**Analytical Method**		**Achievable Laboratory Limits**	
			Published Method MDLs[1]	Published Method QLs[1]	Laboratory MDLs[2]	Laboratory QLs[2] *Lab QLs should be less than or equal to the PQLs*
PCB Aroclors 1016 1221 1232 1242 1248 1254 1260 1262 1268	60 micrograms per Kilogram (µg/Kg)	7 micrograms per Kilogram (µg/Kg)	1 – 4 µg/Kg	7 µg/Kg	To Be Determined. Will vary by Laboratory	7 µg/Kg

SAP Table 2 - Contaminants of Concern (Completed)
(Reference Limit and Evaluation Table)

Matrix: Sediment
Fixed Laboratory Method/SOP: ILM05.4 ICP-AES modification number xxxxxx

Contaminant of Concern	Project Action Level (Units) (wet or dry weight) or Removal Action Limits (RALs)	Project Quantitation Limit (PQLs) (Units) (wet or dry weight) *PQLs should be 3-10 times less than the RALs*	Analytical Method		Achievable Laboratory Limits	
			Published Method MDLs[1]	Published Method QLs[1]	Laboratory MDLs[2]	Laboratory QLs[2] *Lab QLs should be less than or equal to the PQLs*
Metals						
Arsenic	9.8 mg/Kg	1 mg/Kg	0.5 mg/Kg	1 mg/Kg		1 mg/Kg
Barium	None	20 mg/kg	0.16 mg/Kg	20 mg/kg	To Be	20 mg/kg
Cadmium	0.99 mg/Kg	0.5 mg/kg	0.05 mg/Kg	0.5 mg/kg	Determined. Will	0.5 mg/kg
Chromium	43.4 mg/Kg	1 mg/kg	0.16 mg/Kg	1 mg/kg	vary by	1 mg/kg
Lead	35.8 mg/Kg	1 mg/kg	0.34 mg/Kg	1 mg/kg	CLP Laboratory	1 mg/kg

[1]Analytical method MDLs and QLs documented in validated methods. QLs are usually 3-10 times higher than the MDLs.
[2]Achievable MDLs and QLs are limits that an individual laboratory can achieve when performing a specific analytical method.

Figure 6-1: Relationship of Method Detection Limits, Quantitation Limits and Action Levels

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MDL QL Action Level

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0

Statistical Laboratory Method Detection Limit (MDL) determined to be the laboratories' "best case" sensitivity for a given analytical Method.

Quantitation Limit (QL) should be:
- 3 - 10 times lower than AL
- 3 - 10 times higher than MDL
- Verified by the analysis of a standard at that concentration in the calibration curve.

Action Level (AL) may be based on regulatory standard, a referenced-based Clean up goal, technological limitation, etc.

SAP Table 2 - Contaminants of Concern (Continued)
(Reference Limit and Evaluation Table)

Matrix: Sediment
Fixed Laboratory Method/SOP: CAM-IIB (Rev 1 9/9/2009)/ EPA-SW846 method 8270D-(**SIM**)

Contaminant of Concern	**Project Action Level (Units) (wet or dry weight) or Removal Action Limits (RALs)**	**Project Quantitation Limit (PQLs) (Units) (wet or dry weight)** *PQLs should be 3-10 times less than the RALs*	**Analytical Method**		**Achievable Laboratory Limits**	
			Published Method MDLs[1]	Published Method QLs[1]	Laboratory MDLs[2]	Laboratory QLs[2] *Lab QLs should be less than or equal to the PQLs*
Semivolatile Organic Compounds (PAH's)						
Naphthalene	**176 µg/Kg**					
2-Methylnaphthalene	Not Listed					
Acenaphthylene	Not Listed					
Acenaphthene	Not Listed					
Fluorene	**77 µg/Kg**					
Phenanthrene	**204 µg/Kg**					
Anthracene	**70 µg/Kg**					
Fluoranthene	**423 µg/Kg**	3.3 µg/Kg	0.5-2.5 µg/Kg	3.3 µg/Kg	To Be Determined. Will vary by Laboratory	3.3 µg/Kg
Pyrene	**195 µg/Kg**					
Benzo (a) anthracene	**108 µg/Kg**					
Chrysene	**166 µg/Kg**					
Benzo (b) fluoranthene	Not Listed					
Benzo (k) fluoranthene	Not Listed					
Benzo (a) pyrene	**150 µg/Kg**					
Indeno (1,2,3-cd) pyrene	Not Listed					
Dibenzo (a,h) anthracene	**33 µg/Kg**					
Benzo (g,h,i) perylene	Not Listed					

SAP Table 3 - Sampling Locations and Sampling and Analysis Summary

Site: Parker Street Waste Site, New Bedford, Massachusetts
OSCs: Wing Chau, Marcus Holmes, and Sarah DeStefano

Sampling Location[1]	Location ID Number[2]	Matrix	Depth (Units)	Analytical Parameter	Number of Samples (Identify field duplicates and replicates)	Sampling SOP (SAP Section 9.1)	Sample Volume	Containers (Number, size and type)[3]	Preservation Requirements (chemical, temperature, light protected)	Maximum Holding Time (preparation/ analysis)
P-xx-SB-xx-A	TBD	Soil	0 – 1 feet	PCB Aroclors	454 + 23 Dupl	EPRB SOP-001	8 ounces	1 8-oz glass amber jar	Ice	NA/40 Days from extraction
P-xx-SB-xx-B	TBD	Soil	1 – 3 feet	PCB Aroclors	454 + 23 Dupl	EPRB SOP-001	8 ounces	1 8-oz glass amber jar	Ice	NA/40 Days from extraction
P-xx-SB-xx-C	TBD	Soil	TBD (Fill material)	PCB Aroclors	454 + 23 Dupl	EPRB SOP-001	8 ounces	1 8-oz glass amber jar	Ice	NA/40 Days from extraction
P-xx-SB-xx-D	TBD	Soil	TBD (Native Soil - Top)	PCB Aroclors	454 + 23 Dupl	EPRB SOP-001	8 ounces	1 8-oz glass amber jar	Ice	NA/40 Days from extraction
P-xx-SB-xx-E	TBD	Soil	TBD (Native Soil - Bottom)	PCB Aroclors	454 + 23 Dupl	EPRB SOP-001	8 ounces	1 8-oz glass amber jar	Ice	NA/40 Days from extraction
P-xx-SB-xx-A	TBD	Soil	0 – 1 feet	SVOCs (PAHs)	454 + 23 Dupl	EPRB SOP-001	8 ounces	1 8-oz glass amber jar	Ice	14 Days/40 Days
P-xxSB-xx-B	TBD	Soil	1 – 3 feet	SVOCs (PAHs)	454 + 23 Dupl	EPRB SOP-001	8 ounces	1 8-oz glass amber jar	Ice	14 Days/40 days
P-xx-SB-xx-C	TBD	Soil	TBD (Fill material)	SVOCs (PAHs)	454 + 23 Dupl	EPRB SOP-001	8 ounces	1 8-oz glass amber jar	Ice	14 Days/40 Days
P-xx-SB-xx-D	TBD	Soil	TBD (Native Soil - Top)	SVOCs (PAHs)	454 + 23 Dupl	EPRB SOP-001	8 ounces	1 8-oz glass amber jar	Ice	14 Days/40 Days
P-xx-SB-xx-A	TBD	Soil	0 – 1 feet	Metals	454 + 23 Dupl	EPRB SOP-001	4 ounces	1 4-oz glass amber jar	Ice	180 Days
P-xx-SB-xx-B	TBD	Soil	1 – 3 feet	Metals	454 + 23 Dupl	EPRB SOP-001	4 ounces	1 4-oz glass amber jar	Ice	180 Days
P-xx-SB-xx-C	TBD	Soil	TBD (Fill material)	Metals	454 + 23 Dupl	EPRB SOP-001	4ounces	1 4-oz glass amber jar	Ice	180 Days
P-xx-SB-xx-D	TBD	Soil	TBD (Native Soil - Top)	Metals	454 + 23 Dupl	EPRB SOP-001	4ounces	1 4-oz glass amber jar	Ice	180 Days
P-xx-SB-xx-E	TBD	Soil	TBD (Native Soil - Bottom)	Metals	454 + 23 Dupl	EPRB SOP-001	4 ounces	1 4-oz glass amber jar	Ice	180 Days

Notes:

1) Sampling Locations are designated in generic terms in this table. There will be between 347 - 425 boring locations. For a complete listing of sample boring locations see Table in Section 9.0 of this SAP.
2) CLP sample numbers will be assigned to each sample in the field.
3) An additional 8-0z glass amber jar will be collected at the A and B interval for all locations to be archived by MassDEP for potential future dioxin analysis.

SAP Table 3A - Sampling Locations and Sampling and Analysis Summary

Site: Parker Street Waste Site, New Bedford, Massachusetts
OSCs: Wing Chau, Marcus Holmes, and Sarah DeStefano

Sampling Location[1]	Location ID Number[2]	Matrix	Depth (Units)	Analytical Parameter	Number of Samples (Identify field duplicates and replicates)	Sampling SOP (SAP Section 9.1)	Sample Volume	Containers (Number, size and type)[3]	Preservation Requirements (chemical, temperature, light protected)	Maximum Holding Time (preparation/ analysis)
WETL-SB-01-A	TBD	Sediment	0 – 0.5 feet	PCB Aroclors	19 + 1 Dupl	EPRB SOP-003	8 ounces	1 8-oz glass amber jar	Ice	NA/40 Days
WETL-SB-01-B	TBD	Sediment	0.5 – 2 feet	PCB Aroclors	19 + 1 Dupl	EPRB SOP-003	8 ounces	1 8-oz glass amber jar	Ice	NA/40 Days
WETL-SB-01-C	TBD	Sediment	2 – 3 feet	PCB Aroclors	19 + 1 Dupl	EPRB SOP-003	8 ounces	1 8-oz glass amber jar	Ice	NA/40 Days
through										
WETL-SB-19-A	TBD	Sediment	0 – 0.5 feet	PCB Aroclors	19 + 1 Dupl	EPRB SOP-003	8 ounces	1 8-oz glass amber jar	Ice	NA/40 Days
WETL-SB-19-B	TBD	Sediment	0.5 – 2 feet	PCB Aroclors	19 + 1 Dupl	EPRB SOP-003	8 ounces	1 8-oz glass amber jar	Ice	NA/40 Days
WETL-SB-19-C	TBD	Sediment	2 – 3 feet	PCB Aroclors	19 + 1 Dupl	EPRB SOP-003	8 ounces	1 8-oz glass amber jar	Ice	NA/40 Days
WETL-SB-01-A	TBD	Sediment	0 – 0.5 feet	SVOC (PAH)	19 + 1 Dupl	EPRB SOP-003	8 ounces	1 8-oz glass amber jar	Ice	14/40 Days
WETL-SB-01-B	TBD	Sediment	0.5 – 2 feet	SVOC (PAH)	19 + 1 Dupl	EPRB SOP-003	8 ounces	1 8-oz glass amber jar	Ice	14/40 Days
WETL-SB-01-C	TBD	Sediment	2 – 3 feet	SVOC (PAH)	19 + 1 Dupl	EPRB SOP-003	8 ounces	1 8-oz glass amber jar	Ice	14/40 Days
through										
WETL-SB-19-A	TBD	Sediment	0 – 0.5 feet	SVOC (PAH)	19 + 1 Dupl	EPRB SOP-003	8 ounces	1 8-oz glass amber jar	Ice	14/40 Days
WETL-SB-19-B	TBD	Sediment	0.5 – 2 feet	SVOC (PAH)	19 + 1 Dupl	EPRB SOP-003	8 ounces	1 8-oz glass amber jar	Ice	14/40 Days
WETL-SB-19-C	TBD	Sediment	2 – 3 feet	SVOC (PAH)	19 + 1 Dupl	EPRB SOP-003	8 ounces	1 8-oz glass amber jar	Ice	14/40 Days
WETL-SB-01-A	TBD	Sediment	0 – 0.5 feet	Metals	19 + 1 Dupl	EPRB SOP-003	4 ounces	1 4-oz glass amber jar	Ice	180 Days
WETL-SB-01-B	TBD	Sediment	0.5 – 2 feet	Metals	19 + 1 Dupl	EPRB SOP-003	4 ounces	1 4-oz glass amber jar	Ice	180 Days
WETL-SB-01-C	TBD	Sediment	2 – 3 feet	Metals	19 + 1 Dupl	EPRB SOP-003	4 ounces	1 4-oz glass amber jar	Ice	180 Days
through										
WETL-SB-19-A	TBD	Sediment	0 – 0.5 feet	Metals	19 + 1 Dupl	EPRB SOP-003	4 ounces	1 4-oz glass amber jar	Ice	180 Days
WETL-SB-19-B	TBD	Sediment	0.5 – 2 feet	Metals	19 + 1 Dupl	EPRB SOP-003	4 ounces	1 4-oz glass amber jar	Ice	180 Days
WETL-SB-19-C	TBD	Sediment	2 – 3 feet	Metals	19 + 1 Dupl	EPRB SOP-003	4 ounces	1 4-oz glass amber jar	Ice	180 Days

Notes:

1) Sampling Locations are designated in generic terms in this table. There will be between 347 - 425 boring locations. For a complete listing of sample boring locations see Table in text.
2) CLP sample numbers will be assigned to each sample in the field.
3) An additional 8-0z glass amber jar will be collected at the A and B interval for all locations to be archived by MassDEP for potential future dioxin analysis.

SAP Table 4 - Field Quality Control Summary

Site: Parker Street Waste Site, New Bedford, Massachusetts
OSCs: Wing Chau, Marcus Holmes, and Sarah DeStefano

Matrix	Analytical Parameter	Analytical Method/ SOP Reference	No. of Sampling Locations	No. of Field Duplicate Pairs	Organic		Inorganic		No. of VOA Trip Blanks	No. of Equip. Blanks	No. of Confirmatory Samples	No. of PE Samples	Total No. of Samples to Lab
					No. of MS	No. of MSD	No. of Duplicates	No. of MS					
Soil	PCB Aroclors	CAM-VA (Rev 1 9/14/2009)/ EPA-SW846 method 8082A	1,735 to 2,125	43- 54*	43-54**	43-54**	-----	-----	-----	43- 54*	-----	87 - 107	1,951 – 2,394
Soil	SVOCs (PAHs)	CAM-IIB (Rev 1 9/9/2009)/ EPA-SW846 method 8270D	1,735 to 2,125	43- 54*	43-54**	43-54**	-----	-----	-----	43- 54*	-----	87 - 107	1,951 – 2,394
Soil	Metals	ILM05.4 ICP-AES modification number xxxxxx	1,735 to 2,125	87 - 107			87-107	87-107	-----	43-54*	-----	87 - 107	2.039 – 2,500
Sediment	PCB Aroclors	CAM-VA (Rev 1 9/14/2009)/ EPA-SW846 method 8082A	57	2	2	2	-----	-----	-----	1	-----	3	65
Sediment	SVOC (PAHs)	CAM-IIB (Rev 1 9/9/2009)/ EPA-SW846 method 8270D	57	2	2	2	-----	-----	-----	1	-----	3	65
Sediment	Metals	ILM05.4 ICP-AES modification number xxxxxx	57	2	-----	----	**3**	**3**	-----	1	-----	3	65

Note:
If samples will be collected at different depths at the same location, count each discrete sampling depth as a separate sampling location/station.
MS = Matrix Spike
MSD = Matrix Spike Duplicate
* Rinsate, and field duplicate samples will be collected at a rate of one per property or 1 per 40 samples per property.
** MS/MSD samples will be collected at a rate of one per property or 1 per 40 samples or per property for organics at varied depths.

REFERENCES

[1] U.S. Environmental Protection Agency, New England. 2005. *Emergency Planning and Response Branch, Generic Program Quality Assurance Project Plan*. 16 June.

[2] BETA Group Inc., *Final Completion and Inspection Report*, 2006

[3] USGS (U.S. Geological Survey). Year (Photorevised Edition). Quadrangle Name, State (7.5-minute series topographic map).

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[7] U.S. Environmental Protection Agency. 2007. Published Laboratory Quantitation Limits (QLs). Office of Environmental Measurement and Evaluation, Region I Laboratory and US EPA Contract Laboratory Program (CLP) Statement of Work (SOW) SOM01.2

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[9] Massachusetts Department of Environmental Protection. 2007. Bureau of Waste Site Cleanup, WSC-CAM, Section IIB, Revision No. 5, *Quality Assurance and Quality Control Requirements for SW-846 Method 8270C, Semivolatile Organic Compounds by Gas Chromatography (GC) for the Massachusetts Contingency Plan (MCP).* 20 December.

[10] Massachusetts Department of Environmental Protection. 2007. Bureau of Waste Site Cleanup, WSC-CAM, Section VA, Revision No. 4, *Quality Assurance and Quality Control Requirements for SW-846 Method 8082, Polychlorinated Biphenyls (PCBs) by Gas Chromatography (GC) for the Massachusetts Contingency Plan (MCP).* 20 August.

[11] Massachusetts Department of Environmental Protection. 2004. Bureau of Waste Site Cleanup, WSC-CAM, Section VIIA, Revision No. 3.2, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted under the Massachusetts Contingency Plan (MCP).* 21 May.

[12] Massachusetts Department of Environmental Protection. 2004. Bureau of Waste Site Cleanup, WSC-CAM, Section IIIA, Revision No. 5, *Quality Assurance and Quality Control Requirements and Performance Standards for SW-846 Method 6010B, Trace Metals by Inductively Coupled Plasma-Atomic Emission Spectometry (ICP-AES) for the Massachusetts Contingency Plan (MCP).* 28 May.

Appendix A

Site Location Map
Site Diagrams

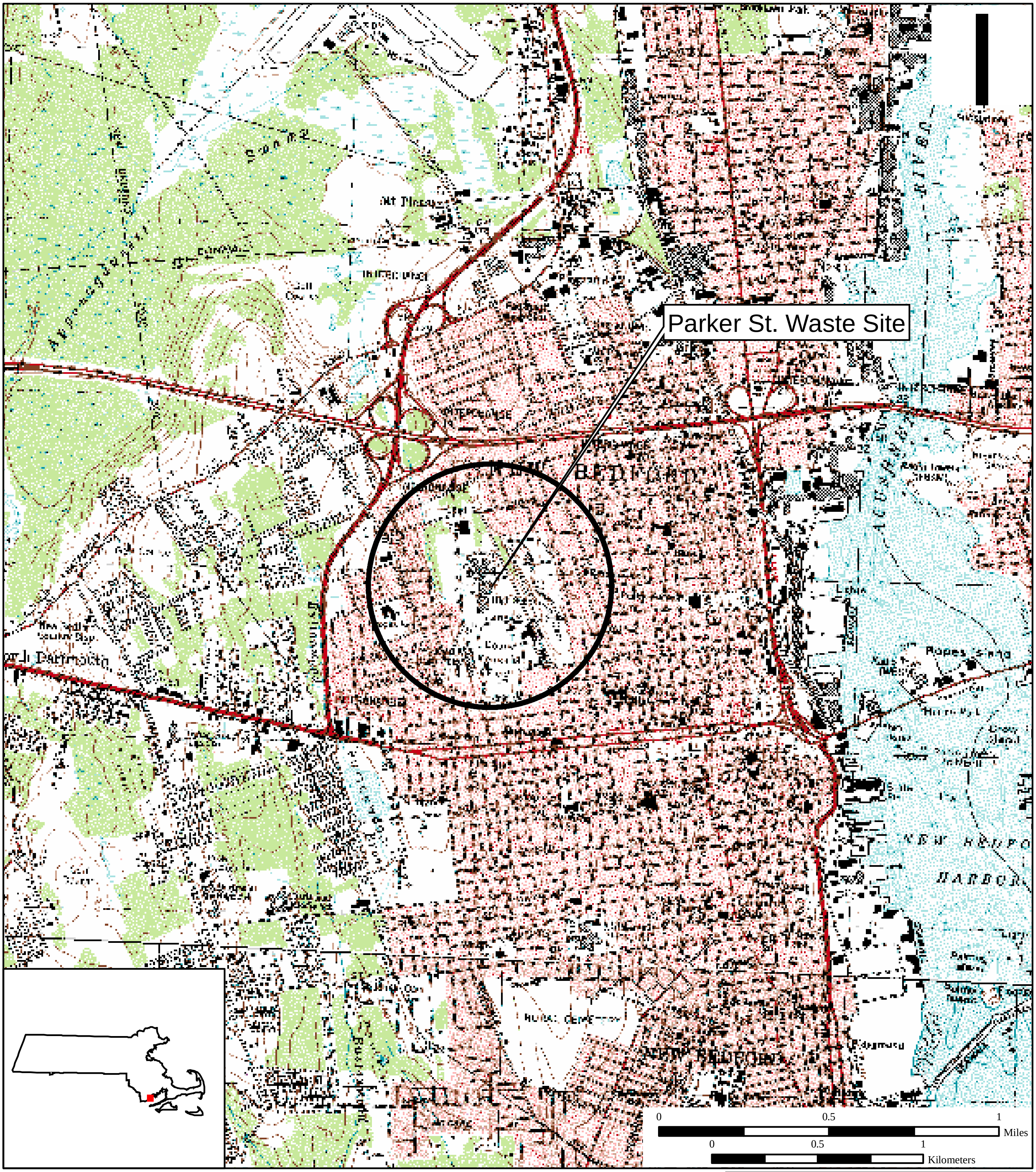

Figure 3

Site Location Map

Parker St. Waste Site
New Bedford, MA

EPA Region I
Superfund Technical Assessment and Response Team (START) III
Contract No. EP-W-05-042

TDD Number:	09-10-0001
Created by:	D. Willette
Created on:	11 November 2009
Modified by:	D. Willette
Modified on:	25 January 2010

Data Sources:
Topos: MicroPath/USGS
Quadrangle Name(s): L41070E8
All other data: START

WESTON SOLUTIONS
Restoring Resource Efficiency

E:\MA_gis\Parker St. Waste Site\MXDs\SAP\Figure3.mxd

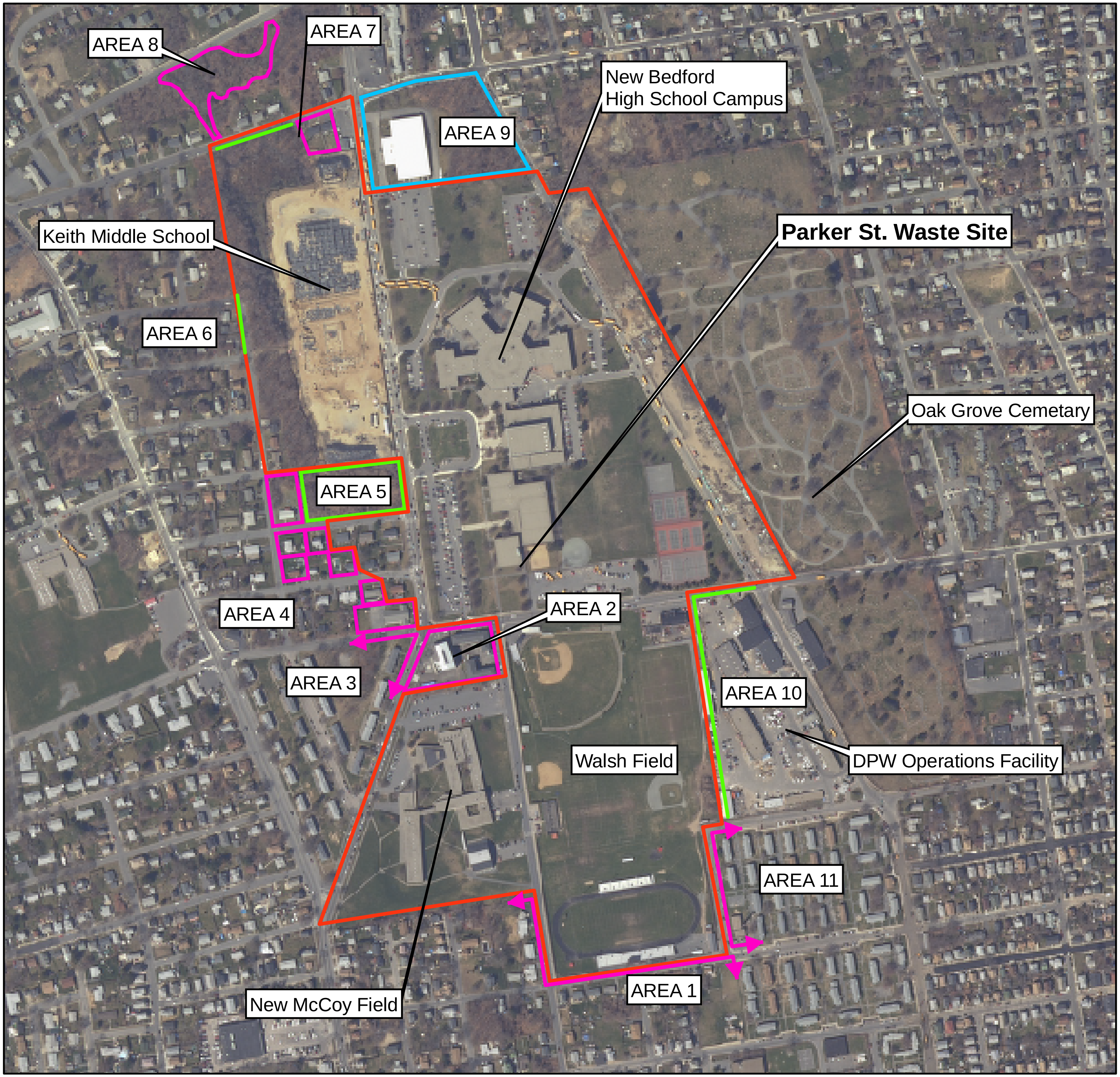

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Figure 4

Site Diagram

Parker St. Waste Site
New Bedford, MA

EPA Region I
Superfund Technical Assessment and Response Team (START) III
Contract No. EP-W-05-042

TDD Number:	09-10-0001
Created by:	D. Willette
Created on:	11 November 2009
Modified by:	D. Willette
Modified on:	30 March 2010

LEGEND

- Estimated Site Boundary
- EPA Sample Area
- City of New Bedford Sample Area
- MassDEP Sample Area

0 500 1,000 Feet

Data Sources: TRC Environmental Corp.

Imagery: MassGIS
Topos: MicroPath
All other data: START

Restoring Resource Efficiency

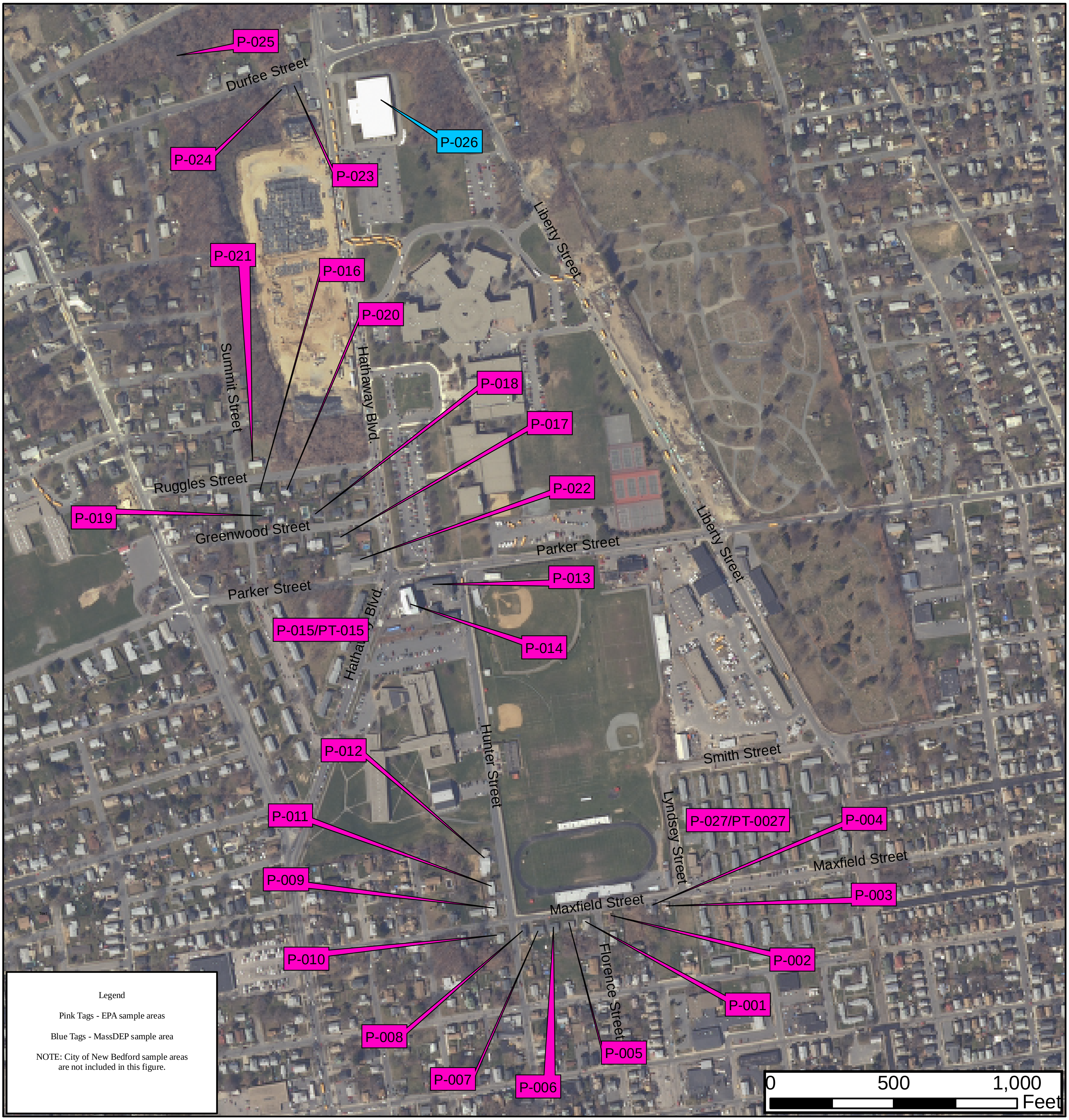

Figure 4A

Properties for Proposed Sampling

Parker St. Waste Site
New Bedford, MA

EPA Region I
Superfund Technical Assessment and
Response Team (START) III
Contract No. EP-W-05-042

TDD Number:	09-10-0001
Created by:	D. Willette
Created on:	5 January 2010
Modified by:	D. Willette
Modified on:	30 March 2010

Data Sources:

Topos:
Quadrangle Name(s):
All other data: START

WESTON SOLUTIONS
Restoring Resource Efficiency

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Appendix B

Superfund Performance Evaluation Sample Index

For EPA PE Samples call:

Leo Corben

617.918.8630

or

Steve Stodola

617.918.8634

START REVISED
SUPERFUND PERFORMANCE EVALUATION SAMPLE LIST

CATALOG NUMBER	DESCRIPTION
90-001	Volatile Organics in Water at Low/Medium Concentration
95-001	Volatile Organics in Water at Low/Medium Concentration
05-004	Volatile Organics in Water at Low/Medium Concentration
91-001	Volatile Organics in Water at Low Concentration
05-003	Volatile Organics in Water at Trace Concentration
03-006	Volatiles in Soil, Full Volume, Closed System **(10-Day Holding Time)**
05-008	Volatiles in Soil, Full Volume, Closed System **(10-Day Holding Time)**
90-002	Semivolatile Organics in Water at Low/Medium Concentration
95-002	Semivolatile Organics in Water at Low/Medium Concentration
05-005	Semivolatile Organics in Water at Low/Medium Concentration
91-002	Semivolatile Organics in Water at Low Concentration
01-016	Semivolatile Organics in Soil
05-009	Semivolatile Organics in Soil
90-003	Pesticides/PCBs in Water at Low/Medium Concentration
95-003	Pesticides/PCBs in Water at Low/Medium Concentration
05-006	Pesticides in Water at Low/Medium Concentration
91-003	Pesticides/PCBs in Water at Low Concentration
03-008	Pesticides in Soil
05-001	Pesticides in Soil at Low/Medium Concentration
05-002	Pesticides in Soil at High Concentration
05-007	Aroclors in Water
91-013	Aroclor 1248 in Soil
04-005	Aroclor 1254 in Soil
91-011	Aroclor 1260 in Soil
03-003	Toxaphene in Water
03-004	Toxaphene in Soil
98-002	Organics in Water at L/M Concentration (VOC, SVOC, Pest.)
95-008	Low Concentration Organics in Water (VOC, SVOC, Pest.)
01-001	Low Concentration Organics in Water (VOC, SVOC, Pest.)
03-007	1,4-Dioxane in Water for Volatile Analysis
03-010	1,4-Dioxane in Water for Semivolatile Analysis

START REVISED
SUPERFUND PERFORMANCE EVALUATION SAMPLE LIST
(continued)

CATALOG NUMBER	DESCRIPTION
90-004	Metals in Water at Low/Medium Concentration
95-017-W	Metals in Water at Low/Medium Concentration
99-004	Metals in Water at Low/Medium Concentration
03-009	ICP-MS Metals in Water
90-005	Metals in Soil at Low/Medium Concentration
95-017-S	Metals in Soil at Low/Medium Concentration
99-005	Metals in Soil at Low/Medium Concentration
03-002	Mercury in Water at Low/Medium Concentration
90-006	Cyanide in Water at Low/Medium Concentration
03-001	Cyanide in Water at Low/Medium Concentration
99-008	Cyanide in Soil at Low/Medium Concentration

Other PE Samples are also available for the following parameters:

- Chlorinated Dioxins/Furans
- Industry-specific metals categories

Please contact Leo Corben at 617-918-8630, or a START chemist for more information.

Appendix C

Proposed City of New Bedford Work Plan

TRC
Wannalancit Mills
650 Suffolk Street
Lowell Massachusetts 01854

Main 978.970.5600
Fax 978.453.1995

Memorandum

To: Scott Alfonse and Cheryl Henlin, City of New Bedford
From: David M. Sullivan, LSP CHMM, TRC Environmental Corporation
CC: Jeffrey Saunders, TRC Environmental Corporation
Subject: Proposed Nemasket Lots Investigation Approach
Date: March 3, 2010

The following outlines the proposed technical approach for initiating an environmental investigation of the Nemasket Street Lots. The approach proposed herein is an initial step in an iterative approach to the evaluation of this portion of the Parker Street Waste Site (PSWS). An iterative approach is consistent with prior environmental investigative activities undertaken by TRC Environmental Corporation (TRC), where available data were used to help define the initial stages of environmental investigation. Subsequent stages of investigation, where warranted, will be further defined by the incremental data collected from each investigative effort and will be designed to address specific data gaps, test hypotheses, or evaluate risk, as determined necessary for the investigation at that time.

Nemasket Technical Approach

The data collection described herein is an interim step toward the implementation of a remedy for the subject parcels. TRC will plan, implement and oversee the clearing and investigative work at the Nemasket Street lots (the former Bethel AME property). The Nemasket Street lots parcel identifications are summarized below and illustrated on Figure 1.

069 0092	069 0093
069 0086	069 0100
069 0088	069 0099
069 0091	069 0097

Clearing. The City of New Bedford (City) is prepared to perform clearing at the Nemasket Street lots to the degree necessary to facilitate access for geophysics equipment and a backhoe or excavator for test pit inspections of the subsurface. No additional disturbance of the subsurface is proposed (i.e., no grubbing) as part of the clearing activity. An appropriately qualified contractor will be retained to clear small vegetative growth from the area using power equipment (a vehicle mounted brush hog). Larger growth will be addressed with chainsaws (manual labor). All vegetation will be cut/removed flush to the ground surface.

Dust monitoring and dust suppression consistent with soil removal work conducted by TRC at other areas of the Parker Street Waste Site (PSWS) will be implemented as a precaution to monitor and minimize/mitigate potential nuisance conditions.

All vegetation will be removed from the site for disposal as solid waste or managed through off-site composting, subject to appropriate regulatory approval. Alternatively, the vegetative matter may be chipped and spread on the lots to stabilize exposed surfaces.

Geophysics. Prior to test pit exploration of the Nemasket Street lots, TRC will oversee the implementation of a combined Ground Penetrating Radar (GPR) and Electromagnetic Induction (EMI) investigation of the parcels. The purpose of this investigation is to help locate medium to large buried metallic objects. The geophysics contractor will employ an SIR System-3000 and/or SIR System-2000 GPR unit with multiple antennas (depending upon the application/conditions). The systems have a real-time display and collection of data is recorded on a flash card which is downloaded and edited after the survey is completed. Real-time data acquisition will allow the marking of detected items in the field. For the EMI investigation, an EM Profiler EMP-400 electromagnetic induction tool will be utilized that will also provide real-time data collection allowing the marking of detected subsurface anomalies.

The results of the GPR/EMI investigation will be evaluated and anomalies warranting further investigation will be evaluated by test pit exploration.

Test Pit Exploration. The number of test pits to be excavated will depend in part on the results of the geophysics investigation.

The test pit excavation conducted previously at the site generally measured approximately 2-feet wide by 8-feet long and, if feasible, test pits were excavated until native soil material (e.g., peat material) was encountered (i.e., approximately 7 to 9-feet below grade). A similar protocol will be followed at the Nemasket Street lots unless site data/conditions require an alternative approach.

The soil will be removed from each test pit in approximately 1-foot flights. The material will be temporarily stockpiled on polyethylene sheeting for observation. As each flight is removed, the material will be examined using hand tools and identifiable or potentially identifiable fill material will be segregated, field documented and photographed by TRC's field geologist/engineer. A subset of the identifiable or potentially identifiable material, where identified, will be retained for further expert forensic analysis. TRC will evaluate and log the geologic character of the soil samples consistent with the Burmeister (1958) method (consistent with the PSWS soil boring program conducted prior by TRC).

Air monitoring will be performed using a combination of real-time dust monitoring upwind and downwind of the work area. The dust monitoring will consist of TSI Dustrak™ units (or equivalent) equipped with size-selective inlet for particles of 10 micrometers in diameter or less (PM10). Background samples will be collected for at least 15 minutes at each location prior to the start of site activities and the dust monitoring instruments will be zeroed daily before use and at the end of the day. Data will be logged at 60-second intervals and monitored periodically by field personnel. Data will be downloaded daily. In addition, volatile organic compound (VOC) air monitoring will be performed using a photo-ionization detector (PID) to monitor for the presence of VOCs within the work area breathing zone.

Following completion, each test pit will be immediately backfilled with the stockpiled material, taking care to minimize mixing of horizons. All excavated material will be returned to the original test pit location. Each test pit will be subsequently surveyed by Land Planning, Incorporated of Hanson, Massachusetts. The locations will be plotted on an aerial photograph obtained from the Massachusetts Geographic Information System, and may also be incorporated into line drawings of the area.

Soil Sampling. No soil borings are proposed at this time. The City proposes to design a soil boring program to evaluate and initially delineate impacts from waste disposal activity that is guided by the results of the geophysics work, as well as the results of prior soil sampling conducted by BETA.

During the test pit investigation, TRC will conduct field screening of soil samples based on visual and olfactory observations, jar headspace readings using an appropriate calibrated PID, and professional judgment. Screening will be conducted consistent with TRC Standard Operating Procedures (SOPs) and general industry practice. TRC field investigators my collect soil samples for analysis to supplement the findings of the test pit program. Sample decisions will be based on professional judgment in consultation with the Licensed Site Professional (LSP). Where a soil sampling decision is made, one or more of the following analytical methods will be utilized for soil analysis, consistent with prior work conducted by TRC at the PSWS:

- Polychlorinated biphenyls (PCBs) as Aroclors by SW-846 Method 8082
- Polyaromatic hydrocarbons (PAHs) by SW-846 Method 8270C
- Massachusetts Contingency Plan (MCP) Metals/Hg – antimony, arsenic, barium, beryllium, cadmium, chromium, lead, nickel, selenium, silver, thallium, vanadium, zinc and mercury by SW-846 Methods 6010B/7471A.

In addition, soil sampling may include the following analysis for dioxins and PCB congeners, consistent with TRC's recommended technical approach for dioxins at the PSWS (see Attachment A).

- Chlorinated dioxin/dibenzofuran congeners by SW-846 Method 8290 to evaluate the presence/absence of these compounds
- PCB congeners by SW-846 Method 1668A to establish a basis for correlation and to evaluate the potential presence of PCB dioxin-like congeners.

As a contingency, TRC is prepared to submit soil samples for VOC analysis contingent upon the results of field screening and professional judgment. TRC will notify the City when such judgments are made. The following analytical method will be specified in such an event:

- VOCs by Method SW-846 Method 8260B.

We look forward to discussing this memorandum with you at your earliest convenience.

ATTACHMENT A

RECOMMENDED TECHNICAL APPROACH FOR DIOXIN EVALUATION

PARKER STREET WASTE SITE, NEW BEDFORD, MASSACHUSETTS

March 2, 2010

Introduction

TRC Environmental Corporation (TRC) prepared this Recommended Technical Approach (RTA) document for the following purposes:

1. To document an initial evaluation of the potential for the presence of polychlorinated dibenzo-p-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs), collectively referred to as dioxin compounds, at various portions of the Parker Street Waste Site (PSWS);
2. To highlight available dioxin (e.g., PCDDs/PCDFs) compound soil analytical data collected from the Keith Middle School (KMS) portion of the PSWS by a prior consultant; and
3. To provide a suggested framework for further data collection.

The PSWS is located in the general vicinity of New Bedford High School (NBHS), Keith Middle School (KMS) and Walsh Field in New Bedford, Massachusetts. The PSWS is a listed site regulated under the Massachusetts Contingency Plan (310 CMR 40.0000), tracked under primary Release Tracking Number (RTN) 4-15685, and is also regulated under the United States Environmental Protection Agency (EPA) through the Toxic Substances Control Act (TSCA; 40 CFR Part 761 et.seq.) where regulated concentrations of polychlorinated biphenyls (PCBs) are present. Please see attached Figure 1 for a map illustrating geographic features identified in this RTA Document.

Summary

TRC recommends the collection of soil and fill samples for dioxin compound analysis from the PSWS, in collaboration with the Office of Research and Standards (ORS) of the Massachusetts Department of Environmental Protection (MassDEP) and EPA, to evaluate the potential presence of dioxin compounds, estimate the potential risk posed by the presence of any detected dioxin compounds, and assess the relationship between any detected dioxin compounds and potential precursor compounds and other contaminants. TRC proposed framework for data collection is described herein.

Note that based upon the available evidence, TRC does not believe that sampling for dioxin compounds south of Parker Street, particularly at the Walsh Field and former Keith Junior High School (KJHS) portion of the PSWS, is warranted. This is based on the absence of significant concentrations of precursor compounds[1] (i.e., chlorinated organic compounds such as PCBs, chlorobenzenes and chlorophenols) and site-specific historical information. This history indicates that waste disposal activities at Walsh pre-date the disposal of dioxin compound precursors such as polychlorinated biphenyls (PCBs) and the intensive use of such precursor compounds by the City of New Bedford industrial base. However, other portions of the PSWS include chemical contaminants, principally PCBs, which could serve, under appropriate conditions, as precursors to dioxin compounds.

1 Precursors are foundation molecules to dioxin compound formation from which PCDDs/PCDFs can form from the thermal breakdown and molecular rearrangement of precursor ring compounds, which are defined as chlorinated aromatic hydrocarbons that have a structural resemblance to the PCDD/PCDF molecules.

Background Information on Dioxin

PCDDs and PCDFs are tricyclic aromatic compounds with similar chemical and physical properties. They are ubiquitous in the environment[2] (EPA, 2006). However, they do not generally occur naturally[3], nor are they intentionally produced. PCDDs/PCDFs also result as incidental by-products from processes that manufacture or use chlorine containing chemicals.[4] There are 75 positional isomers of PCDDs and 135 positional isomers of PCDFs (ECH 88, 1989). The term "dioxin-like" includes congeners of PCDDs and PCDFs having chlorine atoms in the 2, 3, 7, and 8 positions on the molecule, and certain coplanar-substituted polychlorinated biphenyls (PCBs). The term "dioxin-like" refers to the fact that these compounds have similar chemical structure and physical-chemical properties and invoke a similar toxic response (EPA, 2006).

Because of the hydrophobic nature and resistance to metabolism of dioxin-like chemicals, they tend to persist and bioaccumulate in the fatty tissues of animals and humans. Consequently, the principal route of chronic population exposure is through the dietary consumption of animal fats, fish, shellfish, and dairy products. Dioxin-like compounds are persistent in soils and sediments, with environmental half-lives ranging from years to several decades (EPA, 2006).

Evaluation of Available Information

The following provides an evaluation of available information on PSWS disposal activity, site history/timeline, available PSWS dioxin data, distribution of detected compounds, and dioxin precursor compounds and burning activity.

Disposal Activity

Much of the information about disposal activities at the PSWS is derived from visible information such as aerial photographs that show the progression of deposition across the area. Additional information is available from newspaper accounts.

Generally, municipal waste was disposed of east of Hathaway Boulevard, and industrial waste was disposed of west of Hathaway Boulevard, although municipal wastes and construction debris such as large boulders were also disposed of west of Hathaway Boulevard. During the time period when the disposal activity took place, the municipal waste was not necessarily separated from industrial waste so trash trucks could have picked up a mix of wastes.

---

2 The major identified sources of environmental releases of dioxin-like compounds are grouped into six broad categories: combustion sources, metals smelting, refining and process sources, chemical manufacturing sources, natural sources, and environmental reservoirs (EPA, 2006). Some of the major known sources of atmospheric impacts by PCDDs/PCDFs are industrial activities in which a combustion process is involved (Abad et al., 2002). Burning of domestic refuse in backyard burn barrels has emerged as the largest source of dioxin emissions to the U.S. environment (EPA, 2006). Consequently, atmospheric deposition represents a source of PCDDs/PCDFs onto the surface of soils. In addition, the presence of PCDDs/PCDFs on vegetation surfaces is due to the retention of PCDDs/PCDFs by direct deposition of airborne particles or absorption of vapor-phase contaminants, including those attributable to evaporation from soils (Abad et al., 2002).

3 The evidence for the widespread existence of natural sources of dioxin compounds is quite weak. Recent studies suggest that PCDDs/PCDFs can form under certain environmental conditions (e.g., composting) from the action of microorganisms on chlorinated phenolic compounds. Similarly, PCDDs/PCDFs have been reported to form during photolysis of highly chlorinated phenols. Certain clays used in ceramics (e.g., ball clay) are believed to have become impacted by dioxin as a result of natural processes, but the source of the impacts remains unknown. Some have suggested that volcanoes may be a natural source, though there is no reliable evidence that volcanoes produce and emit significant amounts of dioxin during eruptions (EPA, 2006).

4 PCDDs/PCDFs can be formed as an unintentional byproduct where chlorine reacts with organic chemicals with similar structural features to dioxins under high temperatures.

Trash and ash were used to fill in the swampy wetland areas that originally comprised the site and were eventually spread for redevelopment. Wastes disposed included tires, industrial wastes, bottles, rusted cars, coal ash, curbing, big boulders, cement, cans, batteries, ash, trees, and tanned leather.

As discussed below, wastes disposed of at Walsh Field tend to be older than those at present-day New Bedford High School (NBHS) based on aerial photographic analysis.

Distribution of Detected Compounds

The compounds detected at the PSWS generally consist of PCBs, heavy metals, and polyaromatic hydrocarbons (PAHs). A "picture" of the geographic distribution of the impacts in soil has emerged from the nearly 3,000 soil samples collected for chemical analysis from the PSWS (exclusive of the investigative work conducted at KMS by others). Some compounds are relatively ubiquitous and some are found in only a portion of the site.

Ubiquitous contaminants include lead and PAHs. Lead is found across the PSWS including Walsh Field, NBHS, and some residential and commercial properties evaluated to date.

Other contaminants have very limited geographic distribution. For example, arsenic was detected in surface soil at the two baseball diamonds at Walsh Field, but not elsewhere at similar depths and concentrations.

Overall contaminant distribution patterns have also been identified, with Parker Street serving as a geographic "dividing line".

South of Parker Street. To the south of Parker Street (i.e., Walsh Field and the former Keith Junior High School [KJHS]), heavy metals such as lead, cadmium and arsenic as well as PAHs are commonly detected. However, PCBs are not detected at concentrations of significance south of Parker Street. For example, prior to the work conducted at the site by TRC, a previous consultant collected 69 soil samples from Walsh Field for PCB analysis, primarily from depth sequences within the contaminated fill. Most of the results were non-detect, with the highest PCB concentration detected in Walsh Field soil at 0.19 mg/kg. Other organic contaminants are generally not found in soil samples collected south of Parker Street. Based on risk evaluations conducted to date, risk-contributing compounds south of Parker Street generally include lead, cadmium, and arsenic, with lesser contributions by some PAHs, dibenzofuran (non-chlorinated), acenaphthylene, and diesel range organics.

North of Parker Street. To the north of Parker Street (i.e., NBHS, KMS, and some residential properties), contaminants such as barium and PCBs are more prevalent. Risk-contributing chemicals to the north of Parker Street, using the NBHS campus as an example, include PCBs, cadmium, lead, benzo(a)pyrene, dibenz(a,h)anthracene, benzo(a)anthracene, benzo(b)fluoranthene, indeno(1,2,3-cd)pyrene, dibenz(a,h)anthracene, arsenic, barium, cadmium, chromium, and lead, with prevalence varying by location. (Recently, volatile organic compounds (VOCs) have come under evaluation at NBHS, also.)

Site History/Timeline

Apparent impacts at the PSWS are evident as early as 1936 based on a review of aerial images. In 1961, the disposal activity had stopped and the site had vegetative cover probably due to Corp of Engineers grading of the site about 1960 to create the Liberty Gardens. In 1963, the site continued to have a vegetative cover. By 1971, the construction of NBHS was in progress. Fill material displaced by the construction of the NBHS was deposited to the west of Hathaway Boulevard at the location of the KMS (which also appears to have been impacted by PSWS-related waste management practices).

Walsh Field athletic areas are also depicted in the earliest available aerial photographs, including 1936. Walsh Field appears as a fully developed and maintained athletic complex in the 1950s. The absence of significant concentrations of PCBs (< 0.19 mg/kg) in Walsh Field soil/fill and evidence of the early development of the athletic complex relative to PSWS disposal activity suggest that waste deposition at Walsh Field pre-dated the disposal of significant quantities of PCBs.

Available PSWS Dioxin Data

On October 15, 2009, KMS dioxin compound soil data were provided to TRC by EPA in tabulated form. TRC's initial review of the tabulated dioxin compound data noted the following:

- Results for a number of samples expressed as 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) Toxic Equivalents (TEQs) (see attached tables) exceed the Method 1 S-1 soil cleanup standard of 20 picograms per gram (pg/g) or parts per trillion (ppt). However, the concentrations presented are not alarming from a risk assessment perspective as they would correspond to less than a 1 in 100,000 cancer risk for a residential exposure scenario. Additional information is needed to determine the representativeness of the data (e.g., biased-high, low, etc.).

- The TCDD TEQs (last column in the multi-page table) appear to have been calculated using the 1998 World Health Organization (WHO) toxicity equivalency factors (TEFs) for dioxin compounds. MassDEP has developed TEFs (MassDEP, 1991) that differ from those developed by the WHO. ORS will likely want the MassDEP TEFs or updated WHO TEFs (van den Berg, 2006) used to calculate the dioxin TEQs. However, WHO only developed TEFs for dioxin/dibenzofuran congeners with chlorines in the 2, 3, 7 and 8 positions (those congeners included in the tabulated data). MassDEP has developed TEFs for all dioxin/dibenzofuran congeners, even those that do not have chlorines in each of the 2, 3, 7 and 8 positions.

TRC notes further that congener/isomer-specific analyses data (if available) can be used to examine PCDD/PCDF profiles found in soils. Profiles represent a valuable tool in identifying precursor compounds (e.g., thermal formation) as well as potential sources of PCDDs/PCDFs. In addition, congener/isomer-specific data (e.g., actual PCDD/PCDF concentrations found in soil samples) and not TEF-weighted data can be used for comparison to PCDD/PCDF concentrations found in soils both in the US and worldwide. Such comparisons allow us to place PSWS data in perspective and answer the question: How do PCDD/PCDF data in PSWS soils compare to global background concentrations?

Given the fate and transport behavior of dioxin compounds, which in large part is very similar to PCBs and PAHs (strong tendency to partition to solid phases, very low water solubility and very low volatility), TRC does not believe that the remedial approaches proposed for the PSWS (i.e., prevent exposure) will be significantly affected.

Precursor Compounds and Burning Activity

Dioxin compounds may be formed as part of a burning/combustion process under appropriate conditions. The presence of ash at the PSWS suggests the presence of burned materials.

The available soils data indicate that PCBs are the only PCDD/PCDF precursor compounds at PSWS. The available analytical data provide no indication of the presence of any other chlorinated organic compounds with the potential to serve as dioxin precursors in significant concentrations. This is based on analysis for VOCs, semivolatile organic compounds (SVOCs), pesticides, and PCBs conducted by the prior consultant and TRC.

The highest concentrations of PCBs detected at PSWS have been detected at KMS, the KMS wetland, the Nemasket Street Lots (former Bethel AME parcels), and some residential locations. For example, PCBs detected in excess of 100 milligrams per kilogram (mg/kg) have been detected in soil samples collected from the following locations:

- KMS (pre-remediation)
- Nemasket Street Lots (Former Bethel AME parcels)
- 101 Greenwood Street

PCBs in excess of 50 mg/kg have been detected at the following locations:

- 128 Ruggles Street
- 102 Greenwood Street
- NBHS (two locations)

Anecdotal evidence indicates that products of waste buring, whether on-site or waste that had been burned/incinerated off-site, were disposed of at the PSWS. Subsequent filling and grading activity is likely to have displaced the impacts of burning activity (such as the transfer of fill material from the vicinity of the NBHS building to the KMS grounds). Based upon the history of the area that indicates some waste burning, it would be expected that select metals, as well as PAHs, would be present at elevated concentrations in the ash due to the burning of trash. Hence, the presence of enriched metals and PAH concentrations (as well as PAH profiles) could be another indicator of waste combustion. The presence of elevated concentrations of PCBs (see above samples) in combination with elevated concentrations of pyrogenic PAHs and selected metals could serve as useful chemical criteria for identifying candidate sites where soil samples would be collected to undergo PCDD/PCDF analyses.

Conclusions

- Dioxins are unlikely to be present in Walsh Field fill and soil because deposition at Walsh Field pre-dated the disposal of PCB wastes at the PSWS. Absent combustion activity in the presence of chlorinated organic precursor compounds such as PCBs, dioxin compound formation is not expected to be an important process at this location.

- Dioxin compound precursors at the PSWS are principally associated with PCBs. The available analytical data provide no indication of the presence of any other chlorinated organic compounds in significant concentrations.

- The highest concentrations of PCBs have been detected at KMS (pre-remediation), the Nemasket Street Lots, a few residential parcels, and localized areas on the NBHS campus.

- Artifacts of burning (the presence of ash, metal enrichment, and PAHs) are generally ubiquitous in fill material at the PSWS. However, the combination of burning artifacts (ash, metals enrichment, and PAHs) and precursor chemicals (e.g., PCBs) is found to the north of Parker Street.

Recommendations

TRC recommends the following activities:

- The collection of soil and fill samples for dioxin compound analysis from select locations at the PSWS. These data would be used for the following:

  - Evaluate the presence of dioxin compounds at the PSWS.

  - Estimate the potential risks posed by the presence of measured concentrations of PCDDs/PCDFs.

In developing an investigation program for an area targeted for PCDD/PCDF soil sampling, TRC will review relevant soil data from the area focusing principally on metals results, PAH and SVOC data, and PCB (homolog or aroclor) results to develop a process for sample selection. As noted above, artifacts of burning include the presence of ash, metal enrichment, and PAHs. Soil samples with elevated results, in particular those with concentrations greater than regulatory limits for PCBs and/or PAHs and/or metals may be used to identify a population of samples for potential PCDD/PCDF analyses. The specifics of the sampling program will be tailored to the specifics of each area targeted for evaluation.

References

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TABLE X
SUMMARY OF SOIL ANALYSES FOR
CHLORINATED DIBENZO-P-DIOXINS AND DIBENZOFURANS
McCoy Field
New Bedford, Massachusetts

Sample ID	2,3,7,8-TCDD pg/g	TCDD TEQ	1,2,3,7,8-PeCDD pg/g	TCDD TEQ	1,2,3,4,7,8-HxCDD pg/g	TCDD TEQ	1,2,3,6,7,8-HxCDD pg/g	TCDD TEQ	1,2,3,7,8,9-HxCDD pg/g	TCDD TEQ	1,2,3,4,6,7,8-HpCDD pg/g	TCDD TEQ
TCDD TEF$_{DFP}$-WHO$_{98}$ --->	**1**		**1**		**0.1**		**0.1**		**0.1**		**0.01**	
Q4-A & B	0.2 U	0.1	0.3 U	0.15	1.4 J	0.14	6.2	0.62	5.2	0.52	117	1.17
Q16 A & B	*0.8* J	0.8	2.2 J	2.2	3.4 J	0.34	16.8	1.68	10.2	1.02	629	6.29
Q24 A & B	1.4 J	1.4	3.6 J	3.6	6.7	0.67	44.2	4.42	23.5	2.35	1790	17.9
Q37 A, B, &C	*0.68* J	0.68	2.1 J	2.1	3.6 J	0.36	9.3	0.93	9	0.9	237	2.37
Duplicate 11	2.8	2.8	6	6	5.2	0.52	34.1	3.41	24.1	2.41	1310	13.1
Duplicate 13	0.95 J	0.95	3.2 J	3.2	2.6 J	0.26	9	0.9	7.9	0.79	146	1.46
Q6-Embankment A & B	0.66 J	0.66	2.5 J	2.5	2.3 J	0.23	8	0.8	7	0.7	129	1.29
Q11-Embankment A &	0.4 J	0.4	1.8 J	1.8	2.2 J	0.22	5.8	0.58	6	0.6	106	1.06
Arithmetic Mean		0.97		2.69		0.34		1.67		1.16		5.58
Maximum		2.8		6		0.67		4.42		2.41		17.9
Method 1 S-1 Soil standard		4		4		4		4		4		4
Method 1 S-2 Soil standard		6		6		6		6		6		6
Method 1 S-3 Soil standard		20		20		20		20		20		20
Upper Concentration Limit		200		200		200		200		200		200

pg/g = picograms per grams (parts per trillion).
U = Undetected at quantitation limit presented.
J = Estimated concentration below calibration range.
C = Value reported from confirmatory analysis.
D = Value reported from dilution analysis.
X = Interference from diphenyl ethers.
Value in italics = Estimated most probable concentration (EMPC)

TABLE X
SUMMARY OF SOIL ANALYSES FOR
CHLORINATED DIBENZO-P-DIOXINS AND DIBENZOFURANS
McCoy Field
New Bedford, Massachusetts

Sample ID	1,2,3,4,6,7,8,9-OCDD pg/g		TCDD TEQ	2,3,7,8-TCDF pg/g		TCDD TEQ	1,2,3,7,8-PeCDF pg/g		TCDD TEQ	2,3,4,7,8-PeCDF pg/g	TCDD TEQ	1,2,3,4,7,8-HxCDF pg/g	TCDD TEQ	1,2,3,6,7,8-HxCDF pg/g	TCDD TEQ
TCDD TEF$_{DFP}$-WHO$_{98}$ --->	**0.0001**			**0.1**			**0.05**			**0.5**		**0.1**		**0.1**	
Q4-A & B	1260		0.126	8.2	C	0.82	0.1	U	0.0025	14.7	7.35	93.7	9.37	33.3	3.33
Q16 A & B	4690	D	0.469	11.1	C	1.11	0.1	U	0.0025	11.5	5.75	36.5	3.65	17	1.7
Q24 A & B	12160	D	1.216	15.7	C	1.57	0.1	U	0.0025	16.3	8.15	44.2	4.42	18.9	1.89
Q37 A, B, &C	3020		0.302	5.2	C	0.52	0.08	U	0.002	5.6	2.8	23.7	2.37	9.9	0.99
Duplicate 11	10210	D	1.021	18.4	C	1.84	0.2	U	0.005	19.3	9.65	51.9	5.19	22.2	2.22
Duplicate 13	1400		0.14	13	C	1.3	0.1	U	0.0025	17.6	8.8	34.4	3.44	16.8	1.68
Q6-Embankment A & B	1190		0.119	11.2	C	1.12	0.6	U	0.015	9.9	4.95	29.6	2.96	13.5	1.35
Q11-Embankment A &	1640		0.164	5.3	C	0.53	0.05	U	0.00125	5.8	2.9	11.4	1.14	6.2	0.62
Arithmetic Mean			0.44			1.10			0.004		6.29		4.07		1.72
Maximum			1.22			1.84			0.015		9.65		9.37		3.33
Method 1 S-1 Soil standard			4			4			4		4		4		4
Method 1 S-2 Soil standard			6			6			6		6		6		6
Method 1 S-3 Soil standard			20			20			20		20		20		20
Upper Concentration Limit			200			200			200		200		200		200

pg/g = picograms per gram:
U = Undetected at quantitati
J = Estimated concentration
C = Value reported from con
D = Value reported from dilu
X = Interference from diphe
Value in italics = Estimated r

TABLE X
SUMMARY OF SOIL ANALYSES FOR
CHLORINATED DIBENZO-P-DIOXINS AND DIBENZOFURANS
McCoy Field
New Bedford, Massachusetts

Sample ID	2,3,4,6,7,8-HxCDF pg/g		TCDD TEQ	1,2,3,7,8,9-HxCDF pg/g		TCDD TEQ	1,2,3,4,6,7,8-HpCDF pg/g		TCDD TEQ	1,2,3,4,7,8,9-HpCDF pg/g		TCDD TEQ	1,2,3,4,6,7,8,9-OCDF pg/g		TCDD TEQ	Sample Total TCDD pg/g	Lab sheet TEQs pg/g
TCDD TEF_{DFP}-WHO_{98} --->	**0.1**			**0.1**			**0.01**			**0.01**			**0.0001**				
Q4-A & B	19.1		1.91	*5.8*	X	0.58	76.3		0.763	27.3		0.273	156		0.0156	27.2	28.7
Q16 A & B	16.4		1.64	*7.5*	X	0.75	172		1.72	12.1		0.121	276		0.0276	29.3	32.6
Q24 A & B	20.2		2.02	*8.6*	X	0.86	346		3.46	20.3		0.203	1320		0.132	54.3	64.6
Q37 A, B, &C	8.4		0.84	*4.2*	XJ	0.42	99.7		0.997	8.2		0.082	220		0.022	16.7	18.6
Duplicate 11	22.4		2.24	*10.4*	X	1.04	310		3.1	18.2		0.182	628		0.0628	54.8	61.6
Duplicate 13	20.9		2.09	*10.9*	X	1.09	108		1.08	8.5		0.085	128		0.0128	27.3	27.1
Q6-Embankment A & B	14.8		1.48	*10.1*	X	1.01	88.8		0.888	6.2		0.062	100		0.01	20.1	20.2
Q11-Embankment A &	8.5		0.85	*3.8*	XJ	0.38	45.6		0.456	3.3	J	0.033	58.4		0.00584	11.7	12.4
Arithmetic Mean			1.63			0.77			1.56			0.13			0.036	30.2	33.2
Maximum			2.24			1.09			3.46			0.27			0.132	54.8	64.6
Method 1 S-1 Soil standard			4			4			4			4			4	4	
Method 1 S-2 Soil standard			6			6			6			6			6	6	
Method 1 S-3 Soil standard			20			20			20			20			20	20	
Upper Concentration Limit			200			200			200			200			200	200	

pg/g = picograms per gram
U = Undetected at quantitati
J = Estimated concentration
C = Value reported from con
D = Value reported from dilu
X = Interference from diphe
Value in italics = Estimated r

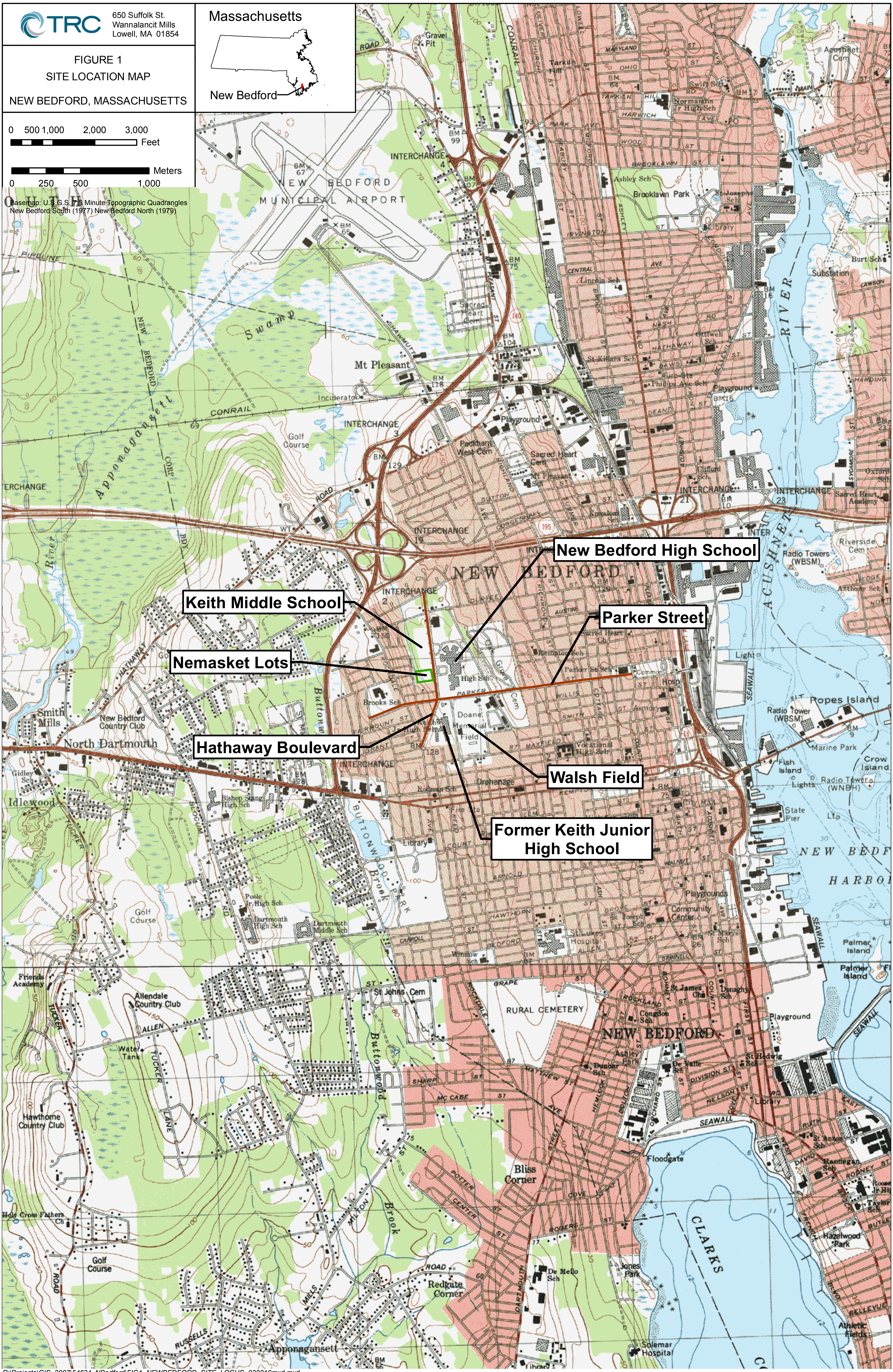

FIGURE 1
SITE LOCATION MAP
NEW BEDFORD, MASSACHUSETTS

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Memorandum

To: Scott Alfonse and Cheryl Henlin, City of New Bedford

From: David M. Sullivan, LSP CHMM, TRC Environmental Corporation

CC: Jeffrey Saunders, TRC Environmental Corporation

Subject: Proposed New Bedford High School Dioxin Investigation Technical Approach

Date: March 3, 2010

The following outlines the proposed technical approach for conducting an initial environmental investigation for polychlorinated dibenzo-p-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs), collectively referred to as dioxin compounds, in soil at the New Bedford High School (NBHS) campus. The approach proposed herein is an initial step in an iterative approach to the evaluation of dioxin in this portion of the Parker Street Waste Site (PSWS). An iterative approach is consistent with prior environmental investigative activities undertaken by TRC Environmental Corporation (TRC), where available data are used to help define the stages of environmental investigation. Subsequent stages of investigation, where warranted, are defined by the incremental data collected from each investigative effort and will be designed to address specific data gaps, test hypotheses, or evaluate risk, as determined necessary for the investigation at that time.

New Bedford High School Dioxin Investigation Technical Approach

TRC will plan, implement and oversee the dioxin-related investigative work at the NBHS Campus. The location of the NBHS Campus is illustrated on Figure 1.

Soil Boring Exploration. In developing a proposed soil sampling program for PCDDs/PCDFs at NBHS, TRC reviewed all soil data collected from the PSWS. As discussed in Attachment A (Recommended Technical Approach for Dioxin Evaluation), TRC's evaluation focused principally on metals results, PAH and SVOC results and PCB (homolog or aroclor) results as part of a process for sample selection. From this evaluation, TRC identified a population of samples from which sample locations were selected to undergo PCDD/PCDF analyses based on existing chemical signature and geographic coverage within that population of samples. Based on this evaluation, TRC identified the five previous sample locations listed below for further sampling and analysis (see Figure 2).

- HB-26
- HF-14
- HF-40
- HG-2
- HD-31D

At each location, TRC proposes to conduct sampling in the top foot of soil, the 1 to 3 foot depth zone, and the fill as set forth below:

- Top 1 foot – Evaluate current risk and the potential for Imminent Hazard conditions under the MCP.
- The 1 to 3 foot depth zone – Evaluate current risk under the MCP.
- Fill – Evaluate/characterize the primary contaminated media and the potential for the fill material to contribute to future risk.

For each sample, TRC proposes the following analytical suite:

- Chlorinated dioxin/dibenzofuran congeners by SW-846 Method 8290 to evaluate the presence/absence of these compounds
- PCB congeners by SW-846 Method 1668A to establish a basis for correlation and to evaluate the potential presence of PCB dioxin-like congeners.
- PCBs as Aroclors by SW-846 Method 8082 - To maintain consistency for comparison with the extensive historical data base.
- Polyaromatic hydrocarbons (PAHs) by SW-846 Method 8270C Massachusetts Contingency Plan (MCP) Metals/Hg – antimony, arsenic, barium, beryllium, cadmium, chromium, lead, nickel, selenium, silver, thallium, vanadium, zinc and mercury by SW-846 Methods 6010B/7471A - To evaluate potential site-specific correlations with the presence of PCDDs/PCDFs.

TRC will conduct field screening of soil samples based on visual and olfactory observations, jar headspace readings using an appropriate calibrated PID, and professional judgment. Screening will be conducted consistent with TRC Standard Operating Procedures (SOPs) and general industry practice. TRC field investigators my collect soil samples for analysis to supplement the findings of the soil boring program. Sample decisions will be based on professional judgment in consultation with the Licensed Site Professional (LSP). Where a soil sampling decision is made, one or more of the following analytical methods will be utilized for soil analysis, consistent with prior work conducted by TRC at the PSWS:

As a contingency, TRC is prepared to submit soil samples for VOC analysis contingent upon the results of field screening and professional judgment. TRC will notify the City when such judgments are made. The following analytical method will be specified in such an event:

- VOCs by Method SW-846 Method 8260B.

We look forward to discussing this memorandum with you at your earliest convenience.

ATTACHMENT A

RECOMMENDED TECHNICAL APPROACH FOR DIOXIN EVALUATION

PARKER STREET WASTE SITE, NEW BEDFORD, MASSACHUSETTS

March 2, 2010

Introduction

TRC Environmental Corporation (TRC) prepared this Recommended Technical Approach (RTA) document for the following purposes:

1. To document an initial evaluation of the potential for the presence of polychlorinated dibenzo-p-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs), collectively referred to as dioxin compounds, at various portions of the Parker Street Waste Site (PSWS);
2. To highlight available dioxin (e.g., PCDDs/PCDFs) compound soil analytical data collected from the Keith Middle School (KMS) portion of the PSWS by a prior consultant; and
3. To provide a suggested framework for further data collection.

The PSWS is located in the general vicinity of New Bedford High School (NBHS), Keith Middle School (KMS) and Walsh Field in New Bedford, Massachusetts. The PSWS is a listed site regulated under the Massachusetts Contingency Plan (310 CMR 40.0000), tracked under primary Release Tracking Number (RTN) 4-15685, and is also regulated under the United States Environmental Protection Agency (EPA) through the Toxic Substances Control Act (TSCA; 40 CFR Part 761 et.seq.) where regulated concentrations of polychlorinated biphenyls (PCBs) are present. Please see attached Figure 1 for a map illustrating geographic features identified in this RTA Document.

Summary

TRC recommends the collection of soil and fill samples for dioxin compound analysis from the PSWS, in collaboration with the Office of Research and Standards (ORS) of the Massachusetts Department of Environmental Protection (MassDEP) and EPA, to evaluate the potential presence of dioxin compounds, estimate the potential risk posed by the presence of any detected dioxin compounds, and assess the relationship between any detected dioxin compounds and potential precursor compounds and other contaminants. TRC proposed framework for data collection is described herein.

Note that based upon the available evidence, TRC does not believe that sampling for dioxin compounds south of Parker Street, particularly at the Walsh Field and former Keith Junior High School (KJHS) portion of the PSWS, is warranted. This is based on the absence of significant concentrations of precursor compounds[1] (i.e., chlorinated organic compounds such as PCBs, chlorobenzenes and chlorophenols) and site-specific historical information. This history indicates that waste disposal activities at Walsh pre-date the disposal of dioxin compound precursors such as polychlorinated biphenyls (PCBs) and the intensive use of such precursor compounds by the City of New Bedford industrial base. However, other portions of the PSWS include chemical contaminants, principally PCBs, which could serve, under appropriate conditions, as precursors to dioxin compounds.

[1] Precursors are foundation molecules to dioxin compound formation from which PCDDs/PCDFs can form from the thermal breakdown and molecular rearrangement of precursor ring compounds, which are defined as chlorinated aromatic hydrocarbons that have a structural resemblance to the PCDD/PCDF molecules.

Background Information on Dioxin

PCDDs and PCDFs are tricyclic aromatic compounds with similar chemical and physical properties. They are ubiquitous in the environment[2] (EPA, 2006). However, they do not generally occur naturally[3], nor are they intentionally produced. PCDDs/PCDFs also result as incidental by-products from processes that manufacture or use chlorine containing chemicals.[4] There are 75 positional isomers of PCDDs and 135 positional isomers of PCDFs (ECH 88, 1989). The term "dioxin-like" includes congeners of PCDDs and PCDFs having chlorine atoms in the 2, 3, 7, and 8 positions on the molecule, and certain coplanar-substituted polychlorinated biphenyls (PCBs). The term "dioxin-like" refers to the fact that these compounds have similar chemical structure and physical-chemical properties and invoke a similar toxic response (EPA, 2006).

Because of the hydrophobic nature and resistance to metabolism of dioxin-like chemicals, they tend to persist and bioaccumulate in the fatty tissues of animals and humans. Consequently, the principal route of chronic population exposure is through the dietary consumption of animal fats, fish, shellfish, and dairy products. Dioxin-like compounds are persistent in soils and sediments, with environmental half-lives ranging from years to several decades (EPA, 2006).

Evaluation of Available Information

The following provides an evaluation of available information on PSWS disposal activity, site history/timeline, available PSWS dioxin data, distribution of detected compounds, and dioxin precursor compounds and burning activity.

<u>Disposal Activity</u>

Much of the information about disposal activities at the PSWS is derived from visible information such as aerial photographs that show the progression of deposition across the area. Additional information is available from newspaper accounts.

Generally, municipal waste was disposed of east of Hathaway Boulevard, and industrial waste was disposed of west of Hathaway Boulevard, although municipal wastes and construction debris such as large boulders were also disposed of west of Hathaway Boulevard. During the time period when the

---

[2] The major identified sources of environmental releases of dioxin-like compounds are grouped into six broad categories: combustion sources, metals smelting, refining and process sources, chemical manufacturing sources, natural sources, and environmental reservoirs (EPA, 2006). Some of the major known sources of atmospheric impacts by PCDDs/PCDFs are industrial activities in which a combustion process is involved (Abad et al., 2002). Burning of domestic refuse in backyard burn barrels has emerged as the largest source of dioxin emissions to the U.S. environment (EPA, 2006). Consequently, atmospheric deposition represents a source of PCDDs/PCDFs onto the surface of soils. In addition, the presence of PCDDs/PCDFs on vegetation surfaces is due to the retention of PCDDs/PCDFs by direct deposition of airborne particles or absorption of vapor-phase contaminants, including those attributable to evaporation from soils (Abad et al., 2002).

[3] The evidence for the widespread existence of natural sources of dioxin compounds is quite weak. Recent studies suggest that PCDDs/PCDFs can form under certain environmental conditions (e.g., composting) from the action of microorganisms on chlorinated phenolic compounds. Similarly, PCDDs/PCDFs have been reported to form during photolysis of highly chlorinated phenols. Certain clays used in ceramics (e.g., ball clay) are believed to have become impacted by dioxin as a result of natural processes, but the source of the impacts remains unknown. Some have suggested that volcanoes may be a natural source, though there is no reliable evidence that volcanoes produce and emit significant amounts of dioxin during eruptions (EPA, 2006).

[4] PCDDs/PCDFs can be formed as an unintentional byproduct where chlorine reacts with organic chemicals with similar structural features to dioxins under high temperatures.

disposal activity took place, the municipal waste was not necessarily separated from industrial waste so trash trucks could have picked up a mix of wastes.

Trash and ash were used to fill in the swampy wetland areas that originally comprised the site and were eventually spread for redevelopment. Wastes disposed included tires, industrial wastes, bottles, rusted cars, coal ash, curbing, big boulders, cement, cans, batteries, ash, trees, and tanned leather.

As discussed below, wastes disposed of at Walsh Field tend to be older than those at present-day New Bedford High School (NBHS) based on aerial photographic analysis.

Distribution of Detected Compounds

The compounds detected at the PSWS generally consist of PCBs, heavy metals, and polyaromatic hydrocarbons (PAHs). A "picture" of the geographic distribution of the impacts in soil has emerged from the nearly 3,000 soil samples collected for chemical analysis from the PSWS (exclusive of the investigative work conducted at KMS by others). Some compounds are relatively ubiquitous and some are found in only a portion of the site.

Ubiquitous contaminants include lead and PAHs. Lead is found across the PSWS including Walsh Field, NBHS, and some residential and commercial properties evaluated to date.

Other contaminants have very limited geographic distribution. For example, arsenic was detected in surface soil at the two baseball diamonds at Walsh Field, but not elsewhere at similar depths and concentrations.

Overall contaminant distribution patterns have also been identified, with Parker Street serving as a geographic "dividing line".

South of Parker Street. To the south of Parker Street (i.e., Walsh Field and the former Keith Junior High School [KJHS]), heavy metals such as lead, cadmium and arsenic as well as PAHs are commonly detected. However, PCBs are not detected at concentrations of significance south of Parker Street. For example, prior to the work conducted at the site by TRC, a previous consultant collected 69 soil samples from Walsh Field for PCB analysis, primarily from depth sequences within the contaminated fill. Most of the results were non-detect, with the highest PCB concentration detected in Walsh Field soil at 0.19 mg/kg. Other organic contaminants are generally not found in soil samples collected south of Parker Street. Based on risk evaluations conducted to date, risk-contributing compounds south of Parker Street generally include lead, cadmium, and arsenic, with lesser contributions by some PAHs, dibenzofuran (non-chlorinated), acenaphthylene, and diesel range organics.

North of Parker Street. To the north of Parker Street (i.e., NBHS, KMS, and some residential properties), contaminants such as barium and PCBs are more prevalent. Risk-contributing chemicals to the north of Parker Street, using the NBHS campus as an example, include PCBs, cadmium, lead, benzo(a)pyrene, dibenz(a,h)anthracene, benzo(a)anthracene, benzo(b)fluoranthene, indeno(1,2,3-cd)pyrene, dibenz(a,h)anthracene, arsenic, barium, cadmium, chromium, and lead, with prevalence varying by location. (Recently, volatile organic compounds (VOCs) have come under evaluation at NBHS, also.)

Site History/Timeline

Apparent impacts at the PSWS are evident as early as 1936 based on a review of aerial images. In 1961, the disposal activity had stopped and the site had vegetative cover probably due to Corp of Engineers grading of the site about 1960 to create the Liberty Gardens. In 1963, the site continued to have a vegetative cover. By 1971, the construction of NBHS was in progress. Fill material displaced by the construction of the NBHS was deposited to the west of Hathaway Boulevard at the location of the KMS (which also appears to have been impacted by PSWS-related waste management practices).

Walsh Field athletic areas are also depicted in the earliest available aerial photographs, including 1936. Walsh Field appears as a fully developed and maintained athletic complex in the 1950s. The absence of significant concentrations of PCBs (< 0.19 mg/kg) in Walsh Field soil/fill and evidence of the early development of the athletic complex relative to PSWS disposal activity suggest that waste deposition at Walsh Field pre-dated the disposal of significant quantities of PCBs.

Available PSWS Dioxin Data

On October 15, 2009, KMS dioxin compound soil data were provided to TRC by EPA in tabulated form. TRC's initial review of the tabulated dioxin compound data noted the following:

- Results for a number of samples expressed as 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) Toxic Equivalents (TEQs) (see attached tables) exceed the Method 1 S-1 soil cleanup standard of 20 picograms per gram (pg/g) or parts per trillion (ppt). However, the concentrations presented are not alarming from a risk assessment perspective as they would correspond to less than a 1 in 100,000 cancer risk for a residential exposure scenario. Additional information is needed to determine the representativeness of the data (e.g., biased-high, low, etc.).

- The TCDD TEQs (last column in the multi-page table) appear to have been calculated using the 1998 World Health Organization (WHO) toxicity equivalency factors (TEFs) for dioxin compounds. MassDEP has developed TEFs (MassDEP, 1991) that differ from those developed by the WHO. ORS will likely want the MassDEP TEFs or updated WHO TEFs (van den Berg, 2006) used to calculate the dioxin TEQs. However, WHO only developed TEFs for dioxin/dibenzofuran congeners with chlorines in the 2, 3, 7 and 8 positions (those congeners included in the tabulated data). MassDEP has developed TEFs for all dioxin/dibenzofuran congeners, even those that do not have chlorines in each of the 2, 3, 7 and 8 positions.

TRC notes further that congener/isomer-specific analyses data (if available) can be used to examine PCDD/PCDF profiles found in soils. Profiles represent a valuable tool in identifying precursor compounds (e.g., thermal formation) as well as potential sources of PCDDs/PCDFs. In addition, congener/isomer-specific data (e.g., actual PCDD/PCDF concentrations found in soil samples) and not TEF-weighted data can be used for comparison to PCDD/PCDF concentrations found in soils both in the US and worldwide. Such comparisons allow us to place PSWS data in perspective and answer the question: How do PCDD/PCDF data in PSWS soils compare to global background concentrations?

Given the fate and transport behavior of dioxin compounds, which in large part is very similar to PCBs and PAHs (strong tendency to partition to solid phases, very low water solubility and very low volatility), TRC does not believe that the remedial approaches proposed for the PSWS (i.e., prevent exposure) will be significantly affected.

<u>Precursor Compounds and Burning Activity</u>

Dioxin compounds may be formed as part of a burning/combustion process under appropriate conditions. The presence of ash at the PSWS suggests the presence of burned materials.

The available soils data indicate that PCBs are the only PCDD/PCDF precursor compounds at PSWS. The available analytical data provide no indication of the presence of any other chlorinated organic compounds with the potential to serve as dioxin precursors in significant concentrations. This is based on analysis for VOCs, semivolatile organic compounds (SVOCs), pesticides, and PCBs conducted by the prior consultant and TRC.

The highest concentrations of PCBs detected at PSWS have been detected at KMS, the KMS wetland, the Nemasket Street Lots (former Bethel AME parcels), and some residential locations. For example, PCBs detected in excess of 100 milligrams per kilogram (mg/kg) have been detected in soil samples collected from the following locations:

- KMS (pre-remediation)
- Nemasket Street Lots (Former Bethel AME parcels)
- 101 Greenwood Street

PCBs in excess of 50 mg/kg have been detected at the following locations:

- 128 Ruggles Street
- 102 Greenwood Street
- NBHS (two locations)

Anecdotal evidence indicates that products of waste buring, whether on-site or waste that had been burned/incinerated off-site, were disposed of at the PSWS. Subsequent filling and grading activity is likely to have displaced the impacts of burning activity (such as the transfer of fill material from the vicinity of the NBHS building to the KMS grounds). Based upon the history of the area that indicates some waste burning, it would be expected that select metals, as well as PAHs, would be present at elevated concentrations in the ash due to the burning of trash. Hence, the presence of enriched metals and PAH concentrations (as well as PAH profiles) could be another indicator of waste combustion. The presence of elevated concentrations of PCBs (see above samples) in combination with elevated concentrations of pyrogenic PAHs and selected metals could serve as useful chemical criteria for identifying candidate sites where soil samples would be collected to undergo PCDD/PCDF analyses.

Conclusions

- Dioxins are unlikely to be present in Walsh Field fill and soil because deposition at Walsh Field pre-dated the disposal of PCB wastes at the PSWS. Absent combustion activity in the presence of chlorinated organic precursor compounds such as PCBs, dioxin compound formation is not expected to be an important process at this location.

- Dioxin compound precursors at the PSWS are principally associated with PCBs. The available analytical data provide no indication of the presence of any other chlorinated organic compounds in significant concentrations.

- The highest concentrations of PCBs have been detected at KMS (pre-remediation), the Nemasket Street Lots, a few residential parcels, and localized areas on the NBHS campus.

- Artifacts of burning (the presence of ash, metal enrichment, and PAHs) are generally ubiquitous in fill material at the PSWS. However, the combination of burning artifacts (ash, metals enrichment, and PAHs) and precursor chemicals (e.g., PCBs) is found to the north of Parker Street.

Recommendations

TRC recommends the following activities:

- The collection of soil and fill samples for dioxin compound analysis from select locations at the PSWS. These data would be used for the following:

  - Evaluate the presence of dioxin compounds at the PSWS.

  - Estimate the potential risks posed by the presence of measured concentrations of PCDDs/PCDFs.

In developing an investigation program for an area targeted for PCDD/PCDF soil sampling, TRC will review relevant soil data from the area focusing principally on metals results, PAH and SVOC data, and PCB (homolog or aroclor) results to develop a process for sample selection. As noted above, artifacts of burning include the presence of ash, metal enrichment, and PAHs. Soil samples with elevated results, in particular those with concentrations greater than regulatory limits for PCBs and/or PAHs and/or metals may be used to identify a population of samples for potential PCDD/PCDF analyses. The specifics of the sampling program will be tailored to the specifics of each area targeted for evaluation.

References

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TABLE X
SUMMARY OF SOIL ANALYSES FOR
CHLORINATED DIBENZO-P-DIOXINS AND DIBENZOFURANS
McCoy Field
New Bedford, Massachusetts

Sample ID	2,3,7,8-TCDD pg/g	TCDD TEQ	1,2,3,7,8-PeCDD pg/g	TCDD TEQ	1,2,3,4,7,8-HxCDD pg/g	TCDD TEQ	1,2,3,6,7,8-HxCDD pg/g	TCDD TEQ	1,2,3,7,8,9-HxCDD pg/g	TCDD TEQ	1,2,3,4,6,7,8-HpCDD pg/g	TCDD TEQ
TCDD TEF$_{DFP}$-WHO$_{98}$ --->	**1**		**1**		**0.1**		**0.1**		**0.1**		**0.01**	
Q4-A & B	0.2 U	0.1	0.3 U	0.15	1.4 J	0.14	6.2	0.62	5.2	0.52	117	1.17
Q16 A & B	*0.8* J	0.8	2.2 J	2.2	3.4 J	0.34	16.8	1.68	10.2	1.02	629	6.29
Q24 A & B	1.4 J	1.4	3.6 J	3.6	6.7	0.67	44.2	4.42	23.5	2.35	1790	17.9
Q37 A, B, &C	*0.68* J	0.68	2.1 J	2.1	3.6 J	0.36	9.3	0.93	9	0.9	237	2.37
Duplicate 11	2.8	2.8	6	6	5.2	0.52	34.1	3.41	24.1	2.41	1310	13.1
Duplicate 13	0.95 J	0.95	3.2 J	3.2	2.6 J	0.26	9	0.9	7.9	0.79	146	1.46
Q6-Embankment A & B	0.66 J	0.66	2.5 J	2.5	2.3 J	0.23	8	0.8	7	0.7	129	1.29
Q11-Embankment A &	0.4 J	0.4	1.8 J	1.8	2.2 J	0.22	5.8	0.58	6	0.6	106	1.06
Arithmetic Mean		0.97		2.69		0.34		1.67		1.16		5.58
Maximum		2.8		6		0.67		4.42		2.41		17.9
Method 1 S-1 Soil standard		4		4		4		4		4		4
Method 1 S-2 Soil standard		6		6		6		6		6		6
Method 1 S-3 Soil standard		20		20		20		20		20		20
Upper Concentration Limit		200		200		200		200		200		200

pg/g = picrograms per grams (parts per trillion).
U = Undetected at quantitation limit presented.
J = Estimated concentration below calibration range.
C = Value reported from confirmatory analysis.
D = Value reported from dilution analysis.
X = Interference from diphenyl ethers.
Value in italics = Estimated most probable concentration (EMPC)

TABLE X
SUMMARY OF SOIL ANALYSES FOR
CHLORINATED DIBENZO-P-DIOXINS AND DIBENZOFURANS
McCoy Field
New Bedford, Massachusetts

Sample ID	1,2,3,4,6,7,8,9-OCDD pg/g		TCDD TEQ	2,3,7,8-TCDF pg/g		TCDD TEQ	1,2,3,7,8-PeCDF pg/g		TCDD TEQ	2,3,4,7,8-PeCDF pg/g	TCDD TEQ	1,2,3,4,7,8-HxCDF pg/g	TCDD TEQ	1,2,3,6,7,8-HxCDF pg/g	TCDD TEQ
TCDD TEF$_{DFP}$-WHO$_{98}$ --->	**0.0001**			**0.1**			**0.05**			**0.5**		**0.1**		**0.1**	
Q4-A & B	1260		0.126	8.2	C	0.82	0.1	U	0.0025	14.7	7.35	93.7	9.37	33.3	3.33
Q16 A & B	4690	D	0.469	11.1	C	1.11	0.1	U	0.0025	11.5	5.75	36.5	3.65	17	1.7
Q24 A & B	12160	D	1.216	15.7	C	1.57	0.1	U	0.0025	16.3	8.15	44.2	4.42	18.9	1.89
Q37 A, B, &C	3020		0.302	5.2	C	0.52	0.08	U	0.002	5.6	2.8	23.7	2.37	9.9	0.99
Duplicate 11	10210	D	1.021	18.4	C	1.84	0.2	U	0.005	19.3	9.65	51.9	5.19	22.2	2.22
Duplicate 13	1400		0.14	13	C	1.3	0.1	U	0.0025	17.6	8.8	34.4	3.44	16.8	1.68
Q6-Embankment A & B	1190		0.119	11.2	C	1.12	0.6	U	0.015	9.9	4.95	29.6	2.96	13.5	1.35
Q11-Embankment A &	1640		0.164	5.3	C	0.53	0.05	U	0.00125	5.8	2.9	11.4	1.14	6.2	0.62
Arithmetic Mean			0.44			1.10			0.004		6.29		4.07		1.72
Maximum			1.22			1.84			0.015		9.65		9.37		3.33
Method 1 S-1 Soil standard			4			4			4		4		4		4
Method 1 S-2 Soil standard			6			6			6		6		6		6
Method 1 S-3 Soil standard			20			20			20		20		20		20
Upper Concentration Limit			200			200			200		200		200		200

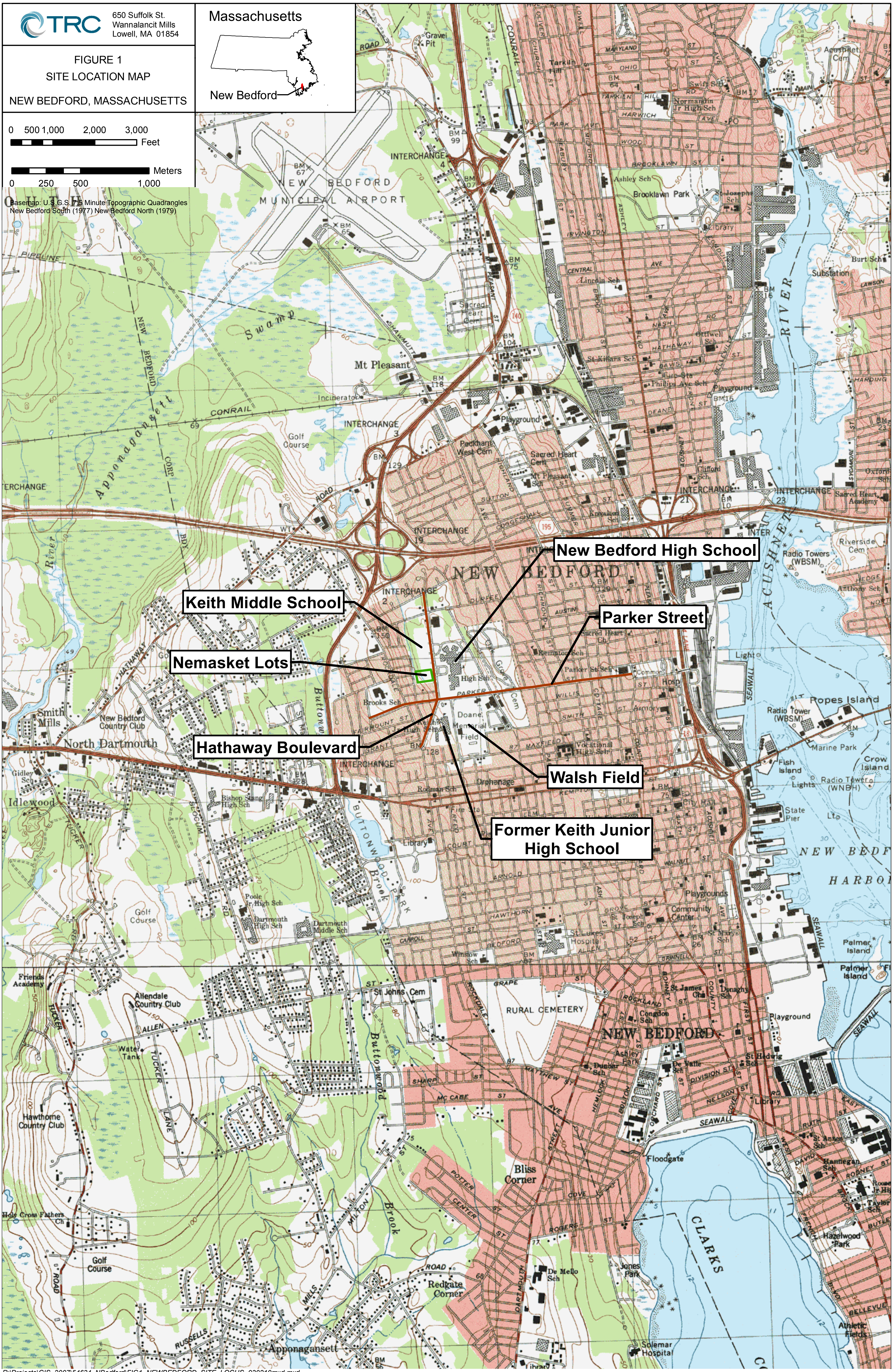
pg/g = picograms per gram:
U = Undetected at quantitati
J = Estimated concentration
C = Value reported from con
D = Value reported from dilu
X = Interference from diphe
Value in italics = Estimated r

TABLE X
SUMMARY OF SOIL ANALYSES FOR
CHLORINATED DIBENZO-P-DIOXINS AND DIBENZOFURANS
McCoy Field
New Bedford, Massachusetts

Sample ID	2,3,4,6,7,8-HxCDF pg/g	TCDD TEQ	1,2,3,7,8,9-HxCDF pg/g	TCDD TEQ	1,2,3,4,6,7,8-HpCDF pg/g	TCDD TEQ	1,2,3,4,7,8,9-HpCDF pg/g	TCDD TEQ	1,2,3,4,6,7,8,9-OCDF pg/g	TCDD TEQ	Sample Total TCDD pg/g	Lab sheet TEQs pg/g
TCDD TEF_{DFP}-WHO_{98} --->	0.1		0.1		0.01		0.01		0.0001			
Q4-A & B	19.1	1.91	*5.8* X	0.58	76.3	0.763	27.3	0.273	156	0.0156	27.2	28.7
Q16 A & B	16.4	1.64	*7.5* X	0.75	172	1.72	12.1	0.121	276	0.0276	29.3	32.6
Q24 A & B	20.2	2.02	*8.6* X	0.86	346	3.46	20.3	0.203	1320	0.132	54.3	64.6
Q37 A, B, &C	8.4	0.84	*4.2* XJ	0.42	99.7	0.997	8.2	0.082	220	0.022	16.7	18.6
Duplicate 11	22.4	2.24	*10.4* X	1.04	310	3.1	18.2	0.182	628	0.0628	54.8	61.6
Duplicate 13	20.9	2.09	*10.9* X	1.09	108	1.08	8.5	0.085	128	0.0128	27.3	27.1
Q6-Embankment A & B	14.8	1.48	*10.1* X	1.01	88.8	0.888	6.2	0.062	100	0.01	20.1	20.2
Q11-Embankment A &	8.5	0.85	*3.8* XJ	0.38	45.6	0.456	3.3 J	0.033	58.4	0.00584	11.7	12.4
Arithmetic Mean		1.63		0.77		1.56		0.13		0.036	30.2	33.2
Maximum		2.24		1.09		3.46		0.27		0.132	54.8	64.6
Method 1 S-1 Soil standard		4		4		4		4		4	4	
Method 1 S-2 Soil standard		6		6		6		6		6	6	
Method 1 S-3 Soil standard		20		20		20		20		20	20	
Upper Concentration Limit		200		200		200		200		200	200	

pg/g = picograms per gram
U = Undetected at quantitati
J = Estimated concentration
C = Value reported from con
D = Value reported from dilu
X = Interference from diphe
Value in italics = Estimated r

FIGURE 1
SITE LOCATION MAP
NEW BEDFORD, MASSACHUSETTS



R:\Projects\GIS_2007\54634_NBedford\FIG1_NEWBEDFORD_SITE_LOCUS_030210mxd.mxd

PARKER STREET WASTE SITE
NEW BEDFORD, MASSACHUSETTS

PROPOSED PCDD/PCDF
NBHS SOIL SAMPLING LOCATIONS

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

FIGURE 2

DRAWN BY: HWB
CHECKED BY: DMS
DATE: DEC 2009

FILE: T:\E_CAD\115058\PARKER ST WASTE SITE-2.dwg

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, Massachusetts 01854

Main 978.970.5600
Fax 978.453.1995

Memorandum

To: Scott Alfonse and Cheryl Henlin, City of New Bedford
From: David M. Sullivan, LSP CHMM, TRC Environmental Corporation
CC: Jeffry Saunders, TRC Environmental Corporation
Subject: Summary of Work Completed at Durfee and Summit Streets
Date: March 3, 2010

The following summarizes the procedures and analytical results associated with soil and groundwater sampling conducted by TRC Environmental Corporation (TRC) along the City of New Bedford (the "City") right-of-way (ROW) along Durfee Street and Summit Street in New Bedford, Massachusetts (see Figures 1). The subsurface soil investigation was performed to provide additional site characterization and delineate areas potentially impacted by the Parker Street Waste Site (PSWS). The groundwater sampling program was conducted concurrently by TRC to further evaluate groundwater conditions in the vicinity of the Keith Middle School (KMS) in support of TRC's wetland ecological evaluation. The data collected by TRC supplement data collected previously on behalf of the City by the BETA Group, Incorporated of Norwood, Massachusetts and by TRC in the surrounding area.

Soil Sampling Investigation

The subsurface soil investigation was conducted on December 17 and 18, 2009 and consisted of direct push soil borings using a truck-mounted direct push GeoProbe® drill rig to sample soil and to observe subsurface soil conditions. Drilling services and equipment were provided by New England Geotech, LLC of Jamestown, Rhode Island. Figure 1 illustrates the locations investigated by TRC along the Durfee Street (WSB-11 through WSB-15) and Summit Street (WSB-16 through WSB-19) ROWs using the above-described techniques. The soil boring locations were surveyed by Land Planning, Incorporated of Hanson, Massachusetts following TRC's sampling activities.

The investigative approach was intended to evaluate the presence or absence of fill, the vertical extent of impacts (if any), and the potential presence of impacts in soil and fill material that may be present. Borings were advanced and samples were collected until native overburden was encountered unless refusal was encountered first. Due to shallow refusal at one soil boring location (WSB-17), additional efforts were made to advance the boring to depth. Where native material was submitted for laboratory analysis, two samples of native material were typically collected in borings selected to characterize the native horizon. The lower native sample was retained for analysis contingent upon the results of the upper native horizon analysis in an attempt to delineate the vertical extent of potential impacts exceeding applicable standards, if present. The contingent native material was not analyzed if the native material interval above it was found to be uncontaminated (below cleanup criteria) based on laboratory analysis or as directed by the TRC Licensed Site Professional (LSP). In this case, analysis of the contingent native samples was not warranted.

TRC conducted field screening of soil samples consisting of visual and olfactory observations, jar headspace readings using an appropriately calibrated photoionization detector (PID), and professional judgment, consistent with TRC Standard Operating Procedures (SOPs) and general industry practice. TRC employed the Massachusetts Department of Environmental Protection (MassDEP) jar headspace technique to screen for the presence of volatile organic compounds (VOCs) in soil. TRC also evaluated and logged the geologic character of the soil samples consistent with the Burmeister method. A subset of soil samples was subjected to chemical analysis at an off-site environmental laboratory. The following table summarizes the soil samples collected by TRC from the Durfee Street and Summit Street ROWs for laboratory analysis:

Summary of Investigation Activities – December 2009

Location	Soil Borings	Number of Soil Samples Submitted for Laboratory Analysis[1]	Analyses[2]		
			PCBs[3]	PAHs[4]	MCP Metals/Hg[5]
Durfee Street	5	19 (4)	19	19	19
Summit Street	4	16 (3)	16	16	16

Notes:
[1] Contingency samples held by the laboratory listed in parentheses.
[2] Does not include quality assurance/quality control samples (e.g., duplicates).
[3] Polychlorinated biphenyls (PCBs) as Aroclors by SW-846 Method 8082.
[4] Polyaromatic hydrocarbons (PAHs) by SW-846 Method 8270C.
[5] Massachusetts Contingency Plan (MCP) Metals/Hg - antimony, arsenic, barium, beryllium, cadmium, chromium, lead, nickel, selenium, silver, thallium, vanadium, zinc and mercury by SW-846 Methods 6010B/7471A.

Soil samples for polychlorinated biphenyl (PCB) Aroclor analyses were submitted to Northeast Analytical Laboratories (NEA) of Schenectady, New York. Soil samples for Massachusetts Contingency Plan (MCP) metals and mercury and polyaromatic hydrocarbon (PAH) analyses were submitted to Con-Test Analytical Laboratory of East Longmeadow, Massachusetts. All samples were submitted under chain-of-custody.

The laboratory analytical results are summarized in Table 1. An analytical data map is included as Figure 1.

The subsurface material along both Durfee Street and Summit Street generally consisted of various sized sands and gravels. Limit fill material (trace to some coal and clinkers) was encountered at shallow depths at two of the soil boring locations along Summit Street (WSB-16 and WSB-19). All of the soil borings were screened with a PID using the MassDEP jar headspace method. PID screening results were consistently at background concentrations. Boring logs are included in Appendix A.

Groundwater Investigation

Two of the soil borings advanced within the Summit Street ROW (WSB-16 and WSB-19) were completed as permanent monitoring wells to evaluate groundwater conditions adjacent to the KMS wetland (see Figure 1). The monitoring well locations were surveyed by Land Planning following TRC's installation activities.

The monitoring wells (MW-9 and MW-10) were installed on December 18, 2009 at soil boring locations WSB-16 and WSB-19, respectively. Well construction logs are included in Appendix A. The monitoring wells were subsequently developed on December 21, 2009 using a Whale Mini Purge Pump and dedicated tubing. A LaMotte 2020 turbidity meter as used throughout development to monitor turbidity levels.

Following a stabilization period, TRC collected groundwater samples from the newly installed monitoring wells on January 7, 2010. Groundwater samples were collected following EPA Region I low stress (low flow) sampling guidelines. During purging activities, water quality parameters were monitored using a YSI 600XL Sonde and 650 MDS datalogger and a LaMotte 2020 turbidity meter. Water quality parameters were recorded on groundwater sampling log forms. Groundwater samples were collected after water quality parameters had stabilized in accordance with the low flow guidance.

Groundwater samples for polychlorinated biphenyl (PCB) Aroclor analyses were submitted to NEA of Schenectady, New York. Groundwater samples for total and dissolved (field filtered) MCP metals and mercury were submitted to Con-Test Analytical Laboratory of East Longmeadow, Massachusetts. All samples were submitted under chain-of-custody.

The results of the groundwater sample analysis from MW-9 and MW-10 are summarized in Table 2.

Please contact us if you have an questions.

Table 1
Summary of Analytical Results for Soil Samples - December 2009
Keith Middle School
New Bedford, Massachusetts

Analysis	Analyte						Sample ID:	WSB-11					WSB-12				WSB-13			
							Sample Depth (ft.):	0.5-1	1-3	1-3	4-5	7-8	0.5-1	1-3	4-5	7-8	0.5-1	1-3	5-6	7-8
							Sample Date:	12/17/2009	12/17/2009	12/17/2009	12/17/2009	12/17/2009	12/17/2009	12/17/2009	12/17/2009	12/17/2009	12/17/2009	12/17/2009	12/17/2009	12/17/2009
		S-1/GW-2	S-1/GW-3	S-2/GW-2	S-2/GW-3	RC S-1**	TSCA			Field Dup										
PAHs																				
	2-Methylnaphthalene	80	300	80	500	0.7	N/A	0.19 U	0.18 U	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.19 U	0.19 U	0.18 U	0.18 U	0.19 U	0.18 U
	Acenaphthene	1,000	1,000	3,000	3,000	4	N/A	0.19 U	0.18 U	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.19 U	0.19 U	0.18 U	0.18 U	0.19 U	0.18 U
	Acenaphthylene	600	10	600	10	1	N/A	0.19 U	0.18 U	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.19 U	0.19 U	0.18 U	0.18 U	0.19 U	0.18 U
	Anthracene	1,000	1,000	3,000	3,000	1,000	N/A	0.19 U	0.18 U	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.19 U	0.19 U	0.18 U	0.18 U	0.19 U	0.18 U
	Benz[a]anthracene	7	7	40	40	7	N/A	0.19 U	0.18 U	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.19 U	0.19 U	0.18 U	0.18 U	0.19 U	0.18 U
	Benzo[a]pyrene	2	2	4	4	2	N/A	0.19 U	0.18 U	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.19 U	0.19 U	0.18 U	0.18 U	0.19 U	0.18 U
	Benzo[b]fluoranthene	7	7	40	40	7	N/A	0.19 U	0.18 U	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.19 U	0.19 U	0.18 U	0.18 U	0.19 U	0.18 U
	Benzo[g,h,i]perylene	1,000	1,000	3,000	3,000	1,000	N/A	0.19 U	0.18 U	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.19 U	0.19 U	0.18 U	0.18 U	0.19 U	0.18 U
	Benzo[k]fluoranthene	70	70	400	400	70	N/A	0.19 U	0.18 U	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.19 U	0.19 U	0.18 U	0.18 U	0.19 U	0.18 U
	Chrysene	70	70	400	400	70	N/A	0.19 U	0.18 U	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.19 U	0.19 U	0.18 U	0.18 U	0.19 U	0.18 U
	Dibenz[a,h]anthracene	0.7	0.7	4	4	0.7	N/A	0.19 U	0.18 U	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.19 U	0.19 U	0.18 U	0.18 U	0.19 U	0.18 U
	Fluoranthene	1,000	1,000	3,000	3,000	1,000	N/A	0.19 U	0.18 U	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.19 U	0.19 U	0.18 U	0.18 U	0.19 U	0.18 U
	Fluorene	1,000	1,000	3,000	3,000	1,000	N/A	0.19 U	0.18 U	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.19 U	0.19 U	0.18 U	0.18 U	0.19 U	0.18 U
	Indeno[1,2,3-cd]pyrene	7	7	40	40	7	N/A	0.19 U	0.18 U	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.19 U	0.19 U	0.18 U	0.18 U	0.19 U	0.18 U
	Naphthalene	40	500	40	1,000	4	N/A	0.19 U	0.18 U	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.19 U	0.19 U	0.18 U	0.18 U	0.19 U	0.18 U
	Phenanthrene	500	500	1,000	1,000	10	N/A	0.19 U	0.18 U	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.19 U	0.19 U	0.18 U	0.18 U	0.19 U	0.18 U
	Pyrene	1,000	1,000	3,000	3,000	1,000	N/A	0.19 U	0.18 U	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.19 U	0.19 U	0.18 U	0.18 U	0.19 U	0.18 U
PCB Aroclors																				
(mg/kg)	Aroclor 1016	2	2	3	3	2	1	0.0547 U	0.0526 U	0.0513 U	0.0574 U	0.0535 U	0.0523 U	0.0519 U	0.0566 U	0.0526 U	0.0516 U	0.0514 U	0.0564 U	0.0529 U
	Aroclor 1221	2	2	3	3	2	1	0.0547 U	0.0526 U	0.0513 U	0.0574 U	0.0535 U	0.0523 U	0.0519 U	0.0566 U	0.0526 U	0.0516 U	0.0514 U	0.0564 U	0.0529 U
	Aroclor 1232	2	2	3	3	2	1	0.0547 U	0.0526 U	0.0513 U	0.0574 U	0.0535 U	0.0523 U	0.0519 U	0.0566 U	0.0526 U	0.0516 U	0.0514 U	0.0564 U	0.0529 U
	Aroclor 1242	2	2	3	3	2	1	0.0547 U	0.0526 U	0.0513 U	0.0574 U	0.0535 U	0.0523 U	0.0519 U	0.0566 U	0.0526 U	0.0516 U	0.0514 U	0.0564 U	0.0529 U
	Aroclor 1248	2	2	3	3	2	1	0.0547 U	0.0526 U	0.0513 U	0.0574 U	0.0535 U	0.0523 U	0.0519 U	0.0566 U	0.0526 U	0.0516 U	0.0514 U	0.0564 U	0.0529 U
	Aroclor 1254	2	2	3	3	2	1	0.0547 U	0.0526 U	0.0513 U	0.0574 U	0.0535 U	0.0523 U	0.0519 U	0.0566 U	0.0526 U	0.0516 U	0.0514 U	0.0564 U	0.0529 U
	Aroclor 1260	2	2	3	3	2	1	0.0547 U	0.0526 U	0.0513 U	0.0574 U	0.0535 U	0.0523 U	0.0519 U	0.0566 U	0.0526 U	0.0516 U	0.0514 U	0.0564 U	0.0529 U
	Total PCBs	2	2	3	3	2	1	0.0547 U	0.0526 U	0.0513 U	0.0574 U	0.0535 U	0.0523 U	0.0519 U	0.0566 U	0.0526 U	0.0516 U	0.0514 U	0.0564 U	0.0529 U
Metals																				
(mg/kg)	Antimony	20	20	30	30	20	N/A	4.4 U	4.3 U	4.1 U	4.5 U	4.4 U	4.2 U	4.2 U	4.5 U	4.5 U	4.2 U	4.3 U	4.5 U	4.3 U
	Arsenic	20	20	20	20	20	N/A	**3.2**	**2.9**	2.6 U	2.8 U	2.8 U	2.6 U	**3.3**	2.8 U	2.8 U	2.6 U	**3.0**	2.8 U	2.7 U
	Barium	1,000	1,000	3,000	3,000	1,000	N/A	**11**	**17**	**14**	5.6 U	**10**	**6.6**	**18**	**14**	**14**	**29**	**14**	**12**	**10**
	Beryllium	100	100	200	200	100	N/A	0.27 U	0.27 U	0.26 U	0.28 U	0.28 U	0.26 U	0.26 U	0.28 U	0.28 U	0.26 U	0.27 U	0.28 U	0.27 U
	Cadmium	2	2	30	30	2	N/A	0.27 U	0.27 U	0.26 U	0.28 U	0.28 U	0.26 U	0.26 U	0.28 U	0.28 U	0.26 U	0.27 U	0.28 U	0.27 U
	Chromium	30	30	200	200	30	N/A	**4.9**	**5.1**	**4.0**	**2.3**	**2.7**	**2.8**	**5.2**	**6.0**	**2.3**	**5.5**	**5.1**	**4.9**	**2.4**
	Lead	300	300	300	300	300	N/A	**13**	**13**	**10**	**3.3**	**5.4**	**4.7**	**5.6**	**10**	**4.2**	**4.9**	**8.8**	**18**	**3.8**
	Nickel	20	20	700	700	20	N/A	**3.5**	**3.6**	**3.3**	**1.7**	**2.4**	**2.2**	**4.1**	**3.1**	**2.1**	**4.8**	**4.0**	**2.5**	**1.7**
	Selenium	400	400	800	800	400	N/A	5.5 U	5.4 U	5.2 U	5.6 U	5.5 U	5.3 U	5.3 U	5.6 U	5.6 U	5.2 U	5.3 U	5.6 U	5.4 U
	Silver	100	100	200	200	100	N/A	0.55 U	0.54 U	0.52 U	0.56 U	0.55 U	0.53 U	0.53 U	0.56 U	0.56 U	0.52 U	0.53 U	0.56 U	0.54 U
	Thallium	8	8	60	60	8	N/A	3.3 U	3.2 U	3.1 U	3.4 U	3.3 U	3.2 U	3.2 U	3.4 U	3.4 U	3.1 U	3.2 U	3.3 U	3.3 U
	Vanadium	600	600	1,000	1,000	600	N/A	**9.8**	**9.3**	**6.3**	5.6 U	5.5 U	5.3 U	**9.8**	**7.3**	5.6 U	**8.1**	**8.8**	**6.1**	5.4 U
	Zinc	2,500	2,500	3,000	3,000	2,500	N/A	**15**	**15**	**20 B**	**11 B**	**11 B**	**15**	**14**	**12**	**8.1**	**19**	**12**	**11**	**6.9**
	Mercury	20	20	30	30	20	N/A	0.020 U	0.023 U	0.021 U	0.017 U	**0.047**	0.015 U	0.019 U	**0.031**	0.017 U	0.019 U	0.026 U	**0.017**	0.022 U

Notes:

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

B - Compound detected in associated method blank

NA - Sample not analyzed for the listed analyte.

N/A - Not applicable.

U - Compound was not detected at specified quantitation limit.

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

Values shown in Bold and shaded type exceed one or more of the listed MassDEP Method 1 standards.

Values shown in Bold and outlined exceed TSCA but are less than the listed Method 1 standards.

PAHs - Polynuclear Aromatic Hydrocarbons.

PCB - Polychlorinated Biphenyl.

RC - Reportable Concentration.

TSCA - Toxic Substances Control Act criteria.

* - The sample exhibits altered PCB pattern; best possible Aroclor match reported.

** - For reference purpose only.

Table 1
Summary of Analytical Results for Soil Samples - December 2009
Keith Middle School
New Bedford, Massachusetts

Analysis	Analyte						Sample ID:	WSB-14			WSB-15				WSB-16			
							Sample Depth (ft.):	1-3	4-5	7-8	0.5-1	1-3	4-5	7-8	0.5-1	1-3	4-5	7-8
							Sample Date:	12/17/2009	12/17/2009	12/17/2009	12/17/2009	12/17/2009	12/17/2009	12/17/2009	12/18/2009	12/18/2009	12/18/2009	12/18/2009
		S-1/GW-2	S-1/GW-3	S-2/GW-2	S-2/GW-3	RC S-1**	TSCA											
PAHs																		
	2-Methylnaphthalene	80	300	80	500	0.7	N/A	0.18 U	0.19 U	0.18 U	0.18 U	0.17 U	0.20 U	0.20 U	0.37 U	0.39 U	0.39 U	0.19 U
	Acenaphthene	1,000	1,000	3,000	3,000	4	N/A	0.18 U	0.19 U	0.18 U	0.18 U	0.17 U	0.20 U	0.20 U	0.37 U	0.39 U	0.39 U	0.19 U
	Acenaphthylene	600	10	600	10	1	N/A	0.18 U	0.19 U	0.18 U	0.18 U	0.17 U	0.20 U	0.20 U	**0.38**	0.39 U	0.39 U	0.19 U
	Anthracene	1,000	1,000	3,000	3,000	1,000	N/A	0.18 U	0.19 U	0.18 U	0.18 U	0.17 U	0.20 U	0.20 U	0.37 U	0.39 U	0.39 U	0.19 U
	Benz[a]anthracene	7	7	40	40	7	N/A	0.18 U	0.19 U	0.18 U	0.18 U	0.17 U	0.20 U	0.20 U	**1.7**	0.39 U	0.39 U	0.19 U
	Benzo[a]pyrene	2	2	4	4	2	N/A	0.18 U	0.19 U	0.18 U	0.18 U	0.17 U	0.20 U	0.20 U	**2.2**	0.39 U	0.39 U	0.19 U
	Benzo[b]fluoranthene	7	7	40	40	7	N/A	0.18 U	0.19 U	0.18 U	0.18 U	0.17 U	0.20 U	0.20 U	**2.6**	0.39 U	0.39 U	0.19 U
	Benzo[g,h,i]perylene	1,000	1,000	3,000	3,000	1,000	N/A	0.18 U	0.19 U	0.18 U	0.18 U	0.17 U	0.20 U	0.20 U	**1.0**	0.39 U	0.39 U	0.19 U
	Benzo[k]fluoranthene	70	70	400	400	70	N/A	0.18 U	0.19 U	0.18 U	0.18 U	0.17 U	0.20 U	0.20 U	**1.1**	0.39 U	0.39 U	0.19 U
	Chrysene	70	70	400	400	70	N/A	0.18 U	0.19 U	0.18 U	0.18 U	0.17 U	0.20 U	0.20 U	**1.9**	0.39 U	0.39 U	0.19 U
	Dibenz[a,h]anthracene	0.7	0.7	4	4	0.7	N/A	0.18 U	0.19 U	0.18 U	0.18 U	0.17 U	0.20 U	0.20 U	0.37 U	0.39 U	0.39 U	0.19 U
	Fluoranthene	1,000	1,000	3,000	3,000	1,000	N/A	0.18 U	0.19 U	0.18 U	0.18 U	0.17 U	0.20 U	0.20 U	**2.3**	0.39 U	0.39 U	0.19 U
	Fluorene	1,000	1,000	3,000	3,000	1,000	N/A	0.18 U	0.19 U	0.18 U	0.18 U	0.17 U	0.20 U	0.20 U	0.37 U	0.39 U	0.39 U	0.19 U
	Indeno[1,2,3-cd]pyrene	7	7	40	40	7	N/A	0.18 U	0.19 U	0.18 U	0.18 U	0.17 U	0.20 U	0.20 U	**1.3**	0.39 U	0.39 U	0.19 U
	Naphthalene	40	500	40	1,000	4	N/A	0.18 U	0.19 U	0.18 U	0.18 U	0.17 U	0.20 U	0.20 U	0.37 U	0.39 U	0.39 U	0.19 U
	Phenanthrene	500	500	1,000	1,000	10	N/A	0.18 U	0.19 U	0.18 U	0.18 U	0.17 U	0.20 U	0.20 U	**1.5**	0.39 U	0.39 U	0.19 U
	Pyrene	1,000	1,000	3,000	3,000	1,000	N/A	0.18 U	0.19 U	0.18 U	0.18 U	0.17 U	0.20 U	0.20 U	**2.4**	0.39 U	0.39 U	0.19 U
PCB Aroclors																		
(mg/kg)	Aroclor 1016	2	2	3	3	2	1	0.0517 U	0.0577 U	0.0522 U	0.0530 U	0.0509 U	0.0586 U	0.0571 U	0.0543 U	0.173 U	0.0572 U	0.0558 U
	Aroclor 1221	2	2	3	3	2	1	0.0517 U	0.0577 U	0.0522 U	0.0530 U	0.0509 U	0.0586 U	0.0571 U	0.0543 U	0.173 U	0.0572 U	0.0558 U
	Aroclor 1232	2	2	3	3	2	1	0.0517 U	0.0577 U	0.0522 U	0.0530 U	0.0509 U	0.0586 U	0.0571 U	0.0543 U	0.173 U	0.0572 U	0.0558 U
	Aroclor 1242	2	2	3	3	2	1	0.0517 U	0.0577 U	0.0522 U	0.0530 U	0.0509 U	0.0586 U	0.0571 U	0.0543 U	0.173 U	0.0572 U	0.0558 U
	Aroclor 1248	2	2	3	3	2	1	0.0517 U	0.0577 U	0.0522 U	0.0530 U	0.0509 U	0.0586 U	0.0571 U	0.0543 U	0.173 U	0.0572 U	0.0558 U
	Aroclor 1254	2	2	3	3	2	1	0.0517 U	0.0577 U	0.0522 U	0.0530 U	0.0509 U	0.0586 U	0.0571 U	**0.864** *	**4.69** *	**0.0660** *	0.0558 U
	Aroclor 1260	2	2	3	3	2	1	0.0517 U	0.0577 U	0.0522 U	0.0530 U	0.0509 U	0.0586 U	0.0571 U	0.0543 U	0.173 U	0.0572 U	0.0558 U
	Total PCBs	2	2	3	3	2	1	0.0517 U	0.0577 U	0.0522 U	0.0530 U	0.0509 U	0.0586 U	0.0571 U	**0.864**	**4.69**	**0.0660** *	0.0558 U
Metals																		
(mg/kg)	Antimony	20	20	30	30	20	N/A	4.2 U	4.5 U	4.3 U	4.2 U	4.1 U	4.7 U	4.7 U	4.4 U	4.5 U	4.6 U	4.4 U
	Arsenic	20	20	20	20	20	N/A	**3.1**	2.8 U	**3.0**	**2.8**	**3.3**	3.0 U	**3.7**	**5.9**	2.8 U	2.9 U	**3.2**
	Barium	1,000	1,000	3,000	3,000	1,000	N/A	**17**	**9.9**	**45**	**9.4**	**10**	**8.1**	**29**	**63**	**18**	**15**	**11**
	Beryllium	100	100	200	200	100	N/A	0.26 U	0.28 U	0.27 U	0.26 U	0.26 U	0.30 U	0.29 U	0.27 U	1.4 U	0.29 U	0.27 U
	Cadmium	2	2	30	30	2	N/A	0.26 U	0.28 U	0.27 U	0.26 U	0.26 U	0.30 U	0.29 U	0.27 U	0.28 U	0.29 U	0.27 U
	Chromium	30	30	200	200	30	N/A	**5.4**	**6.6**	**7.9**	**7.5**	**5.1**	**4.3**	**30**	**37**	**10**	**8.4**	**5.3**
	Lead	300	300	300	300	300	N/A	**5.8**	**5.2**	**1.7**	**11**	**1.8**	**1.4**	**2.4**	**37**	**8.2**	**4.2**	**3.0**
	Nickel	20	20	700	700	20	N/A	**3.8**	**2.3**	**5.7**	**2.9**	**2.3**	**2.2**	**13**	**16**	**7.6**	**4.2**	**4.3**
	Selenium	400	400	800	800	400	N/A	5.3 U	5.7 U	5.3 U	5.2 U	5.1 U	5.9 U	5.8 U	5.5 U	5.6 U	5.7 U	5.5 U
	Silver	100	100	200	200	100	N/A	0.53 U	0.57 U	0.53 U	0.52 U	0.51 U	0.59 U	0.58 U	0.55 U	0.56 U	0.57 U	0.55 U
	Thallium	8	8	60	60	8	N/A	3.2 U	3.4 U	3.2 U	3.1 U	3.1 U	3.6 U	3.5 U	3.3 U	3.4 U	3.4 U	3.3 U
	Vanadium	600	600	1,000	1,000	600	N/A	**8.8**	5.7 U	**12**	**7.6**	**8.9**	**6.0**	**24**	**28**	**21**	**12**	**9.0**
	Zinc	2,500	2,500	3,000	3,000	2,500	N/A	**14**	**9.2**	**12**	**21**	**14**	**12**	**26**	**38**	**28** B	**15**	**9.8**
	Mercury	20	20	30	30	20	N/A	0.020 U	0.019 U	0.018 U	**0.026**	0.013 U	0.016 U	0.016 U	**0.098**	**0.025**	0.013 U	0.021 U

Notes:

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

B - Compound detected in associated method blank

NA - Sample not analyzed for the listed analyte.

N/A - Not applicable.

U - Compound was not detected at specified quantitation limit.

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

Values shown in Bold and shaded type exceed one or more of the listed MassDEP Method 1 standards.

Values shown in Bold and outlined exceed TSCA but are less than the listed Method 1 standards.

PAHs - Polynuclear Aromatic Hydrocarbons.

PCB - Polychlorinated Biphenyl.

RC - Reportable Concentration.

TSCA - Toxic Substances Control Act criteria.

* - The sample exhibits altered PCB pattern; best possible Aroclor match reported.

** - For reference purpose only.

Table 1
Summary of Analytical Results for Soil Samples - December 2009
Keith Middle School
New Bedford, Massachusetts

Analysis	Analyte						Sample ID:	WSB-17				WSB-18					WSB-19			
							Sample Depth (ft.):	0.5-1	1-3	4-5	7-8	0.5-1	1-3	1-3	4-5	7-8	0.5-1	1-3	4-5	7-8
							Sample Date:	12/17/2009	12/17/2009	12/18/2009	12/18/2009	12/17/2009	12/17/2009	12/17/2009	12/17/2009	12/17/2009	12/18/2009	12/18/2009	12/18/2009	12/18/2009
		S-1/GW-2	S-1/GW-3	S-2/GW-2	S-2/GW-3	RC S-1**	TSCA							Field Dup						
PAHs																				
	2-Methylnaphthalene	80	300	80	500	0.7	N/A	0.18 U	0.38 U	0.19 U	0.19 U	0.36 U	0.20 U	0.20 U	0.18 U	0.18 U	0.20 U	0.20 U	0.20 U	0.20 U
	Acenaphthene	1,000	1,000	3,000	3,000	4	N/A	0.18 U	0.38 U	0.19 U	0.19 U	0.36 U	0.20 U	0.20 U	0.18 U	0.18 U	0.20 U	0.20 U	0.20 U	0.20 U
	Acenaphthylene	600	10	600	10	1	N/A	0.18 U	0.38 U	0.19 U	0.19 U	0.36 U	0.20 U	0.20 U	0.18 U	0.18 U	0.20 U	0.20 U	0.20 U	0.20 U
	Anthracene	1,000	1,000	3,000	3,000	1,000	N/A	0.18 U	0.38 U	0.19 U	0.19 U	0.36 U	0.20 U	0.20 U	0.18 U	0.18 U	0.20 U	0.20 U	0.20 U	0.20 U
	Benz[a]anthracene	7	7	40	40	7	N/A	0.18 U	0.38 U	0.19 U	0.19 U	0.36 U	0.20 U	0.20 U	0.18 U	0.18 U	**0.83**	0.20 U	0.20 U	0.20 U
	Benzo[a]pyrene	2	2	4	4	2	N/A	0.18 U	0.38 U	0.19 U	0.19 U	0.36 U	0.20 U	0.20 U	0.18 U	0.18 U	**0.88**	0.20 U	0.20 U	0.20 U
	Benzo[b]fluoranthene	7	7	40	40	7	N/A	0.18 U	0.38 U	0.19 U	0.19 U	0.36 U	0.20 U	0.20 U	0.18 U	0.18 U	**1.2**	0.20 U	0.20 U	0.20 U
	Benzo[g,h,i]perylene	1,000	1,000	3,000	3,000	1,000	N/A	0.18 U	0.38 U	0.19 U	0.19 U	0.36 U	0.20 U	0.20 U	0.18 U	0.18 U	**0.45**	0.20 U	0.20 U	0.20 U
	Benzo[k]fluoranthene	70	70	400	400	70	N/A	0.18 U	0.38 U	0.19 U	0.19 U	0.36 U	0.20 U	0.20 U	0.18 U	0.18 U	**0.45**	0.20 U	0.20 U	0.20 U
	Chrysene	70	70	400	400	70	N/A	0.18 U	0.38 U	0.19 U	0.19 U	0.36 U	0.20 U	0.20 U	0.18 U	0.18 U	**0.91**	0.20 U	0.20 U	0.20 U
	Dibenz[a,h]anthracene	0.7	0.7	4	4	0.7	N/A	0.18 U	0.38 U	0.19 U	0.19 U	0.36 U	0.20 U	0.20 U	0.18 U	0.18 U	0.20 U	0.20 U	0.20 U	0.20 U
	Fluoranthene	1,000	1,000	3,000	3,000	1,000	N/A	0.18 U	0.38 U	0.19 U	0.19 U	0.36 U	0.20 U	0.20 U	0.18 U	0.18 U	**2.0**	0.20 U	0.20 U	0.20 U
	Fluorene	1,000	1,000	3,000	3,000	1,000	N/A	0.18 U	0.38 U	0.19 U	0.19 U	0.36 U	0.20 U	0.20 U	0.18 U	0.18 U	0.20 U	0.20 U	0.20 U	0.20 U
	Indeno[1,2,3-cd]pyrene	7	7	40	40	7	N/A	0.18 U	0.38 U	0.19 U	0.19 U	0.36 U	0.20 U	0.20 U	0.18 U	0.18 U	**0.52**	0.20 U	0.20 U	0.20 U
	Naphthalene	40	500	40	1,000	4	N/A	0.18 U	0.38 U	0.19 U	0.19 U	0.36 U	0.20 U	0.20 U	0.18 U	0.18 U	0.20 U	0.20 U	0.20 U	0.20 U
	Phenanthrene	500	500	1,000	1,000	10	N/A	0.18 U	0.38 U	0.19 U	0.19 U	0.36 U	0.20 U	0.20 U	0.18 U	0.18 U	**0.78**	0.20 U	0.20 U	0.20 U
	Pyrene	1,000	1,000	3,000	3,000	1,000	N/A	0.18 U	0.38 U	0.19 U	0.19 U	0.36 U	0.20 U	0.20 U	0.18 U	0.18 U	**1.5**	0.20 U	0.20 U	0.20 U
PCB Aroclors																				
(mg/kg)	Aroclor 1016	2	2	3	3	2	1	0.0539 U	0.0530 U	0.0509 U	0.0535 U	0.0544 U	0.0560 U	0.0562 U	0.0538 U	0.0538 U	0.0561 U	0.0594 U	0.0600 U	0.0587 U
	Aroclor 1221	2	2	3	3	2	1	0.0539 U	0.0530 U	0.0509 U	0.0535 U	0.0544 U	0.0560 U	0.0562 U	0.0538 U	0.0538 U	0.0561 U	0.0594 U	0.0600 U	0.0587 U
	Aroclor 1232	2	2	3	3	2	1	0.0539 U	0.0530 U	0.0509 U	0.0535 U	0.0544 U	0.0560 U	0.0562 U	0.0538 U	0.0538 U	0.0561 U	0.0594 U	0.0600 U	0.0587 U
	Aroclor 1242	2	2	3	3	2	1	0.0539 U	0.0530 U	0.0509 U	0.0535 U	0.0544 U	0.0560 U	0.0562 U	0.0538 U	0.0538 U	0.0561 U	0.0594 U	0.0600 U	0.0587 U
	Aroclor 1248	2	2	3	3	2	1	0.0539 U	0.0530 U	0.0509 U	0.0535 U	0.0544 U	0.0560 U	0.0562 U	0.0538 U	0.0538 U	0.0561 U	0.0594 U	0.0600 U	0.0587 U
	Aroclor 1254	2	2	3	3	2	1	0.0539 U	**0.348** *	0.0509 U	0.0535 U	0.0544 U	0.0560 U	**0.136** *	0.0538 U	0.0538 U	**1.37** *	**0.136** *	0.0600 U	0.0587 U
	Aroclor 1260	2	2	3	3	2	1	0.0539 U	0.0530 U	0.0509 U	0.0535 U	0.0544 U	0.0560 U	0.0562 U	0.0538 U	0.0538 U	0.0561 U	0.0594 U	0.0600 U	0.0587 U
	Total PCBs	2	2	3	3	2	1	0.0539 U	**0.348**	0.0509 U	0.0535 U	0.0544 U	0.0560 U	**0.136**	0.0538 U	0.0538 U	**1.37**	**0.136**	0.0600 U	0.0587 U
Metals																				
(mg/kg)	Antimony	20	20	30	30	20	N/A	4.2 U	4.6 U	4.4 U	4.4 U	4.3 U	4.7 U	4.6 U	4.3 U	4.4 U	4.8 U	4.7 U	4.8 U	4.7 U
	Arsenic	20	20	20	20	20	N/A	**3.1**	2.9 U	**6.2**	2.8 U	**2.7**	**3.4**	**3.3**	2.7 U	2.7 U	**4.8**	**4.9**	**4.4**	**5.7**
	Barium	1,000	1,000	3,000	3,000	1,000	N/A	**97**	**29**	**16**	**7.7**	**87**	**18**	**18**	**5.6**	**17**	**41**	**19**	**11**	**14**
	Beryllium	100	100	200	200	100	N/A	1.3 U	1.4 U	0.28 U	0.28 U	1.3 U	1.5 U	1.4 U	0.27 U	1.4 U	0.30 U	0.29 U	0.30 U	0.29 U
	Cadmium	2	2	30	30	2	N/A	0.26 U	0.29 U	0.28 U	0.28 U	0.27 U	0.30 U	0.29 U	0.27 U	0.27 U	0.30 U	0.29 U	0.30 U	0.29 U
	Chromium	30	30	200	200	30	N/A	**67**	**14**	**7.4**	**4.7**	**50**	**10**	**8.3**	**3.2**	**8.9**	**15**	**11**	**8.9**	**14**
	Lead	300	300	300	300	300	N/A	**5.2**	**29**	**3.3**	**1.8**	**8.5**	**26**	**24**	**2.0**	**3.1**	**120**	**27**	**8.6**	**7.1**
	Nickel	20	20	700	700	20	N/A	**30**	**7.7**	**5.7**	**2.4**	**22**	**5.6**	**4.7**	**2.7**	**6.6**	**6.1**	**5.3**	**4.4**	**7.3**
	Selenium	400	400	800	800	400	N/A	5.3 U	5.7 U	5.5 U	5.5 U	5.3 U	5.9 U	5.7 U	5.4 U	5.5 U	5.9 U	5.8 U	6.0 U	5.9 U
	Silver	100	100	200	200	100	N/A	0.53 U	0.57 U	0.55 U	0.55 U	0.53 U	0.59 U	0.57 U	0.54 U	0.55 U	0.59 U	0.58 U	0.60 U	0.59 U
	Thallium	8	8	60	60	8	N/A	3.2 U	3.4 U	3.3 U	3.3 U	3.2 U	3.6 U	3.4 U	3.2 U	3.3 U	3.6 U	3.5 U	3.6 U	3.5 U
	Vanadium	600	600	1,000	1,000	600	N/A	**38**	**16**	**16**	**5.9**	**35**	**19**	**17**	5.4 U	**10**	**19**	**18**	**14**	**20**
	Zinc	2,500	2,500	3,000	3,000	2,500	N/A	**40 B**	**28 B**	**18**	**12**	**45 B**	**28 B**	**24 B**	**10 B**	**24 B**	**43**	**23**	**24**	**35**
	Mercury	20	20	30	30	20	N/A	0.020 U	**0.034**	0.020 U	0.017 U	0.023 U	**0.11**	**0.069**	0.022 U	0.017 U	**0.10**	**0.057**	**0.042**	**0.033**

Notes:

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

B - Compound detected in associated method blank

NA - Sample not analyzed for the listed analyte.

N/A - Not applicable.

U - Compound was not detected at specified quantitation limit.

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

Values shown in Bold and shaded type exceed one or more of the listed MassDEP Method 1 standards.

Values shown in Bold and outlined exceed TSCA but are less than the listed Method 1 standards.

PAHs - Polynuclear Aromatic Hydrocarbons.

PCB - Polychlorinated Biphenyl.

RC - Reportable Concentration.

TSCA - Toxic Substances Control Act criteria.

* - The sample exhibits altered PCB pattern; best possible Aroclor match reported.

** - For reference purpose only.

Summary of Analytical Results for Groundwater Samples -- January 2010
Keith Middle School
New Bedford, Massachusetts

Analysis	Analyte		Sample ID:	MW-9				MW-10	
			Sample Date:	1/7/2010		1/7/2010		1/7/2010	
		GW-2	GW-3			Field Dup			
PCBs									
(ug/L)	Aroclor 1016	5	10	0.0510	U	0.0505	U	0.0500	U
	Aroclor 1221	5	10	0.0510	U	0.0505	U	0.0500	U
	Aroclor 1232	5	10	0.0510	U	0.0505	U	0.0500	U
	Aroclor 1242	5	10	**0.0495**	**J**	**0.0500**	**J**	0.0500	U
	Aroclor 1248	5	10	0.0510	U	0.0505	U	0.0500	U
	Aroclor 1254	5	10	**0.0235**	**J**	**0.0311**	**J**	0.0500	U
	Aroclor 1260	5	10	0.0510	U	0.0505	U	0.0500	U
	Total PCBs	5	10	**0.0730**	**J**	**0.0811**	**J**	0.0500	U
Metals, dissolved									
(ug/L)	Antimony	NS	8,000	40	U	40	U	40	U
	Arsenic	NS	900	**8.2**		**10**		5.0	U
	Barium	NS	50,000	**330**		**340**		50	U
	Beryllium	NS	200	2.5	U	2.5	U	2.5	U
	Cadmium	NS	4	2.5	U	2.5	U	2.5	U
	Chromium	NS	300	5.0	U	5.0	U	5.0	U
	Lead	NS	10	7.5	U	7.5	U	7.5	U
	Mercury	NS	20	0.10	U	0.10	U	0.10	U
	Nickel	NS	200	**6.7**		**6.8**		5.0	U
	Selenium	NS	100	25	U	25	U	25	U
	Silver	NS	7	2.5	U	2.5	U	2.5	U
	Thallium	NS	3,000	30	U	30	U	30	U
	Vanadium	NS	4,000	25	U	25	U	25	U
	Zinc	NS	900	**99**		**94**		**17**	
	Antimony	NS	8,000	40	U	40	U	40	U
Metals, total									
(ug/L)	Arsenic	NS	900	**8.9**		**9.1**		5.0	U
	Barium	NS	50,000	**360**		**360**		50	U
	Beryllium	NS	200	2.5	U	2.5	U	2.5	U
	Cadmium	NS	4	2.5	U	2.5	U	2.5	U
	Chromium	NS	300	5.0	U	5.0	U	5.0	U
	Lead	NS	10	7.5	U	7.5	U	7.5	U
	Mercury	NS	20	0.10	U	0.10	U	0.10	U

Summary of Analytical Results for Groundwater Samples -- January 2010
Keith Middle School
New Bedford, Massachusetts

Analysis	Analyte		Sample ID:	MW-9		MW-10
			Sample Date:	1/7/2010	1/7/2010	1/7/2010
		GW-2	GW-3		Field Dup	
	Nickel	NS	200	**7.1**	**6.8**	5.0 U
	Selenium	NS	100	25 U	25 U	25 U
	Silver	NS	7	2.5 U	2.5 U	2.5 U
	Thallium	NS	3,000	30 U	30 U	30 U
	Vanadium	NS	4,000	25 U	25 U	25 U
	Zinc	NS	900	**100**	**130**	**16**

Notes:

ug/L - micrograms per liter.

J - Estimated value.

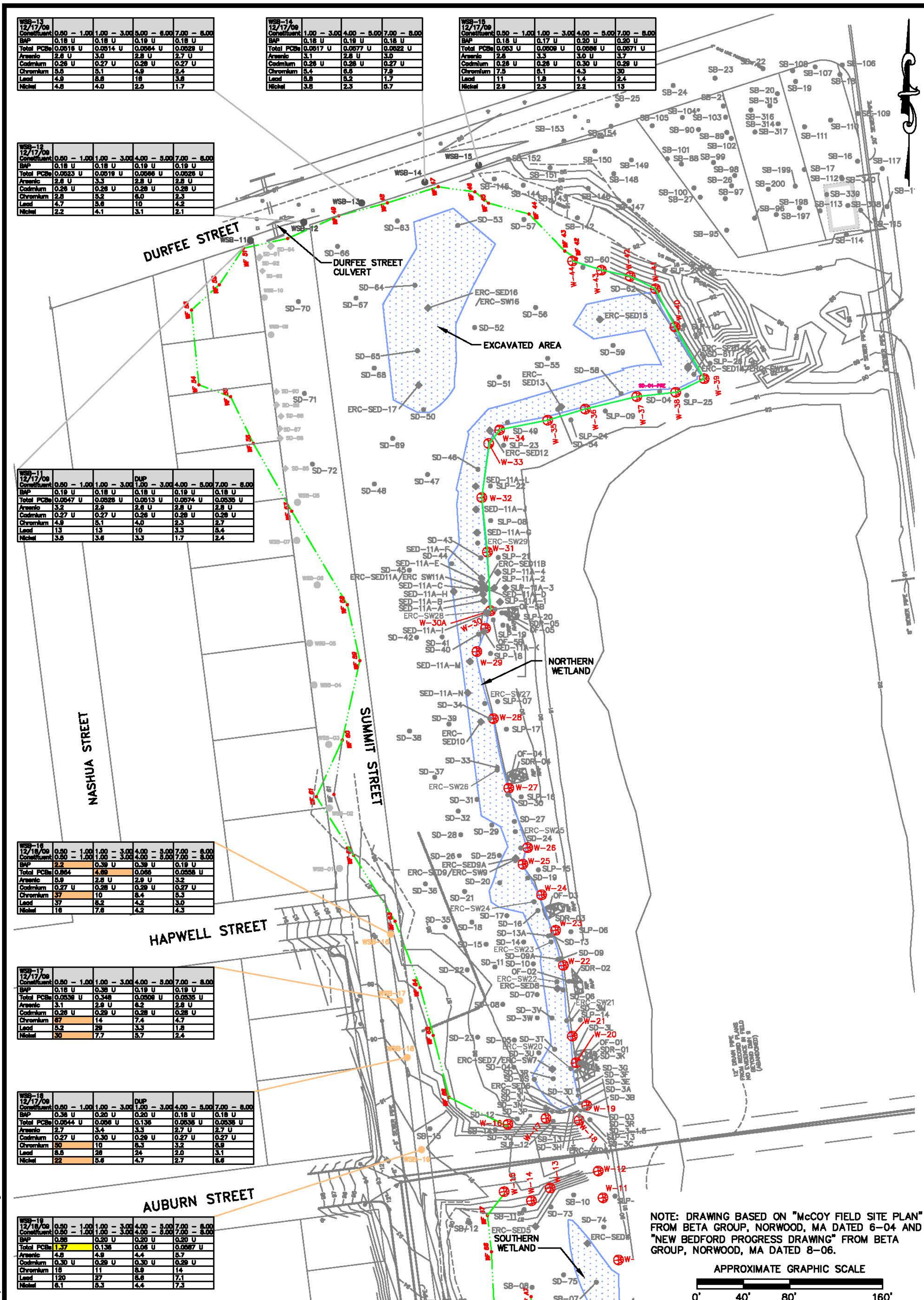
NA - Sample not analyzed for the listed analyte.

NS - No MassDEP standards exist for this compound.

U - Compound was not detected at specified quantitation limit.

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

Values shown in Bold and shaded type exceed one or more of the list



WSB-13 12/17/09 Constituent	0.50 – 1.00	1.00 – 3.00	5.00 – 6.00	7.00 – 8.00
BAP	0.18 U	0.18 U	0.19 U	0.18 U
Total PCBs	0.0516 U	0.0514 U	0.0564 U	0.0529 U
Arsenic	2.6 U	3.0	2.8 U	2.7 U
Cadmium	0.26 U	0.27 U	0.28 U	0.27 U
Chromium	5.5	5.1	4.9	2.4
Lead	4.9	8.6	16	3.6
Nickel	4.6	4.0	2.5	1.7

WSB-14 12/17/09 Constituent	1.00 – 3.00	4.00 – 5.00	7.00 – 8.00
BAP	0.18 U	0.19 U	0.18 U
Total PCBs	0.0517 U	0.0577 U	0.0522 U
Arsenic	3.1	2.8 U	3.0
Cadmium	0.26 U	0.28 U	0.27 U
Chromium	5.4	6.6	7.9
Lead	5.8	5.2	1.7
Nickel	3.6	2.3	5.7

WSB-15 12/17/09 Constituent	0.50 – 1.00	1.00 – 3.00	4.00 – 5.00	7.00 – 8.00
BAP	0.18 U	0.17 U	0.20 U	0.20 U
Total PCBs	0.053 U	0.0509 U	0.0586 U	0.0571 U
Arsenic	2.8	3.3	3.0 U	3.7
Cadmium	0.26 U	0.26 U	0.30 U	0.29 U
Chromium	7.5	6.1	4.3	30
Lead	11	1.8	1.4	2.4
Nickel	2.9	2.3	2.2	13

WSB-12 12/17/09 Constituent	0.50 – 1.00	1.00 – 3.00	4.00 – 5.00	7.00 – 8.00
BAP	0.18 U	0.18 U	0.19 U	0.19 U
Total PCBs	0.0523 U	0.0519 U	0.0566 U	0.0526 U
Arsenic	2.6 U	3.3	2.8 U	2.8 U
Cadmium	0.26 U	0.26 U	0.28 U	0.28 U
Chromium	2.8	5.2	6.0	2.3
Lead	4.7	5.6	10	4.2
Nickel	2.2	4.1	3.1	2.1

WSB-11 12/17/09 Constituent	0.50 – 1.00	1.00 – 3.00	DUP 1.00 – 3.00	4.00 – 5.00	7.00 – 8.00
BAP	0.19 U	0.18 U	0.18 U	0.19 U	0.18 U
Total PCBs	0.0547 U	0.0526 U	0.0513 U	0.0574 U	0.0535 U
Arsenic	3.2	2.9	2.6 U	2.8 U	2.8 U
Cadmium	0.27 U	0.27 U	0.26 U	0.28 U	0.28 U
Chromium	4.9	5.1	4.0	2.3	2.7
Lead	13	13	10	3.3	5.4
Nickel	3.5	3.6	3.3	1.7	2.4

WSB-16 12/18/09 Constituent	0.50 – 1.00 0.50 – 1.00	1.00 – 3.00 1.00 – 3.00	4.00 – 5.00 4.00 – 5.00	7.00 – 8.00 7.00 – 8.00
BAP	2.2	0.39 U	0.39 U	0.19 U
Total PCBs	0.864	4.69	0.066	0.0558 U
Arsenic	5.9	2.8 U	2.9 U	3.2
Cadmium	0.27 U	0.28 U	0.29 U	0.27 U
Chromium	37	10	8.4	5.3
Lead	37	8.2	4.2	3.0
Nickel	16	7.6	4.2	4.3

WSB-17 12/17/09 Constituent	0.50 – 1.00	1.00 – 3.00	4.00 – 5.00	7.00 – 8.00
BAP	0.18 U	0.38 U	0.19 U	0.19 U
Total PCBs	0.0539 U	0.348	0.0509 U	0.0535 U
Arsenic	3.1	2.9 U	6.2	2.8 U
Cadmium	0.26 U	0.29 U	0.28 U	0.28 U
Chromium	67	14	7.4	4.7
Lead	5.2	29	3.3	1.8
Nickel	30	7.7	5.7	2.4

WSB-18 12/17/09 Constituent	0.50 – 1.00	1.00 – 3.00	DUP 1.00 – 3.00	4.00 – 5.00	7.00 – 8.00
BAP	0.36 U	0.20 U	0.20 U	0.18 U	0.18 U
Total PCBs	0.0544 U	0.058 U	0.136	0.0538 U	0.0538 U
Arsenic	2.7	3.4	3.3	2.7 U	2.7 U
Cadmium	0.27 U	0.30 U	0.29 U	0.27 U	0.27 U
Chromium	50	10	8.3	3.2	8.9
Lead	8.5	28	24	2.0	3.1
Nickel	22	5.6	4.7	2.7	6.6

WSB-19 12/18/09 Constituent	0.50 – 1.00 0.50 – 1.00	1.00 – 3.00 1.00 – 3.00	4.00 – 5.00 4.00 – 5.00	7.00 – 8.00 7.00 – 8.00
BAP	0.86	0.20 U	0.20 U	0.20 U
Total PCBs	1.37	0.136	0.06 U	0.0587 U
Arsenic	4.8	4.9	4.4	5.7
Cadmium	0.30 U	0.29 U	0.30 U	0.29 U
Chromium	15	11	8.9	14
Lead	120	27	8.6	7.1
Nickel	6.1	8.3	4.4	7.3

Summary of Regulatory Comparison Criteria for Soil (mg/kg)						
Contaminant Names	S-1/GW-2	S-1/GW-3	S-2/GW-2	S-2/GW-3	RC S-1	TSCA
Benzo(a)pyrene (BAP)	2	2	4	4	2	N/A
Total PCBs	2	2	2	2	2	1
Arsenic	20	20	20	20	20	N/A
Cadmium	2	2	30	30	2	N/A
Chromium	30	30	200	200	30	N/A
Lead	300	300	300	300	300	N/A
Nickel	20	20	700	700	20	N/A

VALUES SHOWN IN PEACH BACKGROUND EXCEED ONE OR MORE OF THE LISTED MASSDEP METHOD 1 STANDARDS.

VALUES SHOWN IN YELLOW BACKGROUND EXCEED TSCA BUT ARE LESS THAN THE LISTED MASSDEP METHOD 1 STANDARDS.

SOIL BORING AND/OR SOIL SAMPLE LOCATION

SEDIMENT SAMPLE

SAMPLE LOCATION WITH EXCEEDANCE(S)

NOTES:
MG/KG - MILLIGRAMS PER KILOGRAM (DRY WEIGHT).
DUP - FIELD DUPLICATE SAMPLE.
N/A - NOT APPLICABLE.
PCBS - POLYCHLORINATED BIPHENYLS.
RCS - REPORTABLE CONCENTRATIONS.
TSCA - TOXIC SUBSTANCES CONTROL ACT.
U - COMPOUND WAS NOT DETECTED AT SPECIFIED QUANTITATION LIMIT.

SAMPLE LOCATION
SAMPLE DATE
CONTAMINANT NAME /ABBREVIATION
SAMPLE DEPTH RANGE IN FEET

KEITH MIDDLE SCHOOL WETLAND
NEW BEDFORD, MASSACHUSETTS

ANALYTICAL RESULTS SUMMARY MAP
DECEMBER WSB SAMPLES

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

FIGURE 1

DRAWN BY: PZ
CHECKED BY: JS
DATE: JANUARY 2010

FILE: Q:\GEOSCI\GISKEYProjects\NewBedford\KMS WSB DEC 09.dwg

TRC
Wannalancit Mills
650 Suffolk Street
Lowell MA
Telephone: 978-970-5600
Fax: 978-453-1995

BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER New Bedford / 115058
BORING/WELL NUMBER WSB-11
TRC GEOLOGIST H. Rizza
DRILLING CONTRACTOR/FOREMAN New England Geotech/Bill Meadows
DATE DRILLED 12/17/2009
LOCATION KMS - Adjacent to culvert along Durfee St.
SAMPLING METHOD 48" Macrocore
DRILLING METHOD Direct Push - 5400 Truck Rig
SCREEN TYPE/SLOT NA
FILTER PACK TYPE NA
SEAL TYPE NA
DEPTH TO WATER (Approximate Feet) 4
TOTAL DEPTH (Feet) 10
GROUND ELEVATION (Feet) 87.51
REFERENCE ELEVATION (Feet) NA
NOTES Sampled for MCP metals, PAHs & PCBs. (Hold WSB-11 (9-10))

DEPTH (ft. BGL)	BLOW COUNTS	PEN/REC (INCHES)	CORE #	TRC ID	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	Field Testing (ppm)	SAMPLE ID/ TIME	WELL DIAGRAM
0		48/34"		S-1		0-1" TOPSOIL 1-24" Tan fine to medium SAND, little gravel.	0.0	WSB-11 (0.5-1) 1115	No Monitoring Well Installed
2								WSB-11 (1-3) 1125 WSB-111 (1-3) 1220 DUP	
3						24-34" Tan to light-tan medium SAND, trace gravel, moist.			
4		48/30"		S-2		0-30" Tan medium to coarse SAND, trace gravel, moist.	0.0	WSB-11 (4-5) 1125 Plus MS/DUP	
7–8								WSB-11 (7-8) 1130	
8		24/21"		S-3		0-9" Dark-brown medium to coarse SAND, wet.	0.0		
9						9-11" Tan to brown fine SAND, some silt, wet. 11-21" Gray medium to coarse SAND, wet.		WSB-11 (9-10) 1140	
10						End of Boring @ 10 feet			

TRC
Wannalancit Mills
650 Suffolk Street
Lowell MA
Telephone: 978-970-5600
Fax: 978-453-1995

BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER New Bedford / 115058
BORING/WELL NUMBER WSB-12
TRC GEOLOGIST H. Rizza
DRILLING CONTRACTOR/FOREMAN New England Geotech/Bill Meadows
DATE DRILLED 12/17/2009
LOCATION KMS - 50' East of WSB-11
SAMPLING METHOD 48" Macrocore
DRILLING METHOD Direct Push - 5400 Truck Rig
SCREEN TYPE/SLOT NA
FILTER PACK TYPE NA
SEAL TYPE NA
DEPTH TO WATER (Approximate Feet) 4
TOTAL DEPTH (Feet) 10
GROUND ELEVATION (Feet) 87.52
REFERENCE ELEVATION (Feet) NA
NOTES Sampled for MCP metals, PAHs & PCBs. (Hold WSB-12 (9-10))

DEPTH (ft. BGL)	BLOW COUNTS	PEN/REC (INCHES)	CORE #	TRC ID	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	Field Testing (ppm)	SAMPLE ID/ TIME	WELL DIAGRAM
0		48/30"		S-1		0-1" Brown TOPSOIL, grass at surface. 1-20" Tan medium SAND, little gravel, trace coal, moist.	0.0	WSB-12 (0.5-1) 1045; WSB-12 (1-3) 1050	
2.5						20-30" Tan to gray fine to medium SAND, trace cobbles (rock), moist.			
4		48/38"		S-2		0-38" Tan to gray fine to medium SAND, trace gravel, wet.	0.0	WSB-12 (4-5) 1055; WSB-12 (7-8) 1100	No Monitoring Well Installed
8		24/24"		S-3		0-24" Gray to tan fine to medium SAND, wet.	0.0	WSB-12 (9-10) 1105	
10						End of Boring @ 10 feet			

TRC
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650 Suffolk Street
Lowell MA
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BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER New Bedford / 115058
BORING/WELL NUMBER WSB-13
TRC GEOLOGIST H. Rizza
DRILLING CONTRACTOR/FOREMAN New England Geotech/Bill Meadows
DATE DRILLED 12/17/2009
LOCATION KMS - 50' East of WSB-12
SAMPLING METHOD 48" Macrocore
DRILLING METHOD Direct Push - 5400 Truck Rig
SCREEN TYPE/SLOT NA
FILTER PACK TYPE NA
SEAL TYPE NA
DEPTH TO WATER (Approximate Feet) 5
TOTAL DEPTH (Feet) 10
GROUND ELEVATION (Feet) 87.94
REFERENCE ELEVATION (Feet) NA
NOTES Sampled for MCP metals, PAHs & PCBs. (Hold WSB-13 (9-10))

DEPTH (ft. BGL)	BLOW COUNTS	PEN/REC (INCHES)	CORE #	TRC ID	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	Field Testing (ppm)	SAMPLE ID/ TIME	WELL DIAGRAM
0		48/36"		S-1		0-3" TOPSOIL, grass at surface. 3-9" Brown to tan fine to medium SAND, rock at 9-feet.	0.0		No Monitoring Well Installed
1						9-17" Tan medium to coarse SAND, moist.		WSB-13 (0.5-1) 1010	
2						17-19" Crushed ROCK. 19-36" Tan to gray fine to medium SAND, little fine gravel.		WSB-13 (1-3) 1015	
4		48/48"		S-2		0-19" Tan fine to medium SAND.	0.0		
5									∇
6						19-48" Gray medium SAND, some fine gravel, moist.		WSB-13 (5-6) 1020	
7								WSB-13 (7-8) 1025	
8		24/20"		S-3		0-20" Tan to brown fine to medium SAND, little fine gravel,	0.0		
9								WSB-13 (9-10) 1030	
10						End of Boring @ 10 feet			

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BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER New Bedford / 115058
BORING/WELL NUMBER WSB-14
TRC GEOLOGIST H. Rizza
DRILLING CONTRACTOR/FOREMAN New England Geotech/Bill Meadows
DATE DRILLED 12/17/2009
LOCATION KMS - 50' East of WSB-13
SAMPLING METHOD 48" Macrocore
DRILLING METHOD Direct Push - 5400 Truck Rig
NOTES Sampled for MCP metals, PAHs & PCBs.

SCREEN TYPE/SLOT NA
FILTER PACK TYPE NA
SEAL TYPE NA
DEPTH TO WATER (Approximate Feet) 5
TOTAL DEPTH (Feet) 8
GROUND ELEVATION (Feet) 88.04
REFERENCE ELEVATION (Feet) NA

DEPTH (ft. BGL)	BLOW COUNTS	PEN/REC (INCHES)	CORE #	TRC ID	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	Field Testing (ppm)	SAMPLE ID/ TIME	WELL DIAGRAM
0		48/30		S-1		0-1" ASPHALT and ROCKS at surface.	0.0		
						1-7" Tan medium SAND, some fine gravel.			
1						7-12" Tan fine SAND, some fine gravel, rock in middle.			
2						12-30" Reddish-tan medium SAND, some fine gravel,		WSB-14 (1-3 0945	
3									
4		48/48"		S-2		0-30" Tan fine SAND, some coarse sand, moist to wet.	0.0	WSB-14 (4-5 0950	No Monitoring Well Installed
5									∇
6									
7						30-36" Tan to gray fine SAND, trace fine gravel, wet.			
						36-48" Gray medium to coarse SAND, trace gravel.		WSB-14 (7-8 0955	
8						End of Boring @ 8 feet			
						(Note: material was very tight at 8-feet; had to stop to avoid jamming core barrel.)			

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BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER New Bedford / 115058
BORING/WELL NUMBER WSB-15
TRC GEOLOGIST H. Rizza
DRILLING CONTRACTOR/FOREMAN New England Geotech/Bill Meadows
DATE DRILLED 12/17/2009
LOCATION KMS - 50' East of WSB-14
SAMPLING METHOD 48" Macrocore
DRILLING METHOD Direct Push - 5400 Truck Rig
SCREEN TYPE/SLOT NA
FILTER PACK TYPE NA
SEAL TYPE NA
DEPTH TO WATER (Approximate Feet) 5
TOTAL DEPTH (Feet) 10
GROUND ELEVATION (Feet) 88.34
REFERENCE ELEVATION (Feet) NA
NOTES Sampled for MCP metals, PAHs & PCBs. (Hold WSB-15 (9-10))

DEPTH (ft. BGL)	BLOW COUNTS	PEN/REC (INCHES)	CORE #	TRC ID	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	Field Testing (ppm)	SAMPLE ID/ TIME	WELL DIAGRAM
0		48/33"		S-1		0-5" Brown medium SAND and fine GRAVEL, some roots, grass at surface.	0.0		
1						5-7" Crushed ROCK.		WSB-15 (0.5-1) 0900	
						7-33" Tan fine to medium SAND, trace gravel.			
2								WSB-15 (1-3) 0905	
3									
4		48/48"		S-2		0-2" Tan fine SAND, trace fine gravel.	0.0		
						2-36" Tan fine to medium SAND, moist, no odor, no staining.		WSB-15 (4-5) 0915	▽ No Monitoring Well Installed
5									
6									
7						36-48" Brown medium SAND, trace gravel, moist, no odor, no staining.		WSB-15 (7-8) 0920	
8		24/24"		S-3		0-12" Tan to brown fine to medium SAND.	0.0		
9						12-18" Brown medium SAND.			
						18-24" Brown to gray coarse SAND, some gravel, weathered bedrock in tip, wet.		WSB-15 (9-10) 0930	
10						End of Boring @ 10 feet			

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BORING/WELL CONSTRUCTION LOG

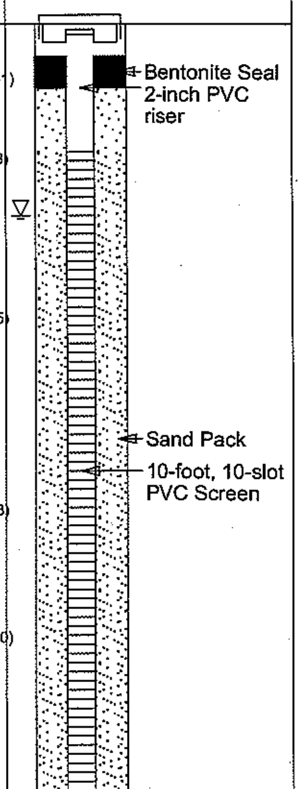
CLIENT/PROJECT NUMBER New Bedford / 115058
BORING/WELL NUMBER WSB-16/MW-9
TRC GEOLOGIST H. Rizza
DRILLING CONTRACTOR/FOREMAN New England Geotech/Hayes Rembijas
DATE DRILLED 12/18/2009
LOCATION KMS - Intersection of Summit and Hapwell Street
SAMPLING METHOD 48" Macrocore
DRILLING METHOD Direct Push - 6600 Truck Rig

SCREEN TYPE/SLOT Slotted
FILTER PACK TYPE Sand
SEAL TYPE Bentonite
DEPTH TO WATER (Approximate Feet) 3
TOTAL DEPTH (Feet) 12
GROUND ELEVATION (Feet) 87.88
REFERENCE ELEVATION (Feet) NA

NOTES Sampled for MCP metals, PAHs & PCBs. (Hold WSB-16 (9-10))

DEPTH (ft. BGL)	BLOW COUNTS	PEN/REC (INCHES)	CORE #	TRC ID	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	Field Testing (ppm)	SAMPLE ID/ TIME
0–5		60/36"		S-1		0-2" Tan to brown medium to coarse SAND, leaves at surface. 2-3" Gray fine to medium SAND, little gravel. 3-5" Brown fine to medium SAND, some gravel, trace pieces of coal and slag. 5-6" ASPHALT. 6-7" Crushed ROCK. 7-14" Brown to tan fine SAND, little gravel, moist to wet. 14-16" Crushed ROCK. 16-36" Gray fine SAND and SILT, some gravel, moist.	0.0	WSB-16 (0.5-1) 0915 WSB-16 (1-3) 0920 WSB-16 (4-5) 0935
5–10		60/50"		S-2		0-50" Tan to gray fine to medium SAND, some gravel, fining toward bottom.	0.0	WSB-16 (7-8) 0940 WSB-16 (9-10) 0945
10–12						End of Boring @ 10 feet (Note: Drove casing to 12 feet to set well.)		

WELL DIAGRAM



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BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER New Bedford / 115058
BORING/WELL NUMBER WSB-17
TRC GEOLOGIST H. Rizza
DRILLING CONTRACTOR/FOREMAN New England Geotech/Hayes Rembijas
DATE DRILLED 12/18/2009
LOCATION KMS - 50' North of WSB-16
SAMPLING METHOD 48" Macrocore
DRILLING METHOD Direct Push - 6600 Truck Rig

SCREEN TYPE/SLOT NA
FILTER PACK TYPE NA
SEAL TYPE NA
DEPTH TO WATER (Approximate Feet) 3.5
TOTAL DEPTH (Feet) 10
GROUND ELEVATION (Feet) 89.08
REFERENCE ELEVATION (Feet) NA

NOTES Sampled for MCP metals, PAHs & PCBs. (Hold WSB-17 (9-10)) (0.5-1 and 1-3 samples collected 12/17/2009 on first attempt)

DEPTH (ft. BGL)	BLOW COUNTS	PEN/REC (INCHES)	CORE #	TRC ID	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	Field Testing (ppm)	SAMPLE ID/ TIME	WELL DIAGRAM
		60/48"		S-1		0-2" TOPSOIL.	0.0		No Monitoring Well Installed
1						2-12" Brown to gray fine to medium SAND, some gravel.		WSB-17 (0.5-1) 1315	
2						12-24" Brown fine SAND, some silt, trace fine gravel, moist to wet.		WSB-17 (1-3) 1320	
3						24-36" Gray crushed GRANITE.			
4						36-48" Tan to orange fine SAND and GRAVEL.		WSB-17 (4-5) 1130	
5		60/60"		S-2		0-10" Brown fine SAND, saturated.	0.0		
6						10-22" Brown medium to coarse SAND and GRAVEL.			
7						22-26" Crushed gray ROCK.			
8						26-46" Brown medium to coarse SAND, some fine sand and gravel.		WSB-17 (7-8) 1135	
9						46-60" Tan to brown fine to coarse SAND.		WSB-17 (9-10) 1140	
10						End of Boring @ 10 feet			

(Note: Hit refusal at this location at 4-feet on 12/17/2009. Attempted again on 12/18/2009 with a different drill rig.)

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BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER New Bedford / 115058
BORING/WELL NUMBER WSB-18
TRC GEOLOGIST H. Rizza
DRILLING CONTRACTOR/FOREMAN New England Geotech/Bill Meadows
DATE DRILLED 12/17/2009
LOCATION KMS - 50' North of WSB-17
SAMPLING METHOD 48" Macrocore
DRILLING METHOD Direct Push - 5400 Truck Rig
SCREEN TYPE/SLOT NA
FILTER PACK TYPE NA
SEAL TYPE NA
DEPTH TO WATER (Approximate Feet) 4
TOTAL DEPTH (Feet) 8
GROUND ELEVATION (Feet) 90.14
REFERENCE ELEVATION (Feet) NA
NOTES Sampled for MCP metals, PAHs & PCBs.

DEPTH (ft. BGL)	BLOW COUNTS	PEN/REC (INCHES)	CORE #	TRC ID	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	Field Testing (ppm)	SAMPLE ID/ TIME	WELL DIAGRAM
		48/29"		S-1		0-2" Brown TOPSOIL with roots and leaves.	0.0		
1						2-8" Brown to gray fine SAND, some coarse sand and gravel.		WSB-18 (0.5-1) 1350	
2						8-18" Gray to brown fine SAND, little gravel.		WSB-18 (1-3) 1400	
3						18-29" Reddish-tan fine SAND, some gravel, crushed rock at bottom.		WSB-118 (1-3) 1500 DUP	
4		48/35"		S-2		0-28" Tan medium to coarse SAND, little gravel, fining towards bottom, wet.	0.0	WSB-18 (4-5) 1415 Plus MS/DUP	No Monitoring Well Installed
5									
6									
7						28-35" Tan to gray fine to medium SAND, some crushed rock.		WSB-18 (7-8) 1420	
8						End of Boring @ 8 feet (refusal)			

BORING/WELL CONSTRUCTION LOG

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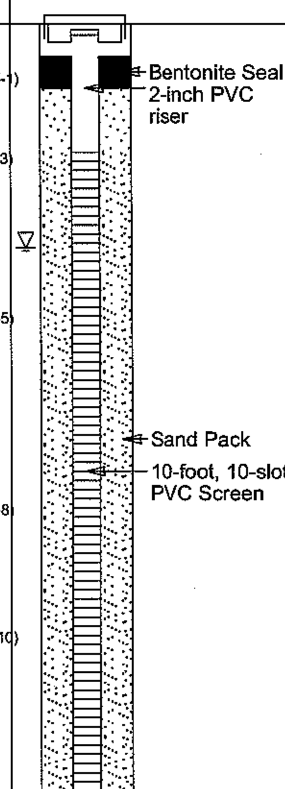
CLIENT/PROJECT NUMBER	New Bedford / 115058	**SCREEN TYPE/SLOT**	Slotted
BORING/WELL NUMBER	WSB-19/MW-10	**FILTER PACK TYPE**	Sand
TRC GEOLOGIST	H. Rizza	**SEAL TYPE**	Bentonite
DRILLING CONTRACTOR/FOREMAN	New England Geotech/Hayes Rembijas	**DEPTH TO WATER (Approximate Feet)**	3.5
DATE DRILLED	12/18/2009	**TOTAL DEPTH (Feet)**	10
LOCATION	KMS - 50' North of WSB-18	**GROUND ELEVATION (Feet)**	91.75
SAMPLING METHOD	48" Macrocore	**REFERENCE ELEVATION (Feet)**	NA
DRILLING METHOD	Direct Push - 6600 Truck Rig		

NOTES Sampled for MCP metals, PAHs & PCBs. (Hold WSB-19 (9-10))

DEPTH (ft. BGL)	BLOW COUNTS	PEN/REC (INCHES)	CORE #	TRC ID	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	Field Testing (ppm)	SAMPLE ID/ TIME
0		60/31"		S-1		0-2" Brown TOPSOIL, some grass and leaves at surface.	0.0	
						2-10" Dark-brown fine SAND, some fill (coal and slag).		WSB-19 (0.5-1) 1040
1–2						10-31" Tan to brown fine SAND, some medium SAND, little gravel, moist to wet.		WSB-19 (1-3) 1045
4		60/35"		S-2			0.0	WSB-19 (4-5) 1050
5						0-10" Brown tan fine SAND and SILT.		
6.5						10-35" Tan to gray fine to medium SAND, some silt and gravel, wet.		WSB-19 (7-8) 1055
								WSB-19 (9-10) 1100
10						End of Boring @ 10 feet		
						(Note: Drove casing to 12-feet to set well.)		

WELL DIAGRAM



Appendix D

MassDEP Work Plan

* MassDEP will provide their work plan as soon as it is available. It will be incorporated to this SAP through the SAP revision process by using the SAP Revision Form (SAP Table 1).

SAP Table 1 - SAP Revision Form

Site: Parker Street Waste Site, New Bedford, Massachusetts
OSCs: Wing Chau, Marcus Holmes, and Sarah DeStefano

Date	Rev. #	Proposed Change to SAP/*QAPP*	Reason for Change of Scope/Procedures	SAP Section Superseded	Requested By	Approved By
5/6/2010	X	Frequency of rinsate blank collection for organics and inorganics.	Clarify field procedures for collecting rinsate blanks.	Sections 9.4 (p. 42) and 13.1(p. 53), and Table 4 (p.76).	START	

Revision No. X, 6 May 2010

Section 9.4, Cleaning and Decontamination of Equipment/Sample Containers, page 42

The effectiveness of the decontamination procedure will be documented through the use of equipment rinsate blanks, which will be collected at a frequency of one per property or at a frequency of one per 40 samples per property for organic analyses; and at a frequency of one per 20 samples for organic analyses.

13.1 Field Quality Control, page 53

Equipment (Rinsate) Blanks - Equipment (rinsate) blanks are collected to assess cross-contamination brought about by improper decontamination procedures between sampling stations. Equipment rinsate blanks are required for non-dedicated sampling equipment. Equipment (rinsate) blanks will be collected for each type of sampling equipment. Rinsate blanks will be collected after field use of sampling equipment by pouring the appropriate rinsate solvent (e.g., DI water) over decontaminated sampling equipment. The rinsate is collected into appropriate sampling containers, preserved, and analyzed for the same parameters as the associated environmental samples (excluding physical parameters such as pH). Equipment rinsate blanks will be shipped with the samples collected the same day. The frequency of equipment rinsate blank collection for organic analyses will be one rinsate blank per decontamination event per type of equipment per property, or one rinsate blank per 40 field samples per property; and for inorganic analyses, will be one rinsate blank per decontamination event per 20 field samples per property.

SAP Table 4, Field Quality Control Summary, page 76

Site: Parker Street Waste Site, New Bedford, Massachusetts
OSCs: Wing Chau, Marcus Holmes, and Sarah DeStefano

Matrix	Analytical Parameter	Analytical Method/ SOP Reference	No. of Sampling Locations	No. of Field Duplicate Pairs	Organic		Inorganic		No. of VOA Trip Blanks	No. of Equip. Blanks	No. of Confirmatory Samples	No. of PE Samples	Total No. of Samples to Lab
					No. of MS	No. of MSD	No. of Duplicates	No. of MS					
Soil	PCB Aroclors	CAM-VA (Rev 1 9/14/2009)/ EPA-SW846 method 8082A	1,735 to 2,125	43- 54*	43-54**	43-54**	-----	-----	-----	43- 54*	-----	87 - 107	1,951 – 2,394
Soil	SVOCs (PAHs)	CAM-IIB (Rev 1 9/9/2009)/ EPA-SW846 method 8270D	1,735 to 2,125	43- 54*	43-54**	43-54**	-----	-----	-----	43- 54*	-----	87 - 107	1,951 – 2,394
Soil	Metals	ILM05.4 ICP-AES modification number xxxxxx	1,735 to 2,125	87 - 107			87-107	87-107	-----	87-107#	-----	87 - 107	2.039 – 2,500
Sediment	PCB Aroclors	CAM-VA (Rev 1 9/14/2009)/ EPA-SW846 method 8082A	57	2	2	2	-----	-----	-----	1	-----	3	65
Sediment	SVOC (PAHs)	CAM-IIB (Rev 1 9/9/2009)/ EPA-SW846 method 8270D	57	2	2	2	-----	-----	-----	1	-----	3	65
Sediment	Metals	ILM05.4 ICP-AES modification number xxxxxx	57	2	-----	----	**3**	**3**	-----	1	-----	3	65

Note:
If samples will be collected at different depths at the same location, count each discrete sampling depth as a separate sampling location/station.
MS = Matrix Spike
MSD = Matrix Spike Duplicate
* Rinsate, and field duplicate samples will be collected at a rate of one per property or 1 per 40 samples per property for organics.
# Rinsate, and field duplicate samples will be collected at a rate of one per property or 1 per 20 samples per property for inorganics.
** MS/MSD samples will be collected at a rate of one per property or 1 per 40 samples or per property for organics at varied depths.

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Parker Street Waste Site - Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region I

Subject:	**POLREP #1** **Initial** **Parker Street Waste Site** **01GB** **New Bedford, MA** **Latitude: 41.6381659 Longitude: -70.9368469**
To:	
From:	Wing Chau, On-Scene Coordinator
Date:	12/15/2010
Reporting Period:	10/29/10 to 12/03/10

1. Introduction

1.1 Background

Site Number:	01GB	**Contract Number:**	EP-W-08-061
D.O. Number:	024	**Action Memo Date:**	8/26/2010
Response Authority:	CERCLA	**Response Type:**	Time-Critical
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	10/29/2010	**Start Date:**	10/29/2010
Demob Date:		**Completion Date:**	
CERCLIS ID:	MAN000105955	**RCRIS ID:**	
ERNS No.:		**State Notification:**	
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category

CERCLA Fund-lead time-critical removal action.

1.1.2 Site Description

The Parker Street Waste Site is a previously estimated 104-acre area located in an urban area of New

Bedford, Bristol County, Massachusetts. The estimated extent of the Parker Street Waste Site, based upon data generated to date, is believed to be bounded to the north by Durfee Street, to the east by Liberty Street and the Oak Grove Cemetery, to the south by Hillman Street, and to the west by Summit Street. Redeveloped on and centered around a former city-owned landfill, the Parker Street Waste Site includes the New Bedford High School campus, the Keith Middle School (KMS), the Hetland Memorial Skating Rink property, Walsh Field, the new Andre McCoy Field, residential properties, New Bedford Housing Authority properties, Carabiner's Indoor Climbing Facility, and two private apartment complexes.

1.1.2.1 Location

Geographic coordiantes of the Site are approximately 41º 38' 33" north latitude and 70º 56' 44" west longitude, as measured from the approximate center of the Site.

1.1.2.2 Description of Threat

Elevated levels of polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and/ or heavy metals in soils at or near the surface, which pose an imminent and substantial endangerment to public health.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

EPA and MassDEP initiated a preliminary assessment and site investigation (PA/SI) on April 26, 2010. 63 parcels comprising 47 properties along the periphery of the Site were sampled to expedite further investigation of the boundaries of the Parker Street Waste Site, and to determine whether there is any immediate threat to human health and/or the environment related to the contamination from the Site. The site investigation identified several residential and commercial properties with elevated levels of polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and/ or heavy metals in soils at or near the surface, which pose an imminent and substantial endangerment to public health. Also, 24 additional properties were sampled in September 2010 to further delineate the nature and extent of the Site boundaries.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

On August 26, 2010, the Action Memorandum was signed by the Director of the Office of Site Remediation and Restoration, approving the proposed removal action to address the release or threatened release of hazardous substances, contaminants, and/or pollutants at the Site.

2.1.2 Response Actions to Date

October 29, 2010:
ERRS contractor mobilized office and storage trailers to the command post area.

Week of November 1, 2010:
ERRS continued establishing command post area. EPA and ERRS continued meeting with property owners to discuss pre-removal checklist and landscaping issues. ERRS collected in-situ soil samples for TCLP analysis and began developing the waste profile for disposal of contaminated soils.

Week of November 8, 2010:
ERRS continued establishing command post area and staging areas. In preparation for soil excavation, the following activities were conducted: tree removal and brush clearing activities were initiated at the following properties; P-004, P-021, P-029, and P-047; the above-ground pool at P-004 was disassembled and placed into storage; and photo-documened pre-removal site conditions at the properties.

Week of November 15, 2010:
ERRS continued establishing the staging areas. The ERRS subcontractor continued tree removal and brush clearing activities.

Week of November 22, 2010:
ERRS initiated soil excavation activities at P-029. START conducted perimeter air sampling and air monitoring. After placement of an orange geotextile, the excavated area was backfilled with clean fill material and the soil pile was covered and secured in preparation for site demobilization during the extended holiday weekend.

Week of November 29, 2010:
ERRS continued excavation activities on P-029 and initiated excavation of P-021. On November 30, 2010, seven truckloads of contaminated soils were shipped offsite to Waste Management's Turnkey Landfill located in Rochester, NH. On December 1, 2010, ten truckloads of contaminated soils were shipped offsite to the Turnkey Landfill in Rochester, NH. On December 3, nine truckloads of contaminated soils were shipped offsite to the Turnkey Landfill in Rochester, NH.

2.1.3 Enforcement Activities

The EPA and MassDEP case team is working with the current owner of property P-013 on developing the scope of the removal action to address soil contamination on its property.

2.2 Planning Section

2.2.1 Anticipated Activities

Complete setup of the staging area for contaminated soils at the Department of Public Infrastructure location on Shawmut Avenue. Complete excavation and backfilling of properties P-021 and P-029. Begin excavation and backfilling activities at properties P-004, P-011, and P-047.

2.2.1.1 Planned Response Activities

Secure access to properties with contamination within the top 3 feet of soil that poses a significant risk. Evaluate the risk assessments and determine the appropriate scope of work warranted under this removal action to address these properties.

Evaluate, in consultation with MassDEP, sampling results from the phase II sampling effort to determine whether a time-critical removal action is warranted.

2.3 Logistics Section

Continue coordination of transportation and disposal (T&D) of contaminated soils to permitted disposal facilities. Continue deliveries of clean backfill materials for excavated areas. Coordinate landscaping services for site restoration activities.

2.4 Finance Section

2.4.1 Narrative

Project Ceiling (Action Memorandum dated August 26, 2010).

Estimated Costs

COST CATEGORY		CEILING
REGIONAL REMOVAL ALLOWANCE COSTS:		
ERRS Contractor		$4,000,000.00
Interagency Agreement		$ 0.00
OTHER EXTRAMURAL COSTS NOT FUNDED FROM THE REGIONAL ALLOWANCE:		
START Contractor		$750,000.00
Extramural Subtotal		$4,750,000.00
Extramural Contingency	20%	$950,000.00
TOTAL, REMOVAL ACTION CEILING		**$5,700,000.00**

2.5 Safety Officer

On-site personnel have reviewed and signed the site specific health and safety plan (HASP). Daily operations health and safety briefings are conducted each morning prior to commencement of site activities.

2.6 Liaison Officer

2.7 Information Officer

2.7.1 Public Information Officer

2.7.2 Community Involvement Coordinator

3. Participating Entities

3.1 Unified Command

USEPA
MassDEP

3.2 Cooperating and Assisting Agencies

4. Personnel On Site

USEPA - 2 OSCs, 1 mobile lab with chemist
START - 1 Site Lead personnel
ERRS - 1 RM, 1 Operator, 2 Cleanup Technicians

5. Definition of Terms

ERRS- Emergency Rapid Response Services
EPA/USEPA - U.S. Environmental Protection Agency
MassDEP - Massachusetts Department of Environmental Protection
OSC - On-Scene Coordinator
RM - Response Manager
START - Superfund Technical Assessment and Response Team
TCLP - Toxicity Characteristic Leaching Procedure

6. Additional sources of information

6.1 Internet location of additional information/reports

http://www.epa.gov/region1/parkerstreet

6.2 Reporting Schedule

7. Situational Reference Materials

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Parker Street Waste Site - Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region I

Subject:	**POLREP #2** **Progress** **Parker Street Waste Site** **01GB** **New Bedford, MA** **Latitude: 41.6381659 Longitude: -70.9368469**
To:	
From:	Wing Chau, On-Scene Coordinator
Date:	2/17/2011
Reporting Period:	12/6/2010 to 2/17/11

1. Introduction

1.1 Background

Site Number:	01GB	**Contract Number:**	EP-W-08-061
D.O. Number:	024	**Action Memo Date:**	8/26/2010
Response Authority:	CERCLA	**Response Type:**	Time-Critical
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	10/29/2010	**Start Date:**	10/29/2010
Demob Date:		**Completion Date:**	
CERCLIS ID:	MAN000105955	**RCRIS ID:**	
ERNS No.:		**State Notification:**	
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category

CERCLA Fund-lead, time-critical removal action.

1.1.2 Site Description

The Parker Street Waste Site is a currently estimated 114-acre area located in an urban area of New Bedford, Bristol County, Massachusetts. The estimated extent of the Parker Street Waste Site, based upon data generated to date, is believed to be bounded to the north by Durfee Street, to the east by Liberty Street and the Oak Grove Cemetery, to the south by Hillman Street, and to the west by Summit Street. Redeveloped on and centered around a former city-owned landfill, the Parker Street Waste Site includes the New Bedford High School campus, the Keith Middle School (KMS), the Hetland Memorial Skating Rink property, Walsh Field, the new Andre McCoy Field, residential properties, New Bedford Housing Authority properties, Carabiner’s Indoor Climbing Facility, and two private apartment complexes.

1.1.2.1 Location

Geographic coordiantes of the Site are approximately 41º 38’ 33” north latitude and 70º 56’ 44” west longitude, as measured from the approximate center of the Site.

1.1.2.2 Description of Threat

Elevated levels of polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and/ or heavy metals in soils at or near the surface, pose an imminent and substantial endangerment to public health.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

EPA and MassDEP initiated a preliminary assessment and site investigation (PA/SI) on April 26, 2010. 63 parcels comprising 47 properties along the periphery of the Site were sampled to expedite further investigation of the boundaries of the Parker Street Waste Site, and to determine whether there is any immediate threat to human health and/or the environment related to the contamination from the Site. The site investigation identified several residential and commercial properties with elevated levels of polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and/ or heavy metals in soils at or near the surface, which pose an imminent and substantial endangerment to public health. Also, 24 additional properties were sampled in September 2010 to further delineate the nature and extent of the Site boundaries.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

On August 26, 2010, the Action Memorandum was signed by the Director of the Office of Site Remediation and Restoration, approving the proposed removal action to address the release or threatened release of hazardous substances, contaminants, and/or pollutants at the Site.

2.1.2 Response Actions to Date

Please refer to POLREP #1 for information on removal activities prior to December 6, 2010.

Week of December 6, 2010:

ERRS contractor continued excavation activities at properties P-021 and P-029. On December 8, 2010, eight truckloads of contaminated soils were transported off-site for disposal at the Waste Management Turnkey Landfill located in Rochester, NH. On December 9, 2010, nine truckloads of contaminated soils were transported off-site for disposal at the Turnkey Landfill in Rochester, NH. On December 10, 2010, four truckloads of contaminated soils were transported off-site for disposal at the Turnkey Landfill in Rochester, NH.

In the completed excavation areas, an orange geotextile fabric was placed as a visual marker to delineate the extent of excavation, 3 feet below ground surface, and clean fill material was used for backfill. START continued air monitoring activities during excavation and loadout activities. Also, an ERRS subcontractor installed a chain-linked fence around the clean soil/backfill staging area on Liberty Street near the Durfee/Liberty Street intersection.

Week of December 13, 2010:
ERRS contractor continued excavation activities at properties P-021 and P-029. On December 13, 2010, six truckloads of contaminated soils were transported offsite for disposal at the Turnkey Landfill in Rochester, NH. On December 14, 2010, five truckloads of contaminated soils were transported off-site for disposal at the Turnkey Landfill in Rochester, NH. On December 15, 2010, 3 truckloads of contaminated soils were transported off-site for disposal at the Turnkey Landfill in Rochester, NH. On December 16, 2010, five truckloads of contaminated soils were transported off-site for disposal at the Turnkey Landfill in Rochester, NH. On December 17, 2010, five truckloads of contaminated soils were transported off-site for disposal at the Turnkey Landfill in Rochester, NH.

In the completed excavation areas, an orange geotextile fabric was placed as a visual marker to delineate the extent of excavation, 3 feet below ground surface, and clean fill material was used for backfill. START continued air monitoring activities during excavation and loadout activities.

Week of December 20, 2010:
ERRS contractor continued excavation activities at properties P-021 and P-029. On December 20, 2010, four truckloads of contaminated soils were transported off-site for disposal at the Turnkey Landfill in Rochester, NH. In the completed excavation areas, an orange geotextile fabric was placed as a visual marker to delineate the extent of excavation, 3 feet below ground surface, and clean fill material was used for backfill. START continued air monitoring activities during excavation and loadout activities. On December 21, 2010, backfilling operations were completed at properties P-021 and P-029. Also, excavation activities commenced at properties P-004, P-011, and P-047. The excavated soils from properties P-004, P-011 and P-047 are temporarily stockpiled at the staging area constructed by EPA at the Department of Public Infrastructure property located on Shawmut Avenue.
Once transportation and disposal (T&D) has been arranged for the contaminated soils, loadout operations will commence. During excavation activities in the front yard of property P-011, a crushed 35-gallon drum along with a black tar-like material was encountered at approximately 2.5 feet below ground surface. This crushed drum and tar-like material were excavated and removed along with the contaminated soils to the temporary staging area while T&D is being arranged.

Week of December 27, 2010:
ERRS contractor continued excavation and backfilling activities at properties P-004 and P-011. Excavated soils are stockpiled at the contaminated soil staging area while awaiting T&D.

Week of January 3, 2011:
ERRS contractor continued and completed excavation and backfilling activities at properties P-004 and P-011. During excavation activities at property P-004 on January 3, 2011, small bone fragments and a live rifle round were discovered. The New Bedford Police Department (NBPD) was notified. NBPD detectives arrived on-scene and collected the bones and rifle ammunition for analysis. Subsequent to their assessment of the excavation area, NBPD indicated soil excavation activities could resume.

During excavation activities at property P-011 on January 5, 2011, several pieces of scrap metal and automobile parts, along with a black tar-like substance, were discovered in the front lawn area.

On January 6, 2011, five truckloads of contaminated soils stockpiled from property P-011 were shipped off-site for disposal at the Turnkey Landfill in Rochester, NH.

On January 7, 2011, three truckloads of contaminated soils stockpiled from property P-011 were shipped off-site for disposal at the Turnkey Landfill in Rochester, NH.

Week of January 10, 2011:
ERRS contractor commenced excavation activities at property P-047. ERRS also began placement of a geotextile fabric over backfilled areas at properties P-004, P-011, and P-021 to cover the excavated areas for the winter season; and where necessary, installed haybales to mitigate any potential erosion issues.

On January 10, 2011, one truckload of contaminated soils stockpiled from property P-011 were shipped off-site for disposal at the Turnkey Landfill in Rochester, NH.

On January 13, 2011, ERRS uncovered potential asbestos-containing tiles during excavation activities at property P-047. A sample of the tiles was collected by START and submitted to EPA's Office of Environmental Measurement and Evaluation (OEME) for lab analysis. Materials from this area were excavated and stockpiled separately at the staging area.

Week of January 17, 2011:
ERRS continued soil excavation and backfilling activities at property P-047.

Week of January 24, 2011:
ERRS completed soil excavation and backfilling activities at property P-047. ERRS began to demobilize personnel and equipment from the Site.

Week of January 31, 2011:
ERRS finished demobilization activities.

Week of February 7, 2011:
EPA and MassDEP hosted a public meeting at the Keith Middle School on February 10, 2011 to provide residents and interested stakeholders an update on the Phase I sampling efforts and the status of current cleanup activities. Representatives from the Massachusetts Department of Public Health (MDPH) and the Agency for Toxic Substances and Disease Registry (ATSDR) were also in attendance to answer site related questions.

2.1.3 Enforcement Activities

The EPA and MassDEP case team is working with the current owner of property P-013 on developing the scope of the removal action to address soil contamination on its property. The case team also anticipates meeting with the New Bedford Housing Authority (NBHA) in February 2011 to initiate discussions on remediation options for NBHA properties.

2.2 Planning Section

2.2.1 Anticipated Activities

Complete T&D of contaminated soils that are temporarily stockpiled in the staging area.

2.2.1.1 Planned Response Activities

Secure access to properties with contamination within the top 3 feet of soil that warrant a removal action. Evaluate, in consultation with MassDEP, sampling results from the Phase II sampling effort to determine whether a time-critical removal action is warranted as well.

Evaluate sampling results from the Phase II sampling effort and determine whether additional sampling is necessary to determine the extent of the Site boundaries.

2.3 Logistics Section

Continue coordination of T&D activities for the remaining stockpiled contaminated soils to permitted disposal facilities. Coordinate landscaping services for site restoration activities currently anticipated for the spring of 2011.

2.4 Finance Section

2.4.1 Narrative

Project Ceiling (Action Memorandum dated August 26, 2010).

Estimated Costs

COST CATEGORY		**CEILING**
REGIONAL REMOVAL ALLOWANCE COSTS:		
ERRS Contractor		$4,000,000.00
Interagency Agreement		$ 0.00
OTHER EXTRAMURAL COSTS NOT FUNDED FROM THE REGIONAL ALLOWANCE:		
START Contractor		$750,000.00
Extramural Subtotal		$4,750,000.00
Extramural Contingency	20%	$950,000.00
TOTAL, REMOVAL ACTION CEILING		**$5,700,000.00**

2.5 Safety Officer

On-site personnel have reviewed and signed the site specific health and safety plan (HASP). Daily operational health and safety briefings are conducted each morning prior to commencement of site activities.

2.6 Liaison Officer

2.7 Information Officer

2.7.1 Public Information Officer

The Public Information Office has created a website to provide access to site related documents and to provide updates regarding site activities. The website address is www.epa.gov/region1/parkerstreet.

2.7.2 Community Involvement Coordinator

3. Participating Entities

3.1 Unified Command

USEPA
MassDEP

3.2 Cooperating and Assisting Agencies

4. Personnel On Site

USEPA - 2 OSCs, 1 mobile lab with chemist
START - 1 Site Lead personnel
ERRS - 1 RM, 2 Operators, 3 Cleanup Technicians

5. Definition of Terms

NBHA - New Bedford Housing Authority
NBPD - New Bedford Police Department
ERRS- Emergency Rapid Response Services
EPA/USEPA - U.S. Environmental Protection Agency
MassDEP - Massachusetts Department of Environmental Protection
OEME - Office of Evironmental Measurement and Evaluation
OSC - On-Scene Coordinator
RM - Response Manager
START - Superfund Technical Assessment and Response Team
TCLP - Toxicity Characteristic Leaching Procedure
T&D - Transportation and Disposal

6. Additional sources of information

6.1 Internet location of additional information/reports

http://www.epa.gov/region1/parkerstreet

6.2 Reporting Schedule

7. Situational Reference Materials

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Parker Street Waste Site - Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region I

Subject:	**POLREP #3** **Progress** **Parker Street Waste Site** **01GB** **New Bedford, MA** **Latitude: 41.6381659 Longitude: -70.9368469**
To:	
From:	Wing Chau, On-Scene Coordinator
Date:	7/1/2011
Reporting Period:	

1. Introduction

1.1 Background

Site Number:	01GB	**Contract Number:**	EP-W-08-061
D.O. Number:	024	**Action Memo Date:**	8/26/2010
Response Authority:	CERCLA	**Response Type:**	Time-Critical
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	10/29/2010	**Start Date:**	10/29/2010
Demob Date:		**Completion Date:**	
CERCLIS ID:	MAN000105955	**RCRIS ID:**	
ERNS No.:		**State Notification:**	
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category

CERCLA Fund-lead, time-critical removal action.

1.1.2 Site Description

The Parker Street Waste Site is a currently estimated 114-acre area located in an urban area of New Bedford, Bristol County, Massachusetts. The estimated extent of the Parker Street Waste Site, based upon data generated to date, is believed to be bounded to the north by Durfee Street, to the east by Liberty Street and the Oak Grove Cemetery, to the south by North Street, and to the west by Summit

Street. Redeveloped on and centered around a former city-owned landfill, the Parker Street Waste Site includes the New Bedford High School campus, the Keith Middle School (KMS), the Hetland Memorial Skating Rink property, Walsh Field, the new Andre McCoy Field, residential properties, New Bedford Housing Authority properties, Carabiner's Indoor Climbing Facility, and two private apartment complexes.

1.1.2.1 Location

Geographic coordiantes of the Site are approximately 41º 38' 33" north latitude and 70º 56' 44" west longitude, as measured from the approximate center of the Site.

1.1.2.2 Description of Threat

Elevated levels of polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and/ or heavy metals in soils at or near the surface, pose an imminent and substantial endangerment to public health.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

EPA and MassDEP initiated a preliminary assessment and site investigation (PA/SI) on April 26, 2010. 63 parcels comprising 47 properties along the periphery of the Site were sampled to expedite further investigation of the boundaries of the Parker Street Waste Site, and to determine whether there is any immediate threat to human health and/or the environment related to the contamination from the Site. The site investigation identified several residential and commercial properties with elevated levels of polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and/ or heavy metals in soils at or near the surface, which pose an imminent and substantial endangerment to public health. Also, 24 additional properties were sampled in September 2010 to further delineate the nature and extent of the Site boundaries.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

On August 26, 2010, the Action Memorandum was signed by the Director of the Office of Site Remediation and Restoration, approving the proposed removal action to address the release or threatened release of hazardous substances, contaminants, and/or pollutants at the Site.

2.1.2 Response Actions to Date

Please refer to POLREPs #1 and #2 for information on removal activities prior to February 7, 2011.

<u>Week of February 7, 2011</u>
ERRS secured temporary fencing and covered soil piles at Shawmut Ave. staging area.

<u>Week of February 14, 2011</u>
ERRS secured temporary fencing and covered soil piles at the contaminated soil staging area on Shawmut Ave. ERRS collected disposal samples from stockpiled soil at the Shawmut Ave. staging area.

<u>Week of March 28, 2011</u>
EPA, ERRS, and START mobilized to the Shawmut Ave. staging area for load-out of contaminated soil. START conducted perimeter particulate monitoring and ERRS implemented dust suppression

measures for the duration of the load-out.

On March 30, 2011, twenty-three (23) truckloads of contaminated soils were shipped off-site for disposal at the Crapo Hill Landfill in New Bedford, MA.

On March 31, 2011, eleven (11) truckloads of contaminated soils were shipped off-site for disposal at the Crapo Hill Landfill in New Bedford, MA. One lined roll-off container of ACM contaminated soil and debris was shipped off-site for disposal at the Turnkey Landfill in Rochester, NH.

Week of April 25, 2011
EPA, ERRS, and START mobilized personnel and equipment to site to continue removal activities. ERRS continued backfilling at properties P-004, P-011, P-021, and P-029 back to original grade in preparation for topsoil.

On April 29, 2011, ERRS spread topsoil at properties P-011, P-021, and P-029.

Week of May 2, 2011
ERRS continued restoration activities at properties P-004, P-011, P-021, P-029, and P-047. EPA, ERRS and START also met with the homeowner and began removal preparation activities at property P-003. Activities included: removing stockade fence, removing all miscellaneous debris, delivering stone to widen the existing driveway to support dump trucks, and surveying elevations to document current site conditions. All non-contaminated debris was staged at the Liberty St. staging area.

Week of May 9, 2011
ERRS personnel continued removal preparation activities at properties P-003, P-040, and P-042. Over the weekend the homeowner at property P-003 removed his stairs, leaving a 5-foot drop out of his backdoor. ERRS placed caution tape in an X pattern across the doorway to prevent anyone from using the door, but leaving it accessible for egress in the event of an emergency.

Removal preparation activities at properties P-040 and P-042 included removing stockade fences between properties, removing miscellaneous debris, and removing stacked 8x8 timbers. All non-contaminated debris was staged at the Liberty St. staging area. ERRS also began excavation and backfilling activities at properties P-003 and P-040. START conducted air monitoring for particulates throughout excavation and restoration activities and collected perimeter air samples to be analyzed for lead during the first three days of excavation activities at every property.

On May 9, 2011, ERRS began removing the concrete patio at property P-003. Under the first slab of concrete, ERRS encountered a 175-gallon tank. ERRS notified the New Bedford Fire Department and Lt. Alcino Marques responded. START monitored the air in and around the tank and found elevated levels of VOCs, which prompted work to continue in Level C PPE. EPA and NBFD Lt. Marques oversaw the cleanout and condition of the tank. There were approximately 22 gallons of liquid in the tank, which was transferred into a 55-gallon drum. START collected a sample of the liquid for laboratory analyses. It was observed that the bottom of the tank contained small holes, which led to START sampling the soil directly beneath the tank [1.5-feet below ground surface (bgs)] and at 3-feet bgs. The tank was crushed and staged at P-003 on site with the 55-gallon drum of product and bag of sorbent pads used for cleaning for future disposal.

On May 10, 2011, ERRS off-loaded twenty (20) 8-foot by 14-foot plastic mats to build a temporary roadway through properties P-047 and P-042 to access property P-040.

On May 11 2011, ERRS continued removal preparation activities at properties P-003, P-042, and P-040.

On May 12, 2011 ERRS began excavation and backfilling activities at properties P-003 and P-040.

Week of May 16, 2011
ERRS continued excavation and backfilling activities at properties P-003 and P-040. ERRS accessed property P-040 by traveling along the temporary roadway established through properties P-047 and P-042. All contaminated soil was stockpiled at the Shawmut Ave. staging area.

On May 19 2011, ERRS excavated the area where the buried tank was located at property P-003 to a final depth of 5-feet bgs and staged associated soils in a separate pile at the Shawmut Ave. staging area. START screened the soil at the floor of the excavation with a PID, detected no elevated readings, and collected a confirmatory soil sample for laboratory analyses. NBFD Lt. Marques responded to site and observed the final depth at the site of the tank.

ERRS collected disposal samples from the contaminated soil stockpiles for analysis located at the Shawmut Ave. staging area.

On May 19, 2011, air sampling results were received from the first three days of excavation activities at properties P-003 and P-040. No recordable levels of lead were recorded in any of the samples.

On May 20, 2011, ERRS began removal preparation activities at property P-042.

Week of May 23, 2011
ERRS continued excavation and backfilling activities at properties P-003 and P-040; and began excavation activities at property P-042. ERRS' landscaping subcontractor began restoration activities at properties P-011, P-021, and P-029.

On May 23, 2011, MassDEP and its cleanup contractor removed the oil tank and 55-gallon drum from property P-003 for off-site disposal.

Week of May 30, 2011
ERRS continued excavation and backfilling activities at properties P-040 and P-042. ERRS backfilled properties P-003 and P-004 with topsoil. Stockade fence at property P-004 has been erected and the flower bed constructed with concrete blocks has been repaired.

On June 2, 2011, START collected addition soil samples from the Westlawn property and P-047 to further delineate site conditions at these two properties.

Week of June 6, 2011
ERRS continued excavation and backfilling activities at property P-042. ERRS begin excavation and backfilling activities at properties P-030 and P-037. The stockade fence at P-003 has been erected.

On June, 10, 2011, nineteen (19) truckloads of contaminated soil were transported from the Shawmut Avenue staging to the Crapo Landfill in New Bedford for disposal.

Week of June 13, 2011
ERRS continued excavation and backfilling activities at properties P-030, P-037, and P-042. ERRS' landscaping subcontractor was onsite to finish site restoration activities at properties P-004, P-011, P-021, and P-029.

On June 13, 2011, EPA, MassDEP, and ATSDR met with community leaders to provide project updates and discuss community concerns regarding the Site.

Week of June 20, 2011
ERRS continued backfilling activities at properties P-040 and P-042. ERRS continued excavation and

backfilling activities at properties P-030 and P-037.

2.1.3 Enforcement Activities

The Administrative Settlement Agreement and Order on Consent for Removal Action for property P-013 was executed on June 28, 2011.

2.2 Planning Section

2.2.1 Anticipated Activities

Complete T&D of contaminated soils that are temporarily stockpiled in the staging area.

2.2.1.1 Planned Response Activities

Secure access to properties with contamination within the top 3 feet of soil that warrant a removal action. Evaluate, in consultation with MassDEP, sampling results from the Phase II sampling effort to determine whether a time-critical removal action is warranted as well.

Evaluate sampling results from the Phase II sampling effort and determine whether additional sampling is necessary to determine the extent of the Site boundaries.

2.3 Logistics Section

Continue coordination of T&D activities for the remaining stockpiled contaminated soils to permitted disposal facilities. Continue coordination of landscaping services for site restoration activities.

2.4 Finance Section

2.4.1 Narrative

Project Ceiling (Action Memorandum dated August 26, 2010).

Estimated Costs

COST CATEGORY		**CEILING**
REGIONAL REMOVAL ALLOWANCE COSTS:		
ERRS Contractor		$4,000,000.00
Interagency Agreement		$ 0.00
OTHER EXTRAMURAL COSTS NOT FUNDED FROM THE REGIONAL ALLOWANCE:		
START Contractor		$750,000.00
Extramural Subtotal		$4,750,000.00
Extramural Contingency	20%	$950,000.00
TOTAL, REMOVAL ACTION CEILING		**$5,700,000.00**

2.5 Safety Officer

On-site personnel have reviewed and signed the site specific health and safety plan (HASP). Daily operational health and safety briefings are conducted each morning prior to commencement of site activities.

2.6 Liaison Officer
2.7 Information Officer

2.7.1 Public Information Officer
The Public Information Office continues to provide updates regarding site activities to interested parties and posting the updates onto the website, www.epa.gov/region1/parkerstreet.

2.7.2 Community Involvement Coordinator

3. Participating Entities
3.1 Unified Command
USEPA
MassDEP

3.2 Cooperating and Assisting Agencies
4. Personnel On Site
USEPA - 2 OSCs, 1 mobile lab with chemist
START - 1 Site Lead personnel
ERRS - 1 RM, , 1 Foreman, 2 Operators, 2 Cleanup Technicians, 2 truck drivers

5. Definition of Terms
ACM - Asbestos Containing Material
ERRS- Emergency Rapid Response Services
EPA/USEPA - U.S. Environmental Protection Agency
MassDEP - Massachusetts Department of Environmental Protection
NBHA - New Bedford Housing Authority
NBPD - New Bedford Police Department
OEME - Office of Evironmental Measurement and Evaluation
OSC - On-Scene Coordinator
PID - Photo Ionization Detector
PPE - Personal Protective Equipment
RM - Response Manager
START - Superfund Technical Assessment and Response Team
TCLP - Toxicity Characteristic Leaching Procedure
T&D - Transportation and Disposal
VOCs - Volatile Organic Compounds

6. Additional sources of information
6.1 Internet location of additional information/reports
http://www.epa.gov/region1/parkerstreet

6.2 Reporting Schedule
7. Situational Reference Materials

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Parker Street Waste Site - Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region I

Subject: **POLREP #4**
Progress
Parker Street Waste Site
01GB
New Bedford, MA
Latitude: 41.6381659 Longitude: -70.9368469

To:
From: Wing Chau, On-Scene Coordinator
Date: 9/9/2011
Reporting Period: 7/27/11 to 9/9/11

1. Introduction

1.1 Background

Site Number:	01GB	**Contract Number:**	EP-W-08-061
D.O. Number:	024	**Action Memo Date:**	8/26/2010
Response Authority:	CERCLA	**Response Type:**	Time-Critical
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	10/29/2010	**Start Date:**	10/29/2010
Demob Date:		**Completion Date:**	
CERCLIS ID:	MAN000105955	**RCRIS ID:**	
ERNS No.:		**State Notification:**	
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category

CERCLA Fund-lead, time-critical removal action.

1.1.2 Site Description

The Parker Street Waste Site is a currently estimated 114-acre area located in an urban area of New Bedford, Bristol County, Massachusetts. The estimated extent of the Parker Street Waste Site, based upon data generated to date, is believed to be bounded to the north by Durfee Street, to the east by

Liberty Street and the Oak Grove Cemetery, to the south by North Street, and to the west by Summit Street. Redeveloped on and centered around a former city-owned landfill, the Parker Street Waste Site includes the New Bedford High School campus, the Keith Middle School (KMS), the Hetland Memorial Skating Rink property, Walsh Field, the new Andre McCoy Field, residential properties, New Bedford Housing Authority properties, Carabiner's Indoor Climbing Facility, and two private apartment complexes.

1.1.2.1 Location

Geographic coordiantes of the Site are approximately 41° 38' 33" north latitude and 70° 56' 44" west longitude, as measured from the approximate center of the Site.

1.1.2.2 Description of Threat

Elevated levels of polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and/ or heavy metals in soils at or near the surface, pose an imminent and substantial endangerment to public health.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

EPA and MassDEP initiated a preliminary assessment and site investigation (PA/SI) on April 26, 2010. 63 parcels comprising 47 properties along the periphery of the Site were sampled to expedite further investigation of the boundaries of the Parker Street Waste Site, and to determine whether there is any immediate threat to human health and/or the environment related to the contamination from the Site. The site investigation identified several residential and commercial properties with elevated levels of polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and/ or heavy metals in soils at or near the surface, which pose an imminent and substantial endangerment to public health. Also, 24 additional properties were sampled in September 2010 to further delineate the nature and extent of the Site boundaries.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

On August 26, 2010, the Action Memorandum was signed by the Director of the Office of Site Remediation and Restoration, approving the proposed removal action to address the release or threatened release of hazardous substances, contaminants, and/or pollutants at the Site.

2.1.2 Response Actions to Date

Please refer to POLREPs #1, #2, and #3 for information on removal activities prior to June 27, 2011.

Week of June 27, 2011
ERRS removed railroad tie retaining wall between properties P-042 and P-039. ERRS continued backfilling activities at properties P-037 and P-042. ERRS continued excavation and backfilling activities at property P-030 as well as reinstalling fence and building a retaining wall.

Week of July 4, 2011
ERRS continued excavation and backfilling activities at properties P-030 and P-037, continued backfilling at property P-042. ERRS begins building retaining wall at P-042.

On July 8, 2011, twenty four (24) truckloads of contaminated soil were transported from the Shawmut Avenue staging area to the Crapo Landfill in New Bedford for disposal.

Week of July 11, 2011
ERRS completed excavation and continued backfilling activities at property P-030 as well as building a retaining wall. ERRS continued excavation activities at property P-037. ERRS continued backfilling and building retaining wall and started placing topsoil at property P-042.

On July 11, 2011, twenty two (22) truckloads of contaminated soil were transported from the Shawmut Avenue staging area to the Crapo Landfill in New Bedford for disposal.

On July 12, 2011, four (4) truckloads of contaminated soil were transported from the Shawmut Avenue staging area to the Crapo Landfill in New Bedford for disposal.

On July 12, 2011, START collected additional soil samples from properties P-037 and P-072 to further delineate site conditions at these two properties.

On July 13, 2011, eleven (11) truckloads of contaminated soil were transported from the Shawmut Avenue staging area to the ESMI Landfill in Loudon, NH for disposal.

Week of July 18, 2011
ERRS continued backfilling and restoration activities at properties P-030, P-037, and P-042. ERRS removed the fence between P-042 and P-047 and completed excavation at property P-047. ERRS began preparing property P-002 for removal activities, which included clearing and grubbing activities.

Week of July 25, 2011
ERRS began excavation activities at property P-072. ERRS completed excavation and backfilling activities at property P-042.

Week of August 1, 2011
ERRS began removal activities at properties P-002 and P-033. ERRS completed excavation and backfilling at property P-072. ERRS continued excavation and backfilling operations at properties P-037 and P-040.

Week of August 8, 2011
ERRS completed excavation and backfilling activities at property P-040. ERRS continued excavation and backfilling activities at properties P-002, P-033, and P-037. ERRS initiated removal activities at property P-012.

START conducted right-of-way split sampling with the City of New Bedford's consultant TRC at property P-033.

Week of August 15, 2011
ERRS continued excavation and backfilling activities at properties P-002, P-033, and P-012. ERRS completed backfilling and placing topsoil at property P-037. ERRS initiated excavation activities at property P-001.

START conducted right-of-way split sampling with the City of New Bedford's consultant TRC at properties P-001 and P-033.

Week of August 22, 2011
ERRS continued excavation and backfilling activities at properties P-001, P-002, P-033, and P-012.

START conducted right-of-way split sampling with the City of New Bedford's consultant TRC at properties P-001 and P-033.

ERRS secured all sites for Hurricane Irene.

On August 25, 2011, EPA, MassDEP, NBHA, Westlawn tenant representatives, and CLEAN members met at the New Bedford Public Library to discuss the proposed removal action for the Westlawn property.

Week of August 29, 2011
ERRS cleaned up on-going removal sites from impacts of Tropical Storm Irene. ERRS continued backfilling activities at properties P-001, P-002, P-012, and P-033. Damaged driveways at properties P-001, P-004, and P-047 have been replaced.

On August 30, 2011, twenty two (22) truckloads of contaminated soil were transported from the Shawmut Avenue staging area to the Crapo Landfill in New Bedford for disposal.

On August 31, 2011, twenty (20) truckloads of contaminated soil were transported from the Shawmut Avenue staging area to the Crapo Landfill in New Bedford for disposal. Also, START conducted right-of-way split sampling with the City of New Bedford's consultant TRC at property P-001.

On September 1, 2011, START conducted right-of-way split sampling with the City of New Bedford's consultant TRC at property P-012. Also, START conducted soil sampling of the raised gardening beds at the Boys &Girls' Club community garden area (property P-028) to further characterize site conditions.

Week of September 5, 2011
ERRS continued excavation and backfilling activities at properties P-001, P-002, and P-012. ERRS intitiated removal activities at property P-005. ERRS' landscaping subcontractor conducted restoration activities at properties P-030, P-037, P-040, and P-072.

On September 7, 2011, START conducted right-of-way split sampling with the City of New Bedford's consultant TRC at property P-001.

On September 9, 2011, START conducted right-of-way split sampling with the City of New Bedford's consultant TRC at properties P-001 and P-012.

2.1.3 Enforcement Activities

The Administrative Settlement Agreement and Order on Consent (AOC) for Removal Action for property P-013 was executed on June 28, 2011. The effective date of the AOC is July 11, 2011.

2.2 Planning Section

2.2.1 Anticipated Activities

Complete T&D of contaminated soils that are temporarily stockpiled in the Shawmut Avenue staging area.

2.2.1.1 Planned Response Activities

Continue securing access to properties with contamination within the top 3 feet of soil that warrant a removal action. Evaluate, in consultation with MassDEP, sampling results from the Phase II sampling effort to determine whether a time-critical removal action is warranted as well.

Evaluate sampling results from the Phase II sampling effort and determine whether additional sampling is necessary to determine the extent of the Site boundaries.

2.3 Logistics Section

Continue coordination of T&D activities for the remaining stockpiled contaminated soils to permitted disposal facilities. Continue coordination of landscaping services for site restoration activities.

2.4 Finance Section

2.4.1 Narrative

Project Ceiling (Action Memorandum dated August 26, 2010).

Estimated Costs

COST CATEGORY		**CEILING**
REGIONAL REMOVAL ALLOWANCE COSTS:		
ERRS Contractor		$4,000,000.00
Interagency Agreement		$ 0.00
OTHER EXTRAMURAL COSTS NOT FUNDED FROM THE REGIONAL ALLOWANCE:		
START Contractor		$750,000.00
Extramural Subtotal		$4,750,000.00
Extramural Contingency	20%	$950,000.00
TOTAL, REMOVAL ACTION CEILING		**$5,700,000.00**

2.5 Safety Officer

On-site personnel have reviewed and signed the site specific health and safety plan (HASP). Daily operational health and safety briefings are conducted each morning prior to commencement of site activities.

2.6 Liaison Officer

2.7 Information Officer

2.7.1 Public Information Officer

The Public Information Office continues to provide updates regarding site activities to interested parties and posting the updates onto the website, www.epa.gov/region1/parkerstreet.

2.7.2 Community Involvement Coordinator

3. Participating Entities

3.1 Unified Command

USEPA
MassDEP

3.2 Cooperating and Assisting Agencies

4. Personnel On Site

USEPA - 2 OSCs, 1 mobile lab with chemist
START - 1 Site Lead personnel
ERRS - 1 RM, , 1 Foreman, 4 Operators, 4 Cleanup Technicians, 2 truck drivers

5. Definition of Terms

ACM - Asbestos Containing Material
ERRS- Emergency Rapid Response Services
EPA/USEPA - U.S. Environmental Protection Agency
MassDEP - Massachusetts Department of Environmental Protection
NBHA - New Bedford Housing Authority
NBPD - New Bedford Police Department
OEME - Office of Evironmental Measurement and Evaluation
OSC - On-Scene Coordinator
PID - Photo Ionization Detector
PPE - Personal Protective Equipment
RM - Response Manager
START - Superfund Technical Assessment and Response Team
TCLP - Toxicity Characteristic Leaching Procedure
T&D - Transportation and Disposal
VOCs - Volatile Organic Compounds

6. Additional sources of information

6.1 Internet location of additional information/reports

http://www.epa.gov/region1/parkerstreet

6.2 Reporting Schedule

7. Situational Reference Materials

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Parker Street Waste Site - Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region I

Subject: **POLREP #5**
Progress
Parker Street Waste Site
01GB
New Bedford, MA
Latitude: 41.6381659 Longitude: -70.9368469

To:
From: Wing Chau, On-Scene Coordinator
Date: 9/30/2011
Reporting Period: 9/12/11 to 9/30/11

1. Introduction

1.1 Background

Site Number:	01GB	**Contract Number:**	EP-W-08-061
D.O. Number:	024	**Action Memo Date:**	8/26/2010
Response Authority:	CERCLA	**Response Type:**	Time-Critical
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	10/29/2010	**Start Date:**	10/29/2010
Demob Date:		**Completion Date:**	
CERCLIS ID:	MAN000105955	**RCRIS ID:**	
ERNS No.:		**State Notification:**	
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category

CERCLA Fund-lead, time-critical removal action.

1.1.2 Site Description

The Parker Street Waste Site is a currently estimated 114-acre area located in an urban area of

New Bedford, Bristol County, Massachusetts. The estimated extent of the Parker Street Waste Site, based upon data generated to date, is believed to be bounded to the north by Durfee Street, to the east by Liberty Street and the Oak Grove Cemetery, to the south by North Street, and to the west by Summit Street. Redeveloped on and centered around a former city-owned landfill, the Parker Street Waste Site includes the New Bedford High School campus, the Keith Middle School (KMS), the Hetland Memorial Skating Rink property, Walsh Field, the new Andre McCoy Field, residential properties, New Bedford Housing Authority properties, Carabiner's Indoor Climbing Facility, and two private apartment complexes.

1.1.2.1 Location

Geographic coordinates of the Site are approximately 41° 38' 33" north latitude and 70° 56' 44" west longitude, as measured from the approximate center of the Site.

1.1.2.2 Description of Threat

Elevated levels of polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and/ or heavy metals in soils at or near the surface, pose an imminent and substantial endangerment to public health.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

EPA and MassDEP initiated a preliminary assessment and site investigation (PA/SI) on April 26, 2010. Sixty-three (63) parcels comprising forty-seven (47) properties along the periphery of the Site were sampled to expedite further investigation of the boundaries of the Parker Street Waste Site, and to determine whether there is any immediate threat to human health and/or the environment related to the contamination from the Site. The site investigation identified several residential and commercial properties with elevated levels of polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and/ or heavy metals in soils at or near the surface, which pose an imminent and substantial endangerment to public health. Also, 24 additional properties were sampled in September 2010 to further delineate the nature and extent of the Site boundaries.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

On August 26, 2010, the Action Memorandum was signed by the Director of the Office of Site Remediation and Restoration, approving the proposed removal action to address the release or threatened release of hazardous substances, contaminants, and/or pollutants at the Site. The Action Memorandum Addendum dated September 15, 2011 was signed by the Assistant Administrator of the Office of Solid Waste and Emergency Response on September 23, 2011, approving the change in Scope of Response, an Exemption from the Statutory 12-Month and $2 Million Limits, and Ceiling Increase at the Parker Street Waste Site.

2.1.2 Response Actions to Date

Please refer to POLREPs #1 through #4 for information on removal activities prior to September 12, 2011.

<u>Week of September 12, 2011</u>
ERRS continued excavating and backfilling activities at properties P-001, P-002 and P-012. ERRS begins

removal activities at property P-005. START conducted right-of-way split sampling with the City of New Bedford's consultant TRC at properties P-002 and P-012.

On September 14, 2011, nineteen (19) truckloads of contaminated soil were transported from the Shawmut Avenue staging area to the Crapo Landfill in New Bedford for disposal. Also, START collected addtional soil samples from property P-028 to further characterize site conditions pursuant to recommendations articulated in MassDEP's evaluation letter dated August 19, 2011 for property P-028.

On September 15, 2011, six (6) truckloads of contaminated soil were transported from the Shawmut Avenue staging area to the Crapo Landfill in New Bedford for disposal.

Week of September 19, 2011
ERRS continued excavating and backfilling activities at properties P-001, P-005 and P-012. ERRS completed grading of properties P-002 and P-033 with topsoil. START conducted right-of-way split sampling with the City of New Bedford's consultant TRC at properties P-001, P-005, P-012, and P-013. ERRS' landscaping subcontractor completed installation of sod and plants at properties P-037 and P-072.

On September 23, 2011, the the Assistant Administrator of the Office of Solid Waste and Emergency Response signed the Action Memorandum Addendum dated September 15, 2011, approving the change in Scope of Response, an Exemption from the Statutory 12-Month and $2 Million Limits, and Ceiling Increase at the Parker Street Waste Site.

Week of September 26, 2011
ERRS continued excavation and backfilling activities at property P-005. ERRS initiated excavation and backfilling activities at properties P-006, P-023, and P-039. ERRS' landscaping and paving subcontractors conducted restoration activities at properties P-001, P-012, P-033 and P-037. START conducted right-of-way split sampling with the City of New Bedford's consultant TRC at properties P-005.

START collected soil samples from properties P-073, P-074, P-075, and P-076 to further characterize site conditions. These properties were sampled due contamination being present on abutting properties.

On September 26, 2011, EPA, MassDEP, and ATSDR hosted an availability session at the Keith Middle School for tenants of the Westlawn Housing complex to provide interested tenants information regarding the upcoming removal action planned for that property.

2.1.3 Enforcement Activities

The Administrative Settlement Agreement and Order on Consent (AOC) for Removal Action for property P-013 was executed on June 28, 2011. The effective date of the AOC is July 11, 2011.

2.2 Planning Section

2.2.1 Anticipated Activities

Complete T&D of contaminated soils that are temporarily stockpiled in the Shawmut Avenue staging area.

2.2.1.1 Planned Response Activities

Continue securing access to properties with contamination within the top 3 feet of soil that warrant a removal action. Evaluate, in consultation with MassDEP, sampling results from the Phase II sampling effort to determine whether a time-critical removal action is warranted as well. Conduct time-critical removal action on properties deemed appropriate.

Evaluate sampling results from the Phase II sampling effort and determine whether additional sampling is necessary to determine the extent of the Site boundaries.

2.3 Logistics Section

Continue coordination of T&D activities for the remaining stockpiled contaminated soils to permitted disposal facilities. Continue coordination of landscaping services for site restoration activities.

2.4 Finance Section

2.4.1 Narrative

Project Ceiling (Action Memorandum Addendum dated September 15, 2011).

COST CATEGORY	CURRENT CEILING	PROPOSED INCREASE	PROPOSED CEILING
REGIONAL REMOVAL ALLOWANCE COSTS:			
ERRS Contractor	$4,000,000.00	$2,000,000.00	$6,000,000.00
Interagency Agreement	$0.00	$0.00	$0.00
OTHER EXTRAMURAL COSTS NOT FUNDED FROM THE REGIONAL ALLOWANCE:			
START Contractor	$750,000.00	$0.00	$750,000.00
Extramural Subtotal	$4,750,000.00	$2,000,000.00	$6,750,000.00
Extramural Contingency (20%)	$950,000.00	$400,000.00	$1,350,000.00
TOTAL, REMOVAL ACTION CEILING	**$5,700,000.00**	**$2,400,000.00**	**$8,100,000.00**

The ERRS task order (0024) is being incrementally funded. Prior to the last task order modification, the task order ceiling of $4,500,000.00 was funded through the ERRS ceiling of $4,000,000.00 and partially from the Extramural Contingency in the amount of $500,000.00. Under the increased project ceiling authorized in the Action Memorandum Addendum dated 9/15/2011, the ERRS task order modification issued on 9/28/11 increased the task order ceiling to $6,199,560.00, which is now funded through the ERRS Ceiling of $6,000,000.00 and partially from the Extramural Contingency in the amount of $199,560.00.

2.5 Safety Officer

On-site personnel have reviewed and signed the site specific health and safety plan (HASP). Daily operational health and safety briefings are conducted each morning prior to commencement of site activities.

2.6 Liaison Officer

2.7 Information Officer

2.7.1 Public Information Officer
The Public Information Office continues to provide updates regarding site activities to interested parties and posting the updates onto the website, www.epa.gov/region1/parkerstreet.

2.7.2 Community Involvement Coordinator

3. Participating Entities
3.1 Unified Command
USEPA
MassDEP

3.2 Cooperating and Assisting Agencies
4. Personnel On Site
USEPA - 2 OSCs, 1 mobile lab with chemist
START - 1 Site Lead personnel
ERRS - 1 RM, , 1 Foreman, 4 Operators, 4 Cleanup Technicians, 2 truck drivers, 1 Field Cost Accountant

5. Definition of Terms
ACM - Asbestos Containing Material
ERRS- Emergency Rapid Response Services
EPA/USEPA - U.S. Environmental Protection Agency
MassDEP - Massachusetts Department of Environmental Protection
NBHA - New Bedford Housing Authority
NBPD - New Bedford Police Department
OEME - Office of Evironmental Measurement and Evaluation
OSC - On-Scene Coordinator
PID - Photo Ionization Detector
PPE - Personal Protective Equipment
RM - Response Manager
START - Superfund Technical Assessment and Response Team
TCLP - Toxicity Characteristic Leaching Procedure
T&D - Transportation and Disposal
VOCs - Volatile Organic Compounds

6. Additional sources of information
6.1 Internet location of additional information/reports
http://www.epa.gov/region1/parkerstreet

6.2 Reporting Schedule

7. Situational Reference Materials

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Parker Street Waste Site - Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region I

Subject:	**POLREP #6** **Parker Street Waste Site** **01GB** **New Bedford, MA** **Latitude: 41.6381659 Longitude: -70.9368469**
To:	
From:	Wing Chau, On-Scene Coordinator
Date:	11/30/2011
Reporting Period:	10/3/11 to 11/25/11

1. Introduction

1.1 Background

Site Number:	01GB	**Contract Number:**	EP-W-08-061
D.O. Number:	024	**Action Memo Date:**	8/26/2010
Response Authority:	CERCLA	**Response Type:**	Time-Critical
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	10/29/2010	**Start Date:**	10/29/2010
Demob Date:		**Completion Date:**	
CERCLIS ID:	MAN000105955	**RCRIS ID:**	
ERNS No.:		**State Notification:**	
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category

CERCLA Fund-lead, time-critical removal action.

1.1.2 Site Description

The Parker Street Waste Site is a currently estimated 114-acre area located in an urban area of New Bedford, Bristol County, Massachusetts. The estimated extent of the Parker Street Waste Site, based upon data generated to date, is believed to be bounded to the north by Durfee Street, to the east by Liberty Street and the Oak Grove Cemetery, to the south by North Street, and to the west by Summit Street. Redeveloped on and centered around a former city-owned landfill, the Parker Street Waste Site includes the New Bedford High School campus, the Keith Middle School (KMS), the Hetland Memorial Skating Rink property, Walsh Field, the new Andre McCoy Field, residential properties, New Bedford Housing Authority properties, Carabiner's Indoor Climbing Facility, and two private apartment complexes.

1.1.2.1 Location

Geographic coordinates of the Site are approximately 41º 38' 33" north latitude and 70º 56' 44" west longitude, as measured from the approximate center of the Site.

1.1.2.2 Description of Threat

Elevated levels of polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and/ or heavy metals in soils at or near the surface, pose an imminent and substantial endangerment to public health.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

EPA and MassDEP initiated a preliminary assessment and site investigation (PA/SI) on April 26, 2010. Sixty-three (63) parcels comprising forty-seven (47) properties along the periphery of the Site were sampled to expedite further investigation of the boundaries of the Parker Street Waste Site, and to determine whether there is any immediate threat to human health and/or the environment related to the contamination from the Site. The site investigation identified several residential and commercial properties with elevated levels of polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and/ or heavy metals in soils at or near the surface, which pose an imminent and substantial endangerment to public health. Also, twenty-four (24) additional properties were sampled in September 2010 to further delineate the nature and extent of the Site boundaries. On October 25, 2011, START conducted PA/SI activities on two (2) additional properties to further characterize the Site's southeastern boundary.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

On August 26, 2010, the Action Memorandum was signed by the Director of the Office of Site Remediation and Restoration, approving the proposed removal action to address the release or threatened release of hazardous substances, contaminants, and/or pollutants at the Site. The Action Memorandum Addendum dated September 15, 2011 was signed by the Assistant Administrator of the Office of Solid Waste and Emergency Response on September 23, 2011, approving the change in Scope of Response, an Exemption from the Statutory 12-Month and $2 Million Limits, and Ceiling Increase at the Parker Street Waste Site.

2.1.2 Response Actions to Date

Please refer to POLREPs #1 through #5 for information on removal activities prior to October 3, 2011.

<u>Week of October 3, 2011</u>
ERRS continued excavating and backfilling activities at properties P-006, P-023 and P-039. ERRS and its subcontractors continued restoration activities at properties P-002, P-012, and P-033. Restoration activities include re-establishing vegetation and repairing of driveways.

On October 6, 2011, EPA and ERRS met with NBHA officials to discuss the schedule of upcoming removal activities at the Westlawn property (P-027).

On October 7, 2011, seven (7) truckloads of contaminated soil were transported from the Shawmut Avenue staging area to the Greenwood Street Landfill in Worcester, MA for disposal.

<u>Week of October 10, 2011</u>
ERRS continued excavating and backfilling activities at properties P-006 and P-039. ERRS and its subcontractors continued restoration activities at properties P-002 and P-033. START conducted right-of-way split sampling with the City of New Bedford's consultant TRC at property P-039.

On October 10, 2011, twenty-two (22) truckloads of contaminated soil were transported from the Shawmut Avenue staging area to the Greenwood Street Landfill in Worcester, MA for disposal.

On October 11, 2011, sixteen (16) truckloads of contaminated soil were transported from the Shawmut Avenue staging area to the Greenwood Street Landfill in Worcester, MA for disposal.

On October 12, 2011, ERRS initiated excavation and backfilling activities at the Westlawn property, P-027.

Week of October 17, 2011
ERRS initiated excavation and backfilling activities at properties P-041 and P-052. ERRS continued excavation and backfilling activities at P-006, P-023, and P-027. ERRS' landscaping subcontractor conducted restoration activites at properties P-027 and P-039. ERRS initiated clearing and grubbing activities at property P-010. ERRS' landscaping and fencing subcontractors conducted restoration activities at properties P-002, P-027 and P-039.

On October 17, 2011, five (5) truckloads of contaminated soil were transported from property P-023 to the Environmental Soil Management, Inc. (ESMI) facility in Loudon, NH for disposal.

On October 18, 2011, five (5) truckloads of contaminated soil from property P-023 and two (2) truckloads of contaminated soil from property P-006 were transported to the Environmental Soil Management, Inc. (ESMI) facility in Loudon, NH for disposal.

On October 19, 2011, three (3) truckloads of contaminated soil from property P-023 and six (6) truckloads of contaminated soil from property P-006 were transported to the Environmental Soil Management, Inc. (ESMI) facility in Loudon, NH for disposal.

On October 20, 2011, six (6) truckloads of contaminated soil from property P-023 and two (2) truckloads of contaminated soil from property P-006 were transported to the Environmental Soil Management, Inc. (ESMI) facility in Loudon, NH for disposal.

On October 21, 2011, one (1) truckload of contaminated soil from property P-023 and five (5) truckloads of contaminated soil from property P-006 were transported to the Environmental Soil Management, Inc. (ESMI) facility in Loudon, NH for disposal.

Week of October 24, 2011
ERRS continued excavation and backfilling operations at properties P-006, P-023, P-027, P-041, and P-052. ERRS conducted clearing and grubbing activities at property P-075. ERRS' landscaping subcontractor conducted restoration activities at properties P-027 and P-039, including installation of sod.

On October 24, 2011, three (3) truckloads of contaminated soil from property P-023 and seven (7) truckloads of contaminated soil from property P-006 were transported to the Environmental Soil Management, Inc. (ESMI) facility in Loudon, NH for disposal.

On October 25-26, 2011. START conducted PA/SI activities at properties P-077 and P-078 on Liberty and North Streets to further define the site boundaries along the southeastern corner of the Site. START also collected additional soil samples at property P-010 to further define site conditions.

Week of October 31, 2011
ERRS continued excavation and backfilling operations at properties P-006, P-023, P-027, and P-052. ERRS continued clearing and grubbing activities at P-010 and initiated similar activites on the abutting property, P-068. ERRS initiated excavation and backfilling operations at properties P-046, P-053, and P-058. ERRS' landscaping and asphalt paving subcontractors conducted restoration activities at properties P-001,P-002, P-005, P-023, P-027, P-039, and P-040.

On November 1, 2011, twelve (12) truckloads of contaminated soil from property P-006 were transported to the Environmental Soil Management, Inc. (ESMI) facility in Loudon, NH for disposal.

On November 1-2, 2011, START conducted sampling activities at properties P-079 and P-080 to delineate the extent of contamination. Side-wall data from an abutting property, P-006, indicated the presence of PCBs at the property boundary.

On November 2, 2011, five (5) truckloads of contaminated soil from property P-006 were transported to the Environmental Soil Management, Inc. (ESMI) facility in Loudon, NH for disposal.

Week of November 7, 2011
ERRS continued excavation and backfilling operations at properties P-052, P-053, and P-058. ERRS completed backfilling operations at property P-006 and P-046. ERRS also continued clearing and grubbing activities at properties P-010 and P-068. ERRS' landscaping subcontractor completed restoration activities at Westlawn (property P-027) and initiated restoration activities at property P-023.

On November 10, 2011, six (6) truckloads of contaminated soil from property P-052 and nine (9) truckloads of contaminated soil from the Shawmut Avenue staging area were transported to the Waste Management Middleboro Landfill in Middleboro, MA for disposal.

Week of November 14, 2011
ERRS continued excavation and backfilling operations at properties P-046, P-052, P-053, and P-058. ERRS initiated excavation and backfilling operations at properties P-010, P-061, and P-068. ERRS' landscaping subcontractor conducted restoration activities at properties P-005 and P-029.

On November 14, 2011, nine (9) truckloads of contaminated soil from property P-052 and sixteen (16) truckloads of contaminated soil from the Shawmut Avenue staging area were transported to the Waste Management Middleboro Landfill in Middleboro, MA for disposal.

On November 15, 2011, fourteen (14) truckloads of contaminated soil from property P-052 and fourteen (14) truckloads of contaminated soil from the Shawmut Avenue staging area were transported to the Waste Management Middleboro Landfill in Middleboro, MA for disposal.

On November 16, 2011, eight (8) truckloads of contaminated soil from property P-052 and eight (8) truckloads of contaminated soil from the Shawmut Avenue staging area were transported to the Waste Management Middleboro Landfill in Middleboro, MA for disposal.

On November 17, 2011, fifteen (15) truckloads of contaminated soil from property P-052 were transported to the Waste Management Middleboro Landfill in Middleboro, MA for disposal.

On November 18, 2011, twelve (12) truckloads of contaminated soil from property P-052 were transported to the Waste Management Middleboro Landfill in Middleboro, MA for disposal.

Week of November 21, 2011
ERRS continued excavation and backfilling operations at properties P-010, P-046, P-052, P-058, P-061, and P-068. ERRS excavated the PCB hot-spot area at property P-020. The excavated soil, which is properly covered and secured, is stockpiled onsite while awaiting transportation and disposal services. ERRS' landscaping and fencing subcontractors conducted restoration activities at properties P-005, P-006.

On November 21, 2011, ten (10) truckloads of contaminated soil from property P-052 were transported to the Waste Management Middleboro Landfill in Middleboro, MA for disposal.

2.1.3 Enforcement Activities

The Administrative Settlement Agreement and Order on Consent (AOC) for Removal Action for property P-013 was executed on June 28, 2011. The effective date of the AOC is July 11, 2011.

2.2 Planning Section

2.2.1 Anticipated Activities

Continue T&D of contaminated soils that are temporarily stockpiled in the Shawmut Avenue staging area.

2.2.1.1 Planned Response Activities

Complete removal activities on properties awaiting removal actions.

2.3 Logistics Section

Continue coordination of T&D activities for the remaining stockpiled contaminated soils to permitted disposal facilities. Continue coordination of landscaping services for site restoration activities.

2.4 Finance Section

2.4.1 Narrative

Project Ceiling (Action Memorandum Addendum dated September 15, 2011).

COST CATEGORY	CURRENT CEILING	PROPOSED INCREASE	PROPOSED CEILING
REGIONAL REMOVAL ALLOWANCE COSTS:			
ERRS Contractor	$4,000,000.00	$2,000,000.00	$6,000,000.00
Interagency Agreement	$0.00	$0.00	$0.00
OTHER EXTRAMURAL COSTS NOT FUNDED FROM THE REGIONAL ALLOWANCE:			
START Contractor	$750,000.00	$0.00	$750,000.00
Extramural Subtotal	$4,750,000.00	$2,000,000.00	$6,750,000.00
Extramural Contingency (20%)	$950,000.00	$400,000.00	$1,350,000.00
TOTAL, REMOVAL ACTION CEILING	**$5,700,000.00**	**$2,400,000.00**	**$8,100,000.00**

The ERRS task order (0024) is being incrementally funded. Prior to the last task order modification, the task order ceiling of $4,500,000.00 was funded through the ERRS ceiling of $4,000,000.00 and partially from the Extramural Contingency in the amount of $500,000.00. Under the increased project ceiling authorized in the Action Memorandum Addendum dated 9/15/2011, the ERRS task order modification issued on 9/28/11 increased the task order ceiling to $6,199,560.00, which is now funded through the ERRS Ceiling of $6,000,000.00 and partially from the Extramural Contingency in the amount of $199,560.00.

2.5 Other Command Staff

2.5.1 Safety Officer

On-site personnel have reviewed and signed the site specific health and safety plan (HASP). Daily operational health and safety briefings are conducted each morning prior to commencement of site activities.

2.6 Liaison Officer

2.7 Information Officer

2.7.1 Public Information Officer

The Public Information Office continues to provide updates regarding site activities to interested parties and posting the updates onto the website, www.epa.gov/region1/parkerstreet.

2.7.2 Community Involvement Coordinator

3. Participating Entities

3.1 Unified Command
USEPA
MassDEP

3.2 Cooperating Agencies

4. Personnel On Site
USEPA - 2 OSCs, 1 mobile lab with chemist
START - 1 Site Lead personnel
ERRS - 1 RM, , 1 Foreman, 7 Operators, 6 Cleanup Technicians, 2 truck drivers, 1 Field Cost Accountant

5. Definition of Terms
ACM - Asbestos Containing Material
ERRS- Emergency Rapid Response Services
EPA/USEPA - U.S. Environmental Protection Agency
MassDEP - Massachusetts Department of Environmental Protection
NBHA - New Bedford Housing Authority
NBPD - New Bedford Police Department
OEME - Office of Evironmental Measurement and Evaluation
OSC - On-Scene Coordinator
PA/SI - Preliminary Assessment/Site Investigation
PID - Photo Ionization Detector
PPE - Personal Protective Equipment
RM - Response Manager
START - Superfund Technical Assessment and Response Team
TCLP - Toxicity Characteristic Leaching Procedure
T&D - Transportation and Disposal
VOCs - Volatile Organic Compounds

6. Additional sources of information
6.1 Internet location of additional information/report

http://www.epa.gov/region1/parkerstreet

6.2 Reporting Schedule

7. Situational Reference Materials
No information available at this time.

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Parker Street Waste Site - Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region I

Subject:	**POLREP #7** **Progress** **Parker Street Waste Site** **01GB** **New Bedford, MA** **Latitude: 41.6381659 Longitude: -70.9368469**
To:	
From:	Wing Chau, On-Scene Coordinator
Date:	1/3/2012
Reporting Period:	11/28/11 to 12/30/11

1. Introduction

1.1 Background

Site Number:	01GB	**Contract Number:**	EP-W-08-061
D.O. Number:	024	**Action Memo Date:**	8/26/2010
Response Authority:	CERCLA	**Response Type:**	Time-Critical
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	10/29/2010	**Start Date:**	10/29/2010
Demob Date:		**Completion Date:**	
CERCLIS ID:	MAN000105955	**RCRIS ID:**	
ERNS No.:		**State Notification:**	
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category

CERCLA Fund-lead, time-critical removal action.

1.1.2 Site Description

The Parker Street Waste Site is a currently estimated 114-acre area located in an urban area of New Bedford, Bristol County, Massachusetts. The estimated extent of the Parker Street Waste Site, based upon data generated to date, is believed to be bounded to the north by Durfee Street, to the east by Liberty Street and the Oak Grove Cemetery, to the south by North Street, and to the west by Summit Street. Redeveloped on and centered around a former city-owned landfill, the Parker Street Waste Site includes the New Bedford High School campus, the Keith Middle School (KMS), the Hetland Memorial Skating Rink property, Walsh Field, the new Andre McCoy Field, residential properties, New Bedford Housing Authority properties, Carabiner's Indoor Climbing Facility, and two private apartment complexes.

1.1.2.1 Location

Geographic coordinates of the Site are approximately 41º 38' 33" north latitude and 70º 56' 44" west longitude, as measured from the approximate center of the Site.

1.1.2.2 Description of Threat

Elevated levels of polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and/ or heavy metals in soils at or near the surface, pose an imminent and substantial endangerment to public health.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

EPA and MassDEP initiated a preliminary assessment and site investigation (PA/SI) on April 26, 2010. Sixty-three (63) parcels comprising forty-seven (47) properties along the periphery of the Site were sampled to expedite further investigation of the boundaries of the Parker Street Waste Site, and to determine whether there is any immediate threat to human health and/or the environment related to the contamination from the Site. The site investigation identified several residential and commercial properties with elevated levels of polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and/ or heavy metals in soils at or near the surface, which pose an imminent and substantial endangerment to public health. Also, twenty-four (24) additional properties were sampled in September 2010 to further delineate the nature and extent of the Site boundaries. On October 25, 2011, START conducted PA/SI activities on two (2) additional properties to further characterize the Site's southeastern boundary.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

On August 26, 2010, the Action Memorandum was signed by the Director of the Office of Site Remediation and Restoration, approving the proposed removal action to address the release or threatened release of hazardous substances, contaminants, and/or pollutants at the Site. The Action Memorandum Addendum dated September 15, 2011 was signed by the Assistant Administrator of the Office of Solid Waste and Emergency Response on September 23, 2011, approving the change in Scope of Response, an Exemption from the Statutory 12-Month and $2 Million Limits, and Ceiling Increase at the Parker Street Waste Site.

2.1.2 Response Actions to Date

Please refer to POLREPs #1 through #6 for information on removal activities prior to November 28, 2011.

Week of November 28, 2011
ERRS continued excavation and backfilling operations at properties P-010, P-046, P-052, P-053, P-061, and P-068. ERRS initiated excavation and backfilling operations at properties P-048 and P-073. ERRS' landscaping subcontractor conducted restoration activities at properties P-005, P-006, and P-058. ERRS's fencing subcontractor re-installed fences on properties P-006 and P-041.

On November 30, 2011, fourteen (14) truckloads of contaminated soil from property P-052 were transported to the Waste Management Middleboro Landfill in Middleboro, MA for disposal.

On December 1, 2011, eleven (11) truckloads of contaminated soil from property P-052 were transported to the Waste Management Middleboro Landfill in Middleboro, MA for disposal.

On December 2, 2011, twelve (12) truckloads of contaminated soil from property P-052 were transported to the Waste Management Middleboro Landfill in Middleboro, MA for disposal.

Week of December 5, 2011
ERRS continued excavation and backfilling operations at properties P-010, P-048, P-052, P-068, and P-073. ERRS completed excavation and backfilling activties at properties P-046 and P-053. ERRS initated excavation and backfilling operations at property P-082 due to contamination being present in the sidewall soil samples collected along property P-48. ERRS' fencing subcontractor completed the fence installations at properties P-005, P-006, and P-033.

On December 6, 2011, eight (8) truckloads of contaminated soil from property P-052 were transported to the Waste Management Middleboro Landfill in Middleboro, MA for disposal.

On December 7, 2011, twelve (12) truckloads of contaminated soil from properties P-010/P-068 and sixteen (16) truckloads of contaminated soil from the Shawmut Avenue staging area were transported to the Waste Management Middleboro Landfill in Middleboro, MA for disposal.

On December 8, 2011, twelve (12) truckloads of contaminated soil from properties P-010/P-068 and eighteen (18) truckloads of contaminated soil from the Shawmut Avenue staging area were transported to the Waste Management Middleboro Landfill in Middleboro, MA for disposal.

On December 9, 2011, twelve (12) truckloads of contaminated soil from properties P-010/P-068 and twelve (12) truckloads of contaminated soil from the Shawmut Avenue staging area were transported to the Waste Management Middleboro Landfill in Middleboro, MA for disposal.

Week of December 12, 2011
ERRS continued excavation and backfilling operations at properties P-010, P-052, P-068, P-073, and P-074. Excavation and backfilling completed at properties P-048 and P-082. ERRS initiated removal activities at properties P-074 and P-076.

On December 14, 2011, ERRS' asphalt subcontractor completed the pavement of the City right-of-way strip in front of property P-013 along the Parker Street side of the property.

On December 15, 2011, twelve (12) truckloads of contaminated soil from properties P-010/P-068 and twelve (12) truckloads of contaminated soil from property P-052 were transported to the Waste Management Middleboro Landfill in Middleboro, MA for disposal.

On December 16, 2011, four (4) truckloads of contaminated soil from properties P-010/P-068 were transported to the Waste Management Middleboro Landfill in Middleboro, MA for disposal.

Week of December 19, 2011
ERRS continued excavation and backfilling operations at properties P-010, P-068, and P-076. Excavation and backfilling completed at properties P-052 P-073, and P-074. ERRS initiated removal activities at P-056.

On December 19, 2011, eight (8) truckloads of contaminated soil from properties P-010/P-068 were transported to the Waste Management Middleboro Landfill in Middleboro, MA for disposal.

On December 20 2011, eight (8) truckloads of contaminated soil from properties P-010/P-068 were transported to the Waste Management Middleboro Landfill in Middleboro, MA for disposal.

On December 21, 2011, eight (8) truckloads of contaminated soil from properties P-010/P-068 were transported to the Waste Management Middleboro Landfill in Middleboro, MA for disposal.

On December 23, 2011, eight (8) truckloads of contaminated soil from properties P-010/P-068 were transported to the Waste Management Middleboro Landfill in Middleboro, MA for disposal.

Week of December 26, 2011
ERRS continued excavation and backfilling operations at properties P-010, P-056, P-068, and P-076. ERRS' fencing subcontractor completed re-establishing the fences at properties P-023, P-039, and P-058.

On December 27, 2011, sixteen (16) truckloads of contaminated soil from the Shawmut Avenue staging area were transported to the Waste Management Middleboro Landfill in Middleboro, MA for disposal.

On December 28, 2011, seventeen (17) truckloads of contaminated soil from the Shawmut Avenue staging area were transported to the Waste Management Middleboro Landfill in Middleboro, MA for disposal.

On December 29, 2011, eight (8) truckloads of contaminated soil from properties P-010/P-068 and thirteen (13) truckloads of contaminated soil from the Shawmut Avenue staging area were transported to the Waste Management Middleboro Landfill in Middleboro, MA for disposal.

On December 30, 2011, ten (10) truckloads of contaminated soil from the Shawmut Avenue staging area were transported to the Waste Management Middleboro Landfill in Middleboro, MA for disposal.

2.1.3 Enforcement Activities

The Administrative Settlement Agreement and Orders on Consent (AOCs) for the Removal Action for property P-013 were executed on June 28, 2011. According to the New Bedford Tax Assessor property maps, property P-013 consists of two lots, each associated with a separate address. Two AOCs were developed and executed to reflect work performed on each of the lots. The docket numbers associated with each of the AOCs are CERCLA-01-2011-0044 and CERCLA-01-2011-0045. The effective date of both of the AOCs is July 11, 2011.

EPA issued a noncompliance letter to the PRP, documenting violation of the removal action start date per the AOCs on September 8, 2011.

The PRP initiated removal activities for the property P-013, located at 157/159 and 169 Hunter Street, on September 22, 2011. The removal action was performed on both lots simultaneously and included the following activities: 1) removal of trees and shrubbery; 2) excavation of 6" to 1' of soil around the property in areas not covered by asphalt; 3) installation of a geotextile fabric, serving as a visual demarcation barrier, in all excavated areas; 4) backfilling/regrading of excavated areas; 5) T&D of excavated material to an approved disposal facility located in Scarborough, Maine; and 6) installation of an asphalt cover in all areas of the property.

The PRP completed these activities on October 7, 2011.

2.2 Planning Section

2.2.1 Anticipated Activities

Continue T&D of contaminated soils that are temporarily stockpiled in the Shawmut Avenue staging area.

2.2.1.1 Planned Response Activities

Complete removal activities on properties awaiting removal actions.

2.3 Logistics Section

Continue coordination of T&D activities for the remaining stockpiled contaminated soils to permitted disposal facilities. Continue coordination of landscaping services for site restoration activities.

2.4 Finance Section

2.4.1 Narrative

Project Ceiling (Action Memorandum Addendum dated September 15, 2011).

COST CATEGORY	CURRENT CEILING	PROPOSED INCREASE	PROPOSED CEILING
REGIONAL REMOVAL ALLOWANCE COSTS:			
ERRS Contractor	$4,000,000.00	$2,000,000.00	$6,000,000.00
Interagency Agreement	$0.00	$0.00	$0.00
OTHER EXTRAMURAL COSTS NOT FUNDED FROM THE REGIONAL ALLOWANCE:			
START Contractor	$750,000.00	$0.00	$750,000.00
Extramural Subtotal	$4,750,000.00	$2,000,000.00	$6,750,000.00
Extramural Contingency (20%)	$950,000.00	$400,000.00	$1,350,000.00
TOTAL, REMOVAL ACTION CEILING	**$5,700,000.00**	**$2,400,000.00**	**$8,100,000.00**

The ERRS task order (0024) is being incrementally funded. Prior to the last task order modification, the task order ceiling of $4,500,000.00 was funded through the ERRS ceiling of $4,000,000.00 and partially from the Extramural Contingency in the amount of $500,000.00. Under the increased project ceiling authorized in the Action Memorandum Addendum dated 9/15/2011, the ERRS task order modification issued on 9/28/11 increased the task order ceiling to $6,199,560.00, which is now funded through the ERRS Ceiling of $6,000,000.00 and partially from the Extramural Contingency in the amount of $199,560.00.

2.5 Other Command Staff

2.5.1 Safety Officer

On-site personnel have reviewed and signed the site specific health and safety plan (HASP). Daily operational health and safety briefings are conducted each morning prior to commencement of site activities.

2.6 Liaison Officer

2.7 Information Officer

2.7.1 Public Information Officer

The Public Information Office continues to provide updates regarding site activities to interested parties and posting the updates onto the website, www.epa.gov/region1/parkerstreet.

2.7.2 Community Involvement Coordinator

3. Participating Entities

3.1 Unified Command

USEPA
MassDEP

3.2 Cooperating Agencies

4. Personnel On Site

USEPA - 2 OSCs, 1 mobile lab with chemist
START - 1 Site Lead personnel
ERRS - 1 RM, , 1 Foreman, 7 Operators, 6 Cleanup Technicians, 2 truck drivers, 1 Field Cost Accountant

5. Definition of Terms

ACM - Asbestos Containing Material
ERRS- Emergency Rapid Response Services
EPA/USEPA - U.S. Environmental Protection Agency
MassDEP - Massachusetts Department of Environmental Protection
NBHA - New Bedford Housing Authority
NBPD - New Bedford Police Department
OEME - Office of Evironmental Measurement and Evaluation
OSC - On-Scene Coordinator
PA/SI - Preliminary Assessment/Site Investigation
PID - Photo Ionization Detector
PPE - Personal Protective Equipment
RM - Response Manager
START - Superfund Technical Assessment and Response Team
TCLP - Toxicity Characteristic Leaching Procedure
T&D - Transportation and Disposal
VOCs - Volatile Organic Compounds

6. Additional sources of information

6.1 Internet location of additional information/report

http://www.epa.gov/region1/parkerstreet

6.2 Reporting Schedule

7. Situational Reference Materials

No information available at this time.

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Parker Street Waste Site - Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region I

Subject:	**POLREP #8** **Progress** **Parker Street Waste Site** **01GB** **New Bedford, MA** **Latitude: 41.6381659 Longitude: -70.9368469**
To:	
From:	Wing Chau, On-Scene Coordinator
Date:	2/23/2012
Reporting Period:	1/3/2012 to 2/10/2012

1. Introduction

1.1 Background

Site Number:	01GB	**Contract Number:**	EP-W-08-061
D.O. Number:	024	**Action Memo Date:**	8/26/2010
Response Authority:	CERCLA	**Response Type:**	Time-Critical
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	10/29/2010	**Start Date:**	10/29/2010
Demob Date:		**Completion Date:**	
CERCLIS ID:	MAN000105955	**RCRIS ID:**	
ERNS No.:		**State Notification:**	
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category

CERCLA Fund-lead, time-critical removal action.

1.1.2 Site Description

The Parker Street Waste Site is a currently estimated 114-acre area located in an urban area of New Bedford, Bristol County, Massachusetts. The estimated extent of the Parker Street Waste Site, based upon data generated to date, is believed to be bounded to the north by Durfee Street, to the east by Liberty Street and the Oak Grove Cemetery, to the south by North Street, and to the west by Summit Street. Redeveloped on and centered around a former city-owned landfill, the Parker Street Waste Site includes the New Bedford High School campus, the Keith Middle School (KMS), the Hetland Memorial Skating Rink property, Walsh Field, the new Andre McCoy Field, residential properties, New Bedford Housing Authority properties, Carabiner's Indoor Climbing Facility, and two private apartment complexes.

1.1.2.1 Location

Geographic coordinates of the Site are approximately 41º 38' 33" north latitude and 70º 56' 44" west longitude, as measured from the approximate center of the Site.

1.1.2.2 Description of Threat

Elevated levels of polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and/ or heavy metals in soils at or near the surface, pose an imminent and substantial endangerment to public health.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

EPA and MassDEP initiated a preliminary assessment and site investigation (PA/SI) on April 26, 2010. Sixty-three (63) parcels comprising forty-seven (47) properties along the periphery of the Site were sampled to expedite further investigation of the boundaries of the Parker Street Waste Site, and to determine whether there is any immediate threat to human health and/or the environment related to the contamination from the Site. The site investigation identified several residential and commercial properties with elevated levels of polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and/ or heavy metals in soils at or near the surface, which pose an imminent and substantial endangerment to public health. Also, twenty-four (24) additional properties were sampled in September 2010 to further delineate the nature and extent of the Site boundaries. On October 25, 2011, START conducted PA/SI activities on two (2) additional properties to further characterize the Site's southeastern boundary.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

On August 26, 2010, the Action Memorandum was signed by the Director of the Office of Site Remediation and Restoration, approving the proposed removal action to address the release or threatened release of hazardous substances, contaminants, and/or pollutants at the Site. The Action Memorandum Addendum dated September 15, 2011 was signed by the Assistant Administrator of the Office of Solid Waste and Emergency Response on September 23, 2011, approving the change in Scope of Response, an Exemption from the Statutory 12-Month and $2 Million Limits, and Ceiling Increase at the Parker Street Waste Site.

2.1.2 Response Actions to Date

Please refer to POLREPs #1 through #7 for information on removal activities prior to January 2, 2012.

<u>Week of January 2, 2012</u>
ERRS continued excavation and backfilling operations at properties P-010, P-056, P-068, and P-076. ERRS' fencing subcontractor re-established fences at properties P-048 and P-082.

On January 6, 2012, ten (10) truckloads of contaminated soil were transported off-site from the Shawmut Avenue staging area to the Waste Management Middleboro Landfill located in Middleboro, MA for disposal.

<u>Week of January 9, 2012</u>
ERRS continued excavation and backfilling operations at properties P-010, P-056, P-068, and P-076. ERRS initiated removal activities at properties P-049, P-070 and P-075. An industrial vacuum truck is utilized to excavate contaminated soils from the back yard of P-049. ERRS' fencing subcontractor was onsite to re-install fences at properties P-046 and P-053.

<u>Week of January 16, 2012</u>
ERRS continued excavation and backfilling operations at properties P-049, P-056, P-061, P-070, and P-075. ERRS completed backfilling and grading activities at properties P-010, P-061, P-069, and P-075. ERRS also removed trees and brushes in the rear of property P-075 to facilitate re-installation of the stockade fence along the property boundary. ERRS' fencing subcontractor was on site to re-install fences at properties P-046, P-048, and P-053.

On January 17, 2012, twelve (12) truckloads of contaminated soil were transported off-site from the Shawmut Avenue staging area to the Waste Management Middleboro Landfill located in Middleboro, MA for disposal. Also, six (6) truckloads of contaminated soil were transported off-site from property P-020 to the Waste Management's Model City Facility in Model City, NY for disposal.

On January 18, 2012, four (4) truckloads of contaminated soil were transported off-site from the Shawmut Avenue staging area to the Waste Management Middleboro Landfill located in Middleboro, MA for disposal.

Week of January 23, 2012
ERRS continued excavation and backfilling operations at properties P-056, P-070, and P-075. ERRS completed excavation and backfilling activities at property P-075. ERRS initiated excavation and backfilling operations at properties P-078 and P-081.

Week of January 30, 2012
ERRS continued excavation and backfilling operations at properties P-056, P-070, P-078 and P-081. ERRS completed excavation and backfilling activities at property P-078. ERRS initiated excavation and backfilling operations at property P-028. ERRS' fencing subcontractor was on site to re-install chain link fence on property P-010.

Week of February 6, 2012
ERRS continued excavation and backfilling operations at properties P-028, P-056, P-070, and P-081. ERRS completed excavation and backfilling activities at property P-081. ERRS initiated excavation and backfilling operations at properties P-069, P-077, and P-084. ERRS' fencing subcontractor was on site to re-install stockade fence on property P-076.

On February 7, 2012, sixteen (16) truckloads of contaminated soil were transported off-site from the Shawmut Avenue staging area to the Waste Management Middleboro Landfill located in Middleboro, MA for disposal.

On February 8, 2012, nineteen (19) truckloads of contaminated soil were transported off-site from the Shawmut Avenue staging area to the Waste Management Middleboro Landfill located in Middleboro, MA for disposal.

On February 9, 2012, nineteen (19) truckloads of contaminated soil were transported off-site from the Shawmut Avenue staging area to the Waste Management Middleboro Landfill located in Middleboro, MA for disposal.

On February 10, 2012, ten (10) truckloads of contaminated soil were transported off-site from the Shawmut Avenue staging area to the Waste Management Middleboro Landfill located in Middleboro, MA for disposal.

2.1.3 Enforcement Activities

The Administrative Settlement Agreement and Orders on Consent (AOCs) for the Removal Action for property P-013 were executed on June 28, 2011. According to the New Bedford Tax Assessor property maps, property P-013 consists of two lots, each associated with a separate address. Two AOCs were developed and executed to reflect work performed on each of the lots. The docket numbers associated with each of the AOCs are CERCLA-01-2011-0044 and CERCLA-01-2011-0045. The effective date of both of the AOCs is July 11, 2011.

EPA issued a noncompliance letter to the PRP, documenting violation of the removal action start date per the AOCs on September 8, 2011.

The PRP initiated removal activities for the property P-013, located at 157/159 and 169 Hunter Street, on September 22, 2011. The removal action was performed on both lots simultaneously and included the following activities: 1) removal of trees and shrubbery; 2) excavation of 6" to 1' of soil around the property in areas not covered by asphalt; 3) installation of a geotextile fabric, serving as a visual demarcation barrier, in all excavated areas; 4) backfilling/regrading of excavated areas; 5)

T&D of excavated material to an approved disposal facility located in Scarborough, Maine; and 6) installation of an asphalt cover in all areas of the property.

The PRP completed these activities on October 7, 2011.

EPA issued a completion letter dated January 30, 2012 to the PRP indicating the removal activities required under the AOCs have been completed satisfactorily.

2.2 Planning Section

2.2.1 Anticipated Activities

Continue T&D of contaminated soils that are temporarily stockpiled in the Shawmut Avenue staging area.

2.2.1.1 Planned Response Activities

Complete removal activities on properties awaiting removal actions.

2.3 Logistics Section

Continue coordination of T&D activities for the remaining stockpiled contaminated soils to permitted disposal facilities. Continue coordination of landscaping and fencing services for site restoration activities.

2.4 Finance Section

2.4.1 Narrative

Project Ceiling (Action Memorandum Addendum dated September 15, 2011).

COST CATEGORY	CURRENT CEILING	PROPOSED INCREASE	PROPOSED CEILING
REGIONAL REMOVAL ALLOWANCE COSTS:			
ERRS Contractor	$4,000,000.00	$2,000,000.00	$6,000,000.00
Interagency Agreement	$0.00	$0.00	$0.00
OTHER EXTRAMURAL COSTS NOT FUNDED FROM THE REGIONAL ALLOWANCE:			
START Contractor	$750,000.00	$0.00	$750,000.00
Extramural Subtotal	$4,750,000.00	$2,000,000.00	$6,750,000.00
Extramural Contingency (20%)	$950,000.00	$400,000.00	$1,350,000.00
TOTAL, REMOVAL ACTION CEILING	**$5,700,000.00**	**$2,400,000.00**	**$8,100,000.00**

The ERRS task order (0024) is being incrementally funded. Prior to the last task order modification, the task order ceiling of $4,500,000.00 was funded through the ERRS ceiling of $4,000,000.00 and partially from the Extramural Contingency in the amount of $500,000.00. Under the increased project ceiling authorized in the Action Memorandum Addendum dated 9/15/2011, the ERRS task order modification issued on 9/28/11 increased the task order ceiling to $6,199,560.00, which is now funded through the ERRS Ceiling of $6,000,000.00 and partially from the Extramural Contingency in the amount of $199,560.00.

2.5 Other Command Staff

2.5.1 Safety Officer

On-site personnel have reviewed and signed the site specific health and safety plan (HASP). Daily operational health and safety briefings are conducted each morning prior to commencement of site activities.

2.6 Liaison Officer

2.7 Information Officer

2.7.1 Public Information Officer

The Public Information Office continues to provide updates regarding site activities to interested parties and posting the updates onto the website, www.epa.gov/region1/parkerstreet.

2.7.2 Community Involvement Coordinator

3. Participating Entities

3.1 Unified Command

USEPA
MassDEP

3.2 Cooperating Agencies

4. Personnel On Site

USEPA - 2 OSCs, 1 mobile lab with chemist
START - 1 Site Lead personnel
ERRS - 1 RM, , 1 Foreman, 5 Operators, 4 Cleanup Technicians, 2 truck drivers, 1 Field Cost Accountant

5. Definition of Terms

ACM - Asbestos Containing Material
ERRS- Emergency Rapid Response Services
EPA/USEPA - U.S. Environmental Protection Agency
MassDEP - Massachusetts Department of Environmental Protection
NBHA - New Bedford Housing Authority
NBPD - New Bedford Police Department
OEME - Office of Evironmental Measurement and Evaluation
OSC - On-Scene Coordinator
PA/SI - Preliminary Assessment/Site Investigation
PID - Photo Ionization Detector
PPE - Personal Protective Equipment
RM - Response Manager
START - Superfund Technical Assessment and Response Team
TCLP - Toxicity Characteristic Leaching Procedure
T&D - Transportation and Disposal
VOCs - Volatile Organic Compounds

6. Additional sources of information

6.1 Internet location of additional information/report

http://www.epa.gov/region1/parkerstreet

6.2 Reporting Schedule

7. Situational Reference Materials

No information available at this time.

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Parker Street Waste Site - Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region I

Subject:	**POLREP #9** **Progress** **Parker Street Waste Site** **01GB** **New Bedford, MA** **Latitude: 41.6381659 Longitude: -70.9368469**
To:	
From:	Wing Chau, On-Scene Coordinator
Date:	3/23/2012
Reporting Period:	2/13/12 to 3/23/12

1. Introduction

1.1 Background

Site Number:	01GB	**Contract Number:**	EP-W-08-061
D.O. Number:	024	**Action Memo Date:**	8/26/2010
Response Authority:	CERCLA	**Response Type:**	Time-Critical
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	10/29/2010	**Start Date:**	10/29/2010
Demob Date:		**Completion Date:**	
CERCLIS ID:	MAN000105955	**RCRIS ID:**	
ERNS No.:		**State Notification:**	
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category

CERCLA Fund-lead, time-critical removal action.

1.1.2 Site Description

The Parker Street Waste Site is a currently estimated 114-acre area located in an urban area of New Bedford, Bristol County, Massachusetts. The estimated extent of the Parker Street Waste Site, based upon data generated to date, is believed to be bounded to the north by Durfee Street, to the east by

Liberty Street and the Oak Grove Cemetery, to the south by North Street, and to the west by Summit Street. Redeveloped on and centered around a former city-owned landfill, the Parker Street Waste Site includes the New Bedford High School campus, the Keith Middle School (KMS), the Hetland Memorial Skating Rink property, Walsh Field, the new Andre McCoy Field, residential properties, New Bedford Housing Authority properties, Carabiner's Indoor Climbing Facility, and two private apartment complexes.

1.1.2.1 Location

Geographic coordinates of the Site are approximately 41º 38' 33" north latitude and 70º 56' 44" west longitude, as measured from the approximate center of the Site.

1.1.2.2 Description of Threat

Elevated levels of polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and/ or heavy metals in soils at or near the surface, pose an imminent and substantial endangerment to public health.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

EPA and MassDEP initiated a preliminary assessment and site investigation (PA/SI) on April 26, 2010. Sixty-three (63) parcels comprising forty-seven (47) properties along the periphery of the Site were sampled to expedite further investigation of the boundaries of the Parker Street Waste Site, and to determine whether there is any immediate threat to human health and/or the environment related to the contamination from the Site. The site investigation identified several residential and commercial properties with elevated levels of polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and/ or heavy metals in soils at or near the surface, which pose an imminent and substantial endangerment to public health. Also, twenty-four (24) additional properties were sampled in September 2010 to further delineate the nature and extent of the Site boundaries. On October 25, 2011, START conducted PA/SI activities on two (2) additional properties to further characterize the Site's southeastern boundary.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

On August 26, 2010, the Action Memorandum was signed by the Director of the Office of Site Remediation and Restoration, approving the proposed removal action to address the release or threatened release of hazardous substances, contaminants, and/or pollutants at the Site. The Action Memorandum Addendum dated September 15, 2011 was signed by the Assistant Administrator of the Office of Solid Waste and Emergency Response on September 23, 2011, approving the change in Scope of Response, an Exemption from the Statutory 12-Month and $2 Million Limits, and Ceiling Increase at the Parker Street Waste Site.

2.1.2 Response Actions to Date

Please refer to POLREPs #1 through #8 for information on removal activities prior to February 13, 2012.

<u>Week of February 13, 2012</u>
ERRS continued excavation and backfilling operations at properties P-028, P-069, P-070, P-077 and P-084.

On February 16, 2012, eight (8) truckloads of contaminated soil were transported off-site from the Shawmut Avenue staging area to the Waste Management Middleboro Landfill located in Middleboro, MA for disposal.

Week of February 20, 2012
ERRS continued excavation and backfilling operations at properties P-056, P-069, P-070, and P-084. ERRS completed excavation and backfilling activities at property P-028.

On February 23, 2012, nineteen (19) truckloads of contaminated soil were transported off-site from the Shawmut Avenue staging area to the Waste Management Middleboro Landfill located in Middleboro, MA for disposal.

On February 24, 2012, ten (10) truckloads of contaminated soil were transported off-site from the Shawmut Avenue staging area to the Waste Management Middleboro Landfill located in Middleboro, MA for disposal.

Week of February 27, 2012
ERRS continued excavation and backfilling operations at properties P-069 and P-084. ERRS completed excavation and backfilling activities at properties P-049, P-056, and P-070. ERRS' fencing subcontractor was on site to re-install the stockade fence at property P-074.

On February 27, 2012, eight (8) truckloads of contaminated soil were transported off-site from the Shawmut Avenue staging area to the Waste Management Middleboro Landfill located in Middleboro, MA for disposal.

On March 2, 2012, five (5) truckloads of contaminated soil were transported off-site from the Shawmut Avenue staging area to the Environmental Soil Management Inc. (ESMI) faciltiy in Loudon, NH for disposal.

Week of March 5, 2012
ERRS completed backfilling operations at properties P-030 and P-084. ERRS' fencing subcontractor re-installed vinyl fence and gate at property P-077.

On March 6, 2012, one (1) truckload of contaminated soil was transported off-site from the Shawmut Avenue staging area to the Waste Management's Turnkey Facility in Rochester, NH for disposal.

On March 9, 2012, two (2) truckloads of contaminated soil were transported off-site from the Shawmut Avenue staging area to the Waste Management Middleboro Landfill located in Middleboro, MA for disposal.

Week of March 12, 2012
ERRS completed backfilling operations at properties P-069 and P-076. ERRS began reconstructing the walkway at property P-028. ERRS' fencing subcontractor re-installed the stockade fences at properties P-056 and P-070.

Week of March 19, 2012
ERRS completed reconstructing the walkway at property P-028. On March 20, 2012, ERRS completed temporary demobilization of personnel and equipment from the Site.

2.1.3 Enforcement Activities

2.2 Planning Section

2.2.1 Anticipated Activities

2.2.1.1 Planned Response Activities

Remobilze to the Site to complete restoration activities during the spring of 2012.

2.3 Logistics Section

Continue coordination of landscaping, repaving, and fencing services for site restoration activities.

2.4 Finance Section

2.4.1 Narrative

Project Ceiling (Action Memorandum Addendum dated September 15, 2011).

COST CATEGORY	CURRENT CEILING	PROPOSED INCREASE	PROPOSED CEILING
REGIONAL REMOVAL ALLOWANCE COSTS:			
ERRS Contractor	$4,000,000.00	$2,000,000.00	$6,000,000.00
Interagency Agreement	$0.00	$0.00	$0.00
OTHER EXTRAMURAL COSTS NOT FUNDED FROM THE REGIONAL ALLOWANCE:			
START Contractor	$750,000.00	$0.00	$750,000.00
Extramural Subtotal	$4,750,000.00	$2,000,000.00	$6,750,000.00
Extramural Contingency (20%)	$950,000.00	$400,000.00	$1,350,000.00
TOTAL, REMOVAL ACTION CEILING	**$5,700,000.00**	**$2,400,000.00**	**$8,100,000.00**

The ERRS task order (0024) is being incrementally funded. Prior to the last task order modification, the task order ceiling of $4,500,000.00 was funded through the ERRS ceiling of $4,000,000.00 and partially from the Extramural Contingency in the amount of $500,000.00. Under the increased project ceiling authorized in the Action Memorandum Addendum dated 9/15/2011, the ERRS task order modification issued on 9/28/11 increased the task order ceiling to $6,199,560.00, which is now funded through the ERRS Ceiling of $6,000,000.00 and partially from the Extramural Contingency in the amount of $199,560.00.

2.5 Other Command Staff

2.5.1 Safety Officer

On-site personnel have reviewed and signed the site specific health and safety plan (HASP). Daily operational health and safety briefings are conducted each morning prior to commencement of site activities.

2.6 Liaison Officer

2.7 Information Officer

2.7.1 Public Information Officer

The Public Information Office continues to provide updates regarding site activities to interested parties and posting the updates onto the website, www.epa.gov/region1/parkerstreet.

2.7.2 Community Involvement Coordinator

3. Participating Entities

3.1 Unified Command

USEPA
MassDEP

3.2 Cooperating Agencies

4. Personnel On Site

USEPA - 2 OSCs, 1 mobile lab with chemist
START - 1 Site Lead personnel
ERRS - 1 RM, , 1 Foreman, 5 Operators, 4 Cleanup Technicians, 2 truck drivers, 1 Field Cost Accountant

5. Definition of Terms

ACM - Asbestos Containing Material
ERRS- Emergency Rapid Response Services
EPA/USEPA - U.S. Environmental Protection Agency
MassDEP - Massachusetts Department of Environmental Protection
NBHA - New Bedford Housing Authority
NBPD - New Bedford Police Department
OEME - Office of Evironmental Measurement and Evaluation
OSC - On-Scene Coordinator
PA/SI - Preliminary Assessment/Site Investigation
PID - Photo Ionization Detector
PPE - Personal Protective Equipment
RM - Response Manager
START - Superfund Technical Assessment and Response Team
TCLP - Toxicity Characteristic Leaching Procedure
T&D - Transportation and Disposal
VOCs - Volatile Organic Compounds

6. Additional sources of information

6.1 Internet location of additional information/report

http://www.epa.gov/region1/parkerstreet

6.2 Reporting Schedule

7. Situational Reference Materials

No information available at this time.

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Parker Street Waste Site - Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region I

Subject:	**POLREP #10** **Parker Street Waste Site** **01GB** **New Bedford, MA** **Latitude: 41.6381659 Longitude: -70.9368469**
To:	
From:	Wing Chau, On-Scene Coordinator
Date:	6/29/2012
Reporting Period:	

1. Introduction

1.1 Background

Site Number:	01GB	**Contract Number:**	EP-W-08-061
D.O. Number:	024	**Action Memo Date:**	8/26/2010
Response Authority:	CERCLA	**Response Type:**	Time-Critical
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	10/29/2010	**Start Date:**	10/29/2010
Demob Date:		**Completion Date:**	
CERCLIS ID:	MAN000105955	**RCRIS ID:**	
ERNS No.:		**State Notification:**	
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category

CERCLA Fund-lead, time-critical removal action.

1.1.2 Site Description

The Parker Street Waste Site is a currently estimated 114-acre area located in an urban area of New Bedford, Bristol County, Massachusetts. The estimated extent of the Parker Street Waste Site, based upon data generated to date, is believed to be bounded to the north by Durfee Street, to the east by Liberty Street and the Oak Grove Cemetery, to the south by North Street, and to the west by Summit Street. Redeveloped on and centered around a former city-owned landfill, the Parker Street Waste Site includes the New Bedford High School campus, the Keith Middle School (KMS), the Hetland Memorial Skating Rink property, Walsh Field, the new Andre McCoy Field, residential properties, New Bedford Housing Authority properties, Carabiner's Indoor Climbing Facility, and two private apartment complexes.

1.1.2.1 Location

Geographic coordinates of the Site are approximately 41º 38' 33" north latitude and 70º 56' 44" west longitude, as measured from the approximate center of the Site.

1.1.2.2 Description of Threat

Elevated levels of polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and/ or heavy metals in soils at or near the surface, pose an imminent and substantial endangerment to public health.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

EPA and MassDEP initiated a preliminary assessment and site investigation (PA/SI) on April 26, 2010. Sixty-three (63) parcels comprising forty-seven (47) properties along the periphery of the Site were sampled to expedite further investigation of the boundaries of the Parker Street Waste Site, and to determine whether there is any immediate threat to human health and/or the environment related to the contamination from the Site. The site investigation identified several residential and commercial properties with elevated levels of polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and/ or heavy metals in soils at or near the surface, which pose an imminent and substantial endangerment to public health. Also, twenty-four (24) additional properties were sampled in September 2010 to further delineate the nature and extent of the Site boundaries. On October 25, 2011, START conducted PA/SI activities on two (2) additional properties to further characterize the Site's southeastern boundary.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

On August 26, 2010, the Action Memorandum was signed by the Director of the Office of Site Remediation and Restoration, approving the proposed removal action to address the release or threatened release of hazardous substances, contaminants, and/or pollutants at the Site. The Action Memorandum Addendum dated September 15, 2011 was signed by the Assistant Administrator of the Office of Solid Waste and Emergency Response on September 23, 2011, approving the change in Scope of Response, an Exemption from the Statutory 12-Month and $2 Million Limits, and Ceiling Increase at the Parker Street Waste Site.

2.1.2 Response Actions to Date

Please refer to POLREPs #1 through #9 for information on removal activities prior to April 9, 2012.

<u>Week of April 9, 2012</u>
On April 10, 2012, EPA, ERRS, and START remobilized to the Site to continue restoration activities. ERRS mobilized personnel and equipment to continue placement and re-grading of topsoil at properties P-010, P-020, P-052, P-056, P-068, P-070, P-073, P-075, and P-076. ERRS' landscaping subcontractor was onsite to review remaining scope of work to be completed.

<u>Week of April 16, 2012</u>
ERRS continued placement and re-grading of topsoil operations at properties P-052, P-056, P-073, P-074, and P-084. ERRS conducted repairs to the front stairs and re-graded the front walkway at property P-056, patched the concrete driveway at property P-053, installed the raised garden bed in the backyard of property P-005, and installed the wooden form for the concrete pad at property P-084. ERRS's landscaping subcontractor was onsite to re-plant arborvitaes at property P-023. The landscaping subcontractor also completed plantings at P-028 and spread fertilizer at P-021, P-029, and P-042. ERRS's asphalt paving subcontractor was onsite to install and grade the sub-base reconstruction of the asphalt basketball court at property P-052.

<u>Week of April 23, 2012</u>
Due to the muddy conditions resulting from heavy rain storms, ERRS constructed a temporary wooden walkway at property P-010 to allow for egress/ingress. ERRS conducted repairs to the bulkhead at the Corner Sports store, which was damaged during removal activities at property P-023. ERRS also augered holes for the re-installation of the basketball posts at property P-052.

<u>Week of April 30, 2012</u>

ERRS capped the abandoned water line to the building at property P-052, which was discovered during excavation activities at this property. Also at property P-052, ERRS re-installed the basketball posts and poured the concrete base. ERRS' landscaping subcontractor was onsite to continue plantings at properties P-010, P-028, and P-068; and placed grass seed at property P-075.

Week of May 7, 2012
ERRS' landscaping contractor installed sod at properties P-010, P-068, P-077, and P-078; and placed grass seed at properties P-010, P-028, P-068, and P-075. ERRS' asphalt paving subcontractor conducted some repair/patch work at the former stockpile area on Shawmut Avenue.

Week of May 14, 2012
ERRS's asphalt paving subcontractor reconstructed the driveways at properties P-056 and P-076. ERRS' landscaping subcontractor installed of sod at properties P-073, P-074, and P-076; and installed plantings at properties P-012 and P-056. START updated the Administrative File Record at the New Bedford Public Library.

Week of May 21, 2012
ERRS' landscaping subcontractor prepared properties P-010, P-082 and P-084 for sod installation. Sod and plants were installed on properties P-010, P-48, and P-084. ERRS' asphalt paving subcontractor repaired the driveways at properties P-P-020, P-021, and P-081; and repaired the walkway at property P-058. ERRS' asphalt paving subcontractor performed additional grading activities on the basketball court area of property P-052.

Week of May 28, 2012
ERRS began regrading and installing a dry well area in the backyard of property P-004 to address flooding issues that occur during heavy rain events. ERRS' landscaping subcontractor installed plants at property P-056 and installed sod at properties P-049, P-056, and P-070.

Week of June 4, 2012
ERRS completed regrading and installation of the dry well at property P-004 and performed similar activities on the abutting property, P-003, which is also having flooding issues during heavy rain events. ERRS' landscaping subcontractor installed sod at properties P-049, P-081, and P-082. ERRS and its landscaping subcontractor conducted additional grading of the topsoil at property P-052. ERRS's asphalt subcontractor repaired the sidewalks near properties P-010 and P-048; and repaired the walkways a properties P-001 and P-006. ERRS' asphalt paving subcontractor reconstructed the concrete pad in the backyard of property P-084.

Week of June 11, 2012
ERRS regraded and installed a dry well at property P-030 to address flooding issues that occurrs during heavy rain events. ERRS repaired the erosion areas on properties P-002 and P-033, which resulted from runoff during the recent heavy rain events. ERRS also placed additional topsoil at property P-052. ERRS' landscaping subcontractor installed plants and sod at properties P-003, P-004, P-049, P-056, P-061, and P-070. ERRS' landscaping subcontractor also replaced the dead sod at property P-042 and hydroseeded properties P-020, P-028, and P-029.

Week of June 18, 2012
ERRS' landscaping subcontractor installed sod at property P-052. ERRS' landscaping subcontractor also repaired sod areas at properties P-001, P-003, and P-004. ERRS' asphalt paving subcontractor reconstructed the asphalt basketball court at property P-052. ERRS' fence subcontractor installed stockade fence at property P-076.

Week of June 25, 2012
ERRS demobilized one of the office trailers at the command post area. ERRS' landscaping subcontractor was onsite to water newly installed sod areas and placed mulch material at property P-084.

2.1.3 Enforcement Activities

2.2 Planning Section

2.2.1 Anticipated Activities

2.2.1.1 Planned Response Activities

2.3 Logistics Section

Upon completion of restoration activities, coordinate demobilization activities.

2.4 Finance Section

2.4.1 Narrative

Project Ceiling (Action Memorandum Addendum dated September 15, 2011).

COST CATEGORY	CURRENT CEILING	PROPOSED INCREASE	PROPOSED CEILING
REGIONAL REMOVAL ALLOWANCE COSTS:			
ERRS Contractor	$4,000,000.00	$2,000,000.00	$6,000,000.00
Interagency Agreement	$0.00	$0.00	$0.00
OTHER EXTRAMURAL COSTS NOT FUNDED FROM THE REGIONAL ALLOWANCE:			
START Contractor	$750,000.00	$0.00	$750,000.00
Extramural Subtotal	$4,750,000.00	$2,000,000.00	$6,750,000.00
Extramural Contingency (20%)	$950,000.00	$400,000.00	$1,350,000.00
TOTAL, REMOVAL ACTION CEILING	**$5,700,000.00**	**$2,400,000.00**	**$8,100,000.00**

The ERRS task order (0024) is being incrementally funded. The ERRS task order modification issued on 6/20/12 increased the task order ceiling to $6,249,560.00, which is now funded through the ERRS Ceiling of $6,000,000.00 and partially from the Extramural Contingency in the amount of $249,560.00. Also, $35,000 from the Extramural Contingency is being utilized for the START ceiling. The amount of $1,065,440 is currently available in the Extramural Contingency ceiling for utilization if necessary.

2.5 Other Command Staff

2.5.1 Safety Officer

On-site personnel have reviewed and signed the site specific health and safety plan (HASP). Daily operational health and safety briefings are conducted each morning prior to commencement of site activities.

2.6 Liaison Officer

2.7 Information Officer

2.7.1 Public Information Officer

The Public Information Office continues to provide updates regarding site activities to interested parties and posting the updates onto the website, www.epa.gov/region1/parkerstreet.

2.7.2 Community Involvement Coordinator

3. Participating Entities

3.1 Unified Command

USEPA
MassDEP

3.2 Cooperating Agencies

4. Personnel On Site

USEPA - 1 OSC
START - 1 Site Lead personnel
ERRS - 1 RM, , 1 Foreman, 2 Operators, 1 Cleanup Technicians, 1 truck driver

5. Definition of Terms

ACM - Asbestos Containing Material
ERRS- Emergency Rapid Response Services
EPA/USEPA - U.S. Environmental Protection Agency
MassDEP - Massachusetts Department of Environmental Protection
NBHA - New Bedford Housing Authority
NBPD - New Bedford Police Department
OEME - Office of Evironmental Measurement and Evaluation
OSC - On-Scene Coordinator
PA/SI - Preliminary Assessment/Site Investigation
PID - Photo Ionization Detector
PPE - Personal Protective Equipment
RM - Response Manager
START - Superfund Technical Assessment and Response Team
TCLP - Toxicity Characteristic Leaching Procedure
T&D - Transportation and Disposal
VOCs - Volatile Organic Compounds

6. Additional sources of information

6.1 Internet location of additional information/report

http://www.epa.gov/region1/parkerstreet

6.2 Reporting Schedule

7. Situational Reference Materials

No information available at this time.

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Parker Street Waste Site - Removal Polrep
Final Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region I

Subject:	**POLREP #11** **Final** **Parker Street Waste Site** **01GB** **New Bedford, MA** **Latitude: 41.6381659 Longitude: -70.9368469**
To:	
From:	Wing Chau, On-Scene Coordinator
Date:	8/28/2012
Reporting Period:	7/2/12 to 8/24/12

1. Introduction

1.1 Background

Site Number:	01GB	**Contract Number:**	EP-W-08-061
D.O. Number:	024	**Action Memo Date:**	8/26/2010
Response Authority:	CERCLA	**Response Type:**	Time-Critical
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	10/29/2010	**Start Date:**	10/29/2010
Demob Date:	8/22/2012	**Completion Date:**	8/22/2012
CERCLIS ID:	MAN000105955	**RCRIS ID:**	
ERNS No.:		**State Notification:**	
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category

CERCLA Fund-lead, time-critical removal action.

1.1.2 Site Description

The Parker Street Waste Site is an approximately 122-acre area located in an urban area of New Bedford, Bristol County, Massachusetts. The estimated extent of the Parker Street Waste Site, based upon data generated to date, is believed to be bounded to the north by Durfee Street, to the east by Liberty Street and the Oak Grove Cemetery, to the south by North Street, and to the west by Summit Street. Redeveloped on and centered around a former city-owned landfill, the Parker Street Waste Site includes the New Bedford High School campus, the Keith Middle School (KMS), the Hetland Memorial Skating Rink property, Walsh Field, the new Andre McCoy Field, residential properties, New Bedford Housing Authority properties, Carabiner's Indoor Climbing Facility, and two private apartment complexes.

1.1.2.1 Location

Geographic coordinates of the Site are approximately 41º 38’ 33” north latitude and 70º 56’ 44” west longitude, as measured from the approximate center of the Site.

1.1.2.2 Description of Threat

Elevated levels of polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and/ or heavy metals in soils at or near the surface, pose an imminent and substantial endangerment to public health.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

EPA and MassDEP initiated a preliminary assessment and site investigation (PA/SI) on April 26, 2010. Sixty-three (63) parcels comprising forty-seven (47) properties along the periphery of the Site were sampled to expedite further investigation of the boundaries of the Parker Street Waste Site, and to determine whether there is any immediate threat to human health and/or the environment related to the contamination from the Site. The site investigation identified several residential and commercial properties with elevated levels of polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and/ or heavy metals in soils at or near the surface, which pose an imminent and substantial endangerment to public health. Also, twenty-four (24) additional properties were sampled in September 2010 to further delineate the nature and extent of the Site boundaries. On October 25, 2011, START conducted PA/SI activities on two (2) additional properties to further characterize the Site's southeastern boundary.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

On August 26, 2010, the Action Memorandum was signed by the Director of the Office of Site Remediation and Restoration, approving the proposed removal action to address the release or threatened release of hazardous substances, contaminants, and/or pollutants at the Site. The Action Memorandum Addendum dated September 15, 2011 was signed by the Assistant Administrator of the Office of Solid Waste and Emergency Response on September 23, 2011, approving the change in Scope of Response, an Exemption from the Statutory 12-Month and $2 Million Limits, and Ceiling Increase at the Parker Street Waste Site.

2.1.2 Response Actions to Date

Please refer to POLREPs #1 through #10 for information on removal activities prior to July 2, 2012.

<u>Week of July 2, 2012</u>
ERRS' landscaping subcontractor was onsite to continue watering recently placed sod and hydroseed at properties P-003, P-004, P-010, P-020, P-049, P-052, P-056, P-070, and P-070.

<u>Week of July 9, 2012</u>
EPA, ERRS, and ERRS' landscaping subcontractor met onsite to discuss and review remaining restoration punchlist items that needed to be completed. ERRS' landscaping subcontractor continued watering recently placed sod and hydroseed at properties P-003, P-004, P-010, P-020, P-049, P-052, P-056, P-070, and P-070.

<u>Week of July 16, 2012</u>
ERRS met with the homeowner at P-042 to evaluate a warped fence post of the recently installed stockade fence. ERRS began re-establishing drainage structures at property P-070. ERRS' landscaping subcontractor completed plantings at P-070.

<u>Week of July 23, 2012</u>
ERRS completed re-establishment of the drainage structures and clothes line at property P-070. ERRS intiated demobilization of the command post area. NSTAR was onsite to disconnect power to the temporary service pole.

Week of July 30, 2012
ERRS completed demobilization of the command post area. ERRS' fencing subcontractor replaced the warped fence post at property P-042 on August 4, 2012.

Week of August 20, 2012
On August 21, 2012, ERRS met with the homeowner at property P-042 to resolve the homeowner's concern regarding the new fence post replacement that was performed on August 4, 2012. The homeowner's concern was due to his misunderstanding on whether the warped post have been replaced.

On August 22, 2012, EPA and MassDEP conducted a final site walk to close out the removal action. In addition, EPA, MassDEP, ATSDR, and CLEAN met in the evening to discuss the current to status of the removal action, which is the removal action is completed and final after action reports will be generated and provided to the property owners.

2.1.3 Enforcement Activities

2.1.4 Progress Metrics

Waste Stream	*Quantity*	*Treatment*	*Disposal*
Contaminated Soil	**44.49 tons**	**Landfilled**	**Turnkey Landfill, Rochester, NH**
Contaminated Soil	**2705.58 tons**	**Landfilled**	**Turnkey Landfill, Rochester, NH**
Contaminated Soil	**16828.83 tons**	**Daily cover for landfill**	**Middleboro Landfill, Middleboro, MA**
Contaminated Soil	**1497.10 tons**	**Daily cover for landfill**	**Green Street Landfill, Worcester, MA**
Contaminated Soil	**2514.64 tons**	**Recycled**	**ESMI Inc., Loudon, NH**
Contaminated Soil	**5890.53 tons**	**Daily cover for landfill**	**Crapo Hill Landfill, New Bedford, MA**
Contaminated Soil	**169.68 tons**	**Landfilled**	**Model City Landfill, Model City, NY**
	29650.85 tons		

2.2 Planning Section

2.2.1 Anticipated Activities

2.2.1.1 Planned Response Activities

None. Removal Action is completed.

2.3 Logistics Section

No information available at this time.

2.4 Finance Section

2.4.1 Narrative

Project Ceiling (Action Memorandum Addendum dated September 15, 2011).

COST CATEGORY	CURRENT CEILING	PROPOSED INCREASE	PROPOSED CEILING
REGIONAL REMOVAL ALLOWANCE COSTS:			
ERRS Contractor	$4,000,000.00	$2,000,000.00	$6,000,000.00
Interagency Agreement	$0.00	$0.00	$0.00
OTHER EXTRAMURAL COSTS NOT FUNDED FROM THE REGIONAL ALLOWANCE:			
START Contractor	$750,000.00	$0.00	$750,000.00
Extramural Subtotal	$4,750,000.00	$2,000,000.00	$6,750,000.00
Extramural Contingency (20%)	$950,000.00	$400,000.00	$1,350,000.00
TOTAL, REMOVAL ACTION CEILING	**$5,700,000.00**	**$2,400,000.00**	**$8,100,000.00**

The ERRS task order (0024) is being incrementally funded. The ERRS task order modification issued on 6/20/12 increased the task order ceiling to $6,249,560.00, which is now funded through the ERRS Ceiling of $6,000,000.00 and partially from the Extramural Contingency in the amount of $249,560.00. Also, $195,601 from the Extramural Contingency is being utilized for the START ceiling. The amount of $904,839 is currently available in the Extramural Contingency ceiling for utilization if necessary.

2.5 Other Command Staff

2.5.1 Safety Officer

2.6 Liaison Officer

2.7 Information Officer

2.7.1 Public Information Officer

The Public Information Office will finalize the last community update factsheet and provide to interested parties, as well as posting it onto the website, www.epa.gov/region1/parkerstreet.

2.7.2 Community Involvement Coordinator

3. Participating Entities

3.1 Unified Command

USEPA
MassDEP

3.2 Cooperating Agencies

4. Personnel On Site

USEPA - 1 OSC
START - 1 Site Lead personnel
ERRS - 1 RM, 1 Foreman, 1 Operators, 1 Cleanup Technician

5. Definition of Terms

ACM - Asbestos Containing Material
CLEAN - Citizens Leading Environmental Action Network
ERRS- Emergency Rapid Response Services
EPA/USEPA - U.S. Environmental Protection Agency
MassDEP - Massachusetts Department of Environmental Protection
NBHA - New Bedford Housing Authority
NBPD - New Bedford Police Department

OEME - Office of Evironmental Measurement and Evaluation
OSC - On-Scene Coordinator
PA/SI - Preliminary Assessment/Site Investigation
PID - Photo Ionization Detector
PPE - Personal Protective Equipment
RM - Response Manager
START - Superfund Technical Assessment and Response Team
TCLP - Toxicity Characteristic Leaching Procedure
T&D - Transportation and Disposal
VOCs - Volatile Organic Compounds

6. Additional sources of information

6.1 Internet location of additional information/report

http://www.epa.gov/region1/parkerstreet

6.2 Reporting Schedule

7. Situational Reference Materials

No information available at this time.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MA 02109-3912

CONTAINS ENFORCEMENT-SENSITIVE INFORMATION

MEMORANDUM

DATE: August 26, 2010

SUBJ: Request for a Removal Action at the Parker Street Waste Site, New Bedford, Bristol County, Massachusetts - **Action Memorandum and Exemption from the Statutory $2,000,000 and 12-Month Limits on Removal Actions**

FROM: Wing Chau, On-Scene Coordinator W.C.
Emergency Response and Removal Section II

THRU: Steven R. Novick, Chief
Emergency Response and Removal Section II

Arthur V. Johnson III, Chief
Emergency Planning & Response Branch

TO: James T. Owens III, Director
Office of Site Remediation and Restoration

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval of the proposed removal action at the Parker Street Waste Site (the Site), which is located in a previously estimated 104-acre area, intersected by Parker Street, in New Bedford, Bristol County, Massachusetts. Hazardous substances present in soils and sediments at the Site, if not addressed by implementing the response actions selected in this Action Memorandum, will continue to pose a threat to human health and the environment. This Action Memorandum also requests and documents the approval of an "emergency" exemption from the $2 million and 12-month statutory limits for removal actions under the National Contingency Plan. There are no nationally significant or precedent-setting issues associated with this Site, and there has been no use of the OSC's $200,000 warrant authority.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID# : MAN000105955
SITE ID# : 01GB
CATEGORY : Time-Critical

A. <u>Site Description</u>

1. Removal site evaluation

The Parker Street Waste Site is a previously estimated 104-acre area located in an urban area of New Bedford, Bristol County, Massachusetts. The estimated extent of the Parker Street Waste Site, based upon data generated to date, is believed to be bounded to the north by Durfee Street, to the east by Liberty Street and the Oak Grove Cemetery, to the south by Hillman Street, and to the west by Summit Street. Centered around a former city-owned landfill, the Parker Street Waste Site includes the New Bedford High School campus, the recently constructed Keith Middle School (KMS), the Hetland Memorial Skating Rink property, Walsh Field, the new Andre McCoy Field, residential properties, New Bedford Housing Authority properties, Carabiner's Indoor Climbing Facility, and two private apartment complexes.

In 2000, during an environmental due diligence investigation of the former McCoy Field as a possible location for the new KMS, PCB levels above regulatory limits were detected. Beginning in 2005, BETA Group Inc., working on behalf of the City of New Bedford, remediated the site by removing PCB-contaminated soil and sediment and installing a 3-foot cap over the contaminated areas. The KMS was then constructed over the resulting 3-foot cap. Throughout the course of the remediation, BETA Group, Inc. conducted several subsurface environmental investigations between 2004 and 2006 at other locations on the Site. In addition, a PCB cleanup of the wetlands behind KMS was conducted in 2005/2006.

Following the remediation of the former McCoy Field/current KMS location, TRC Environmental Corp. (TRC) was contracted by the City of New Bedford to conduct site investigations at the Parker Street Waste Site. TRC conducted investigations at the New Bedford High School campus, Walsh Field area, new Andre McCoy Field area, 16 residential properties, one church, five city-owned right-of-way areas, one privately-owned commercial property, and one city-owned lot on Durfee St. Most of the investigatory work was completed throughout 2007 and 2008, with portions of the final reports completed by the end of year 2008.

For the past several years, the City of New Bedford has been addressing contamination at the Parker Street Waste Site pursuant to the Massachusetts Contingency Plan (MCP), the State's privatized cleanup program, and under a PCB cleanup approval issued by EPA Region 1 under the Toxic Substance Control Act (TSCA). On April 15, 2009, the EPA Administrator, Lisa Jackson, visited the City of New Bedford to announce funding from the American Recovery and Reinvestment Act of 2009 being made available for the cleanup of New Bedford Harbor. During this visit, various stakeholders raised concerns regarding the Parker Street Waste Site. In response to these concerns, EPA and the Massachusetts Department of Environmental Protection (MassDEP) conducted a public meeting on September 30, 2009, during which concerns regarding the scope and pace of the environmental assessment and clean up of the Site were voiced by residents and community leaders. One of their concerns included the unknown extent of contamination which could possibly extend into the largely residential neighborhoods surrounding the school campuses. At the meeting, EPA and the MassDEP committed to work with the City of New Bedford and community members to expedite further investigation of the boundaries of the Parker Street Waste Site, and to determine whether there is any immediate threat to human health and/or the environment related to contamination from the Site.

EPA and MassDEP mobilized to the Site on April 19, 2010 to establish the command post and work areas. Field sampling activities for the preliminary assessment/site investigation (PA/SI) began on April 26, 2010 and concluded in early June 2010. The site investigation identified several residential and commercial properties with elevated levels of polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and/ or heavy metals in soils at or near the surface, which pose an imminent and substantial endangerment to public health. Currently 25 of the 47 properties tested to date have undergone risk evaluations by MassDEP; and 20 properties have been determined to contain elevated levels of contamination that trigger an Imminent Hazard condition and/or Significant Risk condition as defined under the Massachusetts Contingency Plan (MCP). Under the MCP, the contamination within the top 1-foot of soil is evaluated to determine if an Imminent Hazard exists. For the top 3-feet of soil, the contamination is evaluated to determine if a Significant Risk is present based upon the current land-use of the property. Evaluations of the other remaining properties are on-going. The PA/SI was concluded and a time-critical removal action was recommended in the Site Investigation Closure Memorandum dated August 19, 2010. Although this phase of the PA/SI has concluded, an estimated 23 additional residential and commercial properties are also scheduled to be sampled to determine whether there is an immediate threat present to human health and/or the environment, and to also further define the extent of the Site boundaries.

2. Physical location

The Parker Street Waste Site is a previously approximated 104-acre area located in New Bedford, Bristol County, Massachusetts. Geographic coordinates of the Site are approximately 41° 38' 33" north latitude and 70° 56' 44" west longitude, as measured from the approximate center of the Site. The estimated extent of the Site is believed to be bounded to the north by Durfee Street, to the east by Liberty Street and the Oak Grove Cemetery, to the south by Hillman Street, and to the west by Summit Street. Located within the bounds of the former waste site is the New Bedford High School campus, the Keith Middle School, the Hetland Memorial Skating Rink property, Walsh Field, the new Andre McCoy Field, residential properties, New Bedford Housing Authority properties, Carabiner's Indoor Climbing Facility, and two privately-owned apartment complexes. The estimated size of the Site has increased with the addition of the impacted properties identified during the initial PA/SI. Additional properties identified to be sampled may also be included into the Site if determined to be impacted by Site related contamination.

3. Site characteristics

According to historical topographical maps, the Site was a wetland area linked to the Apponagansett Swamp prior to 1936. Subsequent maps and aerial imagery revealed that the southern end of the Site (Walsh Field area) was the first to be developed and was displayed as dry land in historical maps. The majority of activity suspected to be associated with the waste material identified on the Site occurred in the 1950s and early 1960s and was located in the current New Bedford High School campus area. This waste material is suspected to have been disturbed during construction of the New Bedford High School's foundation between 1968 and 1972. Further disturbance of fill-related waste material is also suspected to have occurred during the construction of the former Andre McCoy Field (prior to construction of KMS).

All nearby residents receive city-supplied water; therefore, there are no impacted drinking water supply wells. The current location of KMS is a historical wetland, and there are small wetlands located west and north of KMS. According to the 2000 Census, the approximate area population is respectively 30,119, 7,074, and 894 people within a 1 mile, 0.5 mile, and 0.25 radius of the Site. The surrounding area is predominantly used for residential and recreational purposes. According to the EPA Region 1 Environmental Justice Mapping Tool, the Site is in an environmental justice area.

a. Removal Action Areas

<u>Area 1</u>

Residential properties located south and west of Walsh Field (Maxfield Street, Hunter Street, Florence Street, Hillman Street). (Please refer to the Parker Street Waste Site Map in Attachment 1)

<u>Area 2</u>

Residential and Commercial Properties located on Parker Street and Hunter Street. (Please refer to the Parker Street Waste Site Map in Attachment 1)

<u>Area 4</u>

Residential and commercial properties located on Hathaway Boulevard, Greenwood Street, and Ruggles Street. (Please refer to the Parker Street Waste Site Map in Attachment 1)

<u>Area 7</u>

Residential properties located on Durfee Street. (Please refer to the Parker Street Waste Site Map in Attachment 1)

Area 8

Wetland area located between Durfee Street and Potter Street. (Please refer to the Parker Street Waste Site Map in Attachment 1)

Area 11

Westlawn Public Housing Complex located on Liberty Street, Maxfield Street, Lindsey Street, and Smith Street. (Please refer to the Parker Street Waste Site Map in Attachment 1)

An additional extent of contamination investigation will be conducted on properties south of Area 1 and on properties south and east of Area 11 to further delineate the Site boundaries. This investigation will commence in September 2010. If the investigation identifies site conditions that warrant a removal action, additional properties may be added to this Site and will increase the scope of this proposed response action.

The following areas, as shown on Parker Street Waste Site Map in Attachment 1, are not being addressed in this proposed removal:

Area 3 – Site conditions do not warrant a removal action.

Areas 5, 6, and 10 – City owned properties are currently being addressed by the City of New Bedford under the oversight of MassDEP.

Area 9 – The Hetland Memorial Ice Skating Rink is a state-owned property. MassDEP will be the lead regulatory agency for overseeing any cleanup work that may be warranted in this area.

4. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant

PCBs are hazardous substances as defined by Section 101(14) of CERCLA, 42 U.S.C. §9601(14). On the residential and commercial properties sampled during this PA/SI, PCBs were detected in levels as high as 8.6 parts per million ("ppm"). Therefore, a release into the environment of hazardous substances has already occurred. The concentrations of PCBs present at the Site exceed or have the potential to exceed default standards and cleanup levels considered protective of public health including: EPA's PCB Cleanup and Disposal Regulations, 40 CFR Section 761.61, (1 ppm for unrestricted use, and 10 to 100 ppm with a compliant cap); the preliminary remediation goals (1 ppm for residential areas, 10 to 25 ppm for industrial use) specified in EPA OSWER Directive 9355.4-01; and the Massachusetts Contingency Plan Method 1 default standard of 2 ppm for both residential and industrial soils.

Other hazardous substances as defined by Section 101(14) of CERCLA that have been released at residential and commercial properties on the Site are shown in the table below with the highest concentrations detected during the PA/SI compared to the remediation standards identified in the Massachusetts Contingency Plan.

Hazardous Substance	**Highest Concentrations Detected**	**MCP Soil Remediation Standards** S-1 (high frequency/intensity use area)
Arsenic	62.5 ppm	20 ppm
Barium	3690 ppm	1000 ppm
Cadmium	27.4 ppm	2 ppm
Chromium	954 ppm	30 ppm
Lead	34,200 ppm	300 ppm
PCBs	8.6 ppm	2 ppm
Benzo(a)anthracene	830 ppm	7 ppm
Benzo(a)pyrene	700 ppm	2 ppm
Benzo(b)fluoranthene	1000 ppm	7 ppm
Benzo(k)fluoranthene	360 ppm	70 ppm
chrysene	930 ppm	70 ppm
Dibenzo(a,h)anthracene	110 ppm	0.7 ppm
indeno(1,2,3-cd)pyrene	390 ppm	7 ppm
phenanthrene	1800 ppm	500 ppm
Pyrene	1800 ppm	1000 ppm

5. NPL status

The site is not currently on the National Priorities List, and has not received a Hazardous Ranking System rating.

B. Other Actions to Date

1. Previous actions

EPA's TSCA program has provided regulatory oversight of PCB assessment and cleanup activities related to the construction of the Keith Middle School, remediation of the interior of the New Bedford High School, remediation of New Bedford High School Campus, remediation of the wetland located behind Keith Middle School, and demolition of 3 former residential properties.

EPA Region 1 issued a Consent Agreement and Final Order (CAFO) on May 21, 2004, resolving alleged TSCA PCB violations by the City of New Bedford at McCoy Field, which is part of the Parker Street Waste Site. The CAFO assessed an administrative penalty of $27,500 under Section 16 of TSCA for improper disposal of PCBs. The CAFO alleged that the City had removed materials containing PCBs from the "burn dump" (historically part of the Parker Street Waste Site) and had stockpiled them at McCoy Field in violation of PCB disposal regulations. In the CAFO the City agreed to assess and clean up the McCoy Field property, site of the future Keith Middle School, in accordance with an EPA-approved work plan and consistent with the PCB regulations under TSCA.

An Amended CAFO was issued on October 25, 2004, expanding the geographic areas on the McCoy Field property to be addressed in accordance with the PCB regulations under TSCA. The Amended CAFO also included assessment and cleanup of properties in proximity to McCoy Field where PCBs might have migrated or been disposed of as a result of the stockpiling of materials from the "burn dump." The Amended CAFO also provided an extension of time for completion of the PCB cleanup work.

C. State and Local Authorities' Roles

1. State and local actions to date

Currently, the City of New Bedford is assessing and remediating city owned properties under the regulatory oversight of MassDEP and EPA's TSCA program. MassDEP conducted the soil boring activities at the Hetland Memorial Ice Skating Rink as part of the overall assessment of the extent of the Site boundaries. In addition, MassDEP has provided technical assistance to EPA during the PA/SI, which included field presence and sampling oversight.

During the development of the Sampling and Analysis Plan (SAP) for this Site, a technical work group was created to develop a comprehensive plan to achieve assessment objectives of delineating site boundaries and filling in data gaps. The technical workgroup consisted of members/stakeholders from community advocacy groups, community technical consultants, the City of New Bedford, MassDEP, and EPA.

2. Potential for continued State/local response

The MassDEP will continue to work with the City of New Bedford to address issues related to city owned properties. On residential properties where an imminent hazard condition exists, MassDEP will implement interim response measures to address the contact threat to allow EPA time to implement the removal strategy provided herein. MassDEP will also continue to provide technical assistance to EPA during the removal action.

Once EPA has completed this proposed removal action, MassDEP will continue to be the lead agency for any long-term regulatory oversight of this Site, including the residential and commercial properties sampled by EPA.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

As described below, the conditions at various properties located within the Parker Street Waste Site meet the general criteria for a removal action, as set forth in 40 C.F.R. §300.415(b)(1), in that "there is a threat to public health or welfare of the United States or the environment", and in consideration of the factors set forth in 40 C.F.R. §300.415(b)(2) as described below.

Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants; [§300.415(b)(2)(i)];

According to the 2000 Census, the approximate area population is respectively 30,119; 7,074; and 894 people within a 1 mile, 0.5 mile, and 0.25 radius of the Site. The Site is predominately used for residential, academic, and recreational purposes, which include public housing, public schools, private multi-housing units, single family homes, and recreational ball fields. The hazardous substances, including PCBs, PAHs, and metals in the soils pose an immediate direct contact threat and/or potential exposure.

High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate [§300.415(b)(2)(iv)];

Elevated levels of hazardous substances, including PCBs, PAHs, and heavy metals, in soils largely at or near the surface have been detected

Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released [§300.415(b)(2)(v)]; and

Under adverse weather conditions, exposed contaminated soil could potentially migrate off-site via erosion and surface water runoff.

The availability of other appropriate Federal or State response mechanisms to respond to the release [§300.415(b)(2)(vii)].

In a letter dated August 19, 2010, MassDEP has requested EPA's assistance on addressing properties at this Site that are determined to have elevated levels of contamination that trigger either an Imminent Hazard or Significant Risk Condition.

POLYCHLORINATED BIPHENYLS (PCBs)- Please see the Agency for Toxic Substances and Disease Registry (ATSDR), U.S. Department of Health and Human Services, Public Health Service, *ToxFAQ Fact Sheet for Polychlorinated Biphenyls, February 2001* in Attachment II.

ARSENIC – Please see the Agency for Toxic Substances and Disease Registry (ATSDR), U.S. Department of Health and Human Services, Public Health Service, *ToxFAQ Fact Sheet for Arsenic, August 2007* in Attachment II.

BARIUM – Please see the Agency for Toxic Substances and Disease Registry (ATSDR), U.S. Department of Health and Human Services, Public Health Service, *ToxFAQ Fact Sheet for Barium, August 2007* in Attachment II.

CADMIUM – Please see the Agency for Toxic Substances and Disease Registry (ATSDR), U.S. Department of Health and Human Services, Public Health Service, *ToxFAQ Fact Sheet for Cadmium, September 2008* in Attachment II.

CHROMIUM – Please see the Agency for Toxic Substances and Disease Registry (ATSDR), U.S. Department of Health and Human Services, Public Health Service, *ToxFAQ Fact Sheet for Chromium, September 2008* in Attachment II.

LEAD – Please see the Agency for Toxic Substances and Disease Registry (ATSDR), U.S. Department of Health and Human Services, Public Health Service, *ToxFAQ Fact Sheet for Lead, August 2007* in Attachment II.

POLYCYCLIC AROMATIC HYDROCARBONS (PAHs) – Please see the Agency for Toxic Substances and Disease Registry (ATSDR), U.S. Department of Health and Human Services, Public Health Service, *ToxFAQ Fact Sheet for Polycyclic Aromatic Hydrocarbons (PAHs), September 1996* in Attachment II.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.[1]

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[1] In accordance with OSWER Directive 9360.0-34, an endangerment determination is made based on "appropriate Superfund policy or guidance, or on collaboration with a trained risk assessor, which is outlined and discussed in Section III above. Appropriate sources include, but are not limited to, EPA relevant action level or clean-up standards, Agency for Toxic Substances and Disease Registry documents or personnel, or staff toxicologists." EPA relied on the Massachusetts Contingency Plan's (MCP) cumulative risk approach which compares site-

V. EXEMPTION FROM STATUTORY LIMITS

CERCLA § 104(c) states that removal actions can exceed the 12-month and $2 million statutory limits if conditions meet either the "emergency exemption" criteria or the "consistency exemption criteria. The consistency exemption requires that the proposed removal action be appropriate and consistent with the remedial action to be taken. As described below, conditions at the Site meet the criteria for the emergency exemption.

A. Emergency Exemption

Under CERCLA § 104(c)(1)(A), removal actions may exceed the 12-month and $2 million statutory limits if:

1. There is an immediate risk to public health or welfare or the environment;
2. Continued response actions are immediately required to prevent, limit, or mitigate an emergency; and
3. Such assistance will not otherwise be provided on a timely basis.

1. There is an immediate risk to public health or welfare or the environment:

Unrestricted access to elevated level of PCBs, heavy metals, and PAHs exists largely in soils at or near the surface. Furthermore, an estimated 23 additional residential properties are also scheduled to be sampled to determine whether there is an imminent and substantial endangerment present through a contact threat with contaminated surface soils. Site residents include families with young children who play in the yard.

MassDEP and its Site Assessment Remediation Support Services (SARSS) contractor, MACTEC, performed an evaluation of the analytical data for the properties sampled during this PA/SI to determine whether response action is required under the Commonwealth of Massachusetts Waste Site Cleanup requirements contained in 310 Code of Massachusetts Regulations (CMR) 40.0000, known as the MCP. Currently, 25 of the 47 properties tested to date have been evaluated and 20 properties have been determined to contain either an Imminent Hazard and/or Significant Risk condition, as defined in the MCP. Evaluations of the other remaining properties are on-going.

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specific information to a Cumulative Cancer Risk Limit (*See* 310 Code of Massachusetts Regulations (CMR) 40.0000). In addition, MassDEP has, and is continuing to, evaluate the data collected during this PA/SI to determine whether Imminent Hazard and/or Significant Risk conditions, as defined in the MCP, are present at this Site.

Failure to approve the 12-month and $2 million exemption request for this removal action will result in the continued exposure of the public and the environment to these hazardous materials.

2. Continued response actions are immediately required to prevent, limit, or mitigate an emergency:

With the contamination affecting such a large area and several properties impacted, continued response actions, including fully characterizing the extent of Site related contamination, soil removal, and property restoration, are required to prevent, limit, or mitigate this substantial contact threat posed to the public. In order to complete these actions, an exemption from the 12-month and $2 million ceiling is required.

3. Assistance will not otherwise be provided on a timely basis:

The State of Massachusetts currently does not have the resources to abate the threat at this Site due to the large area of contamination. In a letter dated August 19, 2010, MassDEP has requested EPA's assistance on addressing properties at this Site that are determined to have elevated levels of contamination that trigger either an Imminent Hazard or Significant Risk Condition to surface soils under State criteria. In addition, referral of this Site to the remedial program is not practicable, despite the projected expense of the removal, due to the time required for the remedial process.

VI. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

The actions required to mitigate the threats outlined herein, are given below. At this time, EPA has initiated a search for any potentially responsible parties (PRPs). The proposed actions will protect public health, welfare, and the environment by removing the hazardous substances from accessible areas of the Site.

1) Conduct face-to-face meetings with property owners and tenants to discuss the scope of this proposed removal action.

2) Conduct site walk with the Emergency Rapid Response Services (ERRS) contractor.

3) Establish a command post and staging area, and connect necessary utilities.

4) Document existing property conditions for subsequent restoration.

5) Document with each property owner the extent of removal and restoration activities to be accomplished.

6) Remove, to the extent practicable, interference for excavation such as shrubbery, trees, outbuildings, playground equipment, or other items as required.

7) Implement erosion control measures as determined necessary by the EPA OSC.

8) Conduct air monitoring and implement dust control measures as appropriate.

9) Excavate PCBs, PAHs, and/or metals-contaminated surface soils. Remove and dispose of contaminated surface soil determined necessary by EPA. Performance standards for this removal action are based upon cleanup standards established pursuant to the MCP. The extent of the removal action will achieve cleanup standards that will eliminate Imminent Hazard conditions and Significant Risk conditions mainly within the 0-3 ft depth, as defined in the MCP.

10) Conduct extent of contamination sampling to determine the extent of landfill material to be removed; and conduct confirmation sampling as determined necessary by the EPA OSC.

11) Cleanup-generated waste streams will be packaged, documented and shipped off-site for disposal at EPA/MassDEP-approved facilities. Wastes will be staged in a secure area on-site while awaiting shipment to CERCLA compliant off-site disposal facilities to the extent practicable. Live-loading contaminated soils from the properties into dump trucks for disposal may be necessary given the lack of staging areas. Depending on anticipated storage duration prior to shipment for ultimate disposal, the OSC will determine whether waste will be staged on-site or shipped to a properly permitted temporary storage facility. Waste staging options will be evaluated based on cost and safety considerations.

12) Installation of a visual marker to delineate contaminated soils (if any) which may remain at depth (beyond 3 feet below surface grade) or which cannot otherwise be excavated.

13) Repair response related damages, including backfilling with clean fill material, grading, and re-establishing vegetation in areas affected by response related activities.

14) Demobilize all personnel and equipment from the Site.

15) Referring the Site to MassDEP for any long-term remedial measures (including institutional controls and long-term operation and maintenance of any cap that is constructed) that may be required to address remaining Site risks.

2. Community relations

Upon approval of the Action Memorandum, the OSC will coordinate with the EPA's Office of Public Affairs Community Involvement staff to disseminate information regarding the project to the City and the impacted residents.

3. Contribution to remedial performance

The cleanup proposed in this Action Memorandum is designed to mitigate the threats to human health and the environment posed by the Site. The cleanup objectives have been established using state action levels and risk evaluations. MassDEP believes that the actions taken at the Site would be consistent with and will not impede any future responses. Also, MassDEP will be responsible for any long-term regulatory oversight for this Site.

4. Description of alternative technologies

The use of alternative technologies with regard to disposal options will be further examined as the site work progresses. On-site field screening and analytical techniques may be utilized during the removal action.

5. Applicable or relevant and appropriate requirements (ARARs)

Pursuant to 40 C.F.R. 300.415(j), removal actions shall, to the extent practicable considering the exigencies of the situation, attain ARARs. Current ARARs identified, but not limited to, are listed below.

Federal ARARs:

40 C.F.R. Section 122.26(c)(ii)(C) and 122.44(k) Clean Water Act NPDES Regulations (Stormwater Control and Management)

40 C.F.R. Parts 260-262 and 264 Resource Conservation and Recovery Act, Subtitle C- Hazardous Waste Identification and Listing Regulations; Generator and Handler Requirements, Closure and Post-Closure - Massachusetts has been delegated the authority to administer these RCRA standards through its state hazardous waste management regulations. State regulations that have adopted these federal standards are listed below.

40 CFR Section 761.61 : TSCA requirements for cleanup and disposal of PCBs

40 C.F.R. Section 761.79 TSCA Decontamination of Equipment Used

40 C.F.R. Part 61 Clean Air Act – Standards for controlling dust

State ARARs:

310 CMR 40.0900 Procedures and Standards for the Characterization of the Risk of Harm to Health, Safety, Public Welfare and the Environment

310 CMR 30.100 Hazardous Waste Rules for Identification and Listing of Hazardous Wastes

310 CMR 30.300 Hazardous Waste Management Rules - Requirements for Generators

310 CMR 30.500 Hazardous Waste Management Rules - General standards for hazardous waste facilities

310 CMR 30.680 Hazardous Waste Rules - Containers

310 CMR 30.690 Hazardous Waste Rules - Management, Storage, and Treatment in Tanks

The OSC will coordinate with State officials to identify additional State ARARs, if any. In accordance with the National Contingency Plan and EPA Guidance Documents, the OSC will determine the applicability and practicability of complying with each ARAR which is identified in a timely manner.

6. Project schedule

Pending funding availability, the removal action is expected to commence in October 2010.

B. Estimated Costs

COST CATEGORY		**CEILING**
REGIONAL REMOVAL ALLOWANCE COSTS:		
ERRS Contractor		$4,000,000.00
Interagency Agreement		$ 0.00
OTHER EXTRAMURAL COSTS NOT FUNDED FROM THE REGIONAL ALLOWANCE:		
START Contractor		$750,000.00
Extramural Subtotal		$4,750,000.00
Extramural Contingency	20%	$950,000.00
TOTAL, REMOVAL ACTION CEILING		**$5,700,000.00**

VII. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

A delayed removal action or the absence of a removal action described herein will cause conditions at the Site to remain unaddressed, and threats associated with the presence of hazardous substances will continue to pose a threat to human health and the environment.

VIII. OUTSTANDING POLICY ISSUES

There are no precedent-setting policy issues associated with this Site.

IX. ENFORCEMENT ... For Internal Distribution Only

See attached Enforcement Strategy.

The total EPA costs for this removal action based on full-time accounting practices that will be eligible for cost recovery are estimated to be $5,700,000 (extramural costs) + $750,000 (EPA intramural costs) = $6,450,000 X 1.4541 (regional indirect rate) = **$9,378,945** [2].

X. RECOMMENDATION

This decision document represents the selected removal action for the Parker Street Waste Site in New Bedford, Massachusetts, developed in accordance with CERCLA, as amended, and is not inconsistent with the National Contingency Plan. The basis for this decision will be documented in the administrative record to be established for the Site.

Conditions at the Site meet the NCP Section 300.415 (b)(2) criteria for a removal action due to the following:

Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants [§300.415(b)(2)(i)];

High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate [§300.415(b)(2)(iv)];

Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released [§300.415(b)(2)(v)]; and

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[2] Direct Costs include direct extramural costs $5,700,000 and direct intramural costs $750,000. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site specific costs 45.41% x $6,450,000, consistent with the full accounting methodology effective October 2, 2000. These estimates do not include pre-judgement interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual total costs from this estimate will affect the United States' right to cost recovery.

The availability of other appropriate Federal or State response mechanisms to respond to the release [§300.415(b)(2)(vii)].

Furthermore, site conditions meet the criteria for the CERCLA Section 104(c) emergency exemption from the 12-month and $2 million limitations on removal actions. The removal action proposed in this Action Memorandum will abate, prevent, minimize, stabilize, mitigate and/or eliminate the release or threat of release of hazardous substances at the Parker Street Waste Site. I recommend your approval of the proposed removal action and the exemption from the 12-month and $2,000,000 limitations. The total removal action project ceiling if approved will be $5,700,000.

APPROVAL: James T Owens III DATE: August 26, 2010

DISAPPROVAL:____________________ DATE:__________

Attachment 1

Parker Street Waste Site Map

Legend

- Selected Wetlands
- Parcels
- Phase I Completed
- Sample Area

Extent of Fill

- Boundary Requiring Further Evaluation
- Confirmed/Inferred Fill Boundary

Parker Street Waste Site

New Bedford, MA

This map was created by the EPA Region 1 GIS Center on July 2, 2010. Map Tracker ID=7026.
Data Sources: Parcels and Wetlands from MassGIS, Extent of Fill from TRC, Roads from GDT, Aerial Photo from DigitalGlobe dated 4/1/2007.

Attachment II

Agency for Toxic Substances and Disease Registry (ATSDR), U.S. Department of Health and Human Services, Public Health Service, *ToxFAQ Fact Sheets*

ATSDR
AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

ARSENIC
CAS # 7440-38-2

Division of Toxicology and Environmental Medicine ToxFAQs™ August 2007

This fact sheet answers the most frequently asked health questions (FAQs) about arsenic. For more information, call the ATSDR Information Center at 1-800-232-4636. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It is important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Exposure to higher than average levels of arsenic occur mostly in the workplace, near hazardous waste sites, or in areas with high natural levels. At high levels, inorganic arsenic can cause death. Exposure to lower levels for a long time can cause a discoloration of the skin and the appearance of small corns or warts. Arsenic has been found in at least 1,149 of the 1,684 National Priority List sites identified by the Environmental Protection Agency (EPA).

What is arsenic?

Arsenic is a naturally occurring element widely distributed in the earth's crust. In the environment, arsenic is combined with oxygen, chlorine, and sulfur to form inorganic arsenic compounds. Arsenic in animals and plants combines with carbon and hydrogen to form organic arsenic compounds.

Inorganic arsenic compounds are mainly used to preserve wood. Copper chromated arsenate (CCA) is used to make "pressure-treated" lumber. CCA is no longer used in the U.S. for residential uses; it is still used in industrial applications. Organic arsenic compounds are used as pesticides, primarily on cotton fields and orchards.

What happens to arsenic when it enters the environment?

- Arsenic occurs naturally in soil and minerals and may enter the air, water, and land from wind-blown dust and may get into water from runoff and leaching.
- Arsenic cannot be destroyed in the environment. It can only change its form.
- Rain and snow remove arsenic dust particles from the air.
- Many common arsenic compounds can dissolve in water. Most of the arsenic in water will ultimately end up in soil or sediment.
- Fish and shellfish can accumulate arsenic; most of this arsenic is in an organic form called arsenobetaine that is much less harmful.

How might I be exposed to arsenic?

- Ingesting small amounts present in your food and water or breathing air containing arsenic.
- Breathing sawdust or burning smoke from wood treated with arsenic.
- Living in areas with unusually high natural levels of arsenic in rock.
- Working in a job that involves arsenic production or use, such as copper or lead smelting, wood treating, or pesticide application.

How can arsenic affect my health?

Breathing high levels of inorganic arsenic can give you a sore throat or irritated lungs.

Ingesting very high levels of arsenic can result in death. Exposure to lower levels can cause nausea and vomiting, decreased production of red and white blood cells, abnormal heart rhythm, damage to blood vessels, and a sensation of "pins and needles" in hands and feet.

Ingesting or breathing low levels of inorganic arsenic for a long time can cause a darkening of the skin and the appearance of small "corns" or "warts" on the palms, soles, and torso.

Skin contact with inorganic arsenic may cause redness and swelling.

Almost nothing is known regarding health effects of organic arsenic compounds in humans. Studies in animals show that some simple organic arsenic compounds are less toxic than inorganic forms. Ingestion of methyl and dimethyl compounds can cause diarrhea and damage to the kidneys

How likely is arsenic to cause cancer?

Several studies have shown that ingestion of inorganic arsenic can increase the risk of skin cancer and cancer in the liver, bladder, and lungs. Inhalation of inorganic arsenic can cause increased risk of lung cancer. The Department of Health and Human Services (DHHS) and the EPA have determined that inorganic arsenic is a known human carcinogen. The International Agency for Research on Cancer (IARC) has determined that inorganic arsenic is carcinogenic to humans.

How can arsenic affect children?

There is some evidence that long-term exposure to arsenic in children may result in lower IQ scores. There is also some evidence that exposure to arsenic in the womb and early childhood may increase mortality in young adults.

There is some evidence that inhaled or ingested arsenic can injure pregnant women or their unborn babies, although the studies are not definitive. Studies in animals show that large doses of arsenic that cause illness in pregnant females, can also cause low birth weight, fetal malformations, and even fetal death. Arsenic can cross the placenta and has been found in fetal tissues. Arsenic is found at low levels in breast milk.

How can families reduce the risks of exposure to arsenic?

- If you use arsenic-treated wood in home projects, you should wear dust masks, gloves, and protective clothing to decrease exposure to sawdust.
- If you live in an area with high levels of arsenic in water or soil, you should use cleaner sources of water and limit contact with soil.
- If you work in a job that may expose you to arsenic, be aware that you may carry arsenic home on your clothing, skin, hair, or tools. Be sure to shower and change clothes before going home.

Is there a medical test to determine whether I've been exposed to arsenic?

There are tests available to measure arsenic in your blood, urine, hair, and fingernails. The urine test is the most reliable test for arsenic exposure within the last few days. Tests on hair and fingernails can measure exposure to high levels of arsenic over the past 6-12 months. These tests can determine if you have been exposed to above-average levels of arsenic. They cannot predict whether the arsenic levels in your body will affect your health.

Has the federal government made recommendations to protect human health?

The EPA has set limits on the amount of arsenic that industrial sources can release to the environment and has restricted or cancelled many of the uses of arsenic in pesticides. EPA has set a limit of 0.01 parts per million (ppm) for arsenic in drinking water.

The Occupational Safety and Health Administration (OSHA) has set a permissible exposure limit (PEL) of 10 micrograms of arsenic per cubic meter of workplace air (10 $\mu g/m^3$) for 8 hour shifts and 40 hour work weeks.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 2007. Toxicological Profile for Arsenic (Update). Atlanta, GA: U.S. Department of Public Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology and Environmental Medicine, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-800-232-4636, FAX: 770-488-4178. ToxFAQs Internet address via WWW is http://www.atsdr.cdc.gov/toxfaq.html. ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

ATSDR

AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

BARIUM AND COMPOUNDS

CAS # 7440-39-3

Division of Toxicology and Environmental Medicine ToxFAQs™ August 2007

This fact sheet answers the most frequently asked health questions (FAQs) about barium and barium compounds. For more information, call the ATSDR Information Center at 1-800-232-4636. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It is important you understand this information because these substances may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Exposure to barium occurs mostly in the workplace or from drinking contaminated water. Ingesting drinking water containing levels of barium above the EPA drinking water guidelines for relatively short periods of time can cause gastrointestinal disturbances and muscle weakness. Ingesting high levels for a long time can damage the kidneys. Barium and barium compounds have been found in at least 798 of the 1,684 National Priority List sites identified by the Environmental Protection Agency (EPA).

What is barium?

Barium is a silvery-white metal which exists in nature only in ores containing mixtures of elements. It combines with other chemicals such as sulfur or carbon and oxygen to form barium compounds.

Barium compounds are used by the oil and gas industries to make drilling muds. Drilling muds make it easier to drill through rock by keeping the drill bit lubricated. They are also used to make paint, bricks, ceramics, glass, and rubber.

Barium sulfate is sometimes used by doctors to perform medical tests and to take x-rays of the gastrointestinal tract.

What happens to barium when it enters the environment?

- Barium gets into the air during the mining, refining, and production of barium compounds, and from the burning of coal and oil.
- The length of time that barium will last in air, land, water, or sediments depends on the form of barium released.
- Barium compounds, such as barium sulfate and barium carbonate, which do not dissolve well in water, can last a long time in the environment.
- Barium compounds, such as barium chloride, barium nitrate, or barium hydroxide, that dissolve easily in water usually do not last in these forms for a long time in the environment. The barium in these compounds that is dissolved in water quickly combines with sulfate or carbonate that are naturally found in water and become the longer lasting forms (barium sulfate and barium carbonate).
- Fish and aquatic organisms can accumulate barium.

How might I be exposed to barium?

- Ingesting small amounts present in your food and water or breathing air containing very low levels of barium.
- Living in areas with unusually high natural levels of barium in the drinking water.
- Working in a job that involves barium production or use.
- Living or working near waste sites where barium has been disposed of.

How can barium affect my health?

The health effects of the different barium compounds depend on how well the compound dissolves in water or in the stomach contents. Barium compounds that do not dissolve well, such as barium sulfate, are not generally harmful.

Barium has been found to potentially cause gastrointestinal disturbances and muscular weakness when people are exposed to it at levels above the EPA drinking water standards for relatively short periods of time. Some people who eat or drink amounts of barium above background levels found in food and water for a short period may experience vomiting, abdominal cramps, diarrhea, difficulties in breathing, increased or decreased blood pressure, numbness around the face, and muscle weakness. Eating or drinking very large amounts of barium compounds that easily dissolve can cause changes in heart rhythm or paralysis and possibly death. Animals that drank barium over long periods had damage to the kidneys, decreases in body weight, and some died.

How likely is barium to cause cancer?

The Department of Health and Human Services (DHHS) and the International Agency for Research on Cancer (IARC) have not classified barium as to its carcinogenicity. The EPA has determined that barium is not likely to be carcinogenic to humans following ingestion and that there is insufficient information to determine whether it will be carcinogenic to humans following inhalation exposure.

How can barium affect children?

We do not know whether children will be more or less sensitive than adults to barium toxicity. A study in rats that swallowed barium found a decrease in newborn body weight; we do not know if a similar effect would be seen in humans.

How can families reduce the risks of exposure to barium?

The greatest potential source of barium exposure is through food and drinking water. However, the amount of barium in foods and drinking water are typically too low to be of concern.

Is there a medical test to determine whether I've been exposed to barium?

There is no routine medical test to determine whether you have been exposed to barium. Doctors can measure barium in body tissues and fluids, such as bones, blood, urine, and feces, using very complex instruments. These tests cannot be used to predict the extent of the exposure or potential health effects.

The geometric mean barium level measured in the U.S. general population aged 6 and older is reported by the Centers for Disease Control and Prevention (CDC) as 1.44 µg/g creatinine (measured in urine).

Has the federal government made recommendations to protect human health?

The EPA has set a limit of 2.0 milligrams of barium per liter of drinking water (2.0 mg/L), which is the same as 2 ppm.

The Occupational Safety and Health Administration (OSHA) has set Permissible Exposure Limits (PELs) of 0.5 milligrams of soluble barium compounds per cubic meter of workplace air (0.5 mg/m^3) for 8 hour shifts and 40 hour work weeks. The OSHA limits for barium sulfate dust are 15 mg/m^3 of total dust and 5 mg/m^3 for respirable fraction.

The National Institute for Occupational Safety and Health (NIOSH) has set Recommended Exposure Limits (RELs) of 0.5 mg/m^3 for soluble barium compounds. The NIOSH has set RELs of 10 mg/m^3 (total dust) for barium sulfate and 5 mg/m^3 (respirable fraction).

References

Agency for Toxic Substances and Disease Registry (ATSDR). 2007. Toxicological Profile for Barium and Compounds (Update). Atlanta, GA: U.S. Department of Public Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology and Environmental Medicine, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-800-232-4636, FAX: 770-488-4178. ToxFAQs Internet address via WWW is http://www.atsdr.cdc.gov/toxfaq.html. ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

ATSDR
AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

CADMIUM
CAS # 7440-43-9

Division of Toxicology and Environmental Medicine ToxFAQs™ September 2008

This fact sheet answers the most frequently asked health questions (FAQs) about cadmium. For more information, call the ATSDR Information Center at 1-800-232-4636. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It is important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Exposure to cadmium happens mostly in the workplace where cadmium products are made. The general population is exposed from breathing cigarette smoke or eating cadmium contaminated foods. Cadmium damages the kidneys, lungs, and bones. Cadmium has been found in at least 1,014 of the 1,669 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What is cadmium?

Cadmium is a natural element in the earth's crust. It is usually found as a mineral combined with other elements such as oxygen (cadmium oxide), chlorine (cadmium chloride), or sulfur (cadmium sulfate, cadmium sulfide).

All soils and rocks, including coal and mineral fertilizers, contain some cadmium. Most cadmium used in the United States is extracted during the production of other metals like zinc, lead, and copper. Cadmium does not corrode easily and has many uses, including batteries, pigments, metal coatings, and plastics.

What happens to cadmium when it enters the environment?

- ❑ Cadmium enters soil, water, and air from mining, industry, and burning coal and household wastes.
- ❑ Cadmium does not break down in the environment, but can change forms.
- ❑ Cadmium particles in air can travel long distances before falling to the ground or water.
- ❑ Some forms of cadmium dissolve in water.
- ❑ Cadmium binds strongly to soil particles.
- ❑ Fish, plants, and animals take up cadmium from the environment.

How might I be exposed to cadmium?

- ❑ Eating foods containing cadmium; low levels are found in all foods (highest levels are found in shellfish, liver, and kidney meats).
- ❑ Smoking cigarettes or breathing cigarette smoke.
- ❑ Breathing contaminated workplace air.
- ❑ Drinking contaminated water.
- ❑ Living near industrial facilities which release cadmium into the air.

How can cadmium affect my health?

Breathing high levels of cadmium can severely damage the lungs. Eating food or drinking water with very high levels severely irritates the stomach, leading to vomiting and diarrhea.

Long-term exposure to lower levels of cadmium in air, food, or water leads to a buildup of cadmium in the kidneys and possible kidney disease. Other long-term effects are lung damage and fragile bones.

How likely is cadmium to cause cancer?

The Department of Health and Human Services (DHHS) has determined that cadmium and cadmium compounds are known human carcinogens.

How can cadmium affect children?

The health effects in children are expected to be similar to the effects seen in adults (kidney, lung, and bone damage depending on the route of exposure).

A few studies in animals indicate that younger animals absorb more cadmium than adults. Animal studies also indicate that the young are more susceptible than adults to a loss of bone and decreased bone strength from exposure to cadmium.

We don't know if cadmium causes birth defects in people. The babies of animals exposed to high levels of cadmium during pregnancy had changes in behavior and learning ability. There is also some information from animal studies that high enough exposures to cadmium before birth can reduce body weights and affect the skeleton in the developing young.

How can families reduce the risks of exposure to cadmium?

❑ In the home, store substances that contain cadmium safely, and keep nickel-cadmium batteries out of reach of young children.

❑ Cadmium is a component of tobacco smoke. Avoid smoking in enclosed spaces like inside the home or car in order to limit exposure to children and other family members.

❑ If you work with cadmium, use all safety precautions to avoid carrying cadmium-containing dust home from work on your clothing, skin, hair, or tools.

❑ A balanced diet can reduce the amount of cadmium taken into the body from food and drink.

Is there a medical test to determine whether I've been exposed to cadmium?

Cadmium can be measured in blood, urine, hair, or nails. Urinary cadmium has been shown to accurately reflect the amount of cadmium in the body.

The amount of cadmium in your blood shows your recent exposure to cadmium. The amount of cadmium in your urine shows both your recent and your past exposure.

Has the federal government made recommendations to protect human health?

The EPA has determined that exposure to cadmium in drinking water at concentrations of 0.04 ppm for up to 10 days is not expected to cause any adverse effects in a child.

The EPA has determined that lifetime exposure to 0.005 ppm cadmium is not expected to cause any adverse effects.

The FDA has determined that the cadmium concentration in bottled drinking water should not exceed 0.005 ppm.

The Occupational Health and Safety Administration (OSHA) has limited workers' exposure to an average of 5 $\mu g/m^3$ for an 8-hour workday, 40-hour workweek.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 2008. Toxicological Profile for Cadmium (Draft for Public Comment). Atlanta, GA: U.S. Department of Public Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology and Environmental Medicine, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-800-232-4636, FAX: 770-488-4178. ToxFAQs Internet address via WWW is http://www.atsdr.cdc.gov/toxfaq.html. ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

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CHROMIUM

CAS # 7440-47-3

Division of Toxicology and Environmental Medicine ToxFAQs™ September 2008

This fact sheet answers the most frequently asked health questions (FAQs) about chromium. For more information, call the ATSDR Information Center at 1-800-232-4636. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It is important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Exposure to chromium occurs from ingesting contaminated food or drinking water or breathing contaminated workplace air. Chromium(VI) at high levels can damage the nose and cause cancer. Ingesting high levels of chromium(VI) may result in anemia or damage to the stomach or intestines. Chromium(III) is an essential nutrient. Chromium has been found in at least 1,127 of the 1,669 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What is chromium?

Chromium is a naturally occurring element found in rocks, animals, plants, and soil. It can exist in several different forms. Depending on the form it takes, it can be a liquid, solid, or gas. The most common forms are chromium(0), chromium(III), and chromium(VI). No taste or odor is associated with chromium compounds.

The metal chromium, which is the chromium(0) form, is used for making steel. Chromium(VI) and chromium(III) are used for chrome plating, dyes and pigments, leather tanning, and wood preserving.

What happens to chromium when it enters the environment?

- Chromium can be found in air soil, and water after release from the manufacture, use, and disposal of chromium-based products, and during the manufacturing process.
- Chromium does not usually remain in the atmosphere, but is deposited into the soil and water .
- Chromium can easily change from one form to another in water and soil, depending on the conditions present.
- Fish do not accumulate much chromium in their bodies from water.

How might I be exposed to chromium?

- Eating food containing chromium(III).
- Breathing contaminated workplace air or skin contact during use in the workplace.
- Drinking contaminated well water .
- Living near uncontrolled hazardous waste sites containing chromium or industries that use chromium.

How can chromium affect my health?

Chromium(III) is an essential nutrient that helps the body use sugar, protein, and fat.

Breathing high levels of chromium(VI) can cause irritation to the lining of the nose, nose ulcers, runny nose, and breathing problems, such as asthma, cough, shortness of breath, or wheezing. The concentrations of chromium in air that can cause these effects may be different for different types of chromium compounds, with effects occurring at much lower concentrations for chromium(VI) compared to chromium(III).

The main health problems seen in animals following ingestion of chromium(VI) compounds are irritation and ulcers in the stomach and small intestine and anemia. Chromium(III) compounds are much less toxic and do not appear to cause these problems.

Sperm damage and damage to the male reproductive system have also been seen in laboratory animals exposed to chromium(VI).

Skin contact with certain chromium(VI) compounds can cause skin ulcers. Some people are extremely sensitive to chromium(VI) or chromium(III). Allergic reactions consisting of severe redness and swelling of the skin have been noted.

How likely is chromium to cause cancer?

The Department of Health and Human Services (DHHS), the International Agency for Reseach on Cancer (IARC), and the EPA have determined that chromium(VI) compounds are known human carcinogens. In workers, inhalation of chromium(VI) has been shown to cause lung cancer. Chromium(VI) also causes lung cancer in animals. An increase in stomach tumors was observed in humans and animals exposed to chromium(VI) in drinking water.

How can chromium affect children?

It is likely that health effects seen in children exposed to high amounts of chromium will be similar to the effects seen in adults.

We do not know if exposure to chromium will result in birth defects or other developmental effects in people. Some developmental effects have been observed in animals exposed to chromium(VI).

How can families reduce the risks of exposure to chromium?

- Children should avoid playing in soils near uncontrolled hazardous waste sites where chromium may have been discarded.
- Chromium is a component of tobacco smoke. Avoid smoking in enclosed spaces like inside the home or car in order to limit exposure to children and other family members.
- Although chromium(III) is an essential nutrient, you should avoid excessive use of dietary supplements containing chromium.

Is there a medical test to determine whether I've been exposed to chromium?

Since chromium(III) is an essential element and naturally occurs in food, there will always be some level of chromium in your body. Chromium can be measured in hair, urine, and blood.

Higher than normal levels of chromium in blood or urine may indicate that a person has been exposed to chromium. However, increases in blood and urine chromium levels cannot be used to predict the kind of health effects that might develop from that exposure.

Has the federal government made recommendations to protect human health?

The EPA has determined that exposure to chromium in drinking water at concentrations of 1 mg/L for up to 10 days is not expected to cause any adverse effects in a child.

The FDA has determined that the chromium concentration in bottled drinking water should not exceed 1 mg/L.

The Occupational Health and Safety Administration (OSHA) has limited workers' exposure to an average of 0.005 mg/m^3 chromium(VI), 0.5 mg/m^3 chromium(III), and 1.0 mg/m^3 chromium(0) for an 8-hour workday, 40-hour workweek.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 2008. Toxicological Profile for Chromium (Draft for Public Comment). Atlanta, GA: U.S. Department of Public Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology and Environmental Medicine, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-800-232-4636, FAX: 770-488-4178. ToxFAQs Internet address via WWW is http://www.atsdr.cdc.gov/toxfaq.html. ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

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LEAD

CAS # 7439-92-1

Division of Toxicology and Environmental Medicine ToxFAQs™ August 2007

This fact sheet answers the most frequently asked health questions (FAQs) about lead. For more information, call the ATSDR Information Center at 1-800-232-4636. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It is important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Exposure to lead can happen from breathing workplace air or dust, eating contaminated foods, or drinking contaminated water. Children can be exposed from eating lead-based paint chips or playing in contaminated soil. Lead can damage the nervous system, kidneys, and reproductive system. Lead has been found in at least 1,272 of the 1,684 National Priority List sites identified by the Environmental Protection Agency (EPA).

What is lead?

Lead is a naturally occurring bluish-gray metal found in small amounts in the earth's crust. Lead can be found in all parts of our environment. Much of it comes from human activities including burning fossil fuels, mining, and manufacturing.

Lead has many different uses. It is used in the production of batteries, ammunition, metal products (solder and pipes), and devices to shield X-rays. Because of health concerns, lead from paints and ceramic products, caulking, and pipe solder has been dramatically reduced in recent years. The use of lead as an additive to gasoline was banned in 1996 in the United States.

What happens to lead when it enters the environment?

- Lead itself does not break down, but lead compounds are changed by sunlight, air, and water.
- When lead is released to the air, it may travel long distances before settling to the ground.
- Once lead falls onto soil, it usually sticks to soil particles.
- Movement of lead from soil into groundwater will depend on the type of lead compound and the characteristics of the soil.

How might I be exposed to lead?

- Eating food or drinking water that contains lead. Water pipes in some older homes may contain lead solder. Lead can leach out into the water.
- Spending time in areas where lead-based paints have been used and are deteriorating. Deteriorating lead paint can contribute to lead dust.
- Working in a job where lead is used or engaging in certain hobbies in which lead is used, such as making stained glass.
- Using health-care products or folk remedies that contain lead.

How can lead affect my health?

The effects of lead are the same whether it enters the body through breathing or swallowing. Lead can affect almost every organ and system in your body. The main target for lead toxicity is the nervous system, both in adults and children. Long-term exposure of adults can result in decreased performance in some tests that measure functions of the nervous system. It may also cause weakness in fingers, wrists, or ankles. Lead exposure also causes small increases in blood pressure, particularly in middle-aged and older people and can cause anemia. Exposure to high lead levels can severely damage the brain and kidneys in adults or children and ultimately cause death. In pregnant women, high levels of exposure to lead may cause miscarriage. High-level exposure in men can damage the organs responsible for sperm production.

How likely is lead to cause cancer?

We have no conclusive proof that lead causes cancer in humans. Kidney tumors have developed in rats and mice that had been given large doses of some kind of lead compounds. The Department of Health and Human Services

(DHHS) has determined that lead and lead compounds are reasonably anticipated to be human carcinogens and the EPA has determined that lead is a probable human carcinogen. The International Agency for Research on Cancer (IARC) has determined that inorganic lead is probably carcinogenic to humans and that there is insufficient information to determine whether organic lead compounds will cause cancer in humans.

How can lead affect children?

Small children can be exposed by eating lead-based paint chips, chewing on objects painted with lead-based paint, or swallowing house dust or soil that contains lead.

Children are more vulnerable to lead poisoning than adults. A child who swallows large amounts of lead may develop blood anemia, severe stomachache, muscle weakness, and brain damage. If a child swallows smaller amounts of lead, much less severe effects on blood and brain function may occur. Even at much lower levels of exposure, lead can affect a child's mental and physical growth.

Exposure to lead is more dangerous for young and unborn children. Unborn children can be exposed to lead through their mothers. Harmful effects include premature births, smaller babies, decreased mental ability in the infant, learning difficulties, and reduced growth in young children. These effects are more common if the mother or baby was exposed to high levels of lead. Some of these effects may persist beyond childhood.

How can families reduce the risks of exposure to lead?

- ❑ Avoid exposure to sources of lead.
- ❑ Do not allow children to chew or mouth surfaces that may have been painted with lead-based paint.
- ❑ If you have a water lead problem, run or flush water that has been standing overnight before drinking or cooking with it.
- ❑ Some types of paints and pigments that are used as make-up or hair coloring contain lead. Keep these kinds of products away from children
- ❑ If your home contains lead-based paint or you live in an area contaminated with lead, wash children's hands and faces often to remove lead dusts and soil, and regularly clean the house of dust and tracked in soil.

Is there a medical test to determine whether I've been exposed to lead?

A blood test is available to measure the amount of lead in your blood and to estimate the amount of your recent exposure to lead. Blood tests are commonly used to screen children for lead poisoning. Lead in teeth or bones can be measured by X-ray techniques, but these methods are not widely available. Exposure to lead also can be evaluated by measuring erythrocyte protoporphyrin (EP) in blood samples. EP is a part of red blood cells known to increase when the amount of lead in the blood is high. However, the EP level is not sensitive enough to identify children with elevated blood lead levels below about 25 micrograms per deciliter (µg/dL). These tests usually require special analytical equipment that is not available in a doctor's office. However, your doctor can draw blood samples and send them to appropriate laboratories for analysis.

Has the federal government made recommendations to protect human health?

The Centers for Disease Control and Prevention (CDC) recommends that states test children at ages 1 and 2 years. Children should be tested at ages 3–6 years if they have never been tested for lead, if they receive services from public assistance programs for the poor such as Medicaid or the Supplemental Food Program for Women, Infants, and Children, if they live in a building or frequently visit a house built before 1950; if they visit a home (house or apartment) built before 1978 that has been recently remodeled; and/or if they have a brother, sister, or playmate who has had lead poisoning. CDC considers a blood lead level of 10 µg/dL to be a level of concern for children.

EPA limits lead in drinking water to 15 µg per liter.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 2007. Toxicological Profile for lead (Update). Atlanta, GA: U.S. Department of Public Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology and Environmental Medicine, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-800-232-4636, FAX: 770-488-4178. ToxFAQs Internet address via WWW is http://www.atsdr.cdc.gov/toxfaq.html. ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

ATSDR
AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

POLYCHLORINATED BIPHENYLS

Division of Toxicology ToxFAQs™ February 2001

This fact sheet answers the most frequently asked health questions (FAQs) about polychlorinated biphenyls. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It's important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Polychlorinated biphenyls (PCBs) are a mixture of individual chemicals which are no longer produced in the United States, but are still found in the environment. Health effects that have been associated with exposure to PCBs include acne-like skin conditions in adults and neurobehavioral and immunological changes in children. PCBs are known to cause cancer in animals. PCBs have been found in at least 500 of the 1,598 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What are polychlorinated biphenyls?

Polychlorinated biphenyls are mixtures of up to 209 individual chlorinated compounds (known as congeners). There are no known natural sources of PCBs. PCBs are either oily liquids or solids that are colorless to light yellow. Some PCBs can exist as a vapor in air. PCBs have no known smell or taste. Many commercial PCB mixtures are known in the U.S. by the trade name Aroclor.

PCBs have been used as coolants and lubricants in transformers, capacitors, and other electrical equipment because they don't burn easily and are good insulators. The manufacture of PCBs was stopped in the U.S. in 1977 because of evidence they build up in the environment and can cause harmful health effects. Products made before 1977 that may contain PCBs include old fluorescent lighting fixtures and electrical devices containing PCB capacitors, and old microscope and hydraulic oils.

What happens to PCBs when they enter the environment?

- PCBs entered the air, water, and soil during their manufacture, use, and disposal; from accidental spills and leaks during their transport; and from leaks or fires in products containing PCBs.
- PCBs can still be released to the environment from hazardous waste sites; illegal or improper disposal of industrial wastes and consumer products; leaks from old electrical transformers containing PCBs; and burning of some wastes in incinerators.
- PCBs do not readily break down in the environment and thus may remain there for very long periods of time. PCBs can travel long distances in the air and be deposited in areas far away from where they were released. In water, a small amount of PCBs may remain dissolved, but most stick to organic particles and bottom sediments. PCBs also bind strongly to soil.
- PCBs are taken up by small organisms and fish in water. They are also taken up by other animals that eat these aquatic animals as food. PCBs accumulate in fish and marine mammals, reaching levels that may be many thousands of times higher than in water.

How might I be exposed to PCBs?

- Using old fluorescent lighting fixtures and electrical devices and appliances, such as television sets and refrigerators, that were made 30 or more years ago. These items may leak small amounts of PCBs into the air when they get hot during operation, and could be a source of skin exposure.
- Eating contaminated food. The main dietary sources of PCBs are fish (especially sportfish caught in contaminated lakes or rivers), meat, and dairy products.
- Breathing air near hazardous waste sites and drinking contaminated well water.
- In the workplace during repair and maintenance of PCB transformers; accidents, fires or spills involving transformers, fluorescent lights, and other old electrical devices; and disposal of PCB materials.

How can PCBs affect my health?

The most commonly observed health effects in people exposed to large amounts of PCBs are skin conditions such as acne and rashes. Studies in exposed workers have shown changes in blood and urine that may indicate liver damage. PCB exposures in the general population are not likely to result in skin and liver effects. Most of the studies of health effects of PCBs in the general population examined children of mothers who were exposed to PCBs.

Animals that ate food containing large amounts of PCBs for short periods of time had mild liver damage and some died. Animals that ate smaller amounts of PCBs in food over several weeks or months developed various kinds of health effects, including anemia; acne-like skin conditions; and liver, stomach, and thyroid gland injuries. Other effects of PCBs in animals include changes in the immune system, behavioral alterations, and impaired reproduction. PCBs are not known to cause birth defects.

How likely are PCBs to cause cancer?

Few studies of workers indicate that PCBs were associated with certain kinds of cancer in humans, such as cancer of the liver and biliary tract. Rats that ate food containing high levels of PCBs for two years developed liver cancer. The Department of Health and Human Services (DHHS) has concluded that PCBs may reasonably be anticipated to be carcinogens. The EPA and the International Agency for Research on Cancer (IARC) have determined that PCBs are probably carcinogenic to humans.

How can PCBs affect children?

Women who were exposed to relatively high levels of PCBs in the workplace or ate large amounts of fish contaminated with PCBs had babies that weighed slightly less than babies from women who did not have these exposures. Babies born to women who ate PCB-contaminated fish also showed abnormal responses in tests of infant behavior. Some of these behaviors, such as problems with motor skills and a decrease in short-term memory, lasted for several years. Other studies suggest that the immune system was affected in children born to and nursed by mothers exposed to increased levels of PCBs. There are no reports of structural birth defects caused by exposure to PCBs or of health effects of PCBs in older children. The most likely way infants will be exposed to PCBs is from breast milk. Transplacental transfers of PCBs were also reported In most cases, the benefits of breast-feeding outweigh any risks from exposure to PCBs in mother's milk.

How can families reduce the risk of exposure to PCBs?

❑ You and your children may be exposed to PCBs by eating fish or wildlife caught from contaminated locations. Certain states, Native American tribes, and U.S. territories have issued advisories to warn people about PCB-contaminated fish and fish-eating wildlife. You can reduce your family's exposure to PCBs by obeying these advisories.

❑ Children should be told not play with old appliances, electrical equipment, or transformers, since they may contain PCBs.

❑ Children should be discouraged from playing in the dirt near hazardous waste sites and in areas where there was a transformer fire. Children should also be discouraged from eating dirt and putting dirty hands, toys or other objects in their mouths, and should wash hands frequently.

❑ If you are exposed to PCBs in the workplace it is possible to carry them home on your clothes, body, or tools. If this is the case, you should shower and change clothing before leaving work, and your work clothes should be kept separate from other clothes and laundered separately.

Is there a medical test to show whether I've been exposed to PCBs?

Tests exist to measure levels of PCBs in your blood, body fat, and breast milk, but these are not routinely conducted. Most people normally have low levels of PCBs in their body because nearly everyone has been environmentally exposed to PCBs. The tests can show if your PCB levels are elevated, which would indicate past exposure to above-normal levels of PCBs, but cannot determine when or how long you were exposed or whether you will develop health effects.

Has the federal government made recommendations to protect human health?

The EPA has set a limit of 0.0005 milligrams of PCBs per liter of drinking water (0.0005 mg/L). Discharges, spills or accidental releases of 1 pound or more of PCBs into the environment must be reported to the EPA. The Food and Drug Administration (FDA) requires that infant foods, eggs, milk and other dairy products, fish and shellfish, poultry and red meat contain no more than 0.2-3 parts of PCBs per million parts (0.2-3 ppm) of food. Many states have established fish and wildlife consumption advisories for PCBs.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 2000. Toxicological profile for polychlorinated biphenyls (PCBs). Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-888-422-8737, FAX: 770-488-4178. ToxFAQs™ Internet address is http://www.atsdr.cdc.gov/toxfaq.html . ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

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AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

POLYCYCLIC AROMATIC HYDROCARBONS (PAHs)

Agency for Toxic Substances and Disease Registry ToxFAQs September 1996

This fact sheet answers the most frequently asked health questions (FAQs) about polycyclic aromatic hydrocarbons (PAHs). For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. This information is important because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

SUMMARY: Exposure to polycyclic aromatic hydrocarbons usually occurs by breathing air contaminated by wild fires or coal tar, or by eating foods that have been grilled. PAHs have been found in at least 600 of the 1,430 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What are polycyclic aromatic hydrocarbons?

(Pronounced pŏl′ĭ-sī′klĭk ăr′ə-măt′ĭk hī′drə-kar′bənz)

Polycyclic aromatic hydrocarbons (PAHs) are a group of over 100 different chemicals that are formed during the incomplete burning of coal, oil and gas, garbage, or other organic substances like tobacco or charbroiled meat. PAHs are usually found as a mixture containing two or more of these compounds, such as soot.

Some PAHs are manufactured. These pure PAHs usually exist as colorless, white, or pale yellow-green solids. PAHs are found in coal tar, crude oil, creosote, and roofing tar, but a few are used in medicines or to make dyes, plastics, and pesticides.

What happens to PAHs when they enter the environment?

- PAHs enter the air mostly as releases from volcanoes, forest fires, burning coal, and automobile exhaust.
- PAHs can occur in air attached to dust particles.
- Some PAH particles can readily evaporate into the air from soil or surface waters.
- PAHs can break down by reacting with sunlight and other chemicals in the air, over a period of days to weeks.
- PAHs enter water through discharges from industrial and wastewater treatment plants.
- Most PAHs do not dissolve easily in water. They stick to solid particles and settle to the bottoms of lakes or rivers.
- Microorganisms can break down PAHs in soil or water after a period of weeks to months.
- In soils, PAHs are most likely to stick tightly to particles; certain PAHs move through soil to contaminate underground water.
- PAH contents of plants and animals may be much higher than PAH contents of soil or water in which they live.

How might I be exposed to PAHs?

- Breathing air containing PAHs in the workplace of coking, coal-tar, and asphalt production plants; smokehouses; and municipal trash incineration facilities.
- Breathing air containing PAHs from cigarette smoke, wood smoke, vehicle exhausts, asphalt roads, or agricultural burn smoke.
- Coming in contact with air, water, or soil near hazardous waste sites.
- Eating grilled or charred meats; contaminated cereals, flour, bread, vegetables, fruits, meats; and processed or pickled foods.
- Drinking contaminated water or cow's milk.

- Nursing infants of mothers living near hazardous waste sites may be exposed to PAHs through their mother's milk.

How can PAHs affect my health?

Mice that were fed high levels of one PAH during pregnancy had difficulty reproducing and so did their offspring. These offspring also had higher rates of birth defects and lower body weights. It is not known whether these effects occur in people.

Animal studies have also shown that PAHs can cause harmful effects on the skin, body fluids, and ability to fight disease after both short- and long-term exposure. But these effects have not been seen in people.

How likely are PAHs to cause cancer?

The Department of Health and Human Services (DHHS) has determined that some PAHs may reasonably be expected to be carcinogens.

Some people who have breathed or touched mixtures of PAHs and other chemicals for long periods of time have developed cancer. Some PAHs have caused cancer in laboratory animals when they breathed air containing them (lung cancer), ingested them in food (stomach cancer), or had them applied to their skin (skin cancer).

Is there a medical test to show whether I've been exposed to PAHs?

In the body, PAHs are changed into chemicals that can attach to substances within the body. There are special tests that can detect PAHs attached to these substances in body tissues or blood. However, these tests cannot tell whether any health effects will occur or find out the extent or source of your exposure to the PAHs. The tests aren't usually available in your doctor's office because special equipment is needed to conduct them.

Has the federal government made recommendations to protect human health?

The Occupational Safety and Health Administration (OSHA) has set a limit of 0.2 milligrams of PAHs per cubic meter of air (0.2 mg/m^3). The OSHA Permissible Exposure Limit (PEL) for mineral oil mist that contains PAHs is 5 mg/m^3 averaged over an 8-hour exposure period.

The National Institute for Occupational Safety and Health (NIOSH) recommends that the average workplace air levels for coal tar products not exceed 0.1 mg/m^3 for a 10-hour workday, within a 40-hour workweek. There are other limits for workplace exposure for things that contain PAHs, such as coal, coal tar, and mineral oil.

Glossary

Carcinogen: A substance that can cause cancer.

Ingest: Take food or drink into your body.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 1995. Toxicological profile for polycyclic aromatic hydrocarbons. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-888-422-8737, FAX: 770-488-4178. ToxFAQs Internet address via WWW is http://www.atsdr.cdc.gov/toxfaq.html ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MA 02109-3912

DATE: September 15, 2011

SUBJECT: Region 1 Request for a Ceiling Increase at the Parker Street Waste Site, New Bedford, MA
HEADQUARTERS ADDENDUM

FROM: Dana Tulis, Deputy Director
Office Emergency Management

TO: Mathy Stanislaus, Assistant Administrator
Office of Solid Waste and Emergency Response

This Memorandum requests your approval of the Action Memorandum for Region 1's request for a ceiling increase for the on-going removal action at the Parker Street Waste Site located in New Bedford, Massachusetts. This Action Memorandum requests a proposed ceiling increase of $2.4 million, which will bring the total project ceiling to $8,100,000.

EPA initiated removal activities at the Parker Street Waste Site in October 2010, when commencing the removal of contaminated soil from residential properties. An additional site investigation was performed concurrently, which indicated the need to conduct removal activities at additional properties. As of mid-August 2011, EPA completed removals at 11 private residential properties. As of this date, removal activities yet to be completed include the following:

i. Complete restoration of properties already excavated; and

ii. Perform a removal action at additional properties.

According to EPA Delegation 14-2, only the AA of OSWER has the authority to approve emergency exemptions for sites that will cost more than $6 million.

I recommend that you approve the Region 1 request. Extensive removal work and the restoration of residential properties are presently on-going at the Site, and your approval will allow the completion of the removal action. The conditions at the Site meet the emergency exemption criteria under Section 104(c) of CERCLA. This action will be funded from Region 1's FY-10, Region 1 and HQ's FY-11, and possibly Region 1's FY-12 budget. Please indicate your decision by signing below.

APPROVE: ________________ **DATE:** 9/23/11
Assistant Administrator - Office of Solid Waste and Emergency Response

DISAPPROVAL: ________________ **DATE:** ________
Assistant Administrator - Office of Solid Waste and Emergency Response

Attachement

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MA 02109-3912

CONTAINS ENFORCEMENT-SENSITIVE INFORMATION

MEMORANDUM

DATE: September 15, 2011

SUBJ: Request to Continue a Removal Action, Change in Scope of Response, an Exemption from the Statutory 12-Month and $2 Million Limits for the Removal Action, and Ceiling Increase at the Parker Street Waste Site, New Bedford, Bristol County, Massachusetts – **Action Memorandum Addendum**

FROM: James T. Owens III, Director
Office of Site Remediation and Restoration FOR JTO

THRU: Dana Tulis, Deputy Director
Office of Emergency Management

TO: Mathy Stanislaus, Assistant Administrator
Office of Solid Waste and Emergency Response

ATTN: Gilbert Irizarry, Director
Program Operations and Coordination Division

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval for a Change in Scope of Response, an Exemption from the Statutory 12-Month and $2 Million Limits for the Removal Action, and a $2.4 Million Ceiling Increase in the project ceiling to continue a removal action at the Parker Street Waste Site (the Site), which is located in the currently estimated 114-acre area, intersected by Parker Street, in New Bedford, Bristol County, Massachusetts.

A 12-month and $2 million exemption was approved in the original Action Memo of August 26, 2010. Hazardous substances present in soils at the Site, if not addressed by implementing the response actions selected in this Action Memorandum and previously approved Action Memorandum dated August 26, 2010, will continue to pose a threat to human health and the environment. There are no nationally significant or precedent-setting issues associated with this Site, and there has been no use of the OSC's $200,000 warrant authority.

The total project ceiling, if approved, will increase from $5,700,000 to $8,100,000.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID#: MAN000105955
SITE ID#: 01GB
CATEGORY: Time-Critical

A. Site Description

1. Removal Site Evaluation

Please refer to the attached initial Action Memorandum dated August 26, 2010.

2. Physical Location

The Parker Street Waste Site is currently estimated to be a 114-acre area located in New Bedford, Bristol County, Massachusetts. Geographic coordinates of the Site are approximately 41° 38' 33" north latitude and 70° 56' 44" west longitude, as measured from the approximate center of the Site. The estimated extent of the Site is believed to be bounded to the north by Durfee Street, to the east by Liberty Street and the Oak Grove Cemetery, to the south by North Street, and to the west by Summit Street. Located within the bounds of the former waste site is the New Bedford High School campus, the Keith Middle School, the Hetland Memorial Skating Rink property, Walsh Field, the new Andre McCoy Field, residential properties, New Bedford Housing Authority properties, Carabiner's Indoor Climbing Facility, and two privately-owned apartment complexes. The estimated size of the Site has increased with the addition of the impacted properties identified during the preliminary assessment/site investigation (PA/SI).

3. Site Characteristics

According to the EPA Region 1 Environmental Justice Mapping Tool, the Site is located in an environmental justice area. All additional information in this section remains unchanged since the original Action Memo of August 26, 2010.

4. Release or threatened release into the environment of hazardous substances, or pollutants or contaminants

There has been no change since the original Action Memo of August 26, 2010.

5. NPL Status

No change since the original Action Memo of August 26, 2010. The Site is not currently on the National Priorities List, and it has not received a Hazardous Ranking System rating.

B. Other Actions to Date

1. Previous Actions

Please see the original Action Memo for actions performed before August 26, 2010. EPA mobilized to the Site on October 29, 2010 to initiate removal activities, which included preparing the Site, excavating contaminated soil, arranging for transportation and disposal (T&D) of the contaminated soil, and backfilling the excavated areas with clean fill material. During the winter of 2010, EPA conducted removal activities at 5 residential properties which were identified to have Imminent Hazard conditions by the Massachusetts Department of Environmental Protection (MassDEP). EPA demobilized from the Site at the end of January 2011 due to adverse weather conditions. EPA and its contractors remobilized to the Site at the end of April 2011 to initiate restoration activities at the 5 residential properties addressed during the winter of 2010 as well as to initiate response activities at additional properties with contaminated soils warranting a response action. As of mid-August 2011, excavation and disposal of contaminated soils from 11 private residential properties have been completed. Approximately 6,745 tons of contaminated soils have been transported off-site to EPA-approved disposal facilities for final disposition.

2. Current Actions

Currently, EPA is scheduled to conduct removal activities on 13 additional properties located within the Site. Besides these 13 properties, EPA expects that MassDEP will be recommending removal activities on additional properties at the Site when MassDEP completes its risk evaluations on all of the properties sampled during Phase I and Phase II of the preliminary assessment/site investigation (PA/SI).

EPA requests to increase the ceiling of the original Action Memo to cover response actions needed to address a large public housing complex owned by the New Bedford Housing Authority (NBHA), as well as the additional properties sampled during the Phase II PA/SI which may warrant response actions. The response action, pursuant to the National Contingency Plan (NCP), to be conducted at the NBHA's Westlawn property will primarily address surface soil contamination within the top foot of soil to remove any potential contact threat. Any potential exposure to subsurface contaminated soils are eliminated or controlled through institutional controls implemented by the NBHA. Some controls already implemented by the NBHA include the restrictions on planting or disturbance of soils by the tenants on the Westlawn property. In addition, MassDEP will continue to work with NBHA to identify other potential long term measures that may be needed under the Massachusetts Contingency Plan.

C. State and Local Authorities' Roles

EPA is working in consultation with MassDEP on the current removal action. In addition, MassDEP is reviewing sampling data collected by EPA and providing risk evaluations pursuant to the state's cleanup program for the properties sampled during the PA/SI. Please see the original Action Memo of August 26, 2010 for additional information.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

There have been no changes to the threats to public health or the environment since the original Action Memo of August 26, 2010.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.[1]

V. EXEMPTION FROM STATUTORY LIMITS

CERCLA § 104(c) states that removal actions can exceed the 12-month and $2 million statutory limits if conditions meet either the "emergency exemption" criteria or the "consistency exemption" criteria. The consistency exemption requires that the proposed removal action be appropriate and consistent with the remedial action to be taken. As described below, conditions at the Site meet the criteria for the emergency exemption.

A. Emergency Exemption

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[1] In accordance with OSWER Directive 9360.0-34, an endangerment determination is made based on "appropriate Superfund policy or guidance, or on collaboration with a trained risk assessor, which is outlined and discussed in Section III above. Appropriate sources include, but are not limited to, EPA relevant action level or clean-up standards, Agency for Toxic Substances and Disease Registry documents or personnel, or staff toxicologists." EPA relied on the Massachusetts Contingency Plan's (MCP) cumulative risk approach which compares site-specific information to a Cumulative Cancer Risk Limit (*See* 310 Code of Massachusetts Regulations (CMR) 40.0000). In addition, MassDEP has, and is continuing to, evaluate the data collected during this PA/SI to determine whether Imminent Hazard and/or Significant Risk conditions, as defined in the MCP, are present at this Site.

Under CERCLA § 104(c)(1)(A), removal actions may exceed the 12-month and $2 million statutory limits if:

1. There is an immediate risk to public health or welfare or the environment;
2. Continued response actions are immediately required to prevent, limit, or mitigate an emergency; and
3. Such assistance will not otherwise be provided on a timely basis.

1. There is an immediate risk to public health or welfare or the environment:

MassDEP and its Site Assessment Remediation Support Services (SARSS) contractor, MACTEC, are performing an evaluation of the analytical data for the properties sampled during the PA/SI (Phase I and Phase II) to determine whether response actions are required under the MCP.

Currently, MassDEP has identified approximately 24 residential properties sampled during Phase I of the PA/SI with soil contamination at or near the surface where an Imminent Hazard Condition exists or a Condition of No Significant Risk does not exist. During Phase II of the PA/SI, 24 properties were sampled and are also undergoing risk evaluations by MassDEP. Some of these properties may have soil contamination at or near the surface that may require response actions to abate the contact threat. Unrestricted access to elevated levels of PCBs, heavy metals, and PAHs exists largely in soils at or near the surface. Site residents include families with young children who utilize the yard for recreational activities.

In addition, on the NBHA's Westlawn property, there are elevated levels of lead at the surface. Despite the activity and use limitations implemented by the NBHA, limited hot-spot removal of contaminated soils at the surface is necessary to eliminate the contact threat.

Failure to approve the 12-month and $2 million exemption request for this removal action will result in the continued exposure of the public and the environment to these hazardous materials.

2. Continued response actions are immediately required to prevent, limit, or mitigate an emergency:

With the contamination affecting such a large area and several properties impacted, continued response actions, including fully characterizing the extent of Site related contamination, soil removal, and property restoration, are required to prevent, limit, or mitigate this substantial contact threat posed to the public. In order to complete these actions, an exemption from the 12-month and $2 million ceiling is required.

3. Assistance will not otherwise be provided on a timely basis:

The State of Massachusetts currently does not have the resources to abate the threat at this Site due to the large area of contamination. In a letter dated August 19, 2010, MassDEP has requested EPA's assistance on addressing properties at this Site that are determined to have elevated levels of contamination that trigger either an Imminent Hazard or Significant Risk Condition to surface soils under State criteria. In addition, referral of this Site to the remedial program is not practicable, despite the projected expense of the removal, due to the time required for the remedial process.

VI. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

The goals of this action remain the same as the goals described in the original Action Memo of August 26, 2010: to conduct sampling to define the full extent of the boundaries of the Site and to remove contaminated surface soils from properties at the Site. Specific to this amendment are these objectives:

- Conduct additional sampling, as necessary, to define the boundaries of the Site.
- For the NBHA's Westlawn property which has activity and use limitations imposed it by the NBHA, surface soils contaminated with hazardous substances will be addressed within the top foot of soil by response actions consistent with the NCP.
- Remove surface soils contaminated with elevated levels of hazardous substances from additional properties.
- Restore properties to pre-excavation conditions, to the extent practicable.
- Transport and dispose of all contaminated material.

The remaining proposed actions will not be changed from those actions described in the original Action Memo of August 26, 2010.

2. Community relations

Upon approval of the Action Memorandum, the OSC will continue to coordinate with the EPA's Office of Public Affairs Community Involvement staff to disseminate information regarding the project to the community and the impacted residents.

3. Contribution to remedial performance

The cleanup proposed in this Action Memorandum is designed to mitigate the threats to human health and the environment posed by the Site. The cleanup objectives have been established using state action levels and risk evaluations. For the NBHA's Westlawn property which has activity and use limitations imposed it by the NBHA, surface soils contaminated with hazardous substances will be addressed within the top foot of soil by response actions consistent with the NCP.

MassDEP believes that the actions taken at the Site would be consistent with and will not impede any future responses. Also, MassDEP will be responsible for any long-term regulatory oversight for this Site.

4. Description of alternative technologies

Please see the original Action Memo of August 26, 2010. This removal action will also incorporate environmentally responsible practices when practical and applicable.

5. Applicable or relevant and appropriate requirements (ARARs)

Pursuant to 40 C.F.R. 300.415(j), removal actions shall, to the extent practicable considering the exigencies of the situation, attain ARARs. Current ARARs identified, but not limited to, are listed below.

Federal ARARs:
40 C.F.R. Section 122.26(c)(ii)(C) and 122.44(k) Clean Water Act NPDES Regulations (Stormwater Control and Management)

40 C.F.R. Parts 260-262 and 264 Resource Conservation and Recovery Act, Subtitle C- Hazardous Waste Identification and Listing Regulations; Generator and Handler Requirements, Closure and Post-Closure - Massachusetts has been delegated the authority to administer these RCRA standards through its state hazardous waste management regulations. State regulations that have adopted these federal standards are listed below.

40 CFR Section 761.61 : TSCA requirements for cleanup and disposal of PCBs

40 C.F.R. Section 761.79 TSCA Decontamination of Equipment Used

40 C.F.R. Part 61 Clean Air Act – Standards for controlling dust

State ARARs:

310 CMR 40.0900 Procedures and Standards for the Characterization of the Risk of Harm to Health, Safety, Public Welfare and the Environment
310 CMR 30.100 Hazardous Waste Rules for Identification and Listing of Hazardous Wastes

310 CMR 30.300 Hazardous Waste Management Rules - Requirements for Generators

310 CMR 30.500 Hazardous Waste Management Rules - General standards for hazardous waste facilities

310 CMR 30.680 Hazardous Waste Rules - Containers

310 CMR 30.690 Hazardous Waste Rules - Management, Storage, and Treatment in Tanks

The OSC will coordinate with State officials to identify additional State ARARs, if any. In accordance with the National Contingency Plan and EPA Guidance Documents, the OSC will determine the applicability and practicability of complying with each ARAR which is identified in a timely manner.

6. Project schedule

Removal activities under the original Action Memo are in progress. Pending funding availability, removal activities will continue. EPA anticipates completing on-site activities within 18 months of the original start date.

B. Estimated Costs

COST CATEGORY	CURRENT CEILING	PROPOSED INCREASE	PROPOSED CEILING
REGIONAL REMOVAL ALLOWANCE COSTS:			
ERRS Contractor	$4,000,000.00	$2,000,000.00	$6,000,000.00
Interagency Agreement	$0.00	$0.00	$0.00
OTHER EXTRAMURAL COSTS NOT FUNDED FROM THE REGIONAL ALLOWANCE:			
START Contractor	$750,000.00	$0.00	$750,000.00
Extramural Subtotal	$4,750,000.00	$2,000,000.00	$6,750,000.00
Extramural Contingency (20%)	$950,000.00	$400,000.00	$1,350,000.00
TOTAL, REMOVAL ACTION CEILING	**$5,700,000.00**	**$2,400,000.00**	**$8,100,000.00**

VII. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

A delayed removal action or the absence of a removal action described herein will cause conditions at the Site to remain unaddressed, and threats associated with the presence of hazardous substances will continue to pose a threat to human health and the environment.

Not continuing this action would be inconsistent with EPA's previous actions at the Site.

VIII. OUTSTANDING POLICY ISSUES

There are no precedent-setting policy issues associated with this Site.

IX. ENFORCEMENT ... For Internal Distribution Only

See attached Enforcement Strategy.

The total EPA costs for this removal action based on full-time accounting practices that will be eligible for cost recovery are estimated to be $8,100,000 (extramural costs) + $750,000 (EPA intramural costs) = $8,850,000 X 1.3284 (regional indirect rate) = **$ 11,756,340.**[2].

X. RECOMMENDATION

This decision document represents the selected removal action for the Parker Street Waste Site in New Bedford, Massachusetts, developed in accordance with CERCLA, as amended, and is not inconsistent with the National Contingency Plan. The basis for this decision will be documented in the administrative record to be established for the Site.

Conditions at the Site meet the NCP Section 300.415 (b)(2) criteria for a removal action due to the following:

Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants [§300.415(b)(2)(i)];

High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate [§300.415(b)(2)(iv)];

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[2]Direct Costs include direct extramural costs $8,100,000 and direct intramural costs $750,000. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site specific costs 32.84% x $8,850,000, consistent with the full accounting methodology effective October 2, 2000. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual total costs from this estimate will affect the United States' right to cost recovery.

Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released [§300.415(b)(2)(v)]; and

The availability of other appropriate Federal or State response mechanisms to respond to the release [§300.415(b)(2)(vii)].

Furthermore, site conditions continue to meet the NCP section 300.415(b)(2) criteria for a removal and the criteria for the CERCLA Section 104(c) emergency exemption from the 12-month and $2 million limitations on removal actions. The removal action proposed in this Action Memorandum will abate, prevent, minimize, stabilize, mitigate and/or eliminate the release or threat of release of hazardous substances at the Parker Street Waste Site. I recommend your approval of the proposed removal action, the exemption from the 12-month and $2,000,000 limitations, and the proposed project ceiling increase of $2,400,000. The total removal action project ceiling if approved will be $8,100,000.

APPROVAL: [signature] DATE: 9/23/11

DISAPPROVAL:________________ DATE:________

Attachment I Action Memo dated August 26, 2010

December 3, 2010

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-021

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 63 land parcels comprising 47 privately owned properties in the vicinity of the PSWS. The SAP was prepared jointly by the USEPA, MassDEP, 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 63 parcels 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.

As the SAP analytical results are 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 concentrations in the top three feet of soil exceeded the applicable MCP category 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.

Enclosed is a copy of the results from the risk evaluation conducted by MACTEC for the property identified as P-021. These results are the basis for MassDEP's communication with you regarding typology chart development for this property. This evaluation compared the sample results from the soil samples collected from the 6 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, 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 an added measure of conservatism that can be used when evaluating data from a limited data set. 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-021, MassDEP provided you the following determinations:

An Imminent Hazard condition, as defined in the MCP, was determined to exist for the current use of the property for the top 1 foot of soil. Specifically, 5 PAHs were detected in soil borings P-021-SB-02 and P-021-SB-03 in the top foot of soil at concentrations greater than or equal to the site-specific Imminent Hazard levels established by MassDEP for this Site. The MCP requires elimination or control of all Imminent Hazards. This may be accomplished by removing the top foot of soil in the vicinity of these borings and replacing it with clean soil or it can be accomplished by otherwise covering it with clean soil or an impervious surface or cap. No activities should occur on this property that will disrupt the top foot of soil until removal or cover measures are complete.

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, concentrations of PAHs and lead were detected in samples collected from the top 3 feet in soil borings P-021-SB-01, P-021-SB-02, P-021-SB-03, P-021-SB-04, P-021-SB-05, and P-021-SB-06 above the applicable MCP S-1 soil standards. The MCP requires actions to be taken to address this condition, which may include removal of this layer of soil and replacing it with clean soil or covering this layer of soil 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 has not been determined to exist for the soil located between 3 feet and 12 feet below the ground surface. This is because concentrations of PAHs, PCBs chromium and/or lead were detected above the applicable MCP S-1 soil standard in the 2 soil borings identified as P-021-SB-02 and P-021-SB-03 in samples collected from a depth greater than 3 feet. Because this soil is at depth, it does not necessarily need to be removed to be protective of the current use of the property. MassDEP and MACTEC are performing a more in-depth risk evaluation of the sample data from greater than 3 feet in depth from this property to better determine whether the presence of these contaminants at these levels and depths in these limited areas constitute a Condition of No Significant Risk. This additional evaluation includes reviewing the available data for this specific property along with data from adjacent parcels to confirm whether or not a Condition of No Significant Risk exists. By increasing the data set being evaluated, it is possible that the 95% UCL can be eliminated from consideration for decision-making. Until MassDEP completes this evaluation, soil below 3 feet should not be disturbed on this property unless it is under the direction and supervision of a Licensed Site Professional, and in consultation with MassDEP.

Given the findings above, MassDEP has verified that its previous request for USEPA assistance on this property was appropriate. MassDEP continues to evaluate the SAP data on both a property-specific basis and by evaluating data from adjacent parcels to refine its risk evaluations to be able to more specifically inform USEPA of the level of assistance required for other properties.

USEPA has informed MassDEP that the determinations and request 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 to address contamination in the zero to 1 foot, and 1 to 3 foot soil layers. 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 contamination present at a depth greater than 3 feet below the ground surface.

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. Additionally, as stated above, MassDEP and MACTEC are performing more in-depth risk evaluation and SAP data analysis for this property and surrounding properties intended to refine the information we provide to USEPA for response action decision-making.

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

Enclosure

ec: CLEAN, President – Eddie Johnson
City of New Bedford, Office of Environmental Stewardship
cc: Owner, Property P-021

December 3, 2010

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-029

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 63 land parcels comprising 47 privately owned properties in the vicinity of the PSWS. The SAP was prepared jointly by the USEPA, MassDEP, 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 63 parcels 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 approximately 12 feet below ground surface (bgs). The following vertical horizons were analyzed: 0 – 1' bgs, 1 – 3' bgs, and 3 – 12' bgs.

As the SAP analytical results from individual properties are 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 concentrations in the top three feet of soil exceeded the applicable MCP category 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 specific risk characterizations by property for the purpose of typology chart development and risk communication with property owners.

Enclosed is a copy of the results from the risk evaluation conducted by MACTEC for the property identified as P-029. These results are the basis for MassDEP's communication with you regarding typology chart development for this property. This evaluation compared the sample results from the soil samples collected from the 9 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, 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 an added measure of conservatism that can be used when evaluating data from a limited data set. 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-029, MassDEP provided you the following determinations:

An Imminent Hazard condition, as defined in the MCP, was determined to exist for the current use of the property for the top 1 foot of soil. Specifically, 1 PAH was detected in soil borings P-029-SB-05 and P-029-SB-06 in the top foot of soil at concentrations greater than or equal to the site-specific Imminent Hazard levels established by MassDEP for this Site. The MCP requires elimination or control of all Imminent Hazards. This may be accomplished by removing the top foot of soil in the vicinity of these soil borings and replacing it with clean soil or it can be accomplished by otherwise covering those areas with clean soil or an impervious surface or cap. No activities should occur on this property that will disrupt the top foot of soil until removal or cover measures are complete.

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, concentrations of PAHs and lead were detected in samples collected from the top three 3 feet in soil borings P-029-SB-02, P-029-SB-03, P-029-SB-05, P-029-SB-06, and P-029-SB-08 above the applicable MCP S-1 soil standards. The MCP requires actions to be taken to address this condition, which may include removal of this layer of soil in the vicinity of these soil borings and replacing it with clean soil or covering those areas in this layer of soil 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 has not been determined to exist for the soil located between 3 feet and 12 feet below the ground surface. This is because concentrations of PAHs, PCBs chromium and/or lead were detected above the applicable MCP S-1 soil standard in the 2 soil borings identified as P-029-SB-02 and P-029-SB-03 in samples collected from a depth greater than 3 feet. Because this soil is at depth, it does not necessarily need to be removed to be protective of the current use of the property. MassDEP and MACTEC are performing a more in-depth risk evaluation of the sample data from greater than 3 feet in depth from this property to better determine whether the presence of these contaminants at these levels and depths in these limited areas constitute a Condition of No Significant Risk. This additional evaluation includes reviewing the available data for this specific property along with data from adjacent parcels to confirm whether or not a Condition of No Significant Risk exists. By increasing the data set being evaluated, it is possible that the 95% UCL can be eliminated from consideration for decision-making. Until MassDEP completes this evaluation, soil below 3 feet should not be disturbed on this property unless it is under the direction and supervision of a Licensed Site Professional, and in consultation with MassDEP.

Given the findings above, MassDEP has verified that its previous request for USEPA assistance on this property was appropriate. MassDEP continues to evaluate the SAP data on both a property-specific basis and by evaluating data from adjacent parcels to refine its risk evaluations to be able to more specifically inform USEPA of the level of assistance required for other properties.

USEPA has informed MassDEP that the determinations and request 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 to address contamination in the zero to 1 foot, and 1 to 3 foot soil layers. 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 contamination present at a depth greater than 3 feet below the ground surface.

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. Additionally, as stated above, MassDEP and MACTEC are performing more in-depth risk evaluation and SAP data analysis for this property and surrounding properties intended to refine the information we provide to USEPA for response action decision-making.

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

Enclosure

ec: CLEAN, President – Eddie Johnson

City of New Bedford, Office of Environmental Stewardship

cc: Owner, Property P-029

COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
SOUTHEAST REGIONAL OFFICE

DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lieutenant Governor

IAN A. BOWLES
Secretary

LAURIE BURT
Commissioner

December 21, 2010

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-011

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 63 land parcels comprising 47 privately owned properties in the vicinity of the PSWS. The SAP was prepared jointly by the USEPA, MassDEP, 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 63 parcels 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 approximately 12 feet below ground surface (bgs). The following vertical horizons were analyzed: 0 – 1' bgs, 1 – 3' bgs, and 3 – 12' bgs.

As the SAP analytical results from individual properties are 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 concentrations in the top three feet of soil exceeded the applicable MCP category 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 specific risk characterizations by property for the purpose of typology chart development and risk communication with property owners.

Enclosed is a copy of the results from the risk evaluation conducted by MACTEC for the property identified as P-011. These results are the basis for MassDEP's communication with you regarding typology chart development for this property. This evaluation compared the sample results from the soil samples collected from the 7 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, 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 an added measure of conservatism that can be used when evaluating data from a limited data set. 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-011, MassDEP provided you the following determinations:

An Imminent Hazard condition, as defined in the MCP, was determined to exist for the current use of the property for the top 1 foot of soil. Specifically, lead was detected in soil boring P-011-SB-04 in the top foot of soil at concentrations greater than or equal to the site-specific Imminent Hazard levels established by MassDEP for this Site. The MCP requires elimination or control of all Imminent Hazards. This may be accomplished by removing the top foot of soil in the vicinity of these soil borings and replacing it with clean soil or it can be accomplished by otherwise covering those areas with clean soil or an impervious surface or cap. No activities should occur on this property that will disrupt the top foot of soil until removal or cover measures are complete.

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, concentrations of PAHs and/or lead were detected in samples collected from the top three 3 feet in soil borings P-011-SB-02 and P-011-SB-04 above the applicable MCP S-1 soil standards. The MCP requires actions to be taken to address this condition, which may include removal of this layer of soil in the vicinity of these soil borings and replacing it with clean soil or covering those areas in this layer of soil 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 has not been determined to exist for the soil located between 3 feet and 12 feet below the ground surface. This is because concentrations of PAHs and/or lead were detected above the applicable MCP S-1 soil standard in the soil borings identified as P-011-SB-03 and P-011-SB-04 in samples collected from a depth greater than 3 feet. Because this soil is at depth, it does not necessarily need to be removed to be protective of the current use of the property. MassDEP and MACTEC are performing a more in-depth risk evaluation of the sample data from greater than 3 feet in depth from this property to better determine whether the presence of these contaminants at these levels and depths in these limited areas constitute a Condition of No Significant Risk. This additional evaluation includes reviewing the available data for this specific property along with data from adjacent parcels to confirm whether or not a Condition of No

Significant Risk exists. By increasing the data set being evaluated, it is possible that the 95% UCL can be eliminated from consideration for decision-making. Until MassDEP completes this evaluation, soil below 3 feet should not be disturbed on this property unless it is under the direction and supervision of a Licensed Site Professional, and in consultation with MassDEP.

Given the findings above, MassDEP has verified that its previous request for USEPA assistance on this property was appropriate. MassDEP continues to evaluate the SAP data on both a property-specific basis and by evaluating data from adjacent parcels to refine its risk evaluations to be able to more specifically inform USEPA of the level of assistance required for other properties.

USEPA has informed MassDEP that the determinations and request 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 to address contamination in the zero to 1 foot, and 1 to 3 foot soil layers. 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 contamination present at a depth greater than 3 feet below the ground surface.

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. Additionally, as stated above, MassDEP and MACTEC are performing more in-depth risk evaluation and SAP data analysis for this property and surrounding properties intended to refine the information we provide to USEPA for response action decision-making.

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/lm

Enclosure

ec: CLEAN, President – Eddie Johnson
jheljhnsn6@aol.com

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

Novick.Steve@epamail.epa.gov

iphillips@rouxinc.com

tboguski@e2inc.com

cc: Owner, Property P-011

Table P-011
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

				0-1 ft [1]				1-3 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]	Frequer Detec
PAHs (mg/Kg)												
2-Methylnaphthalene	61,000	300	5,000	1 / 7	0.93 - 0.93	0.27	NC [a]	0 / 7	All ND	NA	NC [b]	1 /
Acenaphthene	180,000	1,000	10,000	1 / 7	3.93 - 3.93	0.70	NC [a]	0 / 7	All ND	NA	NC [b]	1 /
Acenaphthylene	180,000	1,000	10,000	0 / 7	All ND	NA	NC [b]	3 / 7	0.19 - 0.28	0.18	0.28 NP [f]	3 /
Anthracene	920,000	1,000	10,000	4 / 7	0.26 - 4.81	0.88	5.2 NP [c]	4 / 7	0.2 - 0.71	0.33	0.59 NP [f]	8 /
Benzo(a)anthracene	160	7	3,000	7 / 7	0.16 - **13.1**	2.5	**9.8** G [k]	4 / 7	1.07 - **7.63**	1.9	4.2 NP [f]	11 /
Benzo(a)pyrene	16	2	300	6 / 7	0.17 - **14.6**	**2.7**	**11.5** NP [d]	4 / 7	1.01 - **6.45**	1.9	**5.0** NP [f]	10 /
Benzo(b)fluoranthene	160	7	3,000	7 / 7	0.2 - **20.1**	3.7	**25** G [l]	4 / 7	1.31 - **7.66**	2.5	6.9 NP [f]	11 /
Benzo(g,h,i)perylene	120,000	1,000	10,000	5 / 7	0.19 - 4.71	1.1	3.9 NP [d]	4 / 7	0.72 - 1.72	0.71	1.4 NP [f]	9 /
Benzo(k)fluoranthene	1,600	70	10,000	4 / 7	0.32 - 7.26	1.3	3.5 NP [e]	4 / 7	0.46 - 2.41	0.79	1.8 NP [f]	8 /
Chrysene	16,000	70	10,000	7 / 7	0.18 - 13.1	2.5	9.7 G [k]	4 / 7	0.95 - 7.26	1.8	4.1 NP [f]	11 /
Dibenz(a,h)anthracene	16	0.7	300	3 / 7	0.21 - **1.37**	0.36	**1.4** NP [f]	4 / 7	0.18 - 0.56	0.26	0.43 NP [f]	7 /
Fluoranthene	120,000	1,000	10,000	7 / 7	0.31 - 25.8	4.8	18.9 G [k]	5 / 7	0.16 - 7.7	2.3	4.5 NP [f]	12 /
Fluorene	120,000	1,000	10,000	1 / 7	2.73 - 2.73	0.53	NC [a]	1 / 7	0.25 - 0.25	0.17	NC [a]	2 /
Indeno(1,2,3-cd)pyrene	160	7	3,000	5 / 7	0.19 - 6.33	1.4	5.2 NP [d]	4 / 7	0.77 - 2.07	0.79	1.6 NP [f]	9 /
Naphthalene	61,000	100	10,000	1 / 7	4.14 - 4.14	0.73	NC [a]	0 / 7	All ND	NA	NC [b]	1 /
Phenanthrene	120,000	500	10,000	7 / 7	0.16 - 20.3	3.5	31 NP [g]	4 / 7	0.65 - 2.73	1.1	2.7 NP [f]	11 /
Pyrene	92,000	1,000	10,000	7 / 7	0.25 - 21.2	4.3	15.8 G [k]	5 / 7	0.18 - 11.6	2.9	6.1 NP [h]	12 /
PCBs (mg/Kg)												
Aroclor-1016	10	2	100	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 /
Aroclor-1221	10	2	100	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 /
Aroclor-1232	10	2	100	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 /
Aroclor-1242	10	2	100	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 /
Aroclor-1248	10	2	100	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 /
Aroclor-1254	10	2	100	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 /
Aroclor-1260	10	2	100	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 /
Aroclor-1262	10	2	100	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 /
Aroclor-1268	10	2	100	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 /
PCBs (Total)	10	2	100	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 /

Table P-011
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	Frequer Detec
Inorganics (mg/Kg)												
Aluminum		NS	NS	7 / 7	4930 - 8310	6677	7571 N [m]	7 / 7	4030 - 9260	6474	7696 N [m]	14 /
Antimony		20	300	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 /
Arsenic	40	20	200	5 / 7	2.5 - 3.1	2.3	2.9 NP [f]	3 / 7	2.7 - 5.7	2.1	5.7 NP [f]	8 /
Barium	200,000	1,000	10,000	7 / 7	11.3 - 43	23	30 N [m]	7 / 7	14.3 - 75.8	30	50 G [k]	14 /
Beryllium		100	2,000	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 /
Cadmium	60	2	300	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 /
Calcium		NS	NS	7 / 7	301 - 746	548	686 N [m]	7 / 7	202 - 1120	496	730 N [m]	14 /
Chromium	200	30	2,000	7 / 7	14.5 - 18.8	16.2	17.2 N [m]	7 / 7	5.1 - 18.2	11.8	15.2 N [m]	14 /
Cobalt		NS	NS	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 /
Copper		NS	NS	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 /
Iron		NS	NS	7 / 7	6200 - 12800	9154	10963 N [m]	7 / 7	5410 - 10100	7864	8914 N [m]	14 /
Lead	1,000	300	3,000	7 / 7	30.2 - **1410**	257	**2172** NP [g]	7 / 7	3.8 - 150	63	110 N [m]	14 /
Magnesium		NS	NS	7 / 7	880 - 1440	1153	1317 N [m]	7 / 7	872 - 2370	1515	1909 N [m]	14 /
Manganese		NS	NS	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 /
Mercury		20	300	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 /
Nickel		20	7,000	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 /
Potassium		NS	NS	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 /
Selenium		400	8,000	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 /
Silver		100	2,000	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 /
Sodium		NS	NS	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 /
Thallium		8	800	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 /
Vanadium		600	10,000	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 /
Zinc		2,500	10,000	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 /
Cyanide		100	4,000	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 /

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] Only one distinct data value was detected
[b] All values non detect

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

G - Gamma Distribution
[k] 95% Approximate Gamma UCL
[l] 95% Adjusted Gamma UCL

N - Normal Distribution
[m] 95% Student's-t UCL

LN - Log Normal Distribution
[n] 95% Chebyshev (MVUE) UCL

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

COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
SOUTHEAST REGIONAL OFFICE

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Governor

TIMOTHY P. MURRAY
Lieutenant Governor

IAN A. BOWLES
Secretary

LAURIE BURT
Commissioner

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December 21, 2010

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-047

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 63 land parcels comprising 47 privately owned properties in the vicinity of the PSWS. The SAP was prepared jointly by the USEPA, MassDEP, 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 63 parcels 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 approximately 12 feet below ground surface (bgs). The following vertical horizons were analyzed: 0 – 1' bgs, 1 – 3' bgs, and 3 – 12' bgs.

As the SAP analytical results from individual properties are 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 concentrations in the top three feet of soil exceeded the applicable MCP category 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 specific risk characterizations by property for the purpose of typology chart development and risk communication with property owners.

Enclosed is a copy of the results from the risk evaluation conducted by MACTEC for the property identified as P-047. These results are the basis for MassDEP's communication with you regarding typology chart development for this property. This evaluation compared the sample results from the soil samples collected from the 8 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, 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 an added measure of conservatism that can be used when evaluating data from a limited data set. 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-011, MassDEP provided you the following determinations:

An Imminent Hazard condition, as defined in the MCP, was determined to exist for the current use of the property for the top 1 foot of soil. Specifically, lead was detected in the soil borings identified as P-047-SB-01, P-047-SB-02, P-047-SB-04, P-047-SB-06 P-047-SB-07, P-047-SB-08, P-047-SB-09 and P-047-SB-10 in the top foot of soil at concentrations greater than or equal to the site-specific Imminent Hazard levels established by MassDEP for this Site. The MCP requires elimination or control of all Imminent Hazards. This may be accomplished by removing the top foot of soil in the vicinity of these soil borings and replacing it with clean soil or it can be accomplished by otherwise covering those areas with clean soil or an impervious surface or cap. No activities should occur on this property that will disrupt the top foot of soil until removal or cover measures are complete.

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, concentrations of lead were detected in samples collected from the top three 3 feet in soil borings P-047-SB-02, P-047-SB-03 and P-047-SB-04 above the applicable MCP S-1 soil standards. The MCP requires actions to be taken to address this condition, which may include removal of this layer of soil in the vicinity of these soil borings and replacing it with clean soil or covering those areas in this layer of soil 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. No further action is required for the soils located greater than 3 feet.

Given the findings above, MassDEP has verified that its previous request for USEPA assistance on this property was appropriate. MassDEP continues to evaluate the SAP data on both a property-specific basis and by evaluating data from adjacent parcels to refine its risk evaluations to be able to more specifically inform USEPA of the level of assistance required for other properties.

USEPA has informed MassDEP that the determinations and request 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 to address contamination in the zero to 1 foot, and 1 to 3 foot soil layers. 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 contamination present at a depth greater than 3 feet below the ground surface.

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. Additionally, as stated above, MassDEP and MACTEC are performing more in-depth risk evaluation and SAP data analysis for this property and surrounding properties intended to refine the information we provide to USEPA for response action decision-making.

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

Enclosure

ec: CLEAN, President – Eddie Johnson
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City of New Bedford, Office of Environmental Stewardship
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cc: Owner, Property P-047

Table P-047
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

				0-1 ft [1]				1-3 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]	Frequer Detec
PAHs (mg/Kg)												
2-Methylnaphthalene	61,000	300	5,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 /
Acenaphthene	180,000	1,000	10,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 /
Acenaphthylene	180,000	1,000	10,000	3 / 10	0.17 - 0.24	0.16	0.24 NP [c]	1 / 10	0.38 - 0.38	0.18	NC [b]	4 /
Anthracene	920,000	1,000	10,000	4 / 10	0.145 - 0.41	0.20	0.32 NP [d]	2 / 10	0.33 - 0.82	0.24	0.50 NP [c]	6 /
Benzo(a)anthracene	160	7	3,000	9 / 10	0.16 - 1.41	0.59	0.86 NP [c]	4 / 10	0.22 - 2.08	0.46	1.2 NP [d]	13 /
Benzo(a)pyrene	16	2	300	10 / 10	0.22 - 1.45	0.63	1.0 G [j]	8 / 10	0.151 - 1.7	0.44	0.72 NP [e]	18 /
Benzo(b)fluoranthene	160	7	3,000	10 / 10	0.22 - 1.99	0.86	1.2 N [k]	8 / 10	0.191 - 2.19	0.54	1.5 NP [f]	18 /
Benzo(g,h,i)perylene	120,000	1,000	10,000	8 / 10	0.179 - 1.22	0.46	0.67 NP [c]	4 / 10	0.21 - 1.47	0.36	0.81 NP [d]	12 /
Benzo(k)fluoranthene	1,600	70	10,000	7 / 10	0.163 - 0.617	0.31	0.43 NP [c]	3 / 10	0.16 - 0.85	0.25	0.85 NP [d]	10 /
Chrysene	16,000	70	10,000	9 / 10	0.18 - 1.59	0.70	1.0 NP [c]	6 / 10	0.159 - 2.5	0.51	0.98 NP [e]	15 /
Dibenz(a,h)anthracene	16	0.7	300	3 / 10	0.158 - 0.28	0.17	0.28 NP [d]	2 / 10	0.18 - 0.36	0.18	0.36 NP [d]	5 /
Fluoranthene	120,000	1,000	10,000	10 / 10	0.27 - 3.02	1.2	1.8 N [k]	8 / 10	0.19 - 4.43	0.89	2.8 NP [f]	18 /
Fluorene	120,000	1,000	10,000	0 / 10	All ND	NA	NC [a]	1 / 10	0.23 - 0.23	0.16	NC [b]	1 /
Indeno(1,2,3-cd)pyrene	160	7	3,000	8 / 10	0.185 - 1.13	0.45	0.65 NP [c]	4 / 10	0.23 - 1.44	0.36	0.90 NP [d]	12 /
Naphthalene	61,000	100	10,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 /
Phenanthrene	120,000	500	10,000	8 / 10	0.18 - 1.86	0.67	1.0 NP [c]	4 / 10	0.22 - 3.26	0.59	1.6 NP [d]	12 /
Pyrene	92,000	1,000	10,000	10 / 10	0.24 - 2.89	1.2	1.7 N [k]	8 / 10	0.16 - 5.06	0.93	3.1 NP [f]	18 /
PCBs (mg/Kg)												
Aroclor-1016	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 /
Aroclor-1221	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 /
Aroclor-1232	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 /
Aroclor-1242	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 /
Aroclor-1248	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 /
Aroclor-1254	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 /
Aroclor-1260	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 /
Aroclor-1262	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 /
Aroclor-1268	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 /
PCBs (Total)	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 /

Table P-047
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	Frequer Detec
Inorganics (mg/Kg)												
Aluminum		NS	NS	10 / 10	4890 - 10800	7434	8554 N [k]	10 / 10	5970 - 9650	7731	8722 G [j]	20 /
Antimony		20	300	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 /
Arsenic	40	20	200	10 / 10	2.7 - 13.6	6.4	9.2 G [j]	10 / 10	1.4 - 12.4	4.7	7.8 G [j]	20 /
Barium	200,000	1,000	10,000	10 / 10	34.1 - 800	207	422 G [j]	10 / 10	11.1 - 359	102	209 G [j]	20 /
Beryllium		100	2,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 /
Cadmium	60	2	300	4 / 10	0.39 - 1.1	0.43	0.94 NP [d]	1 / 10	0.12 - 0.12	0.23	NC [b]	5 /
Calcium		NS	NS	10 / 10	717 - 4720	2104	2859 N [k]	10 / 10	457 - 4050	1392	2168 G [j]	20 /
Chromium	200	30	2,000	10 / 10	10.6 - 15.8	13.5	14.5 N [k]	10 / 10	7.6 - 15.1	11.7	13.0 N [k]	20 /
Cobalt		NS	NS	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 /
Copper		NS	NS	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 /
Iron		NS	NS	10 / 10	8240 - 13000	10482	11433 N [k]	10 / 10	6430 - 21500	11107	14225 N [l]	20 /
Lead	1,000	300	3,000	10 / 10	276 - **5190**	**1772**	**3670** G [j]	10 / 10	11 - **2200**	**542**	**1369** G [j]	20 /
Magnesium		NS	NS	10 / 10	1000 - 1920	1430	1605 N [k]	10 / 10	1030 - 1790	1299	1453 LN [m]	20 /
Manganese		NS	NS	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 /
Mercury		20	300	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 /
Nickel		20	7,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 /
Potassium		NS	NS	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 /
Selenium		400	8,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 /
Silver		100	2,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 /
Sodium		NS	NS	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 /
Thallium		8	800	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 /
Vanadium		600	10,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 /
Zinc		2,500	10,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 /
Cyanide		100	4,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 /

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 or two distinct data values were detected

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

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

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

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

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

COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS
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December 22, 2010

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-004

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 63 land parcels comprising 47 privately owned properties in the vicinity of the PSWS. The SAP was prepared jointly by the USEPA, MassDEP, 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 63 parcels 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.

As the SAP analytical results are 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 concentrations in the top three feet of soil exceeded the applicable MCP category 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.

Enclosed is a copy of the results from the risk evaluation conducted by MACTEC for the property identified as P-004. These results are the basis for MassDEP's communication with you regarding typology chart development for this property. This evaluation compared the sample results from the soil samples collected from the 7 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, 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 an added measure of conservatism that can be used when evaluating data from a limited data set. 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-004, MassDEP provided you the following determinations:

An Imminent Hazard condition, as defined in the MCP, was determined to exist for the current use of the property for the top 1 foot of soil. Specifically, lead was detected in soil borings P-004-SB-04, P-004-SB-05, P-004-SB-06 in the top foot of soil at concentrations greater than or equal to the site-specific Imminent Hazard levels established by MassDEP for this Site. The MCP requires elimination or control of all Imminent Hazards. This may be accomplished by removing the top foot of soil in the vicinity of these borings and replacing it with clean soil or it can be accomplished by otherwise covering it with clean soil or an impervious surface or cap. No activities should occur on this property that will disrupt the top foot of soil until removal or cover measures are complete.

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, concentrations of PAHs and/or lead were detected in samples collected from the top 3 feet in soil borings P-004-SB-01, P-004-SB-02, P-004-SB-03, P-004-SB-04, P-004-SB-05, P-004-SB-06 above the applicable MCP S-1 soil standards. The MCP requires actions to be taken to address this condition, which may include removal of this layer of soil and replacing it with clean soil or covering this layer of soil 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 has not been determined to exist for the soil located between 3 feet and 12 feet below the ground surface. This is because concentrations of lead and/or arsenic were detected above the applicable MCP S-1 soil standard in the 2 soil borings identified as P-004-SB-01 and P-004-SB-02 in samples collected from a depth greater than 3 feet. Because this soil is at depth, it does not necessarily need to be removed to be protective of the current use of the property. MassDEP and MACTEC are performing a more in-depth risk evaluation of the sample data from greater than 3 feet in depth from this property to better determine whether the presence of these contaminants at these levels and depths in these limited areas constitute a Condition of No Significant Risk. This additional evaluation includes reviewing the available data for this specific property along with data from adjacent parcels to confirm whether or not a Condition of No

Significant Risk exists. By increasing the data set being evaluated, it is possible that the 95% UCL can be eliminated from consideration for decision-making. Until MassDEP completes this evaluation, soil below 3 feet should not be disturbed on this property unless it is under the direction and supervision of a Licensed Site Professional, and in consultation with MassDEP.

Given the findings above, MassDEP has verified that its previous request for USEPA assistance on this property was appropriate. MassDEP continues to evaluate the SAP data on both a property-specific basis and by evaluating data from adjacent parcels to refine its risk evaluations to be able to more specifically inform USEPA of the level of assistance required for other properties.

USEPA has informed MassDEP that the determinations and request 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 to address contamination in the zero to 1 foot, and 1 to 3 foot soil layers. 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 contamination present at a depth greater than 3 feet below the ground surface.

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. Additionally, as stated above, MassDEP and MACTEC are performing more in-depth risk evaluation and SAP data analysis for this property and surrounding properties intended to refine the information we provide to USEPA for response action decision-making.

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/lm

Enclosure

ec: CLEAN, President – Eddie Johnson
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cc: Owner, Property P-021

May 17, 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-003

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-003 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-003. 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 six 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-003, 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, concentrations of lead were detected above the applicable MCP S-1 soil standards in samples collected from the top 3 feet in five of the soil borings on the property. The MCP requires actions to be taken to address this condition, which may include removal of this layer of soil and replacing it with clean soil or covering this layer of soil 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 not determined to exist for the soil located between 3 feet and 12 feet below the ground surface because the 95% UCL value calculated for chromium exceeded the applicable MCP S-1 soil standard of 40 mg/Kg.

Property P-003 Final Risk Evaluation and Response Action Recommendations: For the purpose of making final risk evaluation determinations, MassDEP evaluated data from Property P-003 along with data from surrounding properties so that data consistency and COC distribution could be taken into account to ensure the data being evaluated was representative. In cases where MassDEP determined the data was representative, the 95% UCL was not applied for final risk evaluation decision making. Based on this evaluation, MassDEP has determined the following for Property P-003:

- 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, as described above. Response actions are necessary to address the COC contamination in the area of all of the soil borings at this interval.

- Applying the 95% UCL is not necessary for the soil located greater than 3 feet b.g.s. because the COC concentrations observed are consistent with results from samples taken in the surrounding area, and because the actual average for chromium at this depth interval is below the applicable MCP Method 1 S-1 soil standard. As such, a Condition of No Significant Risk exists on this property for the soil located between 3 and 12 feet, and no further response actions are necessary for this soil is representative.

- These final conclusions and response action recommendations for Property P-003 were made while taking into account data from surrounding properties that confirm the data from P-003.

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 to address contamination in the zero to 1 foot, and 1 to 3 foot soil layers. 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 contamination present at a depth greater than 3 feet below the ground surface.

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

Enclosure

ec: CLEAN, President – Eddie Johnson
City of New Bedford, Office of Environmental Stewardship

cc: Owner, Property P-003

Table P-003
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 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Acenaphthene	180,000	1,000	10,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Acenaphthylene	180,000	1,000	10,000	1 / 6	0.3 - 0.3	0.61	NC [b]	0 / 6	All ND	NA	NC [a]	1 / 12	0.3 - 0.3	0.47	NC [b]	0 / 8	All ND	NA	NC [a]
Anthracene	920,000	1,000	10,000	1 / 6	0.42 - 0.42	0.63	NC [b]	1 / 6	0.21 - 0.21	0.42	NC [b]	2 / 12	0.21 - 0.42	0.49	0.42 NP [d]	0 / 8	All ND	NA	NC [a]
Benzo(a)anthracene	160	7	3,000	4 / 6	0.28 - 1.3	0.89	1.1 NP [c]	2 / 6	0.41 - 0.63	0.54	0.63 NP [d]	6 / 12	0.28 - 1.3	0.66	0.62 NP [c]	1 / 8	0.3 - 0.3	0.12	NC [b]
Benzo(a)pyrene	16	2	300	4 / 6	0.27 - 1.2	0.88	1.0 NP [c]	2 / 6	0.42 - 0.64	0.54	0.64 NP [d]	6 / 12	0.27 - 1.2	0.65	0.61 NP [c]	1 / 8	0.32 - 0.32	0.12	NC [b]
Benzo(b)fluoranthene	160	7	3,000	4 / 6	0.27 - 1	0.85	0.88 NP [c]	2 / 6	0.35 - 0.61	0.52	0.61 NP [d]	6 / 12	0.27 - 1	0.63	0.57 NP [d]	1 / 8	0.29 - 0.29	0.12	NC [b]
Benzo(g,h,i)perylene	120,000	1,000	10,000	2 / 6	0.22 - 0.82	0.72	0.82 NP [d]	2 / 6	0.32 - 0.46	0.49	0.46 NP [d]	4 / 12	0.22 - 0.82	0.57	0.47 NP [d]	1 / 8	0.25 - 0.25	0.11	NC [b]
Benzo(k)fluoranthene	1,600	70	10,000	2 / 6	0.27 - 1.1	0.77	1.1 NP [d]	2 / 6	0.38 - 0.53	0.52	0.53 NP [d]	4 / 12	0.27 - 1.1	0.60	0.58 NP [d]	1 / 8	0.26 - 0.26	0.11	NC [b]
Chrysene	16,000	70	10,000	4 / 6	0.32 - 1.3	0.92	1.1 NP [c]	2 / 6	0.45 - 0.68	0.55	0.68 NP [d]	6 / 12	0.32 - 1.3	0.68	0.66 NP [c]	1 / 8	0.32 - 0.32	0.12	NC [b]
Dibenz(a,h)anthracene	16	0.7	300	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Fluoranthene	120,000	1,000	10,000	4 / 6	0.58 - 2.7	1.4	2.0 NP [c]	2 / 6	0.99 - 1.4	0.76	1.4 NP [d]	6 / 12	0.58 - 2.7	0.96	1.2 NP [c]	1 / 8	0.76 - 0.76	0.18	NC [b]
Fluorene	120,000	1,000	10,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Indeno(1,2,3-cd)pyrene	160	7	3,000	1 / 6	0.71 - 0.71	0.68	NC [b]	2 / 6	0.26 - 0.38	0.47	0.38 NP [d]	3 / 12	0.26 - 0.71	0.54	0.42 NP [d]	0 / 8	All ND	NA	NC [a]
Naphthalene	61,000	100	10,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Phenanthrene	120,000	500	10,000	4 / 6	0.24 - 1.6	0.95	1.3 NP [c]	2 / 6	0.56 - 0.71	0.58	0.69 NP [c]	6 / 12	0.24 - 1.6	0.70	0.73 NP [c]	1 / 8	0.46 - 0.46	0.14	NC [b]
Pyrene	92,000	1,000	10,000	4 / 6	0.48 - 2.2	1.2	1.9 NP [c]	2 / 6	0.83 - 1.2	0.70	1.2 NP [d]	6 / 12	0.48 - 2.2	0.88	1.1 NP [d]	1 / 8	0.64 - 0.64	0.16	NC [b]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Aroclor-1254	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Aroclor-1260	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Aroclor-1262	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
PCBs (Total)	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]

Table P-003
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	6 / 6	3630 - 5050	4425	4833 N [g]	6 / 6	2660 - 6400	4793	5900 N [g]	12 / 12	2660 - 6400	4671	5114 N [g]	8 / 8	1830 - 7830	3691	4965 N [g]
Antimony		20	300	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Arsenic	40	20	200	6 / 6	7.9 - **31.2**	18.8	**25.7** N [g]	6 / 6	4.7 - **27.3**	13.9	**21** N [g]	12 / 12	4.7 - **31.2**	15.5	19.0 N [g]	5 / 8	0.9 - 7.3	2.5	4.5 NP [d]
Barium	200,000	1,000	10,000	6 / 6	151 - 386	261	331 N [g]	6 / 6	24.2 - 202	93	153 N [g]	12 / 12	24.2 - 386	149	194 N [g]	8 / 8	8.3 - 101	27	57 LN [i]
Beryllium		100	2,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Cadmium	60	2	300	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	1 / 8	0.13 - 0.13	0.26	NC [b]
Calcium		NS	NS	6 / 6	2600 - 7280	4780	6165 N [g]	6 / 6	813 - 5010	2141	3872 G [h]	12 / 12	813 - 7280	3020	3998 G [h]	8 / 8	500 - 8800	1757	6152 NP [e]
Chromium	200	30	2,000	6 / 6	12.4 - 20.5	16.2	19.1 N [g]	6 / 6	6.3 - 27.2	15.0	21 N [g]	12 / 12	6.3 - 27.2	15.4	17.8 N [g]	8 / 8	6.7 - **56.3**	15	**41** NP [e]
Cobalt		NS	NS	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Copper		NS	NS	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Iron		NS	NS	6 / 6	4830 - 11600	8265	10465 N [g]	6 / 6	3210 - 11300	6648	9181 N [g]	12 / 12	3210 - 11600	7187	8368 N [g]	8 / 8	3320 - 8920	5185	6486 N [g]
Lead	1,000	300	3,000	6 / 6	**387** - **1070**	**751**	**990** N [g]	6 / 6	37.1 - **612**	215	**392** N [g]	12 / 12	37.1 - **1070**	**394**	**612** G [h]	7 / 8	1.2 - 165	24	227 NP [f]
Magnesium		NS	NS	6 / 6	1090 - 2110	1472	1794 N [g]	6 / 6	788 - 2350	1693	2151 N [g]	12 / 12	788 - 2350	1619	1820 N [g]	8 / 8	1130 - 3140	1771	2249 N [g]
Manganese		NS	NS	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Mercury		20	300	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Nickel		20	7,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Potassium		NS	NS	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Selenium		400	8,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Silver		100	2,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Sodium		NS	NS	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Thallium		8	800	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 8	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

N - Normal Distribution
[g] 95% Student's-t UCL

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

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

LN - Log Normal Distribution
[i] 95% H-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 07/29/10
Checked by / Date: KJC 07/30/10

P:\Documents\SITES\FSWS NEW BEDFORD\Supplemental Assessment\Results & Communication\
Evaluations as of 09 20 10, P-003

Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

One Winter Street Boston, MA 02108 • 617-292-5500

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Secretary

KENNETH L. KIMMELL
Commissioner

May 17, 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-040

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-040 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-040. 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 eight 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-040, 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, concentrations of lead were detected above the applicable MCP S-1 soil standards in samples collected from the top 3 feet in all of the soil borings on the property. The MCP requires actions to be taken to address this condition, which may include removal of this layer of soil and replacing it with clean soil or covering this layer of soil 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 not determined to exist for the soil located between 3 feet and 12 feet below the ground surface. This is because the concentrations of PAHs, cadmium and/or lead were detected above the applicable Method 1 S-1 soil standards in soil samples collected from a depth greater than 3 feet in all of the borings on the property. Because this soil is at depth, it does not necessarily need to be removed to be protective of the current use of the property. Soil below three 3 feet should not be disturbed on this property unless it is under the direction and supervision of a Licensed Site Professional, and done in accordance with the MCP. If this soil is to remain in place, land use restrictions and/or controls, defined as a Notice of Activity and Use Limitation or AUL in the MCP, may be necessary for the property to ensure that future activities or changes in use do not create the potential for humans to be exposed to the soil below 3 feet in depth.

- In addition, a condition of Risk to Public Welfare, based on an exceedence of an Upper Concentration Limit (UCL), as defined in the MCP, was observed in the soil located between three feet and twelve feet in depth at soil boring P-040-SB-02, where lead was detected at a concentration Of 21600 mg/Kg. The UCL for lead in soil is 3000 mg/Kg. Soil with average concentrations above the UCL cannot remain in place at a depth of twelve feet or less unless and they are covered with an engineered barrier designed to prevent contact, exposure, migration or erosion of that soil and an Activity and Use Limitation (AUL) is implemented. No activities should occur at the property that will disrupt and/or create exposure to any soil that exceeds a UCL until removal or cover measures and an AUL are complete.

Property P-040 Final Risk Evaluation and Response Action Recommendations: For the purpose of making final risk evaluation determinations, MassDEP evaluated data from Property P-040 along with data from surrounding properties so that data consistency and COC distribution could be taken into account to ensure the data being evaluated was representative. In cases where MassDEP determined the data was representative, the 95% UCL was not applied for final risk evaluation decision making. Based on this evaluation, MassDEP has determined the following for Property P-040:

- MassDEP has verified that its previous request for USEPA assistance on this property was appropriate. Elimination of the 95% UCL as a risk evaluation review criteria did not result in any changes from the preliminary risk evaluation provided to USEPA for typology chart development.

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 to address contamination in the zero to 1 foot, and 1 to 3 foot soil layers. 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 contamination present at a depth greater than 3 feet below the ground surface.

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

Enclosure

ec: CLEAN, President – Eddie Johnson
City of New Bedford, Office of Environmental Stewardship
cc: Owner, Property P-040

Table P-040
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
PAHs (mg/Kg)																			
2-Methylnaphthalene	61,000	300	5,000	4 / 8	0.05 - 0.33	0.30	0.31 NP [a]	6 / 8	0.09 - 4.51	0.99	4.2 NP [c]	10 / 16	0.05 - 4.51	0.76	2.1 NP [c]	7 / 16	0.1 - 1.4	0.23	0.38 NP [b]
Acenaphthene	180,000	1,000	10,000	6 / 8	0.12 - 0.97	0.46	0.70 NP [a]	7 / 8	0.19 - 2.08	0.76	1.1 NP [d]	13 / 16	0.12 - 2.08	0.66	0.81 NP [d]	7 / 16	0.17 - 0.7	0.24	0.34 NP [a]
Acenaphthylene	180,000	1,000	10,000	8 / 8	0.06 - 0.89	0.39	0.58 N [g]	6 / 8	0.5 - 6.06	1.7	4.6 NP [e]	14 / 16	0.06 - 6.06	1.2	3.2 NP [c]	8 / 16	0.07 - 3.51	0.58	0.97 NP [a]
Anthracene	920,000	1,000	10,000	8 / 8	0.1 - 2.74	1.2	1.9 N [g]	8 / 8	0.55 - 14.4	3.7	8.0 G [k]	16 / 16	0.1 - 14.4	2.9	4.3 G [k]	8 / 16	0.14 - 6.56	1.1	1.8 NP [a]
Benzo(a)anthracene	160	7	3,000	8 / 8	0.29 - **7.13**	2.9	4.6 N [g]	8 / 8	1.23 - **19.8**	**7.9**	**12.0** N [g]	16 / 16	0.29 - **19.8**	6.3	**8.8** G [k]	10 / 16	0.09 - **16.4**	2.7	4.9 NP [d]
Benzo(a)pyrene	16	2	300	8 / 8	0.31 - **6.6**	**2.8**	**4.4** N [g]	8 / 8	1.23 - **22.8**	**7.7**	**14.4** G [k]	16 / 16	0.31 - **22.8**	**6.1**	**8.5** G [k]	11 / 16	0.04 - **20.7**	**2.9**	**5.6** NP [d]
Benzo(b)fluoranthene	160	7	3,000	8 / 8	0.41 - **8.47**	3.6	5.6 N [g]	8 / 8	1.68 - **22**	**8.9**	**13.1** N [g]	16 / 16	0.41 - **22**	**7.1**	9.8 G [k]	10 / 16	0.09 - **23.3**	3.6	6.8 NP [d]
Benzo(g,h,i)perylene	120,000	1,000	10,000	8 / 8	0.11 - 3.26	1.4	2.2 N [g]	8 / 8	0.59 - 7.78	3.4	4.9 N [g]	16 / 16	0.11 - 7.78	2.7	3.7 G [k]	10 / 16	0.06 - 5.62	1.2	2.0 NP [b]
Benzo(k)fluoranthene	1,600	70	10,000	8 / 8	0.18 - 3.6	1.4	2.3 N [g]	8 / 8	0.61 - 11.7	3.8	7.2 G [k]	16 / 16	0.18 - 11.7	3.0	4.2 G [k]	9 / 16	0.05 - 7.39	1.3	2.4 NP [b]
Chrysene	16,000	70	10,000	8 / 8	0.33 - 6.51	2.8	4.3 N [g]	8 / 8	1.31 - 18.7	7.8	11.6 N [g]	16 / 16	0.33 - 18.7	6.1	8.5 G [k]	12 / 16	0.03 - 16.4	2.7	7.5 NP [e]
Dibenz(a,h)anthracene	16	0.7	300	8 / 8	0.05 - **0.95**	0.42	0.63 N [g]	8 / 8	0.25 - **3.3**	**1.2**	**2.1** G [k]	16 / 16	0.05 - **3.3**	**0.92**	**1.3** G [k]	8 / 16	0.08 - **2.52**	0.48	**0.76** NP [a]
Fluoranthene	120,000	1,000	10,000	8 / 8	0.7 - 14.5	6.0	9.3 N [g]	8 / 8	2.87 - 47.2	16.3	26 N [g]	16 / 16	0.7 - 47.2	12.9	18.1 G [k]	12 / 16	0.07 - 32.9	5.3	14.8 NP [e]
Fluorene	120,000	1,000	10,000	7 / 8	0.12 - 1.04	0.43	0.69 NP [a]	7 / 8	0.28 - 5.77	1.4	4.2 NP [e]	14 / 16	0.12 - 5.77	1.1	3.0 NP [c]	7 / 16	0.21 - 2.3	0.40	0.72 NP [b]
Indeno(1,2,3-cd)pyrene	160	7	3,000	8 / 8	0.12 - 2.84	1.2	1.9 N [g]	8 / 8	0.62 - **9.09**	3.2	5.7 G [k]	16 / 16	0.12 - **9.09**	2.6	3.5 G [k]	9 / 16	0.07 - **7.11**	1.2	2.2 NP [d]
Naphthalene	61,000	100	10,000	4 / 8	0.1 - 0.8	0.45	0.75 NP [b]	6 / 8	0.19 - 9.92	1.7	9.2 NP [c]	10 / 16	0.1 - 9.92	1.3	4.6 NP [c]	7 / 16	0.22 - 4.09	0.47	1.0 NP [d]
Phenanthrene	120,000	500	10,000	8 / 8	0.37 - 10.8	4.4	7.1 N [g]	8 / 8	1.9 - 44.9	13.7	28 G [k]	16 / 16	0.37 - 44.9	10.6	15.5 G [k]	12 / 16	0.06 - 17.3	3.3	8.6 NP [e]
Pyrene	92,000	1,000	10,000	8 / 8	0.46 - 15.4	6.1	9.8 N [g]	8 / 8	1.9 - 31.3	14.9	22 N [g]	16 / 16	0.46 - 31.3	11.9	16.7 G [k]	10 / 16	0.16 - 22.1	4.8	7.8 NP [b]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 8	All ND	NA	NC [i]	0 / 8	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]
Aroclor-1221	10	2	100	0 / 8	All ND	NA	NC [i]	0 / 8	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]
Aroclor-1232	10	2	100	0 / 8	All ND	NA	NC [i]	0 / 8	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]
Aroclor-1242	10	2	100	0 / 8	All ND	NA	NC [i]	0 / 8	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]
Aroclor-1248	10	2	100	0 / 8	All ND	NA	NC [i]	0 / 8	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]
Aroclor-1254	10	2	100	2 / 8	0.013 - 0.02	0.014	0.023 NP [a]	1 / 8	0.015 - 0.015	0.013	NC [j]	3 / 16	0.013 - 0.02	0.013	0.018 NP [a]	0 / 16	All ND	NA	NC [i]
Aroclor-1260	10	2	100	3 / 8	0.01 - 0.018	0.013	0.018 NP [a]	3 / 8	0.009 - 0.016	0.013	0.017 NP [a]	6 / 16	0.009 - 0.018	0.013	0.015 NP [a]	0 / 16	All ND	NA	NC [i]
Aroclor-1262	10	2	100	0 / 8	All ND	NA	NC [i]	0 / 8	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]
Aroclor-1268	10	2	100	0 / 8	All ND	NA	NC [i]	0 / 8	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]
PCBs (Total)	10	2	100	4 / 8	0.01 - 0.038	0.015	0.022 NP [b]	3 / 8	0.009 - 0.031	0.015	0.031 NP [b]	7 / 16	0.009 - 0.038	0.015	0.017 NP [a]	0 / 16	All ND	NA	NC [i]

Table P-040
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

0-1 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]
Inorganics (mg/Kg)							
Aluminum		NS	NS	8 / 8	5840 - 6980	6360	6670 N [g]
Antimony		20	300	0 / 8	All ND	NA	NC [i]
Arsenic	40	20	200	8 / 8	2.9 - 8.4	5.9	7.3 N [g]
Barium	200,000	1,000	10,000	8 / 8	62 - 190	134	170 N [g]
Beryllium		100	2,000	0 / 8	All ND	NA	NC [i]
Cadmium	60	2	300	8 / 8	0.39 - 1.7	0.94	1.3 N [g]
Calcium		NS	NS	8 / 8	737 - 3970	1761	2436 N [g]
Chromium	200	30	2,000	8 / 8	8.9 - 16.2	13.6	15.2 N [g]
Cobalt		NS	NS	0 / 8	All ND	NA	NC [i]
Copper		NS	NS	0 / 8	All ND	NA	NC [i]
Iron		NS	NS	8 / 8	9260 - 41400	18756	30458 G [k]
Lead	1,000	300	3,000	8 / 8	161 - **737**	**459**	**606** N [g]
Magnesium		NS	NS	8 / 8	756 - 2630	1156	1609 G [k]
Manganese		NS	NS	0 / 8	All ND	NA	NC [i]
Mercury		20	300	0 / 8	All ND	NA	NC [i]
Nickel		20	7,000	0 / 8	All ND	NA	NC [i]
Potassium		NS	NS	0 / 8	All ND	NA	NC [i]
Selenium		400	8,000	0 / 8	All ND	NA	NC [i]
Silver		100	2,000	0 / 8	All ND	NA	NC [i]
Sodium		NS	NS	0 / 8	All ND	NA	NC [i]
Thallium		8	800	0 / 8	All ND	NA	NC [i]
Vanadium		600	10,000	0 / 8	All ND	NA	NC [i]
Zinc		2,500	10,000	0 / 8	All ND	NA	NC [i]
Cyanide		100	4,000	0 / 8	All ND	NA	NC [i]

1-3 ft [1]

Parameter	Frequency of Detection	Range of Detected Concentrations	Average	95% UCL [3]
Inorganics (mg/Kg)				
Aluminum	8 / 8	3690 - 6420	5048	5674 N [g]
Antimony	0 / 8	All ND	NA	NC [i]
Arsenic	8 / 8	4.2 - **36**	11.4	**21** LN [m]
Barium	8 / 8	137 - 403	265	332 N [g]
Beryllium	0 / 8	All ND	NA	NC [i]
Cadmium	8 / 8	0.71 - **2.9**	1.6	**2.1** N [g]
Calcium	8 / 8	1280 - 5700	2619	3611 G [k]
Chromium	8 / 8	9.5 - **71.8**	24	**40** G [k]
Cobalt	0 / 8	All ND	NA	NC [i]
Copper	0 / 8	All ND	NA	NC [i]
Iron	8 / 8	9890 - 32900	18186	23469 N [g]
Lead	8 / 8	397 - **1080**	**863**	**1014** N [g]
Magnesium	8 / 8	848 - 1370	1108	1241 N [g]
Manganese	0 / 8	All ND	NA	NC [i]
Mercury	0 / 8	All ND	NA	NC [i]
Nickel	0 / 8	All ND	NA	NC [i]
Potassium	0 / 8	All ND	NA	NC [i]
Selenium	0 / 8	All ND	NA	NC [i]
Silver	0 / 8	All ND	NA	NC [i]
Sodium	0 / 8	All ND	NA	NC [i]
Thallium	0 / 8	All ND	NA	NC [i]
Vanadium	0 / 8	All ND	NA	NC [i]
Zinc	0 / 8	All ND	NA	NC [i]
Cyanide	0 / 8	All ND	NA	NC [i]

0-3 ft [1, 2]

Parameter	Frequency of Detection	Range of Detected Concentrations	Average	95% UCL [3]
Inorganics (mg/Kg)				
Aluminum	16 / 16	3690 - 6980	5485	5834 N [g]
Antimony	0 / 16	All ND	NA	NC [i]
Arsenic	16 / 16	2.9 - **36**	9.6	17.1 NP [f]
Barium	16 / 16	62 - 403	221	258 N [g]
Beryllium	0 / 16	All ND	NA	NC [i]
Cadmium	16 / 16	0.39 - **2.9**	1.4	1.7 G [k]
Calcium	16 / 16	737 - 5700	2333	2847 LN [m]
Chromium	16 / 16	8.9 - **71.8**	20	**35** NP [f]
Cobalt	0 / 16	All ND	NA	NC [i]
Copper	0 / 16	All ND	NA	NC [i]
Iron	16 / 16	9260 - 41400	18376	21830 N [h]
Lead	16 / 16	161 - **1080**	**728**	**985** NP [f]
Magnesium	16 / 16	756 - 2630	1124	1246 G [k]
Manganese	0 / 16	All ND	NA	NC [i]
Mercury	0 / 16	All ND	NA	NC [i]
Nickel	0 / 16	All ND	NA	NC [i]
Potassium	0 / 16	All ND	NA	NC [i]
Selenium	0 / 16	All ND	NA	NC [i]
Silver	0 / 16	All ND	NA	NC [i]
Sodium	0 / 16	All ND	NA	NC [i]
Thallium	0 / 16	All ND	NA	NC [i]
Vanadium	0 / 16	All ND	NA	NC [i]
Zinc	0 / 16	All ND	NA	NC [i]
Cyanide	0 / 16	All ND	NA	NC [i]

3+ ft [1]

Parameter	Frequency of Detection	Range of Detected Concentrations	Average	95% UCL [3]
Inorganics (mg/Kg)				
Aluminum	16 / 16	2720 - 9100	5768	6538 N [g]
Antimony	0 / 16	All ND	NA	NC [i]
Arsenic	16 / 16	0.75 - **34.3**	7.1	11.6 G [k]
Barium	16 / 16	12.9 - 496	148	255 G [k]
Beryllium	0 / 16	All ND	NA	NC [i]
Cadmium	16 / 16	0.15 - **23.1**	**2.4**	**4.9** LN [n]
Calcium	16 / 16	722 - 9720	2453	3498 G [k]
Chromium	16 / 16	6.9 - **39.5**	16.9	22 G [k]
Cobalt	0 / 16	All ND	NA	NC [i]
Copper	0 / 16	All ND	NA	NC [i]
Iron	16 / 16	4700 - 26800	13146	16102 N [g]
Lead	16 / 16	4.5 - **21600**	**1983**	**6372** G [l]
Magnesium	16 / 16	613 - 2810	1301	1575 G [k]
Manganese	0 / 16	All ND	NA	NC [i]
Mercury	0 / 16	All ND	NA	NC [i]
Nickel	0 / 16	All ND	NA	NC [i]
Potassium	0 / 16	All ND	NA	NC [i]
Selenium	0 / 16	All ND	NA	NC [i]
Silver	0 / 16	All ND	NA	NC [i]
Sodium	0 / 16	All ND	NA	NC [i]
Thallium	0 / 16	All ND	NA	NC [i]
Vanadium	0 / 16	All ND	NA	NC [i]
Zinc	0 / 16	All ND	NA	NC [i]
Cyanide	0 / 16	All ND	NA	NC [i]

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).

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

N - Normal Distribution
- [g] 95% Student's-t UCL
- [h] 95% Modified-t UCL

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

G - Gamma Distribution
- [k] 95% Approximate Gamma UCL
- [l] 95% Adjusted Gamma UCL

LN - Log Normal Distribution
- [m] 95% H-UCL
- [n] 95% Chebyshev (MVUE) 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 8/17/10
Checked by / Date: KJC 8/17/10

Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

One Winter Street Boston, MA 02108 • 617-292-5500

DEVAL L. PATRICK
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Secretary

KENNETH L. KIMMELL
Commissioner

May 17, 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-042

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-042 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-042. 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 11 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-042, 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, concentrations of lead were detected above the applicable MCP S-1 soil standards in samples collected from the top 3 feet in all of the soil borings on the property. The MCP requires actions to be taken to address this condition, which may include removal of this layer of soil and replacing it with clean soil or covering this layer of soil 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 not determined to exist for the soil located between 3 feet and 12 feet below the ground surface. This is because the concentrations of PAHs, cadmium and/or lead were detected above the applicable Method 1 S-1 soil standards in soil samples collected from a depth greater than 3 feet in 9 of the 11 borings on the property. Because this soil is at depth, it does not necessarily need to be removed to be protective of the current use of the property. Soil below three 3 feet should not be disturbed on this property unless it is under the direction and supervision of a Licensed Site Professional, and done in accordance with the MCP. If this soil is to remain in place, land use restrictions and/or controls, defined as a Notice of Activity and Use Limitation or AUL in the MCP, may be necessary for the property to ensure that future activities or changes in use do not create the potential for humans to be exposed to the soil below 3 feet in depth.

Property P-042 Final Risk Evaluation and Response Action Recommendations: For the purpose of making final risk evaluation determinations, MassDEP evaluated data from Property P-042 along with data from surrounding properties so that data consistency and COC distribution could be taken into account to ensure the data being evaluated was representative. In cases where MassDEP determined the data was representative, the 95% UCL was not applied for final risk evaluation decision making. Based on this evaluation, MassDEP has determined the following for Property P-042:

- MassDEP has verified that its previous request for USEPA assistance on this property was appropriate. Elimination of the 95% UCL as a risk evaluation review criteria did not result in any changes from the preliminary risk evaluation provided to USEPA for typology chart development.

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 to address contamination in the zero to 1 foot, and 1 to 3 foot soil layers. 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 contamination present at a depth greater than 3 feet below the ground surface.

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

Enclosure

ec: CLEAN, President – Eddie Johnson
City of New Bedford, Office of Environmental Stewardship

cc: Owner, Property P-042

Table P-042
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 / 11	All ND	NA	NC [a]	2 / 11	0.25 - 0.27	0.13	0.27 NP [c]	2 / 22	0.25 - 0.27	0.12	0.25 NP [d]	0 / 21	All ND	NA	NC [a]
Acenaphthene	180,000	1,000	10,000	0 / 11	All ND	NA	NC [a]	4 / 11	0.22 - 0.79	0.23	0.62 NP [c]	4 / 22	0.22 - 0.79	0.18	0.34 NP [c]	1 / 21	0.44 - 0.44	0.12	NC [b]
Acenaphthylene	180,000	1,000	10,000	8 / 11	0.26 - 0.85	0.39	0.55 NP [c]	7 / 11	0.3 - 1.2	0.47	0.74 NP [c]	15 / 22	0.26 - 1.2	0.44	0.58 NP [c]	5 / 21	0.2 - 0.66	0.17	0.36 NP [c]
Anthracene	920,000	1,000	10,000	10 / 11	0.22 - 1.1	0.55	0.71 NP [d]	9 / 11	0.29 - 2.2	0.94	1.4 NP [d]	19 / 22	0.22 - 2.2	0.81	1.0 NP [e]	6 / 21	0.26 - 1.1	0.26	0.69 NP [c]
Benzo(a)anthracene	160	7	3,000	11 / 11	0.28 - 2.8	1.2	1.5 N [i]	10 / 11	0.2 - 3.2	1.5	2.1 NP [d]	21 / 22	0.2 - 3.2	1.4	1.6 NP [e]	9 / 21	0.42 - 3.6	0.57	1.1 NP [d]
Benzo(a)pyrene	16	2	300	11 / 11	0.3 - **2.4**	1.1	1.4 N [i]	9 / 11	0.65 - **2.6**	1.3	1.8 NP [d]	20 / 22	0.3 - **2.6**	1.2	1.5 NP [e]	9 / 21	0.38 - **3.2**	0.51	0.93 NP [d]
Benzo(b)fluoranthene	160	7	3,000	11 / 11	0.44 - 3.2	1.5	2.0 N [i]	11 / 11	0.21 - 3.5	1.7	2.3 N [i]	22 / 22	0.21 - 3.5	1.6	1.9 N [i]	10 / 21	0.29 - 4.1	0.69	1.2 NP [d]
Benzo(g,h,i)perylene	120,000	1,000	10,000	11 / 11	0.24 - 1.4	0.72	0.92 N [i]	9 / 11	0.5 - 1.7	0.81	1.1 NP [d]	20 / 22	0.24 - 1.7	0.78	0.96 NP [e]	9 / 21	0.26 - 2	0.36	0.62 NP [d]
Benzo(k)fluoranthene	1,600	70	10,000	11 / 11	0.18 - 1.4	0.63	0.81 N [i]	9 / 11	0.34 - 1.4	0.66	0.91 NP [d]	20 / 22	0.18 - 1.4	0.65	0.78 NP [e]	9 / 21	0.21 - 1.7	0.29	0.50 NP [d]
Chrysene	16,000	70	10,000	11 / 11	0.36 - 2.7	1.3	1.7 N [i]	11 / 11	0.18 - 3.3	1.6	2.2 N [i]	22 / 22	0.18 - 3.3	1.5	1.9 G [k]	9 / 21	0.45 - 3.2	0.55	1.0 NP [d]
Dibenz(a,h)anthracene	16	0.7	300	5 / 11	0.18 - 0.44	0.18	0.30 NP [c]	5 / 11	0.23 - 0.49	0.21	0.38 NP [c]	10 / 22	0.18 - 0.49	0.20	0.29 NP [c]	2 / 21	0.31 - 0.53	0.13	0.53 NP [c]
Fluoranthene	120,000	1,000	10,000	11 / 11	0.69 - 4.4	2.3	2.9 N [i]	11 / 11	0.31 - 5.8	2.8	3.9 N [i]	22 / 22	0.31 - 5.8	2.6	3.3 G [k]	10 / 21	0.36 - 6.3	1.1	2.0 NP [c]
Fluorene	120,000	1,000	10,000	1 / 11	0.3 - 0.3	0.11	NC [b]	6 / 11	0.2 - 1	0.32	0.53 NP [c]	7 / 22	0.2 - 1	0.25	0.40 NP [c]	3 / 21	0.24 - 0.48	0.14	0.48 NP [c]
Indeno(1,2,3-cd)pyrene	160	7	3,000	11 / 11	0.25 - 1.6	0.78	0.98 N [i]	9 / 11	0.5 - 1.8	0.88	1.2 NP [d]	20 / 22	0.25 - 1.8	0.85	1.0 NP [c]	9 / 21	0.28 - 2.4	0.39	0.69 NP [d]
Naphthalene	61,000	100	10,000	0 / 11	All ND	NA	NC [a]	2 / 11	0.21 - 0.34	0.13	0.25 NP [d]	2 / 22	0.21 - 0.34	0.12	0.23 NP [d]	1 / 21	0.28 - 0.28	0.11	NC [b]
Phenanthrene	120,000	500	10,000	11 / 11	0.5 - 3	1.6	2.0 N [i]	10 / 11	0.26 - 6.1	2.5	3.7 NP [d]	21 / 22	0.26 - 6.1	2.2	3.5 NP [f]	9 / 21	0.39 - 3.7	0.71	1.3 NP [c]
Pyrene	92,000	1,000	10,000	11 / 11	0.56 - 3.8	2.1	2.6 N [i]	11 / 11	0.28 - 5.2	2.5	3.4 N [i]	22 / 22	0.28 - 5.2	2.3	2.8 N [i]	10 / 21	0.32 - 5.3	0.91	1.6 NP [c]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 21	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 21	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 21	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 21	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 21	All ND	NA	NC [a]
Aroclor-1254	10	2	100	2 / 11	0.024 - 0.0513	0.016	0.051 NP [c]	0 / 11	All ND	NA	NC [a]	2 / 22	0.024 - 0.0513	0.014	0.051 NP [c]	0 / 21	All ND	NA	NC [a]
Aroclor-1260	10	2	100	9 / 11	0.022 - 0.0412	0.027	0.034 NP [d]	5 / 11	0.0193 - 0.047	0.019	0.036 NP [c]	14 / 22	0.0193 - 0.047	0.022	0.030 NP [c]	0 / 21	All ND	NA	NC [a]
Aroclor-1262	10	2	100	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 21	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 21	All ND	NA	NC [a]
PCBs (Total)	10	2	100	9 / 11	0.0244 - 0.0925	0.035	0.049 NP [e]	5 / 11	0.0193 - 0.047	0.021	0.035 NP [c]	14 / 22	0.0193 - 0.0925	0.026	0.034 NP [d]	0 / 21	All ND	NA	NC [a]

Table P-042
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
Inorganics (mg/Kg)																			
Aluminum		NS	NS	11 / 11	4170 - 5750	5086	5426 N [i]	11 / 11	3400 - 6090	5128	5569 N [i]	22 / 22	3400 - 6090	5114	5328 N [i]	21 / 21	3150 - 8380	5379	5900 N [i]
Antimony		20	300	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 21	All ND	NA	NC [a]
Arsenic	40	20	200	11 / 11	3.9 - 9.2	6.7	7.7 N [i]	11 / 11	2.3 - 17.4	10.1	12.8 N [i]	22 / 22	2.3 - 17.4	9.0	10.2 N [i]	21 / 21	1 - 16.4	5.8	10.8 NP [g]
Barium	200,000	1,000	10,000	11 / 11	93.4 - 364	183	230 N [i]	11 / 11	45.2 - 901	279	450 G [k]	22 / 22	45.2 - 901	247	306 G [k]	21 / 21	10.9 - **4850**	325	**2597** NP [h]
Beryllium		100	2,000	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 21	All ND	NA	NC [a]
Cadmium	60	2	300	11 / 11	0.43 - 1.1	0.69	0.82 N [i]	11 / 11	0.2 - **2.4**	1.2	1.5 N [i]	22 / 22	0.2 - **2.4**	1.0	1.2 G [k]	20 / 21	0.077 - **11.8**	1.3	**3.7** NP [f]
Calcium		NS	NS	11 / 11	1390 - 5010	2485	3047 G [k]	11 / 11	770 - 12600	3381	5320 G [k]	22 / 22	770 - 12600	3082	5085 NP [g]	21 / 21	494 - 6120	1904	2596 G [k]
Chromium	200	30	2,000	11 / 11	8.6 - 13.2	10.9	11.7 N [i]	11 / 11	6.4 - 24.2	13.9	16.8 N [i]	22 / 22	6.4 - 24.2	12.9	14.3 G [k]	21 / 21	5.9 - **34.3**	12.6	15.3 N [j]
Cobalt		NS	NS	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 21	All ND	NA	NC [a]
Copper		NS	NS	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 21	All ND	NA	NC [a]
Iron		NS	NS	11 / 11	6980 - 11800	9608	10474 N [i]	11 / 11	5630 - 36300	16454	21930 N [i]	22 / 22	5630 - 36300	14172	20712 NP [g]	21 / 21	4840 - 75400	14639	30100 NP [g]
Lead	1,000	300	3,000	11 / 11	**407** - **2010**	**960**	**1264** N [i]	11 / 11	171 - **3640**	**977**	**1622** G [k]	22 / 22	171 - **3640**	**971**	**1216** G [k]	21 / 21	2.6 - **3230**	**505**	**2285** NP [h]
Magnesium		NS	NS	11 / 11	1010 - 1530	1183	1276 N [i]	11 / 11	738 - 1830	1110	1267 N [i]	22 / 22	738 - 1830	1134	1210 LN [l]	21 / 21	522 - 3720	1328	1602 G [k]
Manganese		NS	NS	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 21	All ND	NA	NC [a]
Mercury		20	300	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 21	All ND	NA	NC [a]
Nickel		20	7,000	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 21	All ND	NA	NC [a]
Potassium		NS	NS	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 21	All ND	NA	NC [a]
Selenium		400	8,000	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 21	All ND	NA	NC [a]
Silver		100	2,000	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 21	All ND	NA	NC [a]
Sodium		NS	NS	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 21	All ND	NA	NC [a]
Thallium		8	800	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 21	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 21	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 21	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 21	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] 95% Chebyshev (Mean, Sd) UCL
[h] 99% Chebyshev (Mean, Sd) UCL

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

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

LN - Log Normal Distribution
[l] 95% H-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 8/17/10
Checked by / Date: KJC 8/17/10

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

DEVAL L. PATRICK
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May 20, 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-004
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-004 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-004.

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 seven 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. b.g.s., 0-3 ft. b.g.s. and >3 ft. b.g.s.) 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-004, MassDEP provided you the following preliminary determinations:

- An Imminent Hazard condition, as defined in the MCP, was determined to exist for the current use of the property for the top 1 foot of soil. Specifically, lead was detected in soil borings P-004-SB-04, P-004-SB-05, P-004-SB-06 in the top foot of soil at concentrations greater than or equal to the site-specific Imminent Hazard levels established by MassDEP for this Site. The MCP requires elimination or control of all Imminent Hazards. This may be accomplished by removing the top foot of soil in the vicinity of these borings and replacing it with clean soil or it can be accomplished by otherwise covering it with clean soil or an impervious surface or cap. No activities should occur on this property that will disrupt the top foot of soil until removal or cover measures are complete.

- 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, concentrations of PAHs and/or lead were detected in samples collected from the top 3 feet in soil borings P-004-SB-01, P-004-SB-02, P-004-SB-03, P-004-SB-04, P-004-SB-05, and P-004-SB-06 above the applicable MCP S-1 soil standards. The MCP requires actions to be taken to address this condition, which may include removal of this layer of soil and replacing it with clean soil or covering this layer of soil 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 not been determined to exist for the soil located between 3 feet and 12 feet below the ground surface. This is because concentrations of lead and/or arsenic were detected above the applicable MCP S-1 soil standard in the 2 soil borings identified as P-004-SB-01 and P-004-SB-02 in samples collected from a depth greater than 3 feet. Because this soil is at depth, it does not necessarily need to be removed to be protective of the current use of the property.

Property P-004 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-004:

- MassDEP has verified its previous request for USEPA assistance to address the Imminent Hazard concentrations and that a Condition of No Significant Risk does not exist for the 0 to 3 foot interval. Response actions are necessary to address the COC contamination in the area of all of the soil borings at this interval. This determination was made while taking into account data from surrounding properties that indicate it is not necessary to apply the 95% UCL on the 0 to 3 foot soil horizon data.

- Applying the 95% UCL is not necessary for the soil located greater than 3 feet b.g.s. because the COC concentrations observed are consistent with results from samples taken in the surrounding area. The actual average for COCs at this depth interval is below the applicable MCP Method 1 S-1 soil standard. As such, a Condition of No Significant Risk exists on this property for the soil located between 3 and 12 feet, and 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/lm

Enclosure

Ecc: MassDEP – SERO
Attn: Millie Garcia-Serrano
Len Pinaud

CLEAN, President – Eddie Johnson
City of New Bedford, Office of Environmental Stewardship
Jhelijhnsn6@aol.com

cc: Owner, Property P-004

Table P-004
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	2 / 7	0.4 - 0.52	0.31	0.52 NP [a]	0 / 7	All ND	NA	NC [h]	2 / 14	0.4 - 0.52	0.23	0.42 NP [e]	0 / 9	All ND	NA	NC [h]
Acenaphthene	180,000	1,000	10,000	1 / 7	0.72 - 0.72	0.31	NC [g]	0 / 7	All ND	NA	NC [h]	1 / 14	0.72 - 0.72	0.22	NC [g]	0 / 9	All ND	NA	NC [h]
Acenaphthylene	180,000	1,000	10,000	3 / 7	0.29 - 2.8	0.67	2.8 NP [a]	2 / 7	0.25 - 0.27	0.21	0.28 NP [e]	5 / 14	0.25 - 2.8	0.36	0.63 NP [a]	1 / 9	0.22 - 0.22	0.19	NC [g]
Anthracene	920,000	1,000	10,000	3 / 7	0.37 - 5.3	1.0	6.1 NP [b]	3 / 7	0.2 - 0.5	0.26	0.50 NP [a]	6 / 14	0.2 - 5.3	0.52	1.0 NP [a]	1 / 9	0.28 - 0.28	0.20	NC [g]
Benzo(a)anthracene	160	7	3,000	5 / 7	0.38 - **10**	2.0	**8.0** NP [c]	3 / 7	0.59 - 1.2	0.52	1.2 NP [a]	8 / 14	0.38 - **10**	1.0	2.0 NP [a]	1 / 9	0.98 - 0.98	0.28	NC [g]
Benzo(a)pyrene	16	2	300	6 / 7	0.36 - **6.9**	1.5	**5.5** NP [c]	3 / 7	0.58 - 1.3	0.52	1.3 NP [a]	9 / 14	0.36 - **6.9**	0.84	1.5 NP [a]	1 / 9	0.99 - 0.99	0.28	NC [g]
Benzo(b)fluoranthene	160	7	3,000	6 / 7	0.57 - **9.6**	2.2	**7.7** NP [c]	4 / 7	0.29 - 1.7	0.72	1.6 NP [a]	10 / 14	0.29 - **9.6**	1.2	2.1 NP [d]	1 / 9	1.4 - 1.4	0.32	NC [g]
Benzo(g,h,i)perylene	120,000	1,000	10,000	4 / 7	0.22 - 2.6	0.66	1.6 NP [d]	3 / 7	0.25 - 0.64	0.31	0.64 NP [a]	7 / 14	0.22 - 2.6	0.42	0.66 NP [a]	1 / 9	0.46 - 0.46	0.22	NC [g]
Benzo(k)fluoranthene	1,600	70	10,000	5 / 7	0.27 - 1.7	0.55	1.4 NP [c]	3 / 7	0.28 - 0.56	0.29	0.56 NP [a]	8 / 14	0.27 - 1.7	0.38	0.53 NP [a]	1 / 9	0.5 - 0.5	0.22	NC [g]
Chrysene	16,000	70	10,000	6 / 7	0.43 - 8	1.8	6.4 NP [c]	3 / 7	0.59 - 1.3	0.55	1.0 NP [e]	9 / 14	0.43 - 8	0.95	1.7 NP [a]	1 / 9	1 - 1	0.28	NC [g]
Dibenz(a,h)anthracene	16	0.7	300	1 / 7	**0.84 - 0.84**	0.33	NC [g]	0 / 7	All ND	NA	NC [h]	1 / 14	**0.84 - 0.84**	0.23	NC [g]	0 / 9	All ND	NA	NC [h]
Fluoranthene	120,000	1,000	10,000	6 / 7	0.57 - 28	4.9	29 NP [b]	5 / 7	0.21 - 2.4	0.9	1.7 NP [a]	11 / 14	0.21 - 28	2.3	10.5 NP [b]	2 / 9	0.54 - 2.22	0.42	2.2 NP [a]
Fluorene	120,000	1,000	10,000	2 / 7	0.31 - 1.9	0.50	1.9 NP [d]	1 / 7	0.18 - 0.18	0.18	NC [g]	3 / 14	0.18 - 1.9	0.29	0.45 NP [e]	0 / 9	All ND	NA	NC [h]
Indeno(1,2,3-cd)pyrene	160	7	3,000	5 / 7	0.29 - 3.1	0.80	2.6 NP [c]	3 / 7	0.35 - 0.72	0.35	0.72 NP [a]	8 / 14	0.29 - 3.1	0.50	0.82 NP [a]	1 / 9	0.63 - 0.63	0.24	NC [g]
Naphthalene	61,000	100	10,000	2 / 7	0.48 - 0.51	0.32	0.51 NP [a]	1 / 7	0.32 - 0.32	0.20	NC [g]	3 / 14	0.32 - 0.51	0.24	0.48 NP [a]	0 / 9	All ND	NA	NC [h]
Phenanthrene	120,000	500	10,000	5 / 7	0.39 - 25	4.2	19.9 NP [c]	3 / 7	0.65 - 1.7	0.63	1.7 NP [a]	8 / 14	0.39 - 25	1.8	9.3 NP [b]	1 / 9	1.2 - 1.2	0.30	NC [g]
Pyrene	92,000	1,000	10,000	6 / 7	0.73 - 23	4.3	24 NP [b]	4 / 7	0.5 - 2.3	0.9	2.0 NP [a]	10 / 14	0.5 - 23	2.0	4.4 NP [d]	2 / 9	0.52 - 1.9	0.38	1.9 NP [a]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 7	All ND	NA	NC [h]	0 / 7	All ND	NA	NC [h]	0 / 14	All ND	NA	NC [h]	0 / 9	All ND	NA	NC [h]
Aroclor-1221	10	2	100	0 / 7	All ND	NA	NC [h]	0 / 7	All ND	NA	NC [h]	0 / 14	All ND	NA	NC [h]	0 / 9	All ND	NA	NC [h]
Aroclor-1232	10	2	100	0 / 7	All ND	NA	NC [h]	0 / 7	All ND	NA	NC [h]	0 / 14	All ND	NA	NC [h]	0 / 9	All ND	NA	NC [h]
Aroclor-1242	10	2	100	0 / 7	All ND	NA	NC [h]	0 / 7	All ND	NA	NC [h]	0 / 14	All ND	NA	NC [h]	0 / 9	All ND	NA	NC [h]
Aroclor-1248	10	2	100	0 / 7	All ND	NA	NC [h]	0 / 7	All ND	NA	NC [h]	0 / 14	All ND	NA	NC [h]	0 / 9	All ND	NA	NC [h]
Aroclor-1254	10	2	100	0 / 7	All ND	NA	NC [h]	0 / 7	All ND	NA	NC [h]	0 / 14	All ND	NA	NC [h]	0 / 9	All ND	NA	NC [h]
Aroclor-1260	10	2	100	0 / 7	All ND	NA	NC [h]	0 / 7	All ND	NA	NC [h]	0 / 14	All ND	NA	NC [h]	0 / 9	All ND	NA	NC [h]
Aroclor-1262	10	2	100	0 / 7	All ND	NA	NC [h]	0 / 7	All ND	NA	NC [h]	0 / 14	All ND	NA	NC [h]	0 / 9	All ND	NA	NC [h]
Aroclor-1268	10	2	100	0 / 7	All ND	NA	NC [h]	0 / 7	All ND	NA	NC [h]	0 / 14	All ND	NA	NC [h]	0 / 9	All ND	NA	NC [h]
PCBs (Total)	10	2	100	0 / 7	All ND	NA	NC [h]	0 / 7	All ND	NA	NC [h]	0 / 14	All ND	NA	NC [h]	0 / 9	All ND	NA	NC [h]

Table P-004
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
Inorganics (mg/Kg)																			
Aluminum		NS	NS	7 / 7	3370 - 4740	4056	4467 N [i]	7 / 7	2290 - 5680	3397	4236 N [i]	14 / 14	2290 - 5680	3617	3989 N [i]	9 / 9	1040 - 5400	2622	3400 N [i]
Antimony		20	300	0 / 7	All ND	NA	NC [h]	0 / 7	All ND	NA	NC [h]	0 / 14	All ND	NA	NC [h]	0 / 9	All ND	NA	NC [h]
Arsenic	40	20	200	7 / 7	5.6 - 18.4	12.3	16.3 N [i]	7 / 7	2.6 - 14.6	7.7	10.7 N [i]	14 / 14	2.6 - 18.4	9.2	11.5 G [j]	9 / 9	0.57 - **24**	6.1	12.2 G [j]
Barium	200,000	1,000	10,000	7 / 7	115 - 563	294	405 N [i]	7 / 7	25.4 - 505	214	327 N [i]	14 / 14	25.4 - 563	241	298 N [i]	9 / 9	5.3 - 323	89	533 NP [f]
Beryllium		100	2,000	0 / 7	All ND	NA	NC [h]	0 / 7	All ND	NA	NC [h]	0 / 14	All ND	NA	NC [h]	0 / 9	All ND	NA	NC [h]
Cadmium	60	2	300	6 / 7	0.75 - **2.1**	1.2	1.6 NP [e]	3 / 7	0.83 - 0.96	0.60	0.91 NP [e]	9 / 14	0.75 - **2.1**	0.81	1.1 NP [e]	2 / 9	0.88 - 1.2	0.47	1.2 NP [a]
Calcium		NS	NS	7 / 7	2280 - 6550	3893	5161 N [i]	7 / 7	622 - 5060	2515	3557 N [i]	14 / 14	622 - 6550	2974	3575 N [i]	9 / 9	318 - 6070	1897	3963 G [j]
Chromium	200	30	2,000	7 / 7	9.5 - 19.7	14.9	17.8 N [i]	7 / 7	5.3 - 16.3	11.3	14.1 N [i]	14 / 14	5.3 - 19.7	12.5	14 N [i]	9 / 9	2.4 - 19.8	8.6	11.9 N [i]
Cobalt		NS	NS	0 / 7	All ND	NA	NC [h]	0 / 7	All ND	NA	NC [h]	0 / 14	All ND	NA	NC [h]	0 / 9	All ND	NA	NC [h]
Copper		NS	NS	0 / 7	All ND	NA	NC [h]	0 / 7	All ND	NA	NC [h]	0 / 14	All ND	NA	NC [h]	0 / 9	All ND	NA	NC [h]
Iron		NS	NS	7 / 7	4440 - 9610	7409	8700 N [i]	7 / 7	2570 - 9400	5331	7174 N [i]	14 / 14	2570 - 9610	6024	6923 N [i]	9 / 9	1470 - 9420	4384	5929 N [i]
Lead	1,000	300	3,000	7 / 7	292 - **1820**	**1067**	**1468** N [i]	7 / 7	57.6 - **1240**	600	**897** N [i]	14 / 14	57.6 - **1820**	**756**	**940** N [i]	9 / 9	2 - **943**	248	**1357** G [k]
Magnesium		NS	NS	7 / 7	615 - 1860	1049	1335 N [i]	7 / 7	511 - 1260	811	1025 N [i]	14 / 14	511 - 1860	890	1022 G [j]	9 / 9	387 - 1530	866	1061 N [i]
Manganese		NS	NS	0 / 7	All ND	NA	NC [h]	0 / 7	All ND	NA	NC [h]	0 / 14	All ND	NA	NC [h]	0 / 9	All ND	NA	NC [h]
Mercury		20	300	0 / 7	All ND	NA	NC [h]	0 / 7	All ND	NA	NC [h]	0 / 14	All ND	NA	NC [h]	0 / 9	All ND	NA	NC [h]
Nickel		20	7,000	0 / 7	All ND	NA	NC [h]	0 / 7	All ND	NA	NC [h]	0 / 14	All ND	NA	NC [h]	0 / 9	All ND	NA	NC [h]
Potassium		NS	NS	0 / 7	All ND	NA	NC [h]	0 / 7	All ND	NA	NC [h]	0 / 14	All ND	NA	NC [h]	0 / 9	All ND	NA	NC [h]
Selenium		400	8,000	0 / 7	All ND	NA	NC [h]	0 / 7	All ND	NA	NC [h]	0 / 14	All ND	NA	NC [h]	0 / 9	All ND	NA	NC [h]
Silver		100	2,000	0 / 7	All ND	NA	NC [h]	0 / 7	All ND	NA	NC [h]	0 / 14	All ND	NA	NC [h]	0 / 9	All ND	NA	NC [h]
Sodium		NS	NS	0 / 7	All ND	NA	NC [h]	0 / 7	All ND	NA	NC [h]	0 / 14	All ND	NA	NC [h]	0 / 9	All ND	NA	NC [h]
Thallium		8	800	0 / 7	All ND	NA	NC [h]	0 / 7	All ND	NA	NC [h]	0 / 14	All ND	NA	NC [h]	0 / 9	All ND	NA	NC [h]
Vanadium		600	10,000	0 / 7	All ND	NA	NC [h]	0 / 7	All ND	NA	NC [h]	0 / 14	All ND	NA	NC [h]	0 / 9	All ND	NA	NC [h]
Zinc		2,500	10,000	0 / 7	All ND	NA	NC [h]	0 / 7	All ND	NA	NC [h]	0 / 14	All ND	NA	NC [h]	0 / 9	All ND	NA	NC [h]
Cyanide		100	4,000	0 / 7	All ND	NA	NC [h]	0 / 7	All ND	NA	NC [h]	0 / 14	All ND	NA	NC [h]	0 / 9	All ND	NA	NC [h]

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).

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

N - Normal Distribution
[i] 95% Student's-t UCL

G - Gamma Distribution
[j] 95% Approximate Gamma UCL
[k] 95% Adjusted Gamma UCL

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

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

Prepared by / Date: BJR 07/29/10
Checked by / Date: KJC 07/29/10

P:\Documents\SITES\PSWS NEW BEDFORD\Supplemental Assessment\Results & Communication\
Evaluations as of 09 20 10, P-004

MassDEP

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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May 20, 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-011
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-011 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-011.

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 seven 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. b.g.s., 0-3 ft. b.g.s. and >3 ft. b.g.s.) 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-011, MassDEP provided you the following preliminary determinations:

- An Imminent Hazard condition, as defined in the MCP, was determined to exist for the current use of the property for the top 1 foot of soil. Specifically, lead was detected in soil boring P-011-SB-04 in the top foot of soil at concentrations greater than or equal to the site-specific Imminent Hazard levels established by MassDEP for this Site. The MCP requires elimination or control of all Imminent Hazards. This may be accomplished by removing the top foot of soil in the vicinity of these soil borings and replacing it with clean soil or it can be accomplished by otherwise covering those areas with clean soil or an impervious surface or cap. No activities should occur on this property that will disrupt the top foot of soil until removal or cover measures are complete.

- 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, concentrations of PAHs and/or lead were detected in samples collected from the top three 3 feet in soil borings P-011-SB-02 and P-011-SB-04 above the applicable MCP S-1 soil standards. The MCP requires actions to be taken to address this condition, which may include removal of this layer of soil in the vicinity of these soil borings and replacing it with clean soil or covering those areas in this layer of soil 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 not determined to exist for the soil located between 3 feet and 12 feet below the ground surface. This is because concentrations of PAHs and/or lead were detected above the applicable MCP S-1 soil standard in the soil borings identified as P-011-SB-03 and P-011-SB-04 in samples collected from a depth greater than 3 feet.

Property P-011 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-011:

- MassDEP has verified its previous request for USEPA assistance to address the Imminent Hazard concentrations and that a Condition of No Significant Risk did not exist for the 0 to 3 foot interval. Response actions were necessary to address the COC contamination in the area of all of the soil borings at this interval. This determination was made while taking into account data from surrounding properties that indicate it is not necessary to apply the 95% UCL on the 0 to 3 foot soil horizon data.

- Applying the 95% UCL is not necessary for the soil located greater than 3 feet b.g.s. because the COC concentrations observed are consistent with results from samples taken in the surrounding area. The actual average for COCs at this depth interval is below the applicable MCP Method 1 S-1 soil standard. As such, a Condition of No Significant Risk exists on this property for the soil located between 3 and 12 feet, and 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/lm

Enclosure

Ecc: MassDEP – SERO
Attn: Millie Garcia-Serrano
Len Pinaud

CLEAN, President – Eddie Johnson
City of New Bedford, Office of Environmental Stewardship
Jhelijhnsn6@aol.com

cc: Owner, Property P-011

Table P-011
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
PAHs (mg/Kg)																			
2-Methylnaphthalene	61,000	300	5,000	1 / 7	0.93 - 0.93	0.27	NC [a]	0 / 7	All ND	NA	NC [b]	1 / 14	0.93 - 0.93	0.19	NC [a]	0 / 10	All ND	NA	NC [b]
Acenaphthene	180,000	1,000	10,000	1 / 7	3.93 - 3.93	0.70	NC [a]	0 / 7	All ND	NA	NC [b]	1 / 14	3.93 - 3.93	0.33	NC [a]	1 / 10	0.17 - 0.17	0.15	NC [a]
Acenaphthylene	180,000	1,000	10,000	0 / 7	All ND	NA	NC [b]	3 / 7	0.19 - 0.28	0.18	0.28 NP [f]	3 / 14	0.19 - 0.28	0.17	0.24 NP [f]	2 / 10	0.25 - 0.3	0.17	0.27 NP [h]
Anthracene	920,000	1,000	10,000	4 / 7	0.26 - 4.81	0.88	5.2 NP [c]	4 / 7	0.2 - 0.71	0.33	0.59 NP [f]	8 / 14	0.2 - 4.81	0.51	0.96 NP [f]	2 / 10	0.7 - 1.14	0.30	0.85 NP [h]
Benzo(a)anthracene	160	7	3,000	7 / 7	0.16 - **13.1**	2.5	**9.8** G [k]	4 / 7	1.07 - **7.63**	1.9	4.2 NP [f]	11 / 14	0.16 - **13.1**	2.1	5.3 NP [d]	2 / 10	1.65 - 2.65	0.55	2.7 NP [f]
Benzo(a)pyrene	16	2	300	6 / 7	0.17 - **14.6**	**2.7**	**11.5** NP [d]	4 / 7	1.01 - **6.45**	1.9	**5.0** NP [f]	10 / 14	0.17 - **14.6**	**2.2**	**3.7** NP [e]	2 / 10	1.68 - **2.52**	0.54	**2.5** NP [f]
Benzo(b)fluoranthene	160	7	3,000	7 / 7	0.2 - **20.1**	3.7	**25** G [l]	4 / 7	1.31 - **7.66**	2.5	6.9 NP [f]	11 / 14	0.2 - **20.1**	2.9	**7.5** NP [d]	2 / 10	2.16 - 3.11	0.64	2.5 NP [h]
Benzo(g,h,i)perylene	120,000	1,000	10,000	5 / 7	0.19 - 4.71	1.1	3.9 NP [d]	4 / 7	0.72 - 1.72	0.71	1.4 NP [f]	9 / 14	0.19 - 4.71	0.85	1.3 NP [f]	2 / 10	1.1 - 1.5	0.38	1.5 NP [f]
Benzo(k)fluoranthene	1,600	70	10,000	4 / 7	0.32 - 7.26	1.3	3.5 NP [e]	4 / 7	0.46 - 2.41	0.79	1.8 NP [f]	8 / 14	0.32 - 7.26	0.96	1.7 NP [f]	2 / 10	0.74 - 1.14	0.31	0.88 NP [h]
Chrysene	16,000	70	10,000	7 / 7	0.18 - 13.1	2.5	9.7 G [k]	4 / 7	0.95 - 7.26	1.8	4.1 NP [f]	11 / 14	0.18 - 13.1	2.1	5.2 NP [d]	2 / 10	1.64 - 2.5	0.53	2.5 NP [f]
Dibenz(a,h)anthracene	16	0.7	300	3 / 7	0.21 - **1.37**	0.36	**1.4** NP [f]	4 / 7	0.18 - 0.56	0.26	0.43 NP [f]	7 / 14	0.18 - **1.37**	0.30	0.43 NP [h]	2 / 10	0.26 - 0.41	0.18	0.31 NP [h]
Fluoranthene	120,000	1,000	10,000	7 / 7	0.31 - 25.8	4.8	18.9 G [k]	5 / 7	0.16 - 7.7	2.3	4.5 NP [f]	12 / 14	0.16 - 25.8	3.1	8.6 NP [d]	2 / 10	3.46 - 5.6	1.0	5.6 NP [f]
Fluorene	120,000	1,000	10,000	1 / 7	2.73 - 2.73	0.53	NC [a]	1 / 7	0.25 - 0.25	0.17	NC [a]	2 / 14	0.25 - 2.73	0.29	0.60 NP [e]	2 / 10	0.31 - 0.31	0.18	NC [a]
Indeno(1,2,3-cd)pyrene	160	7	3,000	5 / 7	0.19 - 6.33	1.4	5.2 NP [d]	4 / 7	0.77 - 2.07	0.79	1.6 NP [f]	9 / 14	0.19 - 6.33	0.98	1.6 NP [f]	2 / 10	1.2 - 1.7	0.41	1.7 NP [f]
Naphthalene	61,000	100	10,000	1 / 7	4.14 - 4.14	0.73	NC [a]	0 / 7	All ND	NA	NC [b]	1 / 14	4.14 - 4.14	0.34	NC [a]	1 / 10	0.21 - 0.21	0.15	NC [a]
Phenanthrene	120,000	500	10,000	7 / 7	0.16 - 20.3	3.5	31 NP [g]	4 / 7	0.65 - 2.73	1.1	2.7 NP [f]	11 / 14	0.16 - 20.3	1.9	7.9 NP [c]	2 / 10	3.27 - 4.29	0.87	4.3 NP [f]
Pyrene	92,000	1,000	10,000	7 / 7	0.25 - 21.2	4.3	15.8 G [k]	5 / 7	0.18 - 11.6	2.9	6.1 NP [h]	12 / 14	0.18 - 21.2	3.4	8.4 NP [d]	2 / 10	3.35 - 5.09	0.96	4.0 NP [h]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]
Aroclor-1221	10	2	100	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]
Aroclor-1232	10	2	100	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]
Aroclor-1242	10	2	100	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]
Aroclor-1248	10	2	100	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]
Aroclor-1254	10	2	100	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]
Aroclor-1260	10	2	100	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]
Aroclor-1262	10	2	100	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]
Aroclor-1268	10	2	100	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]
PCBs (Total)	10	2	100	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]

Table P-011
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
Inorganics (mg/Kg)																			
Aluminum		NS	NS	7 / 7	4930 - 8310	6677	7571 N [m]	7 / 7	4030 - 9260	6474	7696 N [m]	14 / 14	4030 - 9260	6542	7089 N [m]	10 / 10	2770 - 9550	6720	8091 N [m]
Antimony		20	300	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]
Arsenic	40	20	200	5 / 7	2.5 - 3.1	2.3	2.9 NP [f]	3 / 7	2.7 - 5.7	2.1	5.7 NP [f]	8 / 14	2.5 - 5.7	2.2	3.4 NP [f]	1 / 10	6.5 - 6.5	1.4	NC [a]
Barium	200,000	1,000	10,000	7 / 7	11.3 - 43	23	30 N [m]	7 / 7	14.3 - 75.8	30	50 G [k]	14 / 14	11.3 - 75.8	28	45 NP [i]	10 / 10	9.1 - 238	41	137 NP [i]
Beryllium		100	2,000	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]
Cadmium	60	2	300	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]
Calcium		NS	NS	7 / 7	301 - 746	548	686 N [m]	7 / 7	202 - 1120	496	730 N [m]	14 / 14	202 - 1120	513	628 G [k]	10 / 10	99.6 - 2160	658	1063 G [k]
Chromium	200	30	2,000	7 / 7	14.5 - 18.8	16.2	17.2 N [m]	7 / 7	5.1 - 18.2	11.8	15.2 N [m]	14 / 14	5.1 - 18.8	13.2	14.8 N [m]	10 / 10	4.9 - **32.7**	13.1	18.0 G [k]
Cobalt		NS	NS	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]
Copper		NS	NS	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]
Iron		NS	NS	7 / 7	6200 - 12800	9154	10963 N [m]	7 / 7	5410 - 10100	7864	8914 N [m]	14 / 14	5410 - 12800	8294	8991 N [m]	10 / 10	3660 - 11500	8079	9670 N [m]
Lead	1,000	300	3,000	7 / 7	30.2 - **1410**	257	**2172** NP [g]	7 / 7	3.8 - 150	63	110 N [m]	14 / 14	3.8 - **1410**	127	**321** LN [n]	8 / 10	2.1 - **653**	77	**728** NP [j]
Magnesium		NS	NS	7 / 7	880 - 1440	1153	1317 N [m]	7 / 7	872 - 2370	1515	1909 N [m]	14 / 14	872 - 2370	1394	1580 G [k]	10 / 10	876 - 4660	1898	2667 G [k]
Manganese		NS	NS	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]
Mercury		20	300	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]
Nickel		20	7,000	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]
Potassium		NS	NS	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]
Selenium		400	8,000	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]
Silver		100	2,000	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]
Sodium		NS	NS	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]
Thallium		8	800	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]
Vanadium		600	10,000	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]
Zinc		2,500	10,000	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]
Cyanide		100	4,000	0 / 7	All ND	NA	NC [b]	0 / 7	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]

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] Only one distinct data value was detected
[b] All values non detect

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

G - Gamma Distribution
[k] 95% Approximate Gamma UCL
[l] 95% Adjusted Gamma UCL

N - Normal Distribution
[m] 95% Student's-t UCL

LN - Log Normal Distribution
[n] 95% Chebyshev (MVUE) 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 08/04/10
Checked by / Date: KJC 08/06/10

MassDEP
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

DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lieutenant Governor

RICHARD K. SULLIVAN JR.
Secretary

KENNETH L. KIMMELL
Commissioner

May 20, 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-020
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-020 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-020. 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 fifteen 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-020, 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, concentrations of PCBs and/or lead were detected in samples collected from the top three 3 feet in soil boring P-020-SB-01 above the applicable MCP S-1 soil standards. The MCP requires actions to be taken to address this condition, which may include removal of this layer of soil in the vicinity of this soil boring and replacing it with clean soil or covering the area in this layer of soil 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 has not been determined to exist for the soil located between 3 feet and 12 feet below the ground surface. This is because concentrations of PCBs, lead and/or chromium were detected above the applicable MCP S-1 soil standard in the soil boring identified as P-020-SB-01 in samples collected from a depth greater than 3 feet.

Property P-020 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-020:

- MassDEP has verified its previous request for USEPA assistance to address the PCB concentrations at this property subject to the following clarifications. Although the average concentrations of PCBs on the property for the 0-3 foot bgs and greater than 3 foot bgs intervals are both lower than the MCP Method 1 Soil Standards, and only one sample location exhibited PCB concentrations that exceeded the MCP Method 1 Soil Standard, this location (soil boring P-

020-SB-01) exceeded 50 parts per million (ppm). Accordingly, MassDEP recommends that this location be managed for response action consistent with the requirements of the Toxic Substances Control Act (TSCA) of 1976, as regulated by 40 CFR Ch. I Part 761. Response actions conducted pursuant to TSCA to address the PCB contamination observed at soil boring location P-020-SB-01 in both vertical horizons should be coordinated with MassDEP to ensure that a Condition of No Significant Risk, in accordance with the MCP, will exist for both current and future use on this property once response actions are complete.

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 USEPA.

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/lm

Enclosure

Ecc: MassDEP – SERO
Attn: Millie Garcia-Serrano
Len Pinaud

CLEAN, President – Eddie Johnson
City of New Bedford, Office of Environmental Stewardship
Jhelijhnsn6@aol.com

cc: Owner, Property P-020

Table P-020
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
PAHs (mg/Kg)																			
2-Methylnaphthalene	61,000	300	5,000	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Acenaphthene	180,000	1,000	10,000	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	1 / 22	0.22 - 0.22	0.15	NC [b]
Acenaphthylene	180,000	1,000	10,000	1 / 15	0.16 - 0.16	0.26	NC [b]	2 / 15	0.05 - 0.1	0.18	0.12 NP [c]	3 / 30	0.05 - 0.16	0.20	0.13 NP [d]	0 / 22	All ND	NA	NC [a]
Anthracene	920,000	1,000	10,000	6 / 15	0.12 - 0.46	0.24	0.28 NP [c]	2 / 15	0.17 - 0.19	0.19	0.20 NP [c]	8 / 30	0.12 - 0.46	0.21	0.21 NP [c]	2 / 22	0.09 - 0.52	0.16	0.52 NP [f]
Benzo(a)anthracene	160	7	3,000	15 / 15	0.09 - 0.98	0.36	0.47 N [j]	9 / 15	0.07 - 0.59	0.21	0.28 NP [c]	24 / 30	0.07 - 0.98	0.26	0.31 NP [d]	2 / 22	0.12 - 1.3	0.19	0.64 NP [g]
Benzo(a)pyrene	16	2	300	15 / 15	0.08 - 0.86	0.32	0.42 N [j]	10 / 15	0.06 - 0.58	0.18	0.24 NP [d]	25 / 30	0.06 - 0.86	0.22	0.27 NP [f]	2 / 22	0.08 - 1.1	0.18	0.53 NP [g]
Benzo(b)fluoranthene	160	7	3,000	15 / 15	0.12 - 1.1	0.41	0.54 N [j]	10 / 15	0.08 - 1	0.23	0.35 NP [d]	25 / 30	0.08 - 1.1	0.29	0.36 NP [f]	2 / 22	0.1 - 1.6	0.21	0.76 NP [g]
Benzo(g,h,i)perylene	120,000	1,000	10,000	13 / 15	0.04 - 0.24	0.15	0.16 NP [c]	7 / 15	0.04 - 0.15	0.15	0.12 NP [c]	20 / 30	0.04 - 0.24	0.15	0.12 NP [c]	2 / 22	0.04 - 0.34	0.15	0.17 NP [g]
Benzo(k)fluoranthene	1,600	70	10,000	11 / 15	0.05 - 0.6	0.25	0.32 NP [c]	6 / 15	0.06 - 0.42	0.17	0.19 NP [c]	17 / 30	0.05 - 0.6	0.20	0.22 NP [c]	2 / 22	0.06 - 0.61	0.16	0.30 NP [g]
Chrysene	16,000	70	10,000	15 / 15	0.09 - 0.95	0.36	0.47 N [j]	10 / 15	0.08 - 0.53	0.19	0.25 NP [c]	25 / 30	0.08 - 0.95	0.25	0.30 NP [f]	2 / 22	0.1 - 1.3	0.19	0.63 NP [g]
Dibenz(a,h)anthracene	16	0.7	300	1 / 11	0.11 - 0.11	0.24	NC [b]	1 / 11	0.05 - 0.05	0.18	NC [b]	2 / 22	0.05 - 0.11	0.20	0.10 NP [c]	1 / 16	0.18 - 0.18	0.14	NC [b]
Fluoranthene	120,000	1,000	10,000	15 / 15	0.17 - 2.3	0.78	1.0 N [j]	11 / 15	0.06 - 1.5	0.37	0.55 NP [d]	26 / 30	0.06 - 2.3	0.50	0.64 NP [f]	2 / 22	0.32 - 2.8	0.27	1.4 NP [g]
Fluorene	120,000	1,000	10,000	2 / 15	0.1 - 0.11	0.24	0.11 NP [c]	2 / 15	0.046 - 0.08	0.17	0.093 NP [c]	4 / 30	0.046 - 0.11	0.20	0.095 NP [c]	1 / 22	0.22 - 0.22	0.15	NC [b]
Indeno(1,2,3-cd)pyrene	160	7	3,000	9 / 15	0.12 - 0.26	0.19	0.20 NP [c]	6 / 15	0.05 - 0.18	0.16	0.15 NP [c]	15 / 30	0.05 - 0.26	0.17	0.16 NP [c]	1 / 22	0.39 - 0.39	0.15	NC [b]
Naphthalene	61,000	100	10,000	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Phenanthrene	120,000	500	10,000	15 / 15	0.09 - 1.5	0.50	0.76 G [l]	10 / 15	0.1 - 0.79	0.25	0.36 NP [d]	25 / 30	0.09 - 1.5	0.33	0.42 NP [f]	2 / 22	0.4 - 2.1	0.24	NC [b]
Pyrene	92,000	1,000	10,000	15 / 15	0.16 - 1.8	0.63	0.84 N [j]	10 / 15	0.12 - 0.88	0.30	0.41 NP [d]	25 / 30	0.12 - 1.8	0.41	0.51 NP [f]	2 / 22	0.25 - 2.3	0.24	1.1 NP [g]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Aroclor-1254	10	2	100	15 / 15	0.073 - 1.2	0.57	0.73 N [j]	13 / 15	0.009 - **8.6**	0.83	**3.3** NP [e]	28 / 30	0.009 - **8.6**	0.74	**2.4** NP [g]	3 / 22	0.052 - **57**	**2.6**	**33** NP [h]
Aroclor-1260	10	2	100	1 / 15	0.3 - 0.3	0.032	NC [b]	0 / 15	All ND	NA	NC [a]	1 / 30	0.3 - 0.3	0.019	NC [b]	0 / 22	All ND	NA	NC [a]
Aroclor-1262	10	2	100	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
PCBs (Total)	10	2	100	15 / 15	0.073 - 1.2	0.59	0.75 N [j]	13 / 15	0.009 - **8.6**	0.83	**3.3** NP [e]	28 / 30	0.009 - **8.6**	0.75	**2.4** NP [g]	3 / 22	0.052 - **57**	**2.6**	**33** NP [h]

Table P-020
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1]				1-3 ft [1]				0-3 ft [1, 2]				3+ ft [1]			
				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	15 / 15	5910 - 10600	7961	8611 N [j]	15 / 15	4060 - 9950	7325	8101 N [j]	30 / 30	4060 - 10600	7537	7941 N [j]	22 / 22	2430 - 12800	4709	5451 G [l]
Antimony		20	300	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Arsenic	40	20	200	15 / 15	2.2 - 14.2	4.2	5.6 N [k]	13 / 15	0.9 - 4.3	2.2	2.7 NP [c]	28 / 30	0.9 - 14.2	2.8	3.5 NP [f]	16 / 22	0.38 - 12.3	1.4	2.5 NP [f]
Barium	200,000	1,000	10,000	15 / 15	18.6 - 99.3	50	60 N [j]	15 / 15	9.1 - 189	38	57 G [l]	30 / 30	9.1 - 189	42	52 LN [n]	22 / 22	7.1 - 591	38	153 NP [i]
Beryllium		100	2,000	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Cadmium	60	2	300	1 / 15	0.29 - 0.29	0.23	NC [b]	0 / 15	All ND	NA	NC [a]	1 / 30	0.29 - 0.29	0.23	NC [b]	0 / 22	All ND	NA	NC [a]
Calcium		NS	NS	15 / 15	427 - 1520	864	993 N [j]	15 / 15	139 - 1030	537	632 N [j]	30 / 30	139 - 1520	646	716 N [j]	22 / 22	297 - 2830	627	779 G [l]
Chromium	200	30	2,000	15 / 15	9.5 - 20.6	14.1	15.5 N [j]	15 / 15	6.5 - 20.1	11.3	12.7 G [l]	30 / 30	6.5 - 20.6	12.2	13.1 G [l]	22 / 22	4 - **56.7**	9.2	19.2 NP [i]
Cobalt		NS	NS	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Copper		NS	NS	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Iron		NS	NS	15 / 15	7340 - 13300	9841	10560 N [j]	15 / 15	5140 - 12500	8731	9556 N [j]	30 / 30	5140 - 13300	9101	9547 N [j]	22 / 22	3860 - 45100	7681	11079 N [k]
Lead	1,000	300	3,000	15 / 15	56.9 - 222	107	126 N [j]	15 / 15	3.4 - **502**	63	150 LN [m]	30 / 30	3.4 - **502**	78	103 G [l]	16 / 22	1.3 - **631**	33	**320** NP [h]
Magnesium		NS	NS	15 / 15	900 - 3200	1731	2002 N [j]	15 / 15	894 - 2440	1396	1582 N [j]	30 / 30	894 - 3200	1508	1633 G [l]	22 / 22	764 - 2160	1189	1302 G [l]
Manganese		NS	NS	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Mercury		20	300	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Nickel		20	7,000	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Potassium		NS	NS	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Selenium		400	8,000	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Silver		100	2,000	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Sodium		NS	NS	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Thallium		8	800	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 22	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 or two distinct data values were detected

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

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

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

LN - Log Normal Distribution
[m] 95% Chebyshev (MVUE) UCL
[n] 95% H-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 08/06/10
Checked by / Date: KJC 08/06/10

MassDEP

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

DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lieutenant Governor

RICHARD K. SULLIVAN JR.
Secretary

KENNETH L. KIMMELL
Commissioner

May 27, 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-012
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-012 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-012.

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 nineteen 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-012, 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 of lead detected in samples collected from the top 3 feet is above the applicable MCP S-1 soil standards. 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 not determined to exist for the soil located between 3 feet and 12 feet below the ground surface. This is because the 95% UCL for lead, which was calculated based on the analytical data from soils collected from greater than 3 feet bgs, was above the applicable MCP Method 1 S-1 soil standard. Because this soil is at depth, it does not necessarily need to be removed to be protective of the current use of the property.

Property P-012 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-012:

- 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. Specifically, concentrations of lead in soil borings identified as P-012-SB-04 and P-012-SB-13 are above the applicable MCP Method 1 S-1 soil standard. Response actions are necessary to address the COC contamination in the area of these soil borings at this interval.

- Applying the 95% UCL for data evaluation of soil located greater than 3 feet bgs is not necessary because the COC concentrations observed on Property P-012 are consistent with results from samples taken in the surrounding area. The actual average for COCs at this depth interval is below the applicable MCP Method 1 S-1 soil standard. As such, a Condition of No Significant Risk exists on this property for the soil located between 3 and 12 feet, and 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/lm

Enclosure

Ecc: MassDEP – SERO
Attn: Millie Garcia-Serrano
Len Pinaud
Lara Goodine

CLEAN, President – Eddie Johnson
City of New Bedford, Office of Environmental Stewardship
Jhelijhnsn6@aol.com

cc: Owner, Property P-012

Table P-012
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
PAHs (mg/Kg)																			
2-Methylnaphthalene	61,000	300	5,000	0 / 21	All ND	NA	NC [a]	3 / 19	0.466 - 1.45	0.27	1.5 NP [f]	3 / 40	0.466 - 1.45	0.29	0.56 NP [f]	2 / 17	0.063 - 0.14	1.1	0.17 NP [c]
Acenaphthene	180,000	1,000	10,000	1 / 21	0.212 - 0.212	0.33	NC [b]	4 / 19	0.28 - 1.48	0.27	0.67 NP [f]	5 / 40	0.212 - 1.48	0.29	0.38 NP [f]	2 / 17	0.099 - 0.15	1.1	0.17 NP [c]
Acenaphthylene	180,000	1,000	10,000	0 / 21	All ND	NA	NC [a]	2 / 19	0.21 - 0.88	0.27	0.88 NP [d]	2 / 40	0.21 - 0.88	0.29	0.27 NP [c]	1 / 17	0.06 - 0.06	1.1	NC [b]
Anthracene	920,000	1,000	10,000	6 / 21	0.059 - 0.398	0.32	0.18 NP [c]	4 / 19	0.86 - 3.05	0.46	1.6 NP [f]	10 / 40	0.059 - 3.05	0.41	0.46 NP [c]	2 / 17	0.203 - 0.39	1.2	0.39 NP [f]
Benzo(a)anthracene	160	7	3,000	18 / 21	0.058 - 1.98	0.33	0.49 NP [d]	5 / 19	0.23 - 3.71	0.60	2.3 NP [f]	23 / 40	0.058 - 3.71	0.50	0.69 NP [d]	3 / 17	0.2 - 0.73	1.2	0.73 NP [f]
Benzo(a)pyrene	16	2	300	19 / 21	0.05 - **2.29**	0.33	0.79 NP [e]	7 / 19	0.04 - **3.3**	0.55	1.0 NP [f]	26 / 40	0.04 - **3.3**	0.47	0.91 NP [e]	3 / 17	0.189 - 0.65	1.2	0.29 NP [c]
Benzo(b)fluoranthene	160	7	3,000	20 / 21	0.07 - 3.15	0.48	1.1 NP [e]	6 / 19	0.075 - 4.44	0.71	1.9 NP [f]	26 / 40	0.07 - 4.44	0.63	0.88 NP [d]	3 / 17	0.25 - 0.81	1.2	0.81 NP [f]
Benzo(g,h,i)perylene	120,000	1,000	10,000	17 / 21	0.05 - 0.243	0.29	0.16 NP [c]	8 / 19	0.04 - 0.56	0.19	0.24 NP [c]	25 / 40	0.04 - 0.56	0.22	0.19 NP [c]	2 / 17	0.134 - 0.14	1.1	0.14 NP [c]
Benzo(k)fluoranthene	1,600	70	10,000	12 / 21	0.07 - 1.13	0.23	0.31 NP [c]	5 / 19	0.14 - 2.11	0.37	1.0 NP [f]	17 / 40	0.07 - 2.11	0.32	0.41 NP [c]	2 / 17	0.126 - 0.38	1.2	0.18 NP [c]
Chrysene	16,000	70	10,000	21 / 21	0.04 - 2.36	0.40	0.61 G [j]	7 / 19	0.05 - 3.71	0.59	1.1 NP [f]	28 / 40	0.04 - 3.71	0.52	1.0 NP [e]	3 / 17	0.207 - 0.87	1.2	0.34 NP [c]
Dibenz(a,h)anthracene	16	0.7	300	4 / 14	0.04 - 0.0841	0.38	0.073 NP [c]	2 / 11	0.16 - 0.17	0.29	0.17 NP [c]	6 / 25	0.04 - 0.17	0.33	0.15 NP [c]	1 / 13	0.06 - 0.06	**1.5**	NC [b]
Fluoranthene	120,000	1,000	10,000	21 / 21	0.06 - 3.84	0.63	0.97 G [j]	7 / 19	0.088 - 8.18	1.2	2.8 NP [f]	28 / 40	0.06 - 8.18	1.0	2.6 NP [l]	3 / 17	0.45 - 1.57	1.3	1.6 NP [f]
Fluorene	120,000	1,000	10,000	1 / 21	0.144 - 0.144	0.33	NC [b]	4 / 19	0.25 - 1.38	0.29	0.93 NP [f]	5 / 40	0.144 - 1.38	0.30	0.42 NP [f]	2 / 17	0.085 - 0.19	1.1	0.23 NP [c]
Indeno(1,2,3-cd)pyrene	160	7	3,000	9 / 20	0.06 - 0.221	0.30	0.17 NP [c]	4 / 18	0.089 - 0.7	0.22	0.53 NP [f]	13 / 38	0.06 - 0.7	0.25	0.22 NP [c]	1 / 17	0.16 - 0.16	1.1	NC [b]
Naphthalene	61,000	100	10,000	0 / 21	All ND	NA	NC [a]	3 / 19	0.483 - 2.1	0.32	2.1 NP [f]	3 / 40	0.483 - 2.1	0.32	0.62 NP [c]	2 / 17	0.071 - 0.26	1.2	0.33 NP [c]
Phenanthrene	120,000	500	10,000	17 / 21	0.058 - 3.04	0.50	1.2 NP [e]	6 / 19	0.057 - 8.97	1.3	3.8 NP [f]	23 / 40	0.057 - 8.97	1.0	2.2 NP [e]	3 / 17	0.43 - 1.58	1.3	1.6 NP [f]
Pyrene	92,000	1,000	10,000	16 / 21	0.117 - 3.62	0.62	0.94 NP [d]	6 / 19	0.097 - 6.78	1.0	2.4 NP [f]	22 / 40	0.097 - 6.78	0.86	1.2 NP [c]	3 / 17	0.374 - 1.4	1.2	1.4 NP [f]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 21	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 40	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 21	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 40	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 21	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 40	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 21	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 40	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 21	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 40	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Aroclor-1254	10	2	100	10 / 21	0.009 - 0.045	0.016	0.021 NP [c]	2 / 19	0.024 - 0.055	0.015	0.055 NP [f]	12 / 40	0.009 - 0.055	0.016	0.019 NP [c]	1 / 17	0.012 - 0.012	0.012	NC [b]
Aroclor-1260	10	2	100	15 / 21	0.009 - 0.085	0.018	0.025 NP [d]	1 / 19	0.12 - 0.12	0.018	NC [b]	16 / 40	0.009 - 0.12	0.018	0.023 NP [c]	0 / 17	All ND	NA	NC [a]
Aroclor-1262	10	2	100	0 / 21	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 40	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 21	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 40	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
PCBs (Total)	10	2	100	18 / 21	0.009 - 0.085	0.026	0.047 NP [e]	2 / 19	0.024 - 0.175	0.022	NC [b]	20 / 40	0.009 - 0.175	0.023	0.032 NP [f]	1 / 17	0.012 - 0.012	0.012	NC [b]

Table P-012
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	21 / 21	4450 - 9570	7237	7775 N [k]	19 / 19	3440 - 8510	6206	6757 N [k]	40 / 40	3440 - 9570	6573	6892 N [k]	17 / 17	2560 - 6560	4084	4511 N [k]
Antimony		20	300	0 / 21	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 40	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Arsenic	40	20	200	18 / 21	2.4 - 3.7	2.6	3.0 NP [d]	12 / 19	1.3 - **44.7**	4.0	8.8 NP [d]	30 / 40	1.3 - **44.7**	3.5	5.8 NP [d]	12 / 17	0.6 - 5.5	1.3	2.1 NP [d]
Barium	200,000	1,000	10,000	21 / 21	12.3 - 66.2	28	35 LN [m]	19 / 19	8.7 - 139	27	60 NP [g]	40 / 40	8.7 - 139	27	43 NP [g]	17 / 17	9.8 - 563	56	196 NP [g]
Beryllium		100	2,000	0 / 21	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 40	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Cadmium	60	2	300	6 / 21	0.36 - **2.9**	0.45	0.78 NP [f]	3 / 19	0.4 - 1	0.34	0.53 NP [c]	9 / 40	0.36 - **2.9**	0.38	0.56 NP [c]	2 / 17	0.56 - 0.66	0.30	0.66 NP [f]
Calcium		NS	NS	21 / 21	183 - 1630	507	649 LN [m]	19 / 19	94.6 - 1680	463	929 NP [g]	40 / 40	94.6 - 1680	479	720 NP [g]	17 / 17	271 - 2700	941	1230 G [j]
Chromium	200	30	2,000	21 / 21	9.6 - 24.5	14.4	15.9 N [k]	19 / 19	6.4 - 14.6	9.2	10.2 N [k]	40 / 40	6.4 - 24.5	11.1	11.9 N [k]	17 / 17	4.7 - 16.3	8.4	9.7 G [j]
Cobalt		NS	NS	0 / 21	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 40	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Copper		NS	NS	0 / 21	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 40	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Iron		NS	NS	21 / 21	5690 - 32100	9549	11716 N [l]	19 / 19	5180 - 17000	8636	9790 G [j]	40 / 40	5180 - 32100	8961	9850 N [l]	17 / 17	3900 - 10200	6188	6880 N [k]
Lead	1,000	300	3,000	21 / 21	18 - **390**	85	118 G [j]	18 / 19	3.5 - **34200**	**1859**	**19766** NP [h]	39 / 40	3.5 - **34200**	**1228**	**6294** NP [i]	13 / 17	1.9 - **732**	59	**495** NP [h]
Magnesium		NS	NS	21 / 21	764 - 1620	1104	1192 N [k]	19 / 19	802 - 2640	1411	1581 G [j]	40 / 40	764 - 2640	1302	1384 G [j]	17 / 17	416 - 2040	1435	1617 N [k]
Manganese		NS	NS	0 / 21	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 40	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Mercury		20	300	0 / 21	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 40	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Nickel		20	7,000	0 / 21	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 40	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Potassium		NS	NS	0 / 21	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 40	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Selenium		400	8,000	0 / 21	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 40	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Silver		100	2,000	0 / 21	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 40	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Sodium		NS	NS	0 / 21	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 40	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Thallium		8	800	0 / 21	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 40	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 21	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 40	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 21	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 40	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 21	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 40	All ND	NA	NC [a]	0 / 17	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 or two distinct data values were detected

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

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

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

LN - Log Normal Distribution
[m] 95% H-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 08/02/10
Checked by / Date: KJC 08/02/10

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

DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lieutenant Governor

RICHARD K. SULLIVAN JR.
Secretary

KENNETH L. KIMMELL
Commissioner

June 15, 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-010
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-010 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-010. 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 nineteen 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-010, 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 concentrations of lead and one PAH detected in samples collected from the top 3 feet are above the applicable MCP S-1 soil standards. 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 not determined to exist for the soil located between 3 feet and 12 feet below the ground surface. This is because the average concentration for lead, which was calculated based on the analytical data from soils collected from greater than 3 feet bgs, was above the applicable MCP Method 1 S-1 soil standard. Because this soil is at depth, it does not necessarily need to be removed to be protective of the current use of the property.

Property P-010 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-010:

- 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. Specifically, the average concentration of lead and boring specific concentrations of lead and/or one PAH in all but two of the soil borings on the property are above the applicable MCP Method 1 S-1 soil standard. Response actions are necessary to address the COC contamination in the soil borings at this interval.

- MassDEP has also verified that a Condition of No Significant Risk does not exist for future use of the property because the average concentration of lead calculated from data from samples collected from the greater than 3 foot horizon is above the applicable MCP Method 1 S-1 soil standard. One sample in particular, identified as P-010-SB-13C, is well above the established Upper Concentration Limit of 3000 ppm. Based on a review of the soil boring log for this location, it appears the sample was collected from the 3 to 4 foot zone. When evaluating the results for Property P-010 without the results from this sample location, the average concentration for lead for this depth interval is below the applicable Method 1 S-1 soil standard, which would be considered a Condition of No Significant Risk for this depth interval and would require no further response action. However, if this soil is to remain in place, land use restrictions and/or controls defined as a Notice of Activity and Use Limitation (or AUL) in the MCP, may be necessary for the property to ensure that future activities or changes in use do not create the potential for humans to be exposed to the soil below 3 feet in depth.

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/lm

Enclosure

Ecc: 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
Lara Goodine, Data Entry

CLEAN, President – Eddie Johnson
Jhelijhnsn6@aol.com

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

cc: Owner, Property P-010

Table P-010

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	1 / 19	1.3 - 1.3	0.50	NC [a]	0 / 19	All ND	NA	NC [b]	1 / 38	1.3 - 1.3	0.38	NC [a]	0 / 31	All ND	NA	NC [b]
Acenaphthene	180,000	1,000	10,000	3 / 19	0.52 - 1.2	0.53	0.65 NP [c]	1 / 19	1.4 - 1.4	0.37	NC [a]	4 / 38	0.52 - 1.4	0.42	1.2 NP [d]	0 / 31	All ND	NA	NC [b]
Acenaphthylene	180,000	1,000	10,000	12 / 19	0.25 - 4.3	1.2	1.7 NP [c]	8 / 19	0.29 - 6.4	1.2	2.2 NP [d]	20 / 38	0.25 - 6.4	1.2	1.6 NP [c]	3 / 31	0.68 - 1.2	0.21	1.2 NP [d]
Anthracene	920,000	1,000	10,000	12 / 19	0.3 - 5.5	1.4	2.1 NP [d]	10 / 19	0.36 - 6.3	1.2	2.0 NP [e]	22 / 38	0.3 - 6.3	1.2	1.7 NP [d]	4 / 31	0.44 - 1.4	0.22	0.55 NP [c]
Benzo(a)anthracene	160	7	3,000	19 / 19	0.39 - **11**	3.4	4.8 G [j]	15 / 19	0.32 - **17**	2.7	6.9 NP [f]	34 / 38	0.32 - **17**	2.9	5.1 NP [f]	6 / 31	0.38 - 3.1	0.50	2.5 NP [d]
Benzo(a)pyrene	16	2	300	19 / 19	0.4 - **10**	**3.2**	**4.4** G [j]	15 / 19	0.34 - **17**	**2.7**	**6.9** NP [f]	34 / 38	0.34 - **17**	**2.9**	**5.0** NP [f]	5 / 31	0.28 - **3**	0.46	**2.7** NP [d]
Benzo(b)fluoranthene	160	7	3,000	19 / 19	0.62 - **13**	4.2	5.8 G [j]	15 / 19	0.42 - **13**	2.8	6.7 NP [f]	34 / 38	0.42 - **13**	3.3	5.4 NP [f]	6 / 31	0.42 - 4	0.60	2.7 NP [d]
Benzo(g,h,i)perylene	120,000	1,000	10,000	17 / 19	0.3 - 6.6	2.0	2.7 NP [e]	13 / 19	0.24 - 11	1.7	2.9 NP [e]	30 / 38	0.24 - 11	1.8	2.3 NP [e]	4 / 31	1.1 - 2	0.33	1.8 NP [d]
Benzo(k)fluoranthene	1,600	70	10,000	16 / 19	0.21 - 4.7	1.6	2.1 NP [c]	12 / 19	0.37 - 14	1.7	3.2 NP [e]	28 / 38	0.21 - 14	1.7	2.4 NP [e]	4 / 31	0.84 - 2.1	0.31	1.5 NP [d]
Chrysene	16,000	70	10,000	19 / 19	0.49 - 11	3.6	5.1 G [j]	15 / 19	0.32 - 16	2.8	7.0 NP [f]	34 / 38	0.32 - 16	3.1	5.3 NP [f]	6 / 31	0.37 - 3.8	0.54	2.6 NP [d]
Dibenz(a,h)anthracene	16	0.7	300	5 / 19	0.41 - **1.2**	0.57	0.67 NP [d]	4 / 19	0.24 - **2.6**	0.48	**1.0** NP [d]	9 / 38	0.24 - **2.6**	0.51	0.53 NP [c]	4 / 31	0.28 - 0.45	0.17	0.40 NP [d]
Fluoranthene	120,000	1,000	10,000	19 / 19	0.8 - 23	6.9	10.1 G [j]	15 / 19	0.52 - 37	5.8	19.3 NP [g]	34 / 38	0.52 - 37	6.2	11.0 NP [f]	8 / 31	0.22 - 7.7	0.91	2.0 NP [d]
Fluorene	120,000	1,000	10,000	3 / 19	0.57 - 2.6	0.62	2.6 NP [d]	1 / 19	1.5 - 1.5	0.37	NC [a]	4 / 38	0.57 - 2.6	0.45	1.5 NP [d]	1 / 31	0.31 - 0.31	0.14	NC [a]
Indeno(1,2,3-cd)pyrene	160	7	3,000	17 / 19	0.32 - 6.7	2.1	2.8 NP [e]	14 / 19	0.2 - **9.3**	1.7	4.2 NP [f]	31 / 38	0.2 - **9.3**	1.8	2.4 NP [e]	4 / 31	1 - 2.1	0.31	1.1 NP [c]
Naphthalene	61,000	100	10,000	1 / 19	0.21 - 0.21	0.46	NC [a]	0 / 19	All ND	NA	NC [b]	1 / 38	0.21 - 0.21	0.37	NC [a]	0 / 31	All ND	NA	NC [b]
Phenanthrene	120,000	500	10,000	19 / 19	0.41 - 33	5.4	8.5 G [j]	15 / 19	0.26 - 20	3.8	12.0 NP [g]	34 / 38	0.26 - 33	4.3	7.9 NP [f]	6 / 31	0.88 - 6.2	0.57	2.2 NP [d]
Pyrene	92,000	1,000	10,000	19 / 19	0.65 - 24	6.5	9.6 G [j]	15 / 19	0.48 - 32	5.0	13.0 NP [f]	34 / 38	0.48 - 32	5.5	9.8 NP [f]	6 / 31	0.72 - 6	0.78	3.6 NP [d]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 19	All ND	NA	NC [b]	0 / 19	All ND	NA	NC [b]	0 / 38	All ND	NA	NC [b]	0 / 31	All ND	NA	NC [b]
Aroclor-1221	10	2	100	0 / 19	All ND	NA	NC [b]	0 / 19	All ND	NA	NC [b]	0 / 38	All ND	NA	NC [b]	0 / 31	All ND	NA	NC [b]
Aroclor-1232	10	2	100	0 / 19	All ND	NA	NC [b]	0 / 19	All ND	NA	NC [b]	0 / 38	All ND	NA	NC [b]	0 / 31	All ND	NA	NC [b]
Aroclor-1242	10	2	100	0 / 19	All ND	NA	NC [b]	0 / 19	All ND	NA	NC [b]	0 / 38	All ND	NA	NC [b]	0 / 31	All ND	NA	NC [b]
Aroclor-1248	10	2	100	0 / 19	All ND	NA	NC [b]	0 / 19	All ND	NA	NC [b]	0 / 38	All ND	NA	NC [b]	0 / 31	All ND	NA	NC [b]
Aroclor-1254	10	2	100	3 / 19	0.027 - 0.033	0.018	0.033 NP [d]	2 / 19	0.027 - 0.028	0.017	0.028 NP [d]	5 / 38	0.027 - 0.033	0.017	0.028 NP [d]	2 / 31	0.027 - 0.031	0.013	0.027 NP [c]
Aroclor-1260	10	2	100	12 / 19	0.017 - 0.061	0.027	0.035 NP [d]	5 / 19	0.016 - 0.032	0.014	0.023 NP [d]	17 / 38	0.016 - 0.061	0.018	0.024 NP [c]	0 / 31	All ND	NA	NC [b]
Aroclor-1262	10	2	100	0 / 19	All ND	NA	NC [b]	0 / 19	All ND	NA	NC [b]	0 / 38	All ND	NA	NC [b]	0 / 31	All ND	NA	NC [b]
Aroclor-1268	10	2	100	1 / 19	0.013 - 0.013	0.0056	NC [a]	0 / 19	All ND	NA	NC [b]	1 / 38	0.013 - 0.013	0.0052	NC [a]	0 / 31	All ND	NA	NC [b]
PCBs (Total)	10	2	100	12 / 19	0.017 - 0.072	0.035	0.044 NP [d]	7 / 19	0.016 - 0.032	0.020	0.024 NP [d]	19 / 38	0.016 - 0.072	0.025	0.029 NP [c]	2 / 31	0.027 - 0.031	0.013	0.031 NP [d]

Table P-010
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	19 / 19	3510 - 8110	5538	6012 N [k]	19 / 19	3910 - 11300	5726	6506 N [l]	38 / 38	3510 - 11300	5664	6039 N [l]	31 / 31	3430 - 12500	6318	6905 G [j]
Antimony		20	300	0 / 19	All ND	NA	NC [b]	0 / 19	All ND	NA	NC [b]	0 / 38	All ND	NA	NC [b]	0 / 31	All ND	NA	NC [b]
Arsenic	40	20	200	19 / 19	2 - **22.3**	8.8	10.7 G [j]	19 / 19	1.5 - **70.3**	12.4	**21** LN [m]	38 / 38	1.5 - **70.3**	11.2	13.4 LN [m]	31 / 31	0.69 - **62.1**	6.7	**28** NP [h]
Barium	200,000	1,000	10,000	19 / 19	39 - 240	133	155 N [k]	19 / 19	11.4 - 587	187	280 G [j]	38 / 38	11.4 - 587	169	204 G [j]	31 / 31	9.4 - 681	103	403 NP [h]
Beryllium		100	2,000	0 / 19	All ND	NA	NC [b]	0 / 19	All ND	NA	NC [b]	0 / 38	All ND	NA	NC [b]	0 / 31	All ND	NA	NC [b]
Cadmium	60	2	300	5 / 19	0.27 - 0.76	0.31	0.58 NP [d]	7 / 19	0.098 - **4.3**	0.51	0.89 NP [c]	12 / 38	0.098 - **4.3**	0.44	0.61 NP [c]	10 / 31	0.074 - **2.7**	0.39	0.47 NP [c]
Calcium		NS	NS	19 / 19	1080 - 4140	2159	2606 G [j]	19 / 19	480 - 3690	1908	2258 N [k]	38 / 38	480 - 4140	1992	2220 G [j]	31 / 31	311 - 6660	2009	2964 LN [m]
Chromium	200	30	2,000	19 / 19	4 - 26.5	14.8	16.8 N [k]	19 / 19	7.1 - 22.2	12.1	13.6 N [l]	38 / 38	4 - 26.5	13.0	13.9 N [l]	31 / 31	6 - **31.8**	12.7	14.2 G [j]
Cobalt		NS	NS	0 / 19	All ND	NA	NC [b]	0 / 19	All ND	NA	NC [b]	0 / 38	All ND	NA	NC [b]	0 / 31	All ND	NA	NC [b]
Copper		NS	NS	0 / 19	All ND	NA	NC [b]	0 / 19	All ND	NA	NC [b]	0 / 38	All ND	NA	NC [b]	0 / 31	All ND	NA	NC [b]
Iron		NS	NS	19 / 19	6780 - 22900	11749	13219 G [j]	19 / 19	6450 - 36400	14135	17739 N [l]	38 / 38	6450 - 36400	13340	15014 N [l]	31 / 31	5480 - 77600	14121	26422 NP [i]
Lead	1,000	300	3,000	19 / 19	49.2 - **706**	**367**	**433** N [k]	19 / 19	8.8 - **887**	**325**	**430** N [k]	38 / 38	8.8 - **887**	**339**	**391** N [k]	31 / 31	2.1 - **7790**	**333**	**2819** NP [h]
Magnesium		NS	NS	19 / 19	677 - 1490	1032	1128 N [k]	19 / 19	409 - 1470	856	984 N [k]	38 / 38	409 - 1490	915	987 G [j]	31 / 31	375 - 2930	1408	1621 N [k]
Manganese		NS	NS	0 / 19	All ND	NA	NC [b]	0 / 19	All ND	NA	NC [b]	0 / 38	All ND	NA	NC [b]	0 / 31	All ND	NA	NC [b]
Mercury		20	300	0 / 19	All ND	NA	NC [b]	0 / 19	All ND	NA	NC [b]	0 / 38	All ND	NA	NC [b]	0 / 31	All ND	NA	NC [b]
Nickel		20	7,000	0 / 19	All ND	NA	NC [b]	0 / 19	All ND	NA	NC [b]	0 / 38	All ND	NA	NC [b]	0 / 31	All ND	NA	NC [b]
Potassium		NS	NS	0 / 19	All ND	NA	NC [b]	0 / 19	All ND	NA	NC [b]	0 / 38	All ND	NA	NC [b]	0 / 31	All ND	NA	NC [b]
Selenium		400	8,000	0 / 19	All ND	NA	NC [b]	0 / 19	All ND	NA	NC [b]	0 / 38	All ND	NA	NC [b]	0 / 31	All ND	NA	NC [b]
Silver		100	2,000	0 / 19	All ND	NA	NC [b]	0 / 19	All ND	NA	NC [b]	0 / 38	All ND	NA	NC [b]	0 / 31	All ND	NA	NC [b]
Sodium		NS	NS	0 / 19	All ND	NA	NC [b]	0 / 19	All ND	NA	NC [b]	0 / 38	All ND	NA	NC [b]	0 / 31	All ND	NA	NC [b]
Thallium		8	800	0 / 19	All ND	NA	NC [b]	0 / 19	All ND	NA	NC [b]	0 / 38	All ND	NA	NC [b]	0 / 31	All ND	NA	NC [b]
Vanadium		600	10,000	0 / 19	All ND	NA	NC [b]	0 / 19	All ND	NA	NC [b]	0 / 38	All ND	NA	NC [b]	0 / 31	All ND	NA	NC [b]
Zinc		2,500	10,000	0 / 19	All ND	NA	NC [b]	0 / 19	All ND	NA	NC [b]	0 / 38	All ND	NA	NC [b]	0 / 31	All ND	NA	NC [b]
Cyanide		100	4,000	0 / 19	All ND	NA	NC [b]	0 / 19	All ND	NA	NC [b]	0 / 38	All ND	NA	NC [b]	0 / 31	All ND	NA	NC [b]

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] Only one distinct data value was detected
[b] All values non detect

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

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

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

LN - Log Normal Distribution
[m] 95% H-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 8/23/10
Checked by / Date: KJC 8/25/10

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

DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lieutenant Governor

RICHARD K. SULLIVAN JR.
Secretary

KENNETH L. KIMMELL
Commissioner

June 15, 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-030
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-030 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-030.

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 ten 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-030, 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 of lead detected in samples collected from the top 3 feet is above the applicable MCP S-1 soil standards. 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. Both the average and the 95% UCL for all COCs, 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 response actions are required for the soil located greater than three feet below ground surface.

Property P-030 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-030:

- 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. Specifically, concentrations of lead in all of the soil borings on the property are above the applicable MCP Method 1 S-1 soil standard. Response actions are necessary to address the COC contamination in the area of these soil borings at this interval.

- MassDEP has also verified its findings that a Condition of No Significant Risk exists on this property for the soil located between 3 and 12 feet, and 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/lm

Enclosure

Ecc: 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
Lara Goodine, Data Entry

CLEAN, President – Eddie Johnson
Jhelijhnsn6@aol.com

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

cc: Owner, Property P-030

Table F-030
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 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Acenaphthene	180,000	1,000	10,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Acenaphthylene	180,000	1,000	10,000	2 / 10	0.18 - 0.2	0.19	0.21 NP [c]	0 / 10	All ND	NA	NC [a]	2 / 20	0.18 - 0.2	0.18	0.21 NP [c]	0 / 10	All ND	NA	NC [a]
Anthracene	920,000	1,000	10,000	5 / 10	0.194 - 0.35	0.23	0.32 NP [c]	1 / 10	0.36 - 0.36	0.20	NC [b]	6 / 20	0.194 - 0.36	0.21	0.29 NP [d]	0 / 10	All ND	NA	NC [a]
Benzo(a)anthracene	160	7	3,000	9 / 10	0.4 - 1.6	0.86	1.1 NP [c]	1 / 10	0.965 - 0.965	0.26	NC [b]	10 / 20	0.4 - 1.6	0.46	0.87 NP [d]	1 / 10	0.148 - 0.148	0.15	NC [b]
Benzo(a)pyrene	16	2	300	10 / 10	0.4 - 1.33	0.85	1.1 N [h]	1 / 10	0.767 - 0.767	0.24	NC [b]	11 / 20	0.4 - 1.33	0.44	0.71 NP [d]	0 / 10	All ND	NA	NC [a]
Benzo(b)fluoranthene	160	7	3,000	9 / 10	0.78 - 1.9	1.2	1.5 NP [c]	2 / 10	0.17 - 1.04	0.27	1.0 NP [e]	11 / 20	0.17 - 1.9	0.57	0.99 NP [d]	1 / 10	0.178 - 0.178	0.15	NC [b]
Benzo(g,h,i)perylene	120,000	1,000	10,000	8 / 10	0.39 - 0.84	0.59	0.75 NP [d]	1 / 10	0.559 - 0.559	0.22	NC [b]	9 / 20	0.39 - 0.84	0.34	0.61 NP [d]	0 / 10	All ND	NA	NC [a]
Benzo(k)fluoranthene	1,600	70	10,000	10 / 10	0.25 - 0.49	0.38	0.43 N [h]	1 / 10	0.379 - 0.379	0.20	NC [b]	11 / 20	0.25 - 0.49	0.26	0.36 NP [d]	0 / 10	All ND	NA	NC [a]
Chrysene	16,000	70	10,000	9 / 10	0.47 - 1.5	0.89	1.1 NP [c]	1 / 10	0.933 - 0.933	0.25	NC [b]	10 / 20	0.47 - 1.5	0.46	0.87 NP [d]	0 / 10	All ND	NA	NC [a]
Dibenz(a,h)anthracene	16	0.7	300	3 / 10	0.171 - 0.23	0.20	0.25 NP [c]	0 / 10	All ND	NA	NC [a]	3 / 20	0.171 - 0.23	0.18	0.24 NP [c]	0 / 10	All ND	NA	NC [a]
Fluoranthene	120,000	1,000	10,000	9 / 10	0.74 - 2.7	1.6	2.0 NP [c]	3 / 10	0.21 - 2.02	0.37	2.0 NP [d]	12 / 20	0.21 - 2.7	0.78	1.1 NP [d]	1 / 10	0.228 - 0.228	0.16	NC [b]
Fluorene	120,000	1,000	10,000	0 / 10	All ND	NA	NC [a]	1 / 10	0.202 - 0.202	0.18	NC [b]	1 / 20	0.202 - 0.202	0.18	NC [b]	0 / 10	All ND	NA	NC [a]
Indeno(1,2,3-cd)pyrene	160	7	3,000	8 / 10	0.43 - 1	0.65	0.83 NP [d]	1 / 10	0.6 - 0.6	0.22	NC [b]	9 / 20	0.43 - 1	0.36	0.66 NP [d]	0 / 10	All ND	NA	NC [a]
Naphthalene	61,000	100	10,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Phenanthrene	120,000	500	10,000	10 / 10	0.33 - 1.8	0.86	1.1 N [h]	1 / 10	1.74 - 1.74	0.33	NC [b]	11 / 20	0.33 - 1.8	0.51	0.79 NP [d]	0 / 10	All ND	NA	NC [a]
Pyrene	92,000	1,000	10,000	9 / 10	0.69 - 3	1.6	2.1 NP [c]	3 / 10	0.21 - 1.64	0.33	1.6 NP [d]	12 / 20	0.21 - 3	0.75	1.0 NP [d]	1 / 10	0.218 - 0.218	0.16	NC [b]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Aroclor-1254	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Aroclor-1260	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Aroclor-1262	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
PCBs (Total)	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]

Table P-030
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
Inorganics (mg/Kg)																			
Aluminum		NS	NS	10 / 10	3020 - 5920	4144	4675 N [h]	10 / 10	1720 - 4730	3144	3813 N [h]	20 / 20	1720 - 5920	3477	3833 N [h]	9 / 9	1770 - 5460	3216	3940 NP [c]
Antimony		20	300	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Arsenic	40	20	200	10 / 10	12.4 - **62.5**	**28**	**37** N [h]	8 / 10	3.6 - 15	5.2	8.0 NP [e]	18 / 20	3.6 - **62.5**	12.8	**24** NP [f]	4 / 9	2.5 - 5.2	2.0	4.0 NP [d]
Barium	200,000	1,000	10,000	10 / 10	154 - 573	284	362 N [h]	10 / 10	12.4 - 80.6	43	58 N [h]	20 / 20	12.4 - 573	123	222 LN [j]	9 / 9	7.3 - 30.9	15.0	19.3 NP [c]
Beryllium		100	2,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Cadmium	60	2	300	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Calcium		NS	NS	10 / 10	3310 - 7070	4518	5244 N [h]	10 / 10	297 - 2770	1151	1603 N [h]	20 / 20	297 - 7070	2273	3006 G [i]	9 / 9	331 - 1420	690	907 NP [c]
Chromium	200	30	2,000	10 / 10	10.1 - 22.7	16.9	19.4 N [h]	10 / 10	4.3 - 14.3	8.1	9.9 N [h]	20 / 20	4.3 - 22.7	11.0	12.9 G [i]	9 / 9	4.3 - 25.2	9.4	13.1 NP [e]
Cobalt		NS	NS	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Copper		NS	NS	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Iron		NS	NS	10 / 10	7550 - 72300	34052	48766 N [h]	10 / 10	1520 - 6970	4405	5470 N [h]	20 / 20	1520 - 72300	14287	50805 NP [g]	9 / 9	1920 - 7750	4239	5387 NP [c]
Lead	1,000	300	3,000	10 / 10	**547** - **1670**	**971**	**1173** N [h]	10 / 10	12.6 - 211	110	156 N [h]	20 / 20	12.6 - **1670**	**397**	**597** G [i]	9 / 9	2.7 - 27.2	7.8	19.3 NP [f]
Magnesium		NS	NS	10 / 10	612 - 2360	1121	1417 G [i]	10 / 10	327 - 2120	892	1208 N [h]	20 / 20	327 - 2360	968	1143 G [i]	9 / 9	538 - 3150	1388	1920 NP [c]
Manganese		NS	NS	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Mercury		20	300	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Nickel		20	7,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Potassium		NS	NS	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Selenium		400	8,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Silver		100	2,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Sodium		NS	NS	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Thallium		8	800	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	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 (t) UCL
[d] 95% KM (Percentile Bootstrap) UCL
[e] 95% KM (BCA) UCL
[f] 95% KM (Chebyshev) UCL
[g] 99% Chebyshev (Mean, Sd) UCL

N - Normal Distribution
[h] 95% Student's-t UCL

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

LN - Log Normal Distribution
[j] 95% H-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 8/10/10
Checked by / Date: KJC 8/13/10

June 17, 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-006
SAP Data Evaluation Status - Additional
Analysis or USEPA Remedial Action Recommended

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-006 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-006. 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 nineteen 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-006, 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 95% UCL for PCBs calculated for samples collected from the top 3 feet is above the applicable MCP S-1 soil standards. Actions may be required 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 additional evaluation is complete.

- Furthermore, a condition of No Significant Risk, as defined in the MCP, for foreseeable future use of the property was determined not to exist for the soil located between 3 feet and 12 feet below the ground surface. The 95% UCL for lead and one PAH, which were calculated based on the analytical data from soils collected from greater than 3 feet bgs, were above the applicable MCP Method 1 S-1 soil standards. Because this soil is located at dept, it does not necessarily need to be removed or capped to be protective. Additional evaluation of this data is required to determine whether these concentrations at this depth constitute a Condition of No Significant Risk. No activities should occur at the property that will disrupt soil located from 3 feet below ground surface to a depth of 12 feet until this additional evaluation is complete.

Property P-006 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-006:

- MassDEP has verified its previous request for USEPA assistance to address that, based on the SAP data, a determination that a condition of No Significant Risk, as defined in the MCP, cannot be made for current property use for soil located between the ground surface and 3 feet in depth. The preliminary risk evaluation determination was made because the 95% UCL calculated for average PCB contamination in soil located between 0 and 3 feet bgs exceeded the applicable MCP Method 1 S-1 soil standard. Evaluation of available COC concentration data from surrounding properties indicates that the PCB contamination observed on Property P-006 is unique to Property P-006 and is not consistent with COC contamination distribution in the surrounding area. PCBs were detected in samples collected from the 0 to 3 foot bgs interval that exceed the MCP Method 1 S-1 standard of 2.0 ppm in soil borings P-006-SB-04, P-006-SB-09, P-006-SB-10, P-006-SB-12, P-006-SB-15, and P-006-SB-19. The highest PCB contaminant level observed was 13.0 ppm which was observed in the 1-3 foot bgs interval. The concentration listed in the MCP indicating a potential Imminent Hazard for PCB contamination in the top foot of soil is 10 ppm. MassDEP acknowledges that additional characterization was conducted in the vicinity of soil boring P-006-SB-010 based on initial field screening results indicating PCB concentrations above the applicable standard. However, no additional characterization was done at other locations where contaminant levels exceed standard, including in the area of the boring identified as P-006-SB-15 where PCBs were observed at a concentration of 13.0 ppm. In addition, because the data for these borings, as indicated in the data summary tables prepared by Weston for the data for this property, are qualified as estimated and the result of diluted analysis, there is some uncertainty regarding the usability of the qualified data for the purpose of estimating risk. Accordingly, MassDEP recommends that either additional samples be collected and analyzed for PCBs around impacted borings to further refine the risk evaluation or Response Actions be conducted to address the PCB contamination in the 0-3 foot bgs interval.

In addition, based on a review of the soil boring logs for Property P-006 there is evidence of prior burning, indicated by the presence of ash, cinders and/or slag, in addition to the presence PCB contamination. Because these dioxin formation precursor conditions exist, if soil in the area of the borings identified above is to remain in-place and uncapped, samples should be analyzed for the presence of dioxin or dioxin-like compounds and additional risk characterization be conducted based on the additional analysis.

No activities should occur at the property that will disrupt soil located from the ground surface to a depth of 3 feet until either remediation activities are complete or until additional analysis and risk evaluation are complete and demonstrate a condition of No Significant Risk, as defined by the MCP, exists.

- Applying the 95% UCL for data evaluation of soil located greater than 3 feet bgs is not necessary because the COC concentrations observed on Property P-006 for this soil interval are consistent with results from samples taken in the surrounding area. The actual average for COCs at this depth interval is below the applicable MCP Method 1 S-1 soil standard. As such, a Condition of No Significant Risk exists on this property for the soil located between 3 and 12 feet, and 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/lm

Enclosure

Ecc: 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
Lara Goodine, Data Entry

CLEAN, President – Eddie Johnson
Jhelijhnsn6@aol.com

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

cc: Owner, Property P-006

Table P-006
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	2 / 19	0.11 - 0.17	0.19	0.19 NP [a]	0 / 19	All ND	NA	NC [k]	2 / 38	0.11 - 0.17	0.20	0.19 NP [a]	5 / 31	0.32 - 1.76	0.38	0.50 NP [a]
Acenaphthene	180,000	1,000	10,000	6 / 19	0.047 - 0.19	0.16	0.13 NP [a]	3 / 19	0.05 - 0.08	0.20	0.084 NP [a]	9 / 38	0.047 - 0.19	0.19	0.10 NP [c]	6 / 31	0.081 - 2.01	0.42	1.2 NP [c]
Acenaphthylene	180,000	1,000	10,000	8 / 19	0.05 - 0.44	0.18	0.17 NP [a]	2 / 19	0.09 - 0.1	0.21	0.10 NP [a]	10 / 38	0.05 - 0.44	0.20	0.13 NP [c]	11 / 31	0.11 - 4.75	0.59	0.78 NP [a]
Anthracene	920,000	1,000	10,000	16 / 19	0.067 - 0.61	0.22	0.27 NP [b]	7 / 19	0.06 - 0.3	0.21	0.22 NP [a]	23 / 38	0.06 - 0.61	0.21	0.21 NP [a]	16 / 31	0.06 - 9.27	0.78	2.7 NP [e]
Benzo(a)anthracene	160	7	3,000	18 / 19	0.22 - 1.45	0.56	0.67 NP [b]	16 / 19	0.09 - 0.79	0.30	0.55 NP [d]	34 / 38	0.09 - 1.45	0.38	0.45 NP [b]	17 / 31	0.23 - **14.9**	1.2	2.2 NP [b]
Benzo(a)pyrene	16	2	300	19 / 19	0.078 - 1.61	0.55	0.72 G [h]	16 / 19	0.09 - 0.8	0.30	0.56 NP [d]	35 / 38	0.078 - 1.61	0.39	0.46 NP [b]	18 / 31	0.038 - **13.6**	1.2	**2.2** NP [b]
Benzo(b)fluoranthene	160	7	3,000	19 / 19	0.12 - 2.3	0.80	1.1 G [h]	16 / 19	0.14 - 1.22	0.42	0.79 NP [d]	35 / 38	0.12 - 2.3	0.55	0.81 NP [d]	18 / 31	0.06 - **21.6**	1.7	3.3 NP [b]
Benzo(g,h,i)perylene	120,000	1,000	10,000	17 / 19	0.06 - 0.41	0.18	0.21 NP [b]	11 / 19	0.04 - 0.26	0.17	0.14 NP [a]	28 / 38	0.04 - 0.41	0.17	0.15 NP [c]	18 / 31	0.05 - 3.04	0.41	0.60 NP [b]
Benzo(k)fluoranthene	1,600	70	10,000	18 / 19	0.1 - 0.66	0.31	0.37 NP [c]	14 / 19	0.05 - 0.4	0.18	0.22 NP [c]	32 / 38	0.05 - 0.66	0.23	0.31 NP [d]	17 / 31	0.13 - 7.86	0.78	1.4 NP [b]
Chrysene	16,000	70	10,000	19 / 19	0.075 - 1.66	0.59	0.77 G [h]	18 / 19	0.04 - 0.87	0.32	0.60 NP [d]	37 / 38	0.04 - 1.66	0.41	0.60 NP [d]	21 / 31	0.034 - 12.6	1.2	2.0 NP [b]
Dibenz(a,h)anthracene	16	0.7	300	14 / 19	0.05 - 0.28	0.16	0.16 NP [a]	6 / 19	0.1 - 0.2	0.22	0.19 NP [a]	20 / 38	0.05 - 0.28	0.20	0.16 NP [c]	10 / 31	0.047 - **1.8**	0.37	0.36 NP [a]
Fluoranthene	120,000	1,000	10,000	19 / 19	0.12 - 2.16	1.1	1.3 N [i]	18 / 19	0.066 - 1.7	0.57	1.1 NP [d]	37 / 38	0.066 - 2.16	0.74	1.1 NP [d]	22 / 31	0.058 - 42.6	3.0	9.2 NP [d]
Fluorene	120,000	1,000	10,000	5 / 19	0.067 - 0.36	0.19	0.19 NP [c]	3 / 19	0.05 - 0.1	0.20	0.10 NP [c]	8 / 38	0.05 - 0.36	0.20	0.12 NP [c]	8 / 31	0.05 - 4.7	0.57	0.76 NP [a]
Indeno(1,2,3-cd)pyrene	160	7	3,000	17 / 19	0.06 - 0.4	0.19	0.21 NP [b]	10 / 19	0.046 - 0.28	0.18	0.15 NP [a]	27 / 38	0.046 - 0.4	0.18	0.16 NP [c]	15 / 31	0.084 - 3.39	0.43	0.63 NP [a]
Naphthalene	61,000	100	10,000	4 / 19	0.06 - 0.22	0.18	0.20 NP [a]	2 / 19	0.06 - 0.086	0.20	0.096 NP [a]	6 / 38	0.06 - 0.22	0.20	0.14 NP [c]	7 / 31	0.071 - 1.9	0.40	0.53 NP [c]
Phenanthrene	120,000	500	10,000	18 / 19	0.18 - 2.7	0.76	1.4 NP [d]	16 / 19	0.09 - 1.1	0.37	0.50 NP [b]	34 / 38	0.09 - 2.7	0.50	0.62 NP [b]	19 / 31	0.05 - 41.9	2.7	16.8 NP [f]
Pyrene	92,000	1,000	10,000	18 / 19	0.35 - 2.44	0.97	1.2 NP [b]	16 / 19	0.15 - 1.5	0.50	0.67 NP [b]	34 / 38	0.15 - 2.44	0.66	0.78 NP [b]	17 / 31	0.35 - 35.6	2.4	9.8 NP [e]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 19	All ND	NA	NC [k]	0 / 19	All ND	NA	NC [k]	0 / 38	All ND	NA	NC [k]	0 / 31	All ND	NA	NC [k]
Aroclor-1221	10	2	100	0 / 19	All ND	NA	NC [k]	0 / 19	All ND	NA	NC [k]	0 / 38	All ND	NA	NC [k]	0 / 31	All ND	NA	NC [k]
Aroclor-1232	10	2	100	0 / 19	All ND	NA	NC [k]	0 / 19	All ND	NA	NC [k]	0 / 38	All ND	NA	NC [k]	0 / 31	All ND	NA	NC [k]
Aroclor-1242	10	2	100	0 / 19	All ND	NA	NC [k]	0 / 19	All ND	NA	NC [k]	0 / 38	All ND	NA	NC [k]	0 / 31	All ND	NA	NC [k]
Aroclor-1248	10	2	100	0 / 19	All ND	NA	NC [k]	0 / 19	All ND	NA	NC [k]	0 / 38	All ND	NA	NC [k]	0 / 31	All ND	NA	NC [k]
Aroclor-1254	10	2	100	19 / 19	0.089 - **5**	1.3	2.0 G [h]	16 / 19	0.01 - **13**	1.4	**4.6** NP [d]	35 / 38	0.01 - **13**	1.4	**2.9** NP [d]	16 / 31	0.008 - 0.82	0.068	0.26 NP [e]
Aroclor-1260	10	2	100	0 / 19	All ND	NA	NC [k]	1 / 19	0.01 - 0.01	0.012	NC [l]	1 / 38	0.01 - 0.01	0.012	NC [l]	7 / 31	0.025 - 0.088	0.021	0.039 NP [c]
Aroclor-1262	10	2	100	0 / 19	All ND	NA	NC [k]	0 / 19	All ND	NA	NC [k]	0 / 38	All ND	NA	NC [k]	0 / 31	All ND	NA	NC [k]
Aroclor-1268	10	2	100	0 / 19	All ND	NA	NC [k]	0 / 19	All ND	NA	NC [k]	0 / 38	All ND	NA	NC [k]	0 / 31	All ND	NA	NC [k]
PCBs (Total)	10	2	100	19 / 19	0.089 - **5**	1.3	2.0 G [h]	16 / 19	0.01 - **13**	1.4	**4.6** NP [d]	35 / 38	0.01 - **13**	1.4	**2.9** NP [d]	19 / 31	0.008 - 0.82	0.076	0.13 NP [b]

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Evaluations as of 09 20 10, P-006

Table P-006
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1]				1-3 ft [1]				0-3 ft [1, 2]				3+ ft [1]			
				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	19 / 19	3900 - 7800	5991	6381 N [i]	19 / 19	4630 - 8690	6391	6822 N [i]	38 / 38	3900 - 8690	6257	6499 G [h]	31 / 31	3180 - 9990	5106	5581 G [h]
Antimony		20	300	0 / 19	All ND	NA	NC [k]	0 / 19	All ND	NA	NC [k]	0 / 38	All ND	NA	NC [k]	0 / 31	All ND	NA	NC [k]
Arsenic	40	20	200	18 / 19	2.4 - 13.1	4.5	5.6 NP [b]	19 / 19	1.8 - 6.9	3.7	4.4 N [i]	37 / 38	1.8 - 13.1	4.0	4.4 NP [b]	22 / 31	0.87 - **35.1**	8.2	11.4 NP [c]
Barium	200,000	1,000	10,000	19 / 19	31.4 - 187	91	109 N [i]	19 / 19	14.3 - 542	113	158 G [h]	38 / 38	14.3 - 542	106	125 LN [m]	31 / 31	14.4 - 902	97	136 G [h]
Beryllium		100	2,000	0 / 19	All ND	NA	NC [k]	0 / 19	All ND	NA	NC [k]	0 / 38	All ND	NA	NC [k]	0 / 31	All ND	NA	NC [k]
Cadmium	60	2	300	7 / 19	0.43 - **2.9**	0.55	0.89 NP [a]	9 / 19	0.3 - 1.6	0.61	0.80 NP [c]	16 / 38	0.3 - **2.9**	0.59	0.73 NP [a]	12 / 31	0.11 - **2.3**	0.53	0.68 NP [c]
Calcium		NS	NS	19 / 19	767 - 2900	1610	1880 N [i]	19 / 19	545 - 4780	1618	1974 G [h]	38 / 38	545 - 4780	1615	1789 G [h]	31 / 31	741 - 11500	2929	4011 LN [m]
Chromium	200	30	2,000	19 / 19	6.1 - **31.4**	11.9	14.2 N [j]	19 / 19	5.1 - 29.1	13.4	15.7 G [h]	38 / 38	5.1 - **31.4**	12.9	14.1 N [j]	31 / 31	7.6 - **53.3**	13.9	15.8 G [h]
Cobalt		NS	NS	0 / 19	All ND	NA	NC [k]	0 / 19	All ND	NA	NC [k]	0 / 38	All ND	NA	NC [k]	0 / 31	All ND	NA	NC [k]
Copper		NS	NS	0 / 19	All ND	NA	NC [k]	0 / 19	All ND	NA	NC [k]	0 / 38	All ND	NA	NC [k]	0 / 31	All ND	NA	NC [k]
Iron		NS	NS	19 / 19	6580 - 65800	13744	19302 N [j]	19 / 19	6880 - 33300	13993	16536 G [h]	38 / 38	6580 - 65800	13910	15970 N [j]	31 / 31	3990 - 39600	10817	12987 G [h]
Lead	1,000	300	3,000	19 / 19	78.5 - **493**	236	283 N [i]	19 / 19	10 - **954**	255	**375** G [h]	38 / 38	10 - **954**	249	298 G [h]	31 / 31	3.1 - **1100**	211	**681** NP [g]
Magnesium		NS	NS	19 / 19	1010 - 2220	1401	1535 G [h]	19 / 19	1050 - 2680	1694	1891 N [i]	38 / 38	1010 - 2680	1596	1699 N [i]	31 / 31	808 - 5490	1570	1800 G [h]
Manganese		NS	NS	0 / 19	All ND	NA	NC [k]	0 / 19	All ND	NA	NC [k]	0 / 38	All ND	NA	NC [k]	0 / 31	All ND	NA	NC [k]
Mercury		20	300	0 / 19	All ND	NA	NC [k]	0 / 19	All ND	NA	NC [k]	0 / 38	All ND	NA	NC [k]	0 / 31	All ND	NA	NC [k]
Nickel		20	7,000	0 / 19	All ND	NA	NC [k]	0 / 19	All ND	NA	NC [k]	0 / 38	All ND	NA	NC [k]	0 / 31	All ND	NA	NC [k]
Potassium		NS	NS	0 / 19	All ND	NA	NC [k]	0 / 19	All ND	NA	NC [k]	0 / 38	All ND	NA	NC [k]	0 / 31	All ND	NA	NC [k]
Selenium		400	8,000	0 / 19	All ND	NA	NC [k]	0 / 19	All ND	NA	NC [k]	0 / 38	All ND	NA	NC [k]	0 / 31	All ND	NA	NC [k]
Silver		100	2,000	0 / 19	All ND	NA	NC [k]	0 / 19	All ND	NA	NC [k]	0 / 38	All ND	NA	NC [k]	0 / 31	All ND	NA	NC [k]
Sodium		NS	NS	0 / 19	All ND	NA	NC [k]	0 / 19	All ND	NA	NC [k]	0 / 38	All ND	NA	NC [k]	0 / 31	All ND	NA	NC [k]
Thallium		8	800	0 / 19	All ND	NA	NC [k]	0 / 19	All ND	NA	NC [k]	0 / 38	All ND	NA	NC [k]	0 / 31	All ND	NA	NC [k]
Vanadium		600	10,000	0 / 19	All ND	NA	NC [k]	0 / 19	All ND	NA	NC [k]	0 / 38	All ND	NA	NC [k]	0 / 31	All ND	NA	NC [k]
Zinc		2,500	10,000	0 / 19	All ND	NA	NC [k]	0 / 19	All ND	NA	NC [k]	0 / 38	All ND	NA	NC [k]	0 / 31	All ND	NA	NC [k]
Cyanide		100	4,000	0 / 19	All ND	NA	NC [k]	0 / 19	All ND	NA	NC [k]	0 / 38	All ND	NA	NC [k]	0 / 31	All ND	NA	NC [k]

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).

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

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

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

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

LN - Log Normal Distribution
- [m] 95% H-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 08/02/10
Checked by / Date: KJC 08/02/10

MassDEP

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

DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lieutenant Governor

RICHARD K. SULLIVAN JR.
Secretary

KENNETH L. KIMMELL
Commissioner

June 23, 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-002
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-002 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-002. 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 eight 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-002, 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 concentrations of lead and two of the PAHs detected in samples collected from the top 3 feet are above the applicable MCP S-1 soil standards. 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 not determined to exist for the soil located between 3 feet and 12 feet below the ground surface. This is because the average concentration for lead and two PAHs, which were calculated based on the analytical data from soils collected from greater than 3 feet bgs, were above the applicable MCP Method 1 S-1 soil standard. Because this soil is at depth, it does not necessarily need to be removed to be protective of the current use of the property.

Property P-002 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-002:

- 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. Specifically, the average concentration of lead and/or PAHs and the boring-specific concentrations of lead and/or PAHs in all but one of the soil borings on the property are above the applicable MCP Method 1 S-1 soil standard. The only soil boring on property P-002 that did not contain concentrations of lead and/or PAHs above the applicable soil standards in this soil interval is identified as P-002-SB-08.

Response actions are necessary to address the COC contamination in the remaining soil borings at this interval.

- MassDEP has also verified that a Condition of No Significant Risk does not exist for future use of the property because the average concentration of lead and/or PAHs calculated from data from samples collected from the greater than 3 foot horizon is above the applicable MCP Method 1 S-1 soil standard. The lead concentration in one sample in particular, identified as P-002-SB-05C, is above the established Upper Concentration Limit of 3000 ppm. Based on a review of the soil boring log for this location, it appears the sample was collected from the 3 to 4 foot zone. In addition, one PAH was detected in P-002-SB-1C at a concentration above the applicable MCP Method 1 S-1 standard. Available soil boring logs do not indicate the interval from which this sample was collected. When evaluating the results for Property P-002 without the results from these two sample locations, the average concentration for lead and all PAHs for this depth interval are below the applicable Method 1 S-1 soil standard, which would be considered a Condition of No Significant Risk for this depth interval and would require no further response action. However, if this soil is to remain in place, land use restrictions and/or controls defined as a Notice of Activity and Use Limitation (or AUL) in the MCP, may be necessary for the property to ensure that future activities or changes in use do not create the potential for humans to be exposed to the soil below 3 feet in depth.

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/lm

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-002

June 23, 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-027
SAP Data 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-027 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-027. 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 sixty-nine 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-027, 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. This is because the 95% UCL for lead, which was calculated based on the analytical data from soils collected from 0 to 3 feet bgs, was 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 not determined to exist for the soil located between 3 feet and 12 feet below the ground surface. This is because the average concentrations of lead and one PAH detected in soils collected from greater than 3 feet bgs, were above the applicable MCP Method 1 S-1 soil standard. Because this soil is at depth, it does not necessarily need to be removed to be protective of the current use of the property.

Property P-027 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-027:

- 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. Specifically, the previous request for USEPA assistance was made based on the preliminary risk evaluation finding that the lead concentration exceeded the 95% UCL in this soil layer. In its Final Risk Evaluation, MassDEP has determined that it is not necessary to apply the 95% UCL for data evaluation in the 0 to 3 foot bgs soil interval for this property. However, even though the actual lead concentration average is below the MCP Method 1 S-1 soil standard, lead concentrations exceed the MCP Method S-1 standard over a substantial contiguous area of this large residential property and should be addressed. MassDEP has determined that concentrations of lead in soil borings identified as P-027-SB-14, P-027-SB-15, P-027-SB-16, P-027-SB-17, P-027-SB-20, P-027-SB-21, P-027-SB-22, P-027-SB-27, P-027-SB-28, P-027-SB-29, P-027-SB-30, P-027-SB-33, P-027-SB-34, P-027-SB-36, P-027-SB-37 and P-027-SB-43 should be addressed in response to its finding that a Condition of No Significant Risk does not exist on Property P-027. In addition, MassDEP recommends additional samples be taken and analyzed for the presence of lead contamination in the 0 to 3 foot soil horizon in the vicinity of P-027-SB-40 and P-027-SB-41 to better determine whether, or to what extent, these areas should be subject to response action.

- MassDEP has also verified that a Condition of No Significant Risk does not exist for future use of the property because the average concentrations of lead and/or PAHs in samples collected from the greater than 3 foot horizon are above the applicable MCP Method 1 S-1 soil standard(s). This is due to the concentrations of lead and/or PAHs in the vicinity of the soil borings identified as P-027-SB-14, P-027-SB-16, P-027-SB-17, P-027-SB-20, P-027-SB-28, P-027-SB-29, P-027-SB-30, P-027-SB-34, P-027-SB-36 and P-027-SB-43. The samples exceeding the applicable standard in these specific borings are those designated with a "C". Based on a review of the boring logs for these locations, it appears the samples were collected from the 3 to 4 foot zone. If this soil is to remain in place, land use restrictions and/or controls defined as a Notice of Activity and Use Limitation (or AUL) in the MCP, may be necessary for the property to ensure that future activities or changes in use do not create the potential for humans to be exposed to the soil below 3 feet in depth in these areas.

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/lm

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-027

June 24, 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-001
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-001 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-001. 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 seven 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-001, 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 concentrations of lead detected in samples collected from the top 3 feet are above the applicable MCP Method 1 S-1 soil standards. 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 not determined to exist for the soil located between 3 feet and 12 feet below the ground surface. This is because the average concentration of PAHs, which were calculated based on the analytical data from soils collected from greater than 3 feet bgs, were above the applicable MCP Method 1 S-1 soil standard. Because this soil is at depth, it does not necessarily need to be removed to be protective of the current use of the property.

Property P-001 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-001:

- 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. Specifically, the average concentration of lead calculated for this interval and the boring-specific concentrations of lead in all but two of the soil borings for this interval are above the applicable MCP Method 1 S-1 soil standard. The two soil borings on property P-001 that did not contain concentrations of lead above the applicable soil standards in this soil interval are identified as P-001-SB-01 and

P-001-SB-002. Response actions are necessary to address the COC contamination in the remaining soil borings at this interval.

- MassDEP has also verified that a Condition of No Significant Risk does not exist for future use of the property because the average concentration of PAHs calculated from data from samples collected from the greater than 3 foot horizon is above the applicable MCP Method 1 S-1 soil standard. The concentrations of PAHs in one sample in particular, identified as P-001-SB-02C, are well above the applicable MCP Method 1 S-1 standard. The soil boring log for this location does not indicate the interval from which the "C" sample was collected. When evaluating the results for Property P-001 without the results from these two sample locations, the average concentration for all PAHs for this depth interval are below the applicable Method 1 S-1 soil standard, which would be considered a Condition of No Significant Risk for this depth interval and would require no further response action. However, if this soil is to remain in place, land use restrictions and/or controls defined as a Notice of Activity and Use Limitation (or AUL) in the MCP, may be necessary for the property to ensure that future activities or changes in use do not create the potential for humans to be exposed to the soil below 3 feet in depth.

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/lm

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-001

Table P-001
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
PAHs (mg/Kg)																			
2-Methylnaphthalene	61,000	300	5,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Acenaphthene	180,000	1,000	10,000	1 / 7	0.28 - 0.28	0.17	NC [b]	2 / 7	0.2 - 0.25	0.18	0.27 NP [c]	3 / 14	0.2 - 0.28	0.18	0.26 NP [c]	0 / 14	All ND	NA	NC [a]
Acenaphthylene	180,000	1,000	10,000	6 / 7	0.19 - 0.58	0.31	0.42 NP [c]	4 / 7	0.23 - 0.72	0.30	0.52 NP [d]	10 / 14	0.19 - 0.72	0.30	0.39 NP [f]	4 / 14	0.25 - 71	5.4	61 NP [g]
Anthracene	520,000	1,000	10,000	7 / 7	0.28 - 0.92	0.57	0.76 N [h]	7 / 7	0.19 - 1.4	0.52	0.97 G [j]	14 / 14	0.19 - 1.4	0.54	0.69 G [j]	4 / 14	0.36 - 102	7.7	22 NP [c]
Benzo(a)anthracene	160	7	3,000	7 / 7	1.2 - 2.96	1.9	2.4 N [h]	7 / 7	0.91 - 4.4	1.7	3.2 LN [k]	14 / 14	0.91 - 4.4	1.8	2.8 NP [e]	6 / 14	0.29 - **145**	**11.1**	**30** NP [c]
Benzo(a)pyrene	16	2	300	7 / 7	1.2 - **2.56**	1.8	**2.2** N [h]	7 / 7	0.92 - **4.4**	1.7	**3.2** LN [k]	14 / 14	0.92 - 4.4	1.8	**2.2** N [i]	6 / 14	0.25 - **123**	**9.6**	**26** NP [c]
Benzo(b)fluoranthene	160	7	3,000	7 / 7	1.7 - 3.67	2.6	3.2 N [h]	7 / 7	1.3 - 5.9	2.4	4.2 LN [k]	14 / 14	1.3 - 5.9	2.4	3.0 N [i]	6 / 14	0.31 - **164**	**12.7**	**34** NP [c]
Benzo(g,h,i)perylene	120,000	1,000	10,000	7 / 7	0.98 - 1.9	1.4	1.7 N [h]	7 / 7	0.79 - 2.5	1.2	1.8 G [j]	14 / 14	0.79 - 2.5	1.3	1.5 N [i]	6 / 14	0.22 - 68	5.5	14.5 NP [c]
Benzo(k)fluoranthene	1,600	70	10,000	7 / 7	0.6 - 1.17	0.82	0.98 N [h]	7 / 7	0.46 - 1.8	0.76	1.6 NP [e]	14 / 14	0.46 - 1.8	0.78	0.94 N [i]	4 / 14	0.51 - 48	3.9	10.7 NP [c]
Chrysene	16,000	70	10,000	7 / 7	1.3 - 2.83	2.0	2.5 N [h]	7 / 7	1 - 4.9	2.0	3.2 G [j]	14 / 14	1 - 4.9	2.0	2.4 N [i]	6 / 14	0.3 - 126	9.8	26 NP [c]
Dibenz(a,h)anthracene	16	0.7	300	7 / 7	0.23 - 0.49	0.36	0.43 N [h]	7 / 7	0.18 - 0.67	0.31	0.46 G [j]	14 / 14	0.18 - 0.67	0.32	0.39 LN [k]	4 / 14	0.21 - **17**	**1.5**	**3.8** NP [c]
Fluoranthene	120,000	1,000	10,000	7 / 7	2.4 - 7.07	4.1	5.5 N [h]	7 / 7	1.9 - 10.3	4.0	7.1 G [j]	14 / 14	1.9 - 10.3	4.1	6.5 NP [e]	7 / 14	0.45 - 409	30	332 NP [g]
Fluorene	120,000	1,000	10,000	4 / 7	0.22 - 0.31	0.21	0.28 NP [c]	2 / 7	0.29 - 0.51	0.23	0.40 NP [c]	6 / 14	0.22 - 0.51	0.22	0.31 NP [c]	2 / 14	0.41 - 60	4.6	62 NP [g]
Indeno(1,2,3-cd)pyrene	160	7	3,000	7 / 7	0.97 - 1.79	1.4	1.7 N [h]	7 / 7	0.78 - 2.9	1.3	2.0 LN [k]	14 / 14	0.78 - 2.9	1.3	1.6 N [i]	6 / 14	0.2 - **82**	6.5	**17.3** NP [c]
Naphthalene	61,000	100	10,000	1 / 7	0.28 - 0.28	0.17	NC [b]	2 / 7	0.16 - 0.23	0.17	0.26 NP [c]	3 / 14	0.16 - 0.28	0.17	0.25 NP [c]	1 / 14	0.31 - 0.31	1.3	NC [b]
Phenanthrene	120,000	500	10,000	7 / 7	1 - 3.67	2.4	3.2 N [h]	7 / 7	1 - 7.37	2.6	4.9 G [j]	14 / 14	1 - 7.37	2.6	3.3 G [j]	6 / 14	0.52 - 494	36	406 NP [g]
Pyrene	92,000	1,000	10,000	7 / 7	2.4 - 5.33	3.7	4.6 N [h]	7 / 7	1.9 - 8.31	3.5	5.7 G [j]	14 / 14	1.9 - 8.31	3.6	4.3 N [i]	7 / 14	0.42 - 304	23	247 NP [g]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Aroclor-1254	10	2	100	6 / 7	0.25 - 0.46	0.29	0.39 NP [c]	0 / 7	All ND	NA	NC [a]	6 / 14	0.25 - 0.46	0.11	0.32 NP [d]	0 / 14	All ND	NA	NC [a]
Aroclor-1260	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Aroclor-1262	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
PCBs (Total)	10	2	100	6 / 7	0.25 - 0.46	0.29	0.39 NP [c]	0 / 7	All ND	NA	NC [a]	6 / 14	0.25 - 0.46	0.11	0.32 NP [d]	0 / 14	All ND	NA	NC [a]

Table P-001
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	7 / 7	3560 - 5460	4496	4932 N [h]	7 / 7	2940 - 4320	3519	3866 N [h]	14 / 14	2940 - 5460	3844	4100 N [h]	14 / 14	1210 - 6830	3991	4893 N [h]
Antimony		20	300	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Arsenic	40	20	200	7 / 7	3.6 - 5.1	4.5	4.9 N [h]	7 / 7	4.3 - 9	6.5	8.0 N [h]	14 / 14	3.6 - 9	5.8	6.5 N [i]	8 / 14	2.8 - 14	4.2	6.7 NP [d]
Barium	200,000	1,000	10,000	7 / 7	56.2 - 111	84	101 N [h]	7 / 7	92.9 - 254	172	225 N [h]	14 / 14	56.2 - 254	143	170 N [i]	14 / 14	6.9 - 794	163	291 G [j]
Beryllium		100	2,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Cadmium	60	2	300	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	1 / 14	1.7 - 1.7	0.44	NC [b]
Calcium		NS	NS	7 / 7	844 - 1380	1167	1326 N [h]	7 / 7	913 - 4110	2070	2901 N [h]	14 / 14	844 - 4110	1769	2151 N [i]	14 / 14	404 - 15300	6942	9510 N [h]
Chromium	200	30	2,000	7 / 7	4.8 - 9.7	7.5	8.7 N [h]	7 / 7	4.2 - 11.6	7.6	9.3 N [h]	14 / 14	4.2 - 11.6	7.6	8.3 N [h]	14 / 14	3 - **30.6**	10.1	13.2 G [j]
Cobalt		NS	NS	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Copper		NS	NS	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Iron		NS	NS	7 / 7	4150 - 8360	6764	7779 N [h]	7 / 7	4060 - 41500	12657	29696 LN [k]	14 / 14	4060 - 41500	10693	20602 NP [e]	14 / 14	1120 - 22100	8403	13066 G [j]
Lead	1,000	300	3,000	7 / 7	187 - **540**	**316**	**405** N [h]	7 / 7	151 - **991**	**529**	**760** N [h]	14 / 14	151 - **991**	**458**	**577** G [j]	14 / 14	2.6 - **1260**	276	**600** G [j]
Magnesium		NS	NS	7 / 7	468 - 1160	823	993 N [h]	7 / 7	524 - 854	696	799 N [h]	14 / 14	468 - 1160	738	805 N [h]	14 / 14	287 - 1670	774	966 N [h]
Manganese		NS	NS	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Mercury		20	300	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Nickel		20	7,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Potassium		NS	NS	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Selenium		400	8,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Silver		100	2,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Sodium		NS	NS	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Thallium		8	800	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	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 (t) UCL
[d] 95% KM (Percentile Bootstrap) UCL
[e] 95% Chebyshev (Mean, Sd) UCL
[f] 95% KM (BCA) UCL
[g] 99% KM (Chebyshev) UCL

N - Normal Distribution
[h] 95% Student's-t UCL
[i] 95% Modified-t UCL

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

LN - Log Normal Distribution
[k] 95% H-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 07/26/10
Checked by / Date: KJC 8/13/10

MassDEP Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

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Secretary

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Commissioner

June 24, 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-033
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-033 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-033. 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 eight 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-033, 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 of lead detected in samples collected from the top 3 feet is above the applicable MCP Method 1 S-1 soil standards. 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 not determined to exist for the soil located between 3 feet and 12 feet below the ground surface. This is because the average concentration of cadmium, which was calculated based on the analytical data from soils collected from greater than 3 feet bgs, was above the applicable MCP Method 1 S-1 soil standard. Because this soil is at depth, it does not necessarily need to be removed to be protective of the current use of the property.

Property P-033 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-033:

- 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. Specifically, the average concentration of lead calculated for this interval and the boring-specific concentrations of lead in all but three of the soil borings for this interval are above the applicable MCP Method 1 S-1 soil standard. The three soil borings on property P-033 that did not contain concentrations of lead above the applicable soil standards in this soil interval are identified as P-033-SB-06, P-033-SB-07 and P-001-SB-008. Response actions are necessary to address the COC contamination in the remaining soil borings at this interval.

- MassDEP has also verified that a Condition of No Significant Risk does not exist for future use of the property because the average concentration of cadmium calculated from data from samples collected from the greater than 3 foot horizon is above the applicable MCP Method 1 S-1 soil standard. The concentration of cadmium in one sample in particular, identified as P-033-SB-02C, is well above the applicable MCP Method 1 S-1 standard. The soil boring log for this location indicates that the interval the "C" sample was collected is the 3 – 4 foot bgs interval. When evaluating the results for Property P-033 without the results from this sample location, the average concentrations for all COCs are below the applicable Method 1 S-1 soil standard, which would be considered a Condition of No Significant Risk for this depth interval and would require no further response action. However, if this soil in the vicinity of P-033-SB-02 is to remain in place, land use restrictions and/or controls defined as a Notice of Activity and Use Limitation (or AUL) in the MCP, may be necessary for the property to ensure that future activities or changes in use do not create the potential for humans to be exposed to the soil below 3 feet in depth.

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/lm

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-001

Table P-033
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	2 / 8	0.06 - 0.19	0.53	0.25 NP [a]	1 / 8	0.39 - 0.39	0.84	NC [j]	3 / 16	0.06 - 0.39	0.73	0.39 NP [b]	2 / 16	0.074 - 0.1	0.55	0.11 NP [a]
Acenaphthene	180,000	1,000	10,000	2 / 8	0.13 - 0.23	0.54	0.28 NP [a]	1 / 8	0.17 - 0.17	0.86	NC [j]	3 / 16	0.13 - 0.23	0.75	0.21 NP [a]	5 / 16	0.069 - 0.57	0.48	0.38 NP [b]
Acenaphthylene	180,000	1,000	10,000	3 / 8	0.11 - 0.15	0.51	0.15 NP [b]	3 / 8	0.055 - 0.36	0.80	0.36 NP [a]	6 / 16	0.055 - 0.36	0.70	0.23 NP [a]	3 / 16	0.066 - 0.13	0.55	0.13 NP [a]
Anthracene	920,000	1,000	10,000	5 / 8	0.2 - 0.79	0.58	0.57 NP [a]	7 / 8	0.11 - 2.2	0.65	1.7 NP [d]	12 / 16	0.11 - 2.2	0.63	0.74 NP [c]	7 / 16	0.069 - 1.8	0.66	0.72 NP [b]
Benzo(a)anthracene	160	7	3,000	8 / 8	0.42 - 1.6	1.1	1.4 N [g]	8 / 8	0.52 - 4.1	1.7	2.6 N [g]	16 / 16	0.42 - 4.1	1.5	1.9 G [k]	10 / 16	0.052 - 3.5	0.97	1.3 NP [c]
Benzo(a)pyrene	16	2	300	8 / 8	0.43 - 1.5	0.95	1.2 N [g]	8 / 8	0.48 - 3.4	1.4	2.1 N [g]	16 / 16	0.43 - 3.4	1.3	1.7 LN [l]	10 / 16	0.042 - 3.1	0.88	1.2 NP [a]
Benzo(b)fluoranthene	160	7	3,000	8 / 8	0.63 - 2	1.3	1.6 N [g]	8 / 8	0.6 - 6.1	2.1	3.8 G [k]	16 / 16	0.6 - 6.1	1.8	3.1 NP [e]	10 / 16	0.057 - 3.7	1.0	1.4 NP [b]
Benzo(g,h,i)perylene	120,000	1,000	10,000	8 / 8	0.23 - 0.7	0.47	0.58 N [g]	6 / 8	0.27 - 0.95	0.98	0.78 NP [a]	14 / 16	0.23 - 0.95	0.81	0.60 NP [c]	8 / 16	0.19 - 1.4	0.53	0.54 NP [a]
Benzo(k)fluoranthene	1,600	70	10,000	8 / 8	0.045 - 0.72	0.41	0.57 N [g]	8 / 8	0.26 - 2.4	0.82	1.5 G [k]	16 / 16	0.045 - 2.4	0.68	1.1 LN [l]	8 / 16	0.11 - 1.4	0.59	0.60 NP [b]
Chrysene	16,000	70	10,000	8 / 8	0.5 - 1.7	1.1	1.5 N [g]	8 / 8	0.55 - 3.9	1.7	2.6 N [g]	16 / 16	0.5 - 3.9	1.5	2.1 LN [l]	12 / 16	0.035 - 3.5	0.98	2.1 NP [d]
Dibenz(a,h)anthracene	16	0.7	300	4 / 8	0.1 - 0.2	0.50	0.21 NP [a]	5 / 8	0.08 - 0.25	0.76	0.23 NP [a]	9 / 16	0.08 - 0.25	0.67	0.19 NP [a]	5 / 16	0.051 - 0.42	0.52	0.21 NP [a]
Fluoranthene	120,000	1,000	10,000	8 / 8	0.89 - 3.3	2.0	2.6 N [g]	8 / 8	0.91 - 8.4	3.2	5.0 N [g]	16 / 16	0.89 - 8.4	2.8	4.8 NP [e]	12 / 16	0.11 - 6	1.7	4.0 NP [d]
Fluorene	120,000	1,000	10,000	2 / 8	0.2 - 0.4	0.57	0.49 NP [a]	3 / 8	0.13 - 0.63	0.71	0.49 NP [a]	5 / 16	0.13 - 0.63	0.67	0.40 NP [b]	5 / 16	0.12 - 0.66	0.48	0.36 NP [b]
Indeno(1,2,3-cd)pyrene	160	7	3,000	8 / 8	0.19 - 0.61	0.42	0.53 N [g]	6 / 8	0.23 - 0.79	0.90	0.63 NP [a]	14 / 16	0.19 - 0.79	0.74	0.51 NP [c]	7 / 16	0.16 - 1.2	0.55	0.53 NP [b]
Naphthalene	61,000	100	10,000	2 / 8	0.1 - 0.24	0.54	0.30 NP [a]	0 / 8	All ND	NA	NC [i]	2 / 16	0.1 - 0.24	0.76	0.29 NP [a]	4 / 16	0.12 - 0.38	0.54	0.25 NP [b]
Phenanthrene	120,000	500	10,000	8 / 8	0.52 - 3.2	1.5	2.2 N [g]	8 / 8	0.54 - 7.8	3.1	5.0 N [g]	16 / 16	0.52 - 7.8	2.6	4.7 NP [e]	11 / 16	0.11 - 6.1	1.5	2.3 NP [c]
Pyrene	92,000	1,000	10,000	8 / 8	0.83 - 3.8	2.3	3.0 N [g]	8 / 8	1.1 - 7	3.5	5.1 N [g]	16 / 16	0.83 - 7	3.1	4.3 LN [l]	11 / 16	0.094 - 7.9	1.7	2.7 NP [c]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 8	All ND	NA	NC [i]	0 / 8	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]
Aroclor-1221	10	2	100	0 / 8	All ND	NA	NC [i]	0 / 8	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]
Aroclor-1232	10	2	100	0 / 8	All ND	NA	NC [i]	0 / 8	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]
Aroclor-1242	10	2	100	0 / 8	All ND	NA	NC [i]	0 / 8	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]
Aroclor-1248	10	2	100	0 / 8	All ND	NA	NC [i]	0 / 8	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]
Aroclor-1254	10	2	100	3 / 8	0.11 - 0.34	0.093	0.34 NP [b]	4 / 8	0.048 - 0.37	0.11	0.34 NP [b]	7 / 16	0.048 - 0.37	0.11	0.17 NP [b]	5 / 16	0.01 - 0.14	0.032	0.078 NP [b]
Aroclor-1260	10	2	100	7 / 8	0.032 - 0.35	0.11	0.19 NP [c]	7 / 8	0.065 - 0.53	0.22	0.35 NP [a]	14 / 16	0.032 - 0.53	0.18	0.34 NP [d]	5 / 16	0.022 - 0.14	0.033	0.078 NP [b]
Aroclor-1262	10	2	100	0 / 8	All ND	NA	NC [i]	0 / 8	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]
Aroclor-1268	10	2	100	0 / 8	All ND	NA	NC [i]	0 / 8	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]
PCBs (Total)	10	2	100	8 / 8	0.032 - 0.38	0.20	0.29 N [g]	8 / 8	0.048 - 0.87	0.32	0.72 G [k]	16 / 16	0.032 - 0.87	0.28	0.57 LN [m]	7 / 16	0.01 - 0.28	0.053	0.096 NP [b]

Table P-033
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	8 / 8	4810 - 7830	6145	6789 N [g]	8 / 8	3360 - 6650	4981	5834 N [g]	16 / 16	3360 - 7830	5369	5809 N [g]	16 / 16	2510 - 6810	4653	5105 N [g]
Antimony		20	300	0 / 8	All ND	NA	NC [i]	0 / 8	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]
Arsenic	40	20	200	8 / 8	2.8 - 6.4	5.2	6.0 N [g]	8 / 8	1.5 - 7	4.5	5.6 N [g]	16 / 16	1.5 - 7	4.6	5.2 N [g]	16 / 16	0.72 - **27.6**	5.2	8.4 G [k]
Barium	200,000	1,000	10,000	8 / 8	53.6 - 128	95	114 N [g]	8 / 8	36.2 - 161	108	138 N [g]	16 / 16	36.2 - 161	104	117 N [g]	16 / 16	18.8 - 751	123	209 G [k]
Beryllium		100	2,000	0 / 8	All ND	NA	NC [i]	0 / 8	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]
Cadmium	60	2	300	7 / 8	0.12 - **5.4**	1.0	**3.8** NP [d]	5 / 8	0.091 - 0.86	0.42	0.65 NP [a]	12 / 16	0.091 - **5.4**	0.63	2.0 NP [f]	7 / 16	0.12 - **35.7**	**3.0**	**7.0** NP [a]
Calcium		NS	NS	8 / 8	1390 - 3230	1940	2356 G [k]	8 / 8	868 - 3560	1884	2414 N [g]	16 / 16	868 - 3560	1902	2184 LN [l]	16 / 16	1260 - 9530	3182	4154 G [k]
Chromium	200	30	2,000	8 / 8	9.8 - 13.6	12.3	13.1 N [g]	8 / 8	6.9 - 18.2	11.3	13.6 N [g]	16 / 16	6.9 - 18.2	11.6	12.7 G [k]	16 / 16	7.8 - **57.3**	16.6	22 G [k]
Cobalt		NS	NS	0 / 8	All ND	NA	NC [i]	0 / 8	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]
Copper		NS	NS	0 / 8	All ND	NA	NC [i]	0 / 8	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]
Iron		NS	NS	8 / 8	9560 - 27700	14983	19439 LN [l]	8 / 8	7690 - 30100	14366	19462 N [g]	16 / 16	7690 - 30100	14572	17169 LN [l]	16 / 16	2550 - 67300	16345	26036 G [k]
Lead	1,000	300	3,000	8 / 8	148 - **376**	280	**331** N [g]	8 / 8	61.2 - **682**	**334**	**474** N [g]	16 / 16	61.2 - **682**	**316**	**376** N [g]	16 / 16	3.8 - **899**	205	**367** G [k]
Magnesium		NS	NS	8 / 8	1270 - 1840	1408	1538 N [h]	8 / 8	702 - 1560	1248	1475 N [g]	16 / 16	702 - 1840	1301	1404 N [g]	16 / 16	367 - 4170	1401	1838 G [k]
Manganese		NS	NS	0 / 8	All ND	NA	NC [i]	0 / 8	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]
Mercury		20	300	0 / 8	All ND	NA	NC [i]	0 / 8	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]
Nickel		20	7,000	0 / 8	All ND	NA	NC [i]	0 / 8	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]
Potassium		NS	NS	0 / 8	All ND	NA	NC [i]	0 / 8	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]
Selenium		400	8,000	0 / 8	All ND	NA	NC [i]	0 / 8	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]
Silver		100	2,000	0 / 8	All ND	NA	NC [i]	0 / 8	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]
Sodium		NS	NS	0 / 8	All ND	NA	NC [i]	0 / 8	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]
Thallium		8	800	0 / 8	All ND	NA	NC [i]	0 / 8	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]
Vanadium		600	10,000	0 / 8	All ND	NA	NC [i]	0 / 8	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]
Zinc		2,500	10,000	0 / 8	All ND	NA	NC [i]	0 / 8	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]
Cyanide		100	4,000	0 / 8	All ND	NA	NC [i]	0 / 8	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]	0 / 16	All ND	NA	NC [i]

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).

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

N - Normal Distribution
[g] 95% Student's-t UCL
[h] 95% Modified-t UCL

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

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

LN - Log Normal Distribution
[l] 95% H-UCL
[m] 95% Chebyshev (MVUE) UCL

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

Prepared by / Date: BIR 9/1/10
Checked by / Date: KJC 9/8/10

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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RICHARD K. SULLIVAN JR.
Secretary

KENNETH L. KIMMELL
Commissioner

June 24, 2011

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

NEW BEDFORD
Release Tracking Number 4-0015685
Parker Street Waste Site
Property P-055
SAP Data Risk Evaluation - No USEPA Action Recommended

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 from data generated during the first phase of SAP implementation and was followed-up with property by property risk evaluations for the purpose of typology chart development and risk communication with property owners of Phase I properties.

MassDEP is in the process of providing USEPA with both a preliminary risk evaluation and a final risk evaluation for all properties sampled during the first phase of SAP implementation. Preliminary evaluations were performed without consideration of data from surrounding properties that only became available later during SAP implementation, and was included in the final evaluation. Properties evaluated in all subsequent SAP implementation phases receive only one (final) risk evaluation because, as SAP implementation progressed, the data necessary to perform the final evaluation was available. Property P-055 was evaluated during the second implementation phase.

Property P-055 Risk Evaluation and Response Action Recommendations: Enclosed is a copy of the results from the risk evaluation conducted by MACTEC for the property identified as P-055. MassDEP uses these results along with information related to the boring logs, the nature of COCs observed, the property use and other pertinent information to complete its risk evaluation and make a response action recommendation.

MassDEP's evaluation compared the sample results from the soil samples collected from the fifteen boring locations on this property to the MCP Method 1 category S-1 soil standards and to either potential Imminent Hazard values listed in the MCP or site-specific Imminent Hazard (IH) values to determine if an IH may exist and/or if a Condition of No Significant Risk did not exist. 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. The 95% UCL evaluation criteria was used for Preliminary Risk Evaluations of Phase 1 properties when data from surrounding properties was not yet available. When data from surrounding properties is available it can be used to show whether the data collected from the property in question is consistent with surrounding data and adequately representative of likely COC distribution such that there is no need to apply the 95% UCL. In most cases, the 95% UCL evaluation criteria is not applicable to the Final Risk Evaluations or Phase 2 properties.

Based on this evaluation, MassDEP has determined the following for Property P-055:

- A condition of No Significant Risk to human health, as defined in the MCP, was determined to exist for both the current use of the property for the soil located between the ground surface and 3 feet in depth and for future use of the property for the soil located between 3 feet and 12 feet below the ground surface. Applying the 95% UCL for data evaluation of the soil for both intervals is not necessary because the COC concentrations observed on Property P-055 are consistent with results from samples taken in the surrounding area. The actual average concentration calculated for all COCs for both soil intervals are below the applicable MCP Method 1 S-1 soil standards. 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/lm

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-055

Table P-055
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 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]
Acenaphthene	180,000	1,000	10,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]
Acenaphthylene	180,000	1,000	10,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]
Anthracene	920,000	1,000	10,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]
Benzo(a)anthracene	160	7	3,000	3 / 6	0.5 - 0.8	0.56	0.84 NP [c]	4 / 6	0.24 - 0.51	0.28	0.44 NP [d]	7 / 12	0.24 - 0.8	0.37	0.48 NP [d]	1 / 12	0.93 - 0.93	0.16	NC [b]
Benzo(a)pyrene	16	2	300	3 / 6	0.49 - 0.74	0.54	0.77 NP [c]	4 / 6	0.25 - 0.45	0.27	0.43 NP [d]	7 / 12	0.25 - 0.74	0.36	0.46 NP [d]	1 / 12	0.78 - 0.78	0.15	NC [b]
Benzo(b)fluoranthene	160	7	3,000	3 / 6	0.53 - 0.84	0.57	0.86 NP [c]	4 / 6	0.22 - 0.46	0.26	0.43 NP [d]	7 / 12	0.22 - 0.84	0.37	0.48 NP [d]	1 / 12	0.81 - 0.81	0.15	NC [b]
Benzo(g,h,i)perylene	120,000	1,000	10,000	2 / 6	0.46 - 0.5	0.42	0.50 NP [c]	1 / 6	0.24 - 0.24	0.15	NC [b]	3 / 12	0.24 - 0.5	0.24	0.47 NP [d]	1 / 12	0.44 - 0.44	0.12	NC [b]
Benzo(k)fluoranthene	1,600	70	10,000	3 / 6	0.5 - 0.71	0.55	0.77 NP [c]	4 / 6	0.27 - 0.42	0.27	0.41 NP [d]	7 / 12	0.27 - 0.71	0.36	0.46 NP [d]	1 / 12	0.74 - 0.74	0.15	NC [b]
Chrysene	16,000	70	10,000	3 / 6	0.64 - 0.93	0.63	0.93 NP [d]	4 / 6	0.24 - 0.59	0.32	0.53 NP [d]	7 / 12	0.24 - 0.93	0.42	0.55 NP [d]	2 / 12	0.2 - 0.91	0.17	0.91 NP [f]
Dibenz(a,h)anthracene	16	0.7	300	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]
Fluoranthene	120,000	1,000	10,000	5 / 6	0.89 - 1.8	1.2	1.6 NP [c]	4 / 6	0.42 - 0.98	0.50	0.83 NP [d]	9 / 12	0.42 - 1.8	0.72	0.99 NP [d]	2 / 12	0.34 - 2	0.27	2.0 NP [f]
Fluorene	120,000	1,000	10,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]
Indeno(1,2,3-cd)pyrene	160	7	3,000	2 / 6	0.42 - 0.46	0.41	0.46 NP [c]	1 / 6	0.22 - 0.22	0.14	NC [b]	3 / 12	0.22 - 0.46	0.23	0.43 NP [d]	0 / 12	All ND	NA	NC [a]
Naphthalene	61,000	100	10,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]
Phenanthrene	120,000	500	10,000	3 / 6	0.54 - 1.2	0.70	1.2 NP [d]	4 / 6	0.22 - 0.69	0.30	0.50 NP [c]	7 / 12	0.22 - 1.2	0.43	0.58 NP [c]	2 / 12	0.24 - 1.7	0.24	NC [b]
Pyrene	92,000	1,000	10,000	4 / 6	0.8 - 1.5	0.93	1.3 NP [c]	4 / 6	0.36 - 0.98	0.47	0.81 NP [d]	8 / 12	0.36 - 1.5	0.63	0.85 NP [d]	2 / 12	0.29 - 1.5	0.22	1.5 NP [f]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]
Aroclor-1254	10	2	100	0 / 6	All ND	NA	NC [a]	1 / 6	0.032 - 0.032	0.014	NC [b]	1 / 12	0.032 - 0.032	0.013	NC [b]	0 / 12	All ND	NA	NC [a]
Aroclor-1260	10	2	100	6 / 6	0.019 - 0.087	0.055	0.075 N [h]	1 / 6	0.025 - 0.025	0.010	NC [b]	7 / 12	0.019 - 0.087	0.025	0.041 NP [c]	0 / 12	All ND	NA	NC [a]
Aroclor-1262	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]
PCBs (Total)	10	2	100	6 / 6	0.019 - 0.087	0.055	0.075 N [h]	1 / 6	0.057 - 0.057	0.019	NC [b]	7 / 12	0.019 - 0.087	0.031	0.056 NP [d]	0 / 12	All ND	NA	NC [a]

Table P-055
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	6 / 6	4869 - 7625	6172	7106 N [h]	6 / 6	4684 - 8059	6275	7173 N [h]	12 / 12	4684 - 8059	6241	6667 N [h]	12 / 12	3570 - 10300	5784	6768 N [h]
Antimony		20	300	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]
Arsenic	40	20	200	6 / 6	2.3 - 6	3.6	4.7 N [h]	6 / 6	1.6 - 8.1	3.8	5.9 N [h]	12 / 12	1.6 - 8.1	3.7	4.7 G [k]	8 / 12	1.3 - 10.6	2.4	4.2 NP [f]
Barium	200,000	1,000	10,000	6 / 6	30.9 - 99.3	53	73 N [h]	6 / 6	23.8 - 168	70	307 LN [j]	12 / 12	23.8 - 168	64	117 NP [e]	12 / 12	13.6 - 754	93	356 NP [e]
Beryllium		100	2,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]
Cadmium	60	2	300	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	1 / 12	**17.9 - 17.9**	1.6	NC [b]
Calcium		NS	NS	6 / 6	532 - 1721	1153	1530 N [h]	6 / 6	475 - 1914	1082	1528 N [h]	12 / 12	475 - 1914	1106	1305 N [h]	12 / 12	475 - 1918	1028	1237 N [h]
Chromium	200	30	2,000	6 / 6	7.4 - 13.2	10.3	12.1 N [h]	6 / 6	7.2 - 12.7	9.8	11.6 N [h]	12 / 12	7.2 - 13.2	10.0	10.8 N [h]	12 / 12	8 - 17.6	10.9	12.6 N [i]
Cobalt		NS	NS	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]
Copper		NS	NS	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]
Iron		NS	NS	6 / 6	6850 - 10781	8699	9846 N [h]	6 / 6	7346 - 9208	8195	8758 N [h]	12 / 12	6850 - 10781	8363	8753 N [h]	12 / 12	5311 - 12066	7592	8636 N [h]
Lead	1,000	300	3,000	6 / 6	174 - **417**	258	**337** N [h]	6 / 6	34.4 - **787**	251	**865** G [k]	12 / 12	34.4 - **787**	254	**390** G [k]	12 / 12	1.5 - **789**	84	**728** NP [g]
Magnesium		NS	NS	6 / 6	1045 - 1774	1462	1658 N [h]	6 / 6	884 - 2004	1551	1918 N [h]	12 / 12	884 - 2004	1521	1673 N [h]	12 / 12	553 - 4545	1875	2398 N [i]
Manganese		NS	NS	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]
Mercury		20	300	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]
Nickel		20	7,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]
Potassium		NS	NS	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]
Selenium		400	8,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]
Silver		100	2,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]
Sodium		NS	NS	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]
Thallium		8	800	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 12	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. 4.00.05).

NC - Not Calculated
[a] All values non detect
[b] Only one or two distinct data values were detected

N - Normal Distribution
[h] 95% Student's-t UCL
[i] 95% Modified-t UCL

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

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

G - Gamma Distribution
[k] 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 2/18/11
Checked by / Date: KJC 2/18/11

June 30, 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-005
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-005 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-005. 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 eight 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-005, 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 concentrations of lead and one of the PAHs detected in samples collected from the top 3 feet are above the applicable MCP Method 1 S-1 soil standards. 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 not determined to exist for the soil located between 3 feet and 12 feet below the ground surface. This is because the average concentration of lead, which was calculated based on the analytical data from soils collected from greater than 3 feet bgs, was above the applicable MCP Method 1 S-1 soil standard. Because this soil is at depth, it does not necessarily need to be removed to be protective of the current use of the property.

Property P-005 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-005:

- 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. Specifically, the average concentration of lead and/or PAHs calculated for this interval and the boring-specific concentrations of lead and PAHs in all of the soil borings for this interval are above the applicable MCP Method 1 S-1 soil standard. Response actions are necessary to address the COC contamination in the soil borings at this interval.

- MassDEP has also verified that a Condition of No Significant Risk does not exist for future use of the property because the average concentration of lead calculated from data from samples collected from the greater than 3 foot horizon is above the applicable MCP Method 1 S-1 soil standard. In particular, the concentrations of lead in four samples in particular, identified as P-005-SB-03C, P-005-SB-05C, P-005-SB-06C and P-005-SB-08C are well above the applicable MCP Method 1 S-1 standard. The soil boring logs for these sample locations (with the exception of the boring log for P-005-SB-05C) indicate that the "C" samples were collected from the 3 – 4 foot bgs interval. The soil boring log for P-005-SB-05 does not indicate the interval from which the "C" sample was collected. When evaluating the results for Property P-005 without the results from these sample locations, the average concentration of lead for this depth interval is below the applicable Method 1 S-1 soil standard, which would be considered a Condition of No Significant Risk for this depth interval and would require no further response action. However, if this soil is to remain in place, land use restrictions and/or controls defined as a Notice of Activity and Use Limitation (or AUL) in the MCP, may be necessary for the property to ensure that future activities or changes in use do not create the potential for humans to be exposed to the soil below 3 feet in depth.

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/lm

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-005

Table P-005
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 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	3 / 16	0.13 - 1.18	0.39	1.2 NP [d]
Acenaphthene	180,000	1,000	10,000	1 / 8	0.11 - 0.11	0.98	NC [b]	2 / 8	0.33 - 0.77	1.1	0.77 NP [d]	3 / 16	0.11 - 0.77	1.0	0.51 NP [d]	5 / 16	0.14 - 4.55	0.58	1.1 NP [c]
Acenaphthylene	180,000	1,000	10,000	1 / 8	0.17 - 0.17	0.99	NC [b]	4 / 8	0.15 - 0.56	0.89	0.53 NP [c]	5 / 16	0.15 - 0.56	0.92	0.44 NP [c]	3 / 16	0.13 - 0.69	0.41	0.33 NP [c]
Anthracene	920,000	1,000	10,000	4 / 8	0.15 - 0.54	0.91	0.52 NP [c]	6 / 8	0.13 - 2.13	1.2	2.0 NP [e]	10 / 16	0.13 - 2.13	1.1	0.82 NP [f]	5 / 16	0.64 - 10.2	1.2	2.6 NP [c]
Benzo(a)anthracene	160	**7**	3,000	8 / 8	0.42 - 1.73	0.98	1.3 N [h]	8 / 8	0.51 - 3.93	1.6	2.3 N [h]	16 / 16	0.42 - 3.93	1.4	1.8 G [k]	9 / 16	0.08 - **11.5**	1.6	3.0 NP [f]
Benzo(a)pyrene	16	2	300	8 / 8	0.42 - 1.47	0.90	1.2 N [h]	8 / 8	0.52 - **3.43**	1.6	**2.1** N [h]	16 / 16	0.42 - **3.43**	1.3	1.6 G [k]	10 / 16	0.07 - **8.78**	1.3	**2.5** NP [f]
Benzo(b)fluoranthene	160	7	3,000	8 / 8	0.65 - 1.85	1.2	1.5 N [h]	8 / 8	0.63 - 5.14	2.2	3.1 N [h]	16 / 16	0.63 - 5.14	1.9	2.3 G [k]	10 / 16	0.1 - **10.1**	1.6	2.9 NP [f]
Benzo(g,h,i)perylene	120,000	1,000	10,000	8 / 8	0.48 - 5.33	1.5	3.3 LN [j]	8 / 8	0.65 - 5.14	1.8	3.0 G [k]	16 / 16	0.48 - 5.33	1.7	3.0 NP [g]	10 / 16	0.23 - 3.47	0.75	1.2 NP [d]
Benzo(k)fluoranthene	1,600	70	10,000	7 / 8	0.24 - 0.71	0.86	0.54 NP [c]	7 / 8	0.21 - 1.93	1.2	1.2 NP [c]	14 / 16	0.21 - 1.93	1.1	0.88 NP [f]	5 / 16	0.86 - 3.6	0.74	1.8 NP [d]
Chrysene	16,000	70	10,000	8 / 8	0.51 - 1.66	1.1	1.4 N [h]	8 / 8	0.54 - 4.2	1.8	2.6 N [h]	16 / 16	0.51 - 4.2	1.6	2.0 G [k]	10 / 16	0.1 - 11.4	1.6	3.0 NP [f]
Dibenz(a,h)anthracene	16	0.7	300	7 / 8	0.25 - **0.87**	**1.0**	**0.80** NP [c]	7 / 8	0.4 - **1.58**	**1.2**	**1.1** NP [c]	14 / 16	0.25 - **1.58**	**1.2**	**1.1** NP [e]	9 / 16	0.16 - **2.12**	0.50	**0.73** NP [c]
Fluoranthene	120,000	1,000	10,000	8 / 8	0.92 - 3.41	2.0	2.6 N [h]	8 / 8	0.99 - 8.25	3.5	5.0 N [h]	16 / 16	0.92 - 8.25	3.0	3.8 G [k]	10 / 16	0.16 - 24.7	3.4	6.3 NP [f]
Fluorene	120,000	1,000	10,000	1 / 8	0.15 - 0.15	0.99	NC [b]	2 / 8	0.41 - 0.77	1.1	0.77 NP [d]	3 / 16	0.15 - 0.77	1.1	0.57 NP [d]	5 / 16	0.22 - 3.76	0.56	0.98 NP [c]
Indeno(1,2,3-cd)pyrene	160	7	3,000	8 / 8	0.36 - 2.55	0.92	1.5 G [k]	8 / 8	0.57 - 3.46	1.3	2.1 G [k]	16 / 16	0.36 - 3.46	1.2	1.5 LN [j]	11 / 16	0.13 - 3.15	0.65	1.0 NP [f]
Naphthalene	61,000	100	10,000	0 / 8	All ND	NA	NC [a]	1 / 8	0.56 - 0.56	1.1	NC [b]	1 / 16	0.56 - 0.56	1.1	NC [b]	3 / 16	0.24 - 0.99	0.39	0.99 NP [d]
Phenanthrene	120,000	500	10,000	8 / 8	0.57 - 2.5	1.5	2.0 N [h]	8 / 8	0.56 - 7.43	2.8	4.2 N [h]	16 / 16	0.56 - 7.43	2.3	3.1 G [k]	10 / 16	0.1 - 29.6	3.5	7.1 NP [f]
Pyrene	92,000	1,000	10,000	8 / 8	0.72 - 3.24	1.8	2.5 N [h]	8 / 8	0.98 - 7.37	3.1	4.4 N [h]	16 / 16	0.72 - 7.37	2.7	3.3 G [k]	9 / 16	0.14 - 24.9	3.2	6.3 NP [f]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Aroclor-1254	10	2	100	6 / 8	0.016 - 0.22	0.097	0.16 NP [d]	4 / 8	0.02 - 0.061	0.025	0.044 NP [d]	10 / 16	0.016 - 0.22	0.049	0.072 NP [c]	3 / 16	0.034 - 0.3	0.036	0.30 NP [d]
Aroclor-1260	10	2	100	3 / 8	0.01 - 0.032	0.015	0.032 NP [d]	5 / 8	0.01 - 0.048	0.019	0.028 NP [c]	8 / 16	0.01 - 0.048	0.017	0.021 NP [d]	1 / 16	0.023 - 0.023	0.015	NC [b]
Aroclor-1262	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
PCBs (Total)	10	2	100	8 / 8	0.013 - 0.22	0.10	0.16 N [h]	7 / 8	0.01 - 0.091	0.034	0.052 NP [c]	15 / 16	0.01 - 0.22	0.056	0.11 NP [e]	3 / 16	0.034 - 0.3	0.037	0.30 NP [d]

Table P-005
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
Inorganics (mg/Kg)																			
Aluminum		NS	NS	8 / 8	3740 - 5660	4978	5382 N [h]	8 / 8	3600 - 4930	4219	4518 N [h]	16 / 16	3600 - 5660	4472	4683 N [h]	16 / 16	1680 - 8190	4851	5519 N [h]
Antimony		20	300	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Arsenic	40	20	200	8 / 8	4.8 - 9.3	6.3	7.3 N [h]	8 / 8	5.4 - 11.7	8.2	9.8 N [h]	16 / 16	4.8 - 11.7	7.6	8.3 G [k]	15 / 16	1 - 16.4	5.7	10.9 NP [e]
Barium	200,000	1,000	10,000	8 / 8	85.6 - 219	165	200 N [h]	8 / 8	167 - 442	247	312 G [k]	16 / 16	85.6 - 442	220	251 G [k]	16 / 16	15.3 - 593	173	295 G [k]
Beryllium		100	2,000	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Cadmium	60	2	300	4 / 8	0.087 - 0.19	0.17	0.17 NP [c]	5 / 8	0.19 - 0.89	0.36	0.56 NP [c]	9 / 16	0.087 - 0.89	0.30	0.40 NP [c]	5 / 16	0.14 - 1.7	0.34	0.52 NP [c]
Calcium		NS	NS	8 / 8	1030 - 2730	2245	2627 N [h]	8 / 8	1960 - 5140	2820	3636 G [k]	16 / 16	1030 - 5140	2628	2967 G [k]	16 / 16	1300 - 6020	3214	3830 N [h]
Chromium	200	30	2,000	8 / 8	7.3 - 14.6	10.5	12.1 N [h]	8 / 8	7.3 - 18.5	12.7	15.5 N [h]	16 / 16	7.3 - 18.5	12.0	13.4 LN [j]	16 / 16	5.4 - 26.7	13.0	16.0 N [i]
Cobalt		NS	NS	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Copper		NS	NS	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Iron		NS	NS	8 / 8	7310 - 12700	10008	11245 N [h]	8 / 8	7570 - 26400	14983	19437 N [h]	16 / 16	7310 - 26400	13324	15490 G [k]	16 / 16	2280 - 14400	7729	9174 N [h]
Lead	1,000	300	3,000	8 / 8	295 - **593**	**424**	**496** N [h]	8 / 8	**351** - **934**	**600**	**715** N [h]	16 / 16	295 - **934**	**542**	**605** G [k]	16 / 16	5.8 - **1730**	**391**	**954** G [l]
Magnesium		NS	NS	8 / 8	570 - 1910	1096	1409 N [h]	8 / 8	664 - 1420	1024	1194 N [h]	16 / 16	570 - 1910	1048	1162 N [h]	16 / 16	429 - 4160	1445	2057 G [k]
Manganese		NS	NS	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Mercury		20	300	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Nickel		20	7,000	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Potassium		NS	NS	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Selenium		400	8,000	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Silver		100	2,000	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Sodium		NS	NS	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Thallium		8	800	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	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 (t) UCL
[d] 95% KM (Percentile Bootstrap) UCL
[e] 95% KM (Chebyshev) UCL
[f] 95% KM (BCA) UCL
[g] 95% Chebyshev (Mean, Sd) UCL

N - Normal Distribution
[h] 95% Student's-t UCL
[i] 95% Modified-t UCL

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

G - Gamma Distribution
[k] 95% Approximate Gamma UCL
[l] 95% Adjusted 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 8/12/10
Checked by / Date: KJC 8/13/10

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

DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lieutenant Governor

RICHARD K. SULLIVAN JR.
Secretary

KENNETH L. KIMMELL
Commissioner

June 30, 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-023
SAP Data Evaluation Status - Additional Analysis or USEPA Remedial Action Recommended

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-023 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-023. 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 nine 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-023, 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 95% UCL for PCBs calculated for samples collected from the top 3 feet is above the applicable MCP S-1 soil standards. Actions may be required 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 additional evaluation is complete.

- Furthermore, a condition of No Significant Risk, as defined in the MCP, for foreseeable future use of the property was determined not to exist for the soil located between 3 feet and 12 feet below the ground surface. The 95% UCL for PCBs, lead, chromium and barium, which were calculated based on the analytical data from soils collected from greater than 3 feet bgs, were above the applicable MCP Method 1 S-1 soil standards. Because this soil is located at depth, it does not necessarily need to be removed or capped to be protective. Additional evaluation of this data is required to determine whether these concentrations at this depth constitute a Condition of No Significant Risk. No activities should occur at the property that will disrupt soil located from 3 feet below ground surface to a depth of 12 feet until this additional evaluation is complete.

Property P-023 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-023:

- MassDEP has verified its previous request for USEPA assistance to address that, based on the SAP data, a determination that a condition of No Significant Risk, as defined in the MCP, cannot be made for current property use for soil located between the ground surface and 3 feet in depth. The preliminary risk evaluation determination was made because the 95% UCL calculated for average PCB contamination in soil located between 0 and 3 feet bgs exceeded the applicable MCP Method 1 S-1 soil standard. Evaluation of available COC concentration data from surrounding properties indicates that, while the PCB contamination observed on Property P-023 is consistent with the PCB contamination observed and remediated on the abutting Keith Middle School property, it is generally inconsistent with data observed on the surrounding properties evaluated as part of the SAP. PCBs were detected in samples collected from the 0 to 3 foot bgs interval that exceed the MCP Method 1 S-1 standard of 2.0 ppm in soil borings P-006-SB-01 and P-006-SB-09, which are located toward the south end of the property, adjacent to the Keith Middle School property. The highest PCB concentration observed at this interval was 6.36 ppm in P-006-SB-09. MassDEP acknowledges that previous assessment was conducted in the general vicinity of soil boring P-023-SB-009 by TRC on behalf of the City of New Bedford that indicated the presence of PCBs, in one proximal sample location, ranging from 0.0685 to 30.5 ppm (MassDEP was unable to determine the exact depth of the actual samples collected). Based on its review of all available information, MassDEP recommends the following for the soil in the 0-3 foot interval on the portion of the property in the vicinity of these two borings: either additional samples be collected and analyzed for PCBs around impacted borings to better delineate the PCB contamination so additional risk evaluation can be performed; or, Response Actions be conducted to address the PCB contamination in this interval.

In addition, based on a review of the soil boring logs for P-006-SB-01 and P-006-SB-09, there is some evidence of prior burning, indicated by the presence of ash and/or slag, in addition to the presence PCB contamination. Because these dioxin formation precursor conditions exist, if soil in the area of the borings identified above is to remain in-place and uncapped, samples should be analyzed for the presence of dioxin or dioxin-like compounds and additional risk characterization be conducted based on the additional analysis.

No activities should occur at the property that will disrupt soil located from the ground surface to a depth of 3 feet until either remediation activities are complete or until additional analysis and risk evaluation are complete that demonstrate that a condition of No Significant Risk, as defined by the MCP, exists.

- MassDEP has verified its previous determination that applying the 95% UCL for data evaluation of soil located greater than 3 feet bgs is necessary because the COC concentrations observed on Property P-023 for this soil interval are not consistent enough with results from samples taken in the surrounding area to conclude that there are adequate data and sample locations to utilize averaging to characterize contaminant distribution on the property. Results from the "C" samples collected from two borings at this depth interval, identified as P-023-SB-01 and P-023-SB-03, are above the applicable MCP Method 1 S-1 soil standard. Based on a review of the boring logs for these locations, the "C" samples appear to have been collected from a depth between 4 and 5 feet bgs. In addition, the 95% UCL calculated on the mean from the data from the 3 – 12 feet bgs interval is also above the MCP Method 1 S-1 soil standard. As such, based on information available to date, a Condition of No Significant Risk does not exist on this property for the soil located between 3 and 12 feet. MassDEP recommends that either additional samples be collected and analyzed for PCBs around these impacted borings to further refine contaminant distribution such that additional risk evaluation can be performed or Response Actions be conducted to address the PCB contamination in the 3 - 12 foot bgs interval for this portion of the property. Otherwise, if the soil in the greater than 3 feet bgs interval is to remain in place, land use restrictions and/or controls defined as a Notice of Activity and Use Limitation (or AUL) in the MCP, may be necessary for the property to ensure that future activities or changes in use do not create the potential for humans to be exposed to the soil below 3 feet in depth.

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/lm

Enclosure

Ecc: 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-023

Table P-023
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1]				1-3 ft [1]				0-3 ft [1, 2]				3+ ft [1]			
				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 / 9	All ND	NA	NC [a]	1 / 9	0.953 - 0.953	0.24	NC [b]	1 / 18	0.953 - 0.953	0.21	NC [b]	2 / 14	0.252 - 1.6	0.28	1.6 NP [d]
Acenaphthene	180,000	1,000	10,000	0 / 9	All ND	NA	NC [a]	4 / 9	0.152 - 1.43	0.33	0.66 NP [c]	4 / 18	0.152 - 1.43	0.27	0.40 NP [e]	2 / 14	0.824 - 3.11	0.42	1.4 NP [e]
Acenaphthylene	180,000	1,000	10,000	1 / 9	0.245 - 0.245	0.16	NC [b]	3 / 9	0.566 - 0.861	0.33	0.68 NP [e]	4 / 18	0.245 - 0.861	0.27	0.63 NP [c]	2 / 14	0.434 - 2.93	0.38	NC [b]
Anthracene	920,000	1,000	10,000	1 / 9	0.375 - 0.375	0.18	NC [b]	5 / 9	0.4 - 3.81	1.2	2.4 NP [c]	6 / 18	0.375 - 3.81	0.84	1.4 NP [d]	3 / 14	0.501 - 11.7	1.2	11.7 NP [c]
Benzo(a)anthracene	160	7	3,000	4 / 9	0.193 - 1.2	0.33	0.65 NP [c]	7 / 9	0.174 - 6.54	2.0	3.7 NP [e]	11 / 18	0.174 - 6.54	1.5	4.2 NP [h]	4 / 14	0.171 - **16.9**	1.9	**7.5** NP [c]
Benzo(a)pyrene	16	2	300	4 / 9	0.22 - 1.3	0.33	0.67 NP [c]	7 / 9	0.184 - **4.68**	1.6	**4.5** NP [f]	11 / 18	0.184 - **4.68**	1.2	**3.2** NP [h]	4 / 14	0.164 - **14.8**	1.6	**5.8** NP [c]
Benzo(b)fluoranthene	160	7	3,000	6 / 9	0.144 - 1.62	0.42	0.78 NP [d]	7 / 9	0.26 - **7.97**	2.5	4.5 NP [e]	13 / 18	0.144 - **7.97**	1.8	5.0 NP [h]	4 / 14	0.252 - **18.3**	2.1	**9.1** NP [c]
Benzo(g,h,i)perylene	120,000	1,000	10,000	4 / 9	0.152 - 1.06	0.27	0.49 NP [e]	5 / 9	0.221 - 2.45	0.67	1.3 NP [c]	9 / 18	0.152 - 2.45	0.53	0.78 NP [e]	3 / 14	0.97 - 3.6	0.55	3.6 NP [c]
Benzo(k)fluoranthene	1,600	70	10,000	3 / 9	0.194 - 0.499	0.20	0.50 NP [c]	5 / 9	0.283 - 2.5	0.79	1.7 NP [c]	8 / 18	0.194 - 2.5	0.59	0.89 NP [d]	3 / 14	0.701 - 11.9	1.1	3.2 NP [e]
Chrysene	16,000	70	10,000	4 / 9	0.222 - 1.15	0.32	0.62 NP [c]	7 / 9	0.18 - 5.24	1.8	3.1 NP [e]	11 / 18	0.18 - 5.24	1.3	3.5 NP [h]	4 / 14	0.181 - 15	1.7	7.1 NP [c]
Dibenz(a,h)anthracene	16	0.7	300	1 / 9	0.228 - 0.228	0.16	NC [b]	3 / 9	0.377 - 0.487	0.25	0.49 NP [c]	4 / 18	0.228 - 0.487	0.22	0.41 NP [c]	2 / 14	0.497 - **1.33**	0.27	0.70 NP [e]
Fluoranthene	120,000	1,000	10,000	5 / 9	0.18 - 2.51	0.59	1.2 NP [c]	7 / 9	0.361 - 13.6	4.4	7.9 NP [e]	12 / 18	0.18 - 13.6	3.1	7.1 NP [f]	5 / 14	0.197 - 39.4	4.1	10.6 NP [c]
Fluorene	120,000	1,000	10,000	0 / 9	All ND	NA	NC [a]	5 / 9	0.188 - 1.68	0.51	0.91 NP [e]	5 / 18	0.188 - 1.68	0.39	0.59 NP [e]	2 / 14	1.14 - 5.35	0.61	5.4 NP [d]
Indeno(1,2,3-cd)pyrene	160	7	3,000	4 / 9	0.211 - 1.09	0.29	0.52 NP [e]	7 / 9	0.146 - 2.67	0.81	1.4 NP [e]	11 / 18	0.146 - 2.67	0.63	1.6 NP [h]	3 / 14	1.05 - 4.99	0.69	2.0 NP [e]
Naphthalene	61,000	100	10,000	0 / 9	All ND	NA	NC [a]	3 / 9	0.245 - 2.86	0.47	2.9 NP [d]	3 / 18	0.245 - 2.86	0.37	0.65 NP [d]	2 / 14	0.4 - 3.07	0.39	3.1 NP [d]
Phenanthrene	120,000	500	10,000	4 / 9	0.341 - 1.1	0.35	0.67 NP [c]	6 / 9	0.264 - 13.2	4.1	7.5 NP [c]	10 / 18	0.264 - 13.2	2.8	4.3 NP [d]	5 / 14	0.159 - 37.3	3.6	8.7 NP [e]
Pyrene	92,000	1,000	10,000	8 / 9	0.172 - 2.26	0.55	1.5 NP [f]	7 / 9	0.321 - 10.3	3.6	10.1 NP [f]	15 / 18	0.172 - 10.3	2.6	7.1 NP [h]	5 / 14	0.228 - 32.4	3.3	7.8 NP [e]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Aroclor-1254	10	2	100	3 / 9	0.175 - 0.991	0.18	0.99 NP [c]	5 / 9	0.377 - **6.36**	1.1	**2.6** NP [d]	8 / 18	0.175 - **6.36**	0.79	1.6 NP [d]	4 / 14	0.06 - **11.4**	1.0	**3.9** NP [c]
Aroclor-1260	10	2	100	1 / 9	0.275 - 0.275	0.047	NC [b]	1 / 9	0.395 - 0.395	0.093	NC [b]	2 / 18	0.275 - 0.395	0.077	0.40 NP [c]	0 / 14	All ND	NA	NC [a]
Aroclor-1262	10	2	100	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
PCBs (Total)	10	2	100	3 / 9	0.175 - 0.991	0.21	0.99 NP [c]	5 / 9	0.377 - **6.36**	1.1	**2.6** NP [d]	8 / 18	0.175 - **6.36**	0.83	1.6 NP [d]	4 / 14	0.06 - **11.4**	1.0	**3.9** NP [c]

Table P-023
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	9 / 9	3790 - 6850	5326	5973 N [j]	9 / 9	3230 - 7710	5473	6275 N [j]	18 / 18	3230 - 7710	5424	5808 N [j]	14 / 14	2090 - 15900	5353	7216 G [l]
Antimony		20	300	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Arsenic	40	20	200	7 / 9	1.8 - 2.9	2.1	2.6 NP [c]	6 / 9	2.2 - 9.2	3.6	5.7 NP [c]	13 / 18	1.8 - 9.2	3.1	4.3 NP [d]	7 / 14	0.76 - 13.6	2.4	4.2 NP [e]
Barium	200,000	1,000	10,000	9 / 9	19.8 - 48.5	31	37 N [j]	9 / 9	20.4 - 788	198	493 G [l]	18 / 18	19.8 - 788	142	575 NP [g]	14 / 14	7.7 - **5120**	449	**4038** NP [g]
Beryllium		100	2,000	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Cadmium	60	2	300	0 / 9	All ND	NA	NC [a]	2 / 9	1.3 - **2.3**	0.62	**2.3** NP [c]	2 / 18	1.3 - **2.3**	0.50	1.5 NP [e]	0 / 14	All ND	NA	NC [a]
Calcium		NS	NS	9 / 9	518 - 1180	812	926 N [j]	9 / 9	445 - 14100	2629	17498 NP [g]	18 / 18	445 - 14100	2023	5064 NP [i]	14 / 14	131 - 20500	2526	5216 LN [n]
Chromium	200	30	2,000	9 / 9	6.4 - 10.2	8.3	9.2 N [j]	9 / 9	5.9 - **51.7**	16	29 LN [m]	18 / 18	5.9 - **51.7**	13	23 NP [i]	14 / 14	2.8 - **224**	28	**184** NP [g]
Cobalt		NS	NS	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Copper		NS	NS	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Iron		NS	NS	9 / 9	5410 - 8310	6712	7298 N [j]	9 / 9	4610 - 20200	9779	12797 N [j]	18 / 18	4610 - 20200	8757	10154 N [k]	14 / 14	1720 - 41600	8949	14728 G [l]
Lead	1,000	300	3,000	9 / 9	27.3 - 156	66	92 N [j]	9 / 9	25.8 - **785**	219	**475** G [l]	18 / 18	25.8 - **785**	168	242 G [l]	14 / 14	2.7 - **694**	126	**729** NP [g]
Magnesium		NS	NS	9 / 9	919 - 2180	1289	1538 N [j]	9 / 9	897 - 2070	1420	1637 N [j]	18 / 18	897 - 2180	1376	1501 G [l]	14 / 14	332 - 1390	841	1016 N [j]
Manganese		NS	NS	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Mercury		20	300	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Nickel		20	7,000	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Potassium		NS	NS	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Selenium		400	8,000	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Silver		100	2,000	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Sodium		NS	NS	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Thallium		8	800	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 14	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 or two distinct data values were detected

NP - Non-Parametric Distribution
- [c] 95% KM (Percentile Bootstrap) UCL
- [d] 95% KM (BCA) UCL
- [e] 95% KM (t) 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

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

LN - Log Normal Distribution
- [m] 95% H-UCL
- [n] 95% Chebyshev (MVUE) 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 07/20/10
Checked by / Date: KJC 07/20/10

P:\Documents\SITES\PSWS NEW BEDFORD\Supplemental Assessment\Results & Communication\
Evaluations as of 09 20 10, P-023

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

DEVAL L. PATRICK
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Secretary

KENNETH L. KIMMELL
Commissioner

June 30, 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-039
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-039 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-039. 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 eight 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-039, MassDEP provided you the following preliminary determinations:

- An Imminent Hazard condition, as defined in the MCP, was determined to exist for the current use of the property for the top 1 foot of soil. Specifically, the average concentration and several boring-specific concentrations of lead in the top foot of soil were greater than or equal to the site-specific Imminent Hazard levels established by MassDEP for this Site. Lead was detected above the Site-specific IH value in the "A" samples from the borings identified as P-039-SB-01, P-039-SB-03, P-039-SB-04, P-039-SB-05 and P-039-SB-06, which were collected from the 0-1 foot bgs interval. The MCP requires elimination or control of all Imminent Hazards. This may be accomplished by removing the top foot of soil in the vicinity of these soil borings and replacing it with clean soil or it can be accomplished by otherwise covering those areas with clean soil or an impervious surface or cap. No activities should occur on this property that will disrupt the top foot of soil until removal or cover measures are complete.

- 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 concentrations of lead and/or PAHs detected in samples collected from the top 3 feet from all of the soil borings on the property are above the applicable MCP Method 1 S-1 soil standards. 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 not determined to exist for the soil located between 3 feet and 12 feet below the ground surface. This is because the average concentration of PAHs and lead, which were calculated based on the analytical data from soils collected from greater than 3 feet bgs, were above the applicable MCP Method 1 S-1 soil standard. Because this soil is at depth, it does not necessarily need to be removed to be protective of the current use of the property.

Property P-039 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-039:

- MassDEP has verified its previous request for USEPA assistance to address the Imminent Hazard concentrations and that a Condition of No Significant Risk did not exist for the 0 to 3 foot interval, as described above. Response actions are necessary to address the COC contamination in the area of all of the soil borings at this interval.

- MassDEP has also verified that a Condition of No Significant Risk does not exist for future use of the property because the average concentration of PAHs and/or lead calculated from data from samples collected from the greater than 3 foot horizon are above the applicable MCP Method 1 S-1 soil standard. The concentrations of PAHs and/or lead in the "C" samples from seven of the soil borings on the property are well above the MCP Method 1 S-1 standard. The only soil boring that did not contain concentrations of lead or PAHs above the MCP Method 1 S-1 soil standard at this interval is identified as P-039-SB-08. In addition, two samples in particular, identified as P-039-SB-03C and P-039-SB-07C exhibit concentrations of lead that are above the Upper Concentration Limit of 3000 ppm established in the MCP. Based on a review of the soil boring logs for this property, the "C" samples were collected from the 3 – 4 foot bgs interval. If the soil in the greater than 3 feet bgs interval is to remain in place, land use restrictions and/or controls defined as a Notice of Activity and Use Limitation (or AUL) in the MCP, are likely to be necessary for the property to ensure that future activities or changes in use do not create the potential for humans to be exposed to the soil below 3 feet in depth.

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/lm

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-039

Table P-039
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	3 / 8	0.14 - 1.42	0.91	1.2 NP [a]	4 / 8	0.42 - 1.3	2.2	1.3 NP [a]	7 / 16	0.14 - 1.42	1.8	1.0 NP [a]	5 / 16	0.1 - 7.77	1.7	4.0 NP [d]
Acenaphthene	180,000	1,000	10,000	7 / 8	0.07 - 3.8	1.3	2.1 NP [a]	6 / 8	0.35 - 3.04	2.0	2.2 NP [a]	13 / 16	0.07 - 3.8	1.8	1.8 NP [a]	6 / 16	0.15 - 11.7	1.9	5.1 NP [d]
Acenaphthylene	180,000	1,000	10,000	8 / 8	0.17 - 1.56	0.83	1.1 N [h]	7 / 8	0.38 - 7.4	2.7	6.1 NP [c]	15 / 16	0.17 - 7.4	2.1	3.5 NP [c]	7 / 16	0.07 - 15.5	2.7	4.5 NP [a]
Anthracene	920,000	1,000	10,000	8 / 8	0.31 - 10.6	3.3	5.7 N [h]	8 / 8	0.53 - 14	5.9	8.9 N [h]	16 / 16	0.31 - 14	5.0	7.2 G [j]	9 / 16	0.08 - 23.8	5.7	10.0 NP [e]
Benzo(a)anthracene	160	7	3,000	8 / 8	0.84 - **14.8**	5.8	**8.9** N [h]	8 / 8	0.79 - **23**	**10.7**	**15.8** N [h]	16 / 16	0.79 - **23**	**9.1**	**12.6** G [j]	9 / 16	0.32 - **30.4**	6.5	**11.4** NP [d]
Benzo(a)pyrene	16	2	300	8 / 8	0.8 - **14**	**5.6**	**8.6** N [h]	8 / 8	0.62 - **21**	**10.0**	**14.7** N [h]	16 / 16	0.62 - **21**	**8.5**	**10.8** N [h]	9 / 16	0.34 - **29.4**	**6.0**	**10.3** NP [a]
Benzo(b)fluoranthene	160	7	3,000	8 / 8	0.94 - **14.3**	6.2	**9.3** N [h]	8 / 8	0.85 - **24**	**11.8**	**17.2** N [h]	16 / 16	0.85 - **24**	**9.9**	**13.8** G [j]	9 / 16	0.42 - **36.9**	**7.0**	**12.3** NP [a]
Benzo(g,h,i)perylene	120,000	1,000	10,000	8 / 8	0.32 - 9.51	3.3	5.2 N [h]	8 / 8	0.85 - 12	5.0	7.4 N [h]	16 / 16	0.32 - 12	4.4	6.0 G [j]	9 / 16	0.27 - 13	2.8	4.9 NP [a]
Benzo(k)fluoranthene	1,600	70	10,000	8 / 8	0.55 - 6.81	2.8	4.1 N [h]	8 / 8	0.6 - 12	5.2	7.7 N [h]	16 / 16	0.55 - 12	4.4	5.9 G [j]	9 / 16	0.15 - 14.2	3.0	5.1 NP [d]
Chrysene	16,000	70	10,000	8 / 8	0.87 - 15	6.1	9.2 N [h]	8 / 8	1 - 23	10.7	15.6 N [h]	16 / 16	0.87 - 23	9.1	12.5 G [j]	9 / 16	0.36 - 30.5	6.4	11.0 NP [a]
Dibenz(a,h)anthracene	16	0.7	300	7 / 8	0.1 - **2.96**	**1.1**	**1.7** NP [a]	7 / 8	0.38 - **2.8**	**1.6**	**2.3** NP [a]	14 / 16	0.1 - **2.96**	**1.4**	**1.8** NP [a]	9 / 16	0.05 - **4.23**	**0.96**	**1.6** NP [d]
Fluoranthene	120,000	1,000	10,000	8 / 8	1.9 - 42.4	15.7	26 N [h]	8 / 8	2.2 - 53	26	38 N [h]	16 / 16	1.9 - 53	23	28 N [h]	10 / 16	0.06 - 84.8	18.3	31 NP [e]
Fluorene	120,000	1,000	10,000	7 / 8	0.08 - 4.26	1.4	2.4 NP [a]	6 / 8	0.56 - 5.3	3.0	3.8 NP [a]	13 / 16	0.08 - 5.3	2.5	2.7 NP [a]	6 / 16	0.19 - 12.4	3.0	8.0 NP [d]
Indeno(1,2,3-cd)pyrene	160	7	3,000	8 / 8	0.44 - **9.04**	3.1	5.0 N [h]	8 / 8	0.45 - **11**	4.8	**7.1** N [h]	16 / 16	0.44 - **11**	4.2	5.8 G [j]	9 / 16	0.22 - **12**	2.8	**13.9** NP [f]
Naphthalene	61,000	100	10,000	7 / 8	0.08 - 3.7	1.1	1.9 NP [a]	4 / 8	0.7 - 2.85	2.7	2.4 NP [d]	11 / 16	0.08 - 3.7	2.1	1.7 NP [a]	6 / 16	0.054 - 12.2	2.4	5.2 NP [d]
Phenanthrene	120,000	500	10,000	8 / 8	0.96 - 39.2	13.1	32 G [j]	8 / 8	2 - 37	19.9	29 N [h]	16 / 16	0.96 - 39.2	17.6	25 G [j]	9 / 16	0.06 - 88.6	20	35 NP [a]
Pyrene	92,000	1,000	10,000	8 / 8	1.6 - 30.2	11.7	18.3 N [h]	8 / 8	2 - 35	19.0	27 N [h]	16 / 16	1.6 - 35	16.6	22 G [j]	9 / 16	0.58 - 62.6	13.7	24 NP [a]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 8	All ND	NA	NC [k]	0 / 8	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]
Aroclor-1221	10	2	100	0 / 8	All ND	NA	NC [k]	0 / 8	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]
Aroclor-1232	10	2	100	0 / 8	All ND	NA	NC [k]	0 / 8	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]
Aroclor-1242	10	2	100	0 / 8	All ND	NA	NC [k]	0 / 8	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]
Aroclor-1248	10	2	100	0 / 8	All ND	NA	NC [k]	0 / 8	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]
Aroclor-1254	10	2	100	0 / 8	All ND	NA	NC [k]	1 / 8	0.013 - 0.013	0.013	NC [l]	1 / 16	0.013 - 0.013	0.013	NC [l]	0 / 16	All ND	NA	NC [k]
Aroclor-1260	10	2	100	5 / 8	0.0091 - 0.029	0.015	0.020 NP [a]	1 / 8	0.007 - 0.007	0.013	NC [l]	6 / 16	0.007 - 0.029	0.013	0.016 NP [d]	0 / 16	All ND	NA	NC [k]
Aroclor-1262	10	2	100	0 / 8	All ND	NA	NC [k]	0 / 8	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]
Aroclor-1268	10	2	100	0 / 8	All ND	NA	NC [k]	0 / 8	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]
PCBs (Total)	10	2	100	5 / 8	0.0091 - 0.029	0.015	0.020 NP [a]	2 / 8	0.007 - 0.013	0.013	0.016 NP [a]	7 / 16	0.007 - 0.029	0.013	0.015 NP [a]	0 / 16	All ND	NA	NC [k]

Table P-039
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	8 / 8	4060 - 5750	4869	5280 N [h]	8 / 8	3100 - 6030	4543	5092 N [h]	16 / 16	3100 - 6030	4651	4910 N [h]	16 / 16	3570 - 8240	5364	5890 N [h]
Antimony		20	300	0 / 8	All ND	NA	NC [k]	0 / 8	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]
Arsenic	40	20	200	8 / 8	5.6 - 16.6	10.2	12.9 N [h]	8 / 8	6.3 - **28.6**	13.0	**20** LN [m]	16 / 16	5.6 - **28.6**	12.1	14.5 N [i]	16 / 16	0.71 - 19.8	6.8	**22** NP [g]
Barium	200,000	1,000	10,000	8 / 8	117 - 396	232	292 N [h]	8 / 8	135 - 421	253	323 N [h]	16 / 16	117 - 421	246	283 G [j]	16 / 16	13.4 - **1110**	227	**1021** NP [g]
Beryllium		100	2,000	0 / 8	All ND	NA	NC [k]	0 / 8	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]
Cadmium	60	2	300	8 / 8	0.59 - **2.4**	1.2	1.6 G [j]	8 / 8	0.83 - **3**	1.3	1.8 G [j]	16 / 16	0.59 - **3**	1.3	1.5 N [i]	16 / 16	0.11 - **2.3**	0.77	**2.7** NP [g]
Calcium		NS	NS	8 / 8	1910 - 3690	2778	3189 N [h]	8 / 8	1710 - 3830	2640	3192 N [h]	16 / 16	1710 - 3830	2686	2943 N [i]	16 / 16	649 - 7060	2366	3420 G [j]
Chromium	200	30	2,000	8 / 8	12.2 - 21.7	15.9	17.9 N [h]	8 / 8	10.7 - **67.1**	21	**50** NP [b]	16 / 16	10.7 - **67.1**	19.1	25 N [i]	16 / 16	7.4 - **61.2**	17.1	**33** NP [b]
Cobalt		NS	NS	0 / 8	All ND	NA	NC [k]	0 / 8	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]
Copper		NS	NS	0 / 8	All ND	NA	NC [k]	0 / 8	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]
Iron		NS	NS	8 / 8	10500 - 54600	19763	42088 NP [b]	8 / 8	9560 - 41900	20883	27572 N [h]	16 / 16	9560 - 54600	20509	24562 N [i]	16 / 16	4610 - 32600	14603	25275 NP [b]
Lead	1,000	300	3,000	8 / 8	**324** - **3070**	**1250**	**1876** N [h]	8 / 8	**490** - **1560**	**808**	**1071** N [h]	16 / 16	**324** - **3070**	**955**	**1210** LN [m]	16 / 16	4.1 - **27700**	**2347**	**19323** NP [g]
Magnesium		NS	NS	8 / 8	869 - 1960	1174	1430 G [j]	8 / 8	492 - 1140	833	976 N [h]	16 / 16	492 - 1960	947	1057 G [j]	16 / 16	644 - 2320	1150	1379 G [j]
Manganese		NS	NS	0 / 8	All ND	NA	NC [k]	0 / 8	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]
Mercury		20	300	0 / 8	All ND	NA	NC [k]	0 / 8	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]
Nickel		20	7,000	0 / 8	All ND	NA	NC [k]	0 / 8	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]
Potassium		NS	NS	0 / 8	All ND	NA	NC [k]	0 / 8	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]
Selenium		400	8,000	0 / 8	All ND	NA	NC [k]	0 / 8	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]
Silver		100	2,000	0 / 8	All ND	NA	NC [k]	0 / 8	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]
Sodium		NS	NS	0 / 8	All ND	NA	NC [k]	0 / 8	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]
Thallium		8	800	0 / 8	All ND	NA	NC [k]	0 / 8	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]
Vanadium		600	10,000	0 / 8	All ND	NA	NC [k]	0 / 8	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]
Zinc		2,500	10,000	0 / 8	All ND	NA	NC [k]	0 / 8	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]
Cyanide		100	4,000	0 / 8	All ND	NA	NC [k]	0 / 8	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]	0 / 16	All ND	NA	NC [k]

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).

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

N - Normal Distribution
- [h] 95% Student's-t UCL
- [i] 95% Modified-t UCL

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

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

LN - Log Normal Distribution
- [m] 95% H-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 8/16/10
Checked by / Date: KJC 8/17/10

Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

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Commissioner

July 8, 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-013
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-013 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-013. 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 fourteen boring locations on this property to the MCP Method 1 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-013, MassDEP provided you the following preliminary determinations:

- An Imminent Hazard condition, as defined in the MCP, was determined to exist for the current use of the property for the top 1 foot of soil. Specifically, the 95% UCL calculated on the mean from the samples collected from this interval and several boring-specific concentrations of one PAH detected in the top foot of soil were greater than or equal to the site-specific Imminent Hazard levels established by MassDEP for this Site. The PAH was detected above the Site-specific IH value in the "A" samples collected from the 0-1 foot bgs interval from borings identified as P-013-SB-01, P-013-SB-04, P-013-SB-05, P-013-SB-12 and P-013-SB-14. Based on this information, MassDEP determined that an Imminent Hazard could exist on this property. The MCP requires elimination or control of all Imminent Hazards, if applicable. This may be accomplished by removing the top foot of soil in the vicinity of these soil borings and replacing it with clean soil or it can be accomplished by otherwise covering those areas with clean soil or an impervious surface or cap. No activities should occur on this property that will disrupt the top foot of soil until removal or cover measures are complete.

- 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 concentrations of PAHs and/or lead calculated from the samples collected from the top 3 feet from the soil borings on the property are above the applicable MCP Method 1 S-1 soil standards. 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 not determined to exist for the soil located between 3 feet and 12 feet below the ground surface. This is because the average concentration of both PAHs and lead, which were calculated based on the analytical data from soils collected from greater than 3 feet bgs, were above the applicable MCP Method 1 S-1 soil standard. Because this soil is at depth, it does not necessarily need to be removed to be protective of the current use of the property.

Property P-013 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-013:

- MassDEP has verified its previous request for USEPA assistance to further assess and/or address the Imminent Hazard concentrations and to address that a Condition of No Significant Risk did not exist for the 0 to 3 foot interval, as described above. Response actions, and/or additional assessment, are necessary to address the COC contamination in the area of all of the soil borings at this interval.

- MassDEP has also verified that a Condition of No Significant Risk does not exist for future use of the property because the average concentration of PAHs and/or lead calculated from data from samples collected from the greater than 3 foot horizon are above the applicable MCP Method 1 S-1 soil standard. The concentrations of PAHs and/or lead in the "C" samples from all of the soil borings on the property are above the MCP Method 1 S-1 soil standard. If the soil in the greater than 3 feet bgs interval is to remain in place, land use restrictions and/or controls defined as a Notice of Activity and Use Limitation (or AUL) in the MCP, are likely to be necessary for the property to ensure that future activities or changes in use do not create the potential for humans to be exposed to the soil below 3 feet in depth.

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/lm

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-013

Table P-013
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	2 / 14	0.47 - 2.6	2.4	NC [a]	3 / 14	3.2 - 82	7.0	82 NP [c]	5 / 28	0.47 - 82	5.5	17.3 NP [e]	4 / 28	0.26 - **4000**	146	**421** NP [f]
Acenaphthene	180,000	1,000	10,000	2 / 14	0.53 - 1.1	2.3	1.1 NP [c]	3 / 14	4.4 - 7.9	1.8	5.3 NP [f]	5 / 28	0.53 - 7.9	2.0	4.8 NP [c]	3 / 28	0.49 - 50	22	6.7 NP [f]
Acenaphthylene	180,000	1,000	10,000	11 / 14	0.64 - 26	7.3	10.2 NP [d]	12 / 14	1 - 120	11.6	64 NP [g]	23 / 28	0.64 - 120	10.2	27 NP [e]	11 / 28	0.33 - **3700**	137	**1489** NP [h]
Anthracene	920,000	1,000	10,000	10 / 14	0.86 - 24	5.5	12.2 NP [e]	9 / 14	0.98 - 46	7.1	13.9 NP [d]	19 / 28	0.86 - 46	6.6	13.7 NP [e]	12 / 28	0.29 - **1200**	51	488 NP [h]
Benzo(a)anthracene	160	7	3,000	12 / 14	1.9 - **28**	**9.7**	**13.8** NP [f]	14 / 14	1.3 - **65**	**10.7**	**22** LN [n]	26 / 28	1.3 - **65**	**10.4**	**20** NP [e]	15 / 28	0.59 - **1100**	**50**	**449** NP [h]
Benzo(a)pyrene	16	2	300	14 / 14	1.7 - **56**	**15.5**	**24** G [k]	14 / 14	1.7 - **120**	**16.0**	**31** G [k]	28 / 28	1.7 - **120**	**15.8**	**55** NP [i]	16 / 28	0.49 - **1900**	**79**	**762** NP [h]
Benzo(b)fluoranthene	160	7	3,000	12 / 14	1.4 - **46**	**12.7**	**19.1** NP [d]	14 / 14	1.6 - **120**	**15.6**	**32** LN [n]	26 / 28	1.4 - **120**	**14.6**	**32** NP [e]	15 / 28	0.43 - **1100**	**48**	**444** NP [h]
Benzo(g,h,i)perylene	120,000	1,000	10,000	13 / 14	1.2 - 96	18.8	47 NP [e]	13 / 14	1.3 - 230	24	124 NP [g]	26 / 28	1.2 - 230	22	56 NP [e]	17 / 28	0.18 - **2400**	95	956 NP [h]
Benzo(k)fluoranthene	1,600	70	10,000	9 / 14	1.4 - **14**	6.3	7.9 NP [f]	13 / 14	1.1 - 62	8.3	27 NP [e]	22 / 28	1.1 - 62	7.7	16.1 NP [e]	13 / 28	0.43 - **71**	26	25 NP [g]
Chrysene	16,000	70	10,000	12 / 14	1.6 - 33	10.3	15.1 NP [f]	14 / 14	1.4 - **89**	12.4	25 LN [n]	26 / 28	1.4 - **89**	11.7	25 NP [e]	15 / 28	0.58 - **1300**	56	**525** NP [h]
Dibenz(a,h)anthracene	16	0.7	300	6 / 14	0.64 - **3.1**	**2.8**	**2.2** NP [c]	6 / 14	**1.2** - **16**	**2.2**	**4.5** NP [f]	12 / 28	0.64 - **16**	**2.4**	**3.1** NP [c]	5 / 28	0.27 - **26**	**22**	**7.3** NP [c]
Fluoranthene	120,000	1,000	10,000	14 / 14	4.2 - 94	31	43 N [l]	14 / 14	4 - 290	37	76 G [k]	28 / 28	4 - 290	35	129 NP [i]	18 / 28	0.28 - **5000**	206	**1998** NP [h]
Fluorene	120,000	1,000	10,000	5 / 14	1.1 - 4	2.8	2.6 NP [c]	5 / 14	1.1 - 31	3.9	9.8 NP [c]	10 / 28	1.1 - 31	3.6	5.1 NP [f]	6 / 28	0.41 - **1400**	54	146 NP [f]
Indeno(1,2,3-cd)pyrene	160	7	3,000	12 / 14	1 - **61**	**12.0**	**30** NP [e]	12 / 14	1.4 - **140**	**15.2**	**76** NP [g]	24 / 28	1 - **140**	**14.1**	**34** NP [e]	15 / 28	0.3 - **1400**	**57**	**561** NP [h]
Naphthalene	61,000	100	10,000	5 / 14	0.77 - 20	4.3	5.9 NP [f]	7 / 14	1.3 - **190**	15.3	**155** NP [h]	12 / 28	0.77 - **190**	11.6	39 NP [e]	7 / 28	0.26 - **8700**	**316**	**3593** NP [h]
Phenanthrene	120,000	500	10,000	14 / 14	2.4 - 99	29	50 G [k]	14 / 14	2.5 - 310	38	82 LN [n]	28 / 28	2.4 - 310	35	138 NP [i]	16 / 28	**1** - **7500**	297	**2995** NP [h]
Pyrene	92,000	1,000	10,000	14 / 14	3.5 - 120	33	53 G [k]	14 / 14	3.8 - 350	42	87 G [k]	28 / 28	3.5 - 350	39	153 NP [i]	18 / 28	0.29 - **6100**	242	**2427** NP [h]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]
Aroclor-1221	10	2	100	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]
Aroclor-1232	10	2	100	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]
Aroclor-1242	10	2	100	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]
Aroclor-1248	10	2	100	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]
Aroclor-1254	10	2	100	7 / 14	0.058 - 0.363	0.065	0.13 NP [f]	3 / 14	0.044 - 0.17	0.032	0.17 NP [c]	10 / 28	0.044 - 0.363	0.043	0.078 NP [f]	6 / 28	0.029 - 0.13	0.027	0.042 NP [f]
Aroclor-1260	10	2	100	11 / 14	0.023 - 0.15	0.057	0.081 NP [c]	11 / 14	0.018 - 0.17	0.063	0.096 NP [d]	22 / 28	0.018 - 0.17	0.061	0.078 NP [d]	7 / 28	0.015 - 0.099	0.021	0.0384 NP [c]
Aroclor-1262	10	2	100	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]
Aroclor-1268	10	2	100	3 / 14	0.019 - 0.059	0.011	0.059 NP [c]	3 / 14	0.057 - 0.08	0.018	0.080 NP [c]	6 / 28	0.019 - 0.08	0.016	0.059 NP [c]	4 / 28	0.024 - 0.077	0.012	0.049 NP [c]
PCBs (Total)	10	2	100	10 / 14	0.029 - 0.363	0.12	0.18 NP [c]	10 / 14	0.018 - 0.39	0.085	0.28 NP [g]	20 / 28	0.018 - 0.39	0.097	0.17 NP [e]	8 / 28	0.015 - 0.2	0.044	0.099 NP [c]

Table P-013
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg-Kg)	MCP S-1 Direct Contact (mg-Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
Inorganics (mg/Kg)																			
Aluminum		NS	NS	14 / 14	3760 - 12600	5509	6615 N [m]	14 / 14	2850 - 6140	4560	5054 N [l]	28 / 28	2850 - 12600	4876	5250 G [k]	28 / 28	571 - 7150	3874	4332 N [l]
Antimony		20	300	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]
Arsenic	40	20	200	14 / 14	4.2 - 7.8	6.0	6.5 N [l]	14 / 14	1.8 - 14.6	5.8	7.9 G [k]	28 / 28	1.8 - 14.6	5.9	6.7 G [k]	24 / 28	1.1 - **45.6**	8.8	18.5 NP [e]
Barium	200,000	1,000	10,000	14 / 14	93.4 - **1170**	463	602 N [l]	14 / 14	40.3 - **1960**	431	980 LN [n]	28 / 28	40.3 - **1960**	442	**1181** NP [i]	28 / 28	12.3 - **1980**	285	442 G [k]
Beryllium		100	2,000	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]
Cadmium	60	2	300	5 / 14	0.084 - 1.2	0.29	0.43 NP [f]	3 / 14	0.59 - 1.9	0.44	1.9 NP [c]	8 / 28	0.084 - 1.9	0.39	0.51 NP [c]	10 / 28	0.095 - **3.1**	0.43	0.64 NP [f]
Calcium		NS	NS	14 / 14	1540 - 4080	2872	3240 N [l]	14 / 14	645 - 4770	2436	3042 N [l]	28 / 28	645 - 4770	2581	2933 G [k]	28 / 28	597 - 12500	3669	4766 G [k]
Chromium	200	30	2,000	14 / 14	14.3 - **105**	**38**	**52** G [k]	14 / 14	7.7 - **90.5**	26	**41** LN [o]	28 / 28	7.7 - **105**	30	**46** NP [j]	28 / 28	4.8 - **134**	23	**46** NP [j]
Cobalt		NS	NS	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]
Copper		NS	NS	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]
Iron		NS	NS	14 / 14	13500 - 33300	21786	24844 N [l]	14 / 14	6550 - 56300	20861	29660 G [k]	28 / 28	6550 - 56300	21169	24691 G [k]	28 / 28	2890 - 140000	24039	41531 LN [o]
Lead	1,000	300	3,000	14 / 14	266 - **635**	**416**	**472** N [l]	14 / 14	94.9 - **1190**	**452**	**600** N [l]	28 / 28	94.9 - **1190**	**440**	**513** G [k]	28 / 28	3.2 - **4120**	**559**	**1348** NP [j]
Magnesium		NS	NS	14 / 14	1000 - 2580	1854	2068 N [l]	14 / 14	1000 - 3580	1629	1966 G [k]	28 / 28	1000 - 3580	1704	1864 G [k]	28 / 28	136 - 3700	1288	1578 G [k]
Manganese		NS	NS	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]
Mercury		20	300	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]
Nickel		20	7,000	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]
Potassium		NS	NS	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]
Selenium		400	8,000	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]
Silver		100	2,000	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]
Sodium		NS	NS	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]
Thallium		8	800	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]
Vanadium		600	10,000	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]
Zinc		2,500	10,000	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]
Cyanide		100	4,000	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]

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] Only one or two distinct data value was detected
[b] All values non detect

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

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

N - Normal Distribution
[l] 95% Student's-t UCL
[m] Modified-t UCL

LN - Lognormal Distribution
[n] 95% Chebyshev (MVUE) UCL
[o] 95% H-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 07/20/10
Checked by / Date: KJC 07/20/10

MassDEP

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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Secretary

KENNETH L. KIMMELL
Commissioner

July 8, 2011

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

NEW BEDFORD
Release Tracking Number 4-0015685
Parker Street Waste Site
Property P-066
SAP Data Risk Evaluation - No USEPA Action Recommended

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 from data generated during the first phase of SAP implementation and was followed-up with property by property risk evaluations for the purpose of typology chart development and risk communication with property owners of Phase I properties.

MassDEP is in the process of providing USEPA with both a preliminary risk evaluation and a final risk evaluation for all properties sampled during the first phase of SAP implementation. Preliminary evaluations were performed without consideration of data from surrounding properties that only became available later during SAP implementation, and was included in the final evaluation. Properties evaluated in all subsequent SAP implementation phases receive only one (final) risk evaluation because, as SAP implementation progressed, the data necessary to perform the final evaluation was available. Property P-066 was evaluated during the second implementation phase.

Property P-066 Risk Evaluation and Response Action Recommendations: Enclosed is a copy of the results from the risk evaluation conducted by MACTEC for the property identified as P-066. MassDEP uses these results along with information related to the boring logs, the nature of COCs observed, the property use and other pertinent information to complete its risk evaluation and make a response action recommendation.

MassDEP's evaluation compared the sample results from the soil samples collected from the fifteen boring locations on this property to the MCP Method 1 category S-1 soil standards and to either potential Imminent Hazard values listed in the MCP or site-specific Imminent Hazard (IH) values to determine if an IH may exist and/or if a Condition of No Significant Risk did or did not exist. 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. The 95% UCL evaluation criteria was used for Preliminary Risk Evaluations of Phase 1 properties when data from surrounding properties was not yet available. When data from surrounding properties is available it can be used to show whether the data collected from the property in question is consistent with surrounding data and adequately representative of likely COC distribution such that there is no need to apply the 95% UCL. In most cases, the 95% UCL evaluation criteria is not applicable to the Final Risk Evaluations or Phase 2 properties.

Based on this evaluation, MassDEP has determined the following for Property P-066:

- A condition of No Significant Risk to human health, as defined in the MCP, was determined to exist for both the current use of the property for the soil located between the ground surface and 3 feet in depth and for future use of the property for the soil located between 3 feet and 12 feet below the ground surface. The actual average concentration and the 95% UCL calculated for the COCs detected in both soil intervals are below the applicable MCP Method 1 S-1 soil standards. No response actions are necessary for this soil. Property P-066 is in an area outside of the PSWS boundary as it is being defined by MassDEP based on its evaluation of data generated by SAP implementation.

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/lm

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-066

Table P-066
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
PAHs (mg/Kg)																			
2-Methylnaphthalene	61,000	300	5,000	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Acenaphthene	180,000	1,000	10,000	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Acenaphthylene	180,000	1,000	10,000	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Anthracene	920,000	1,000	10,000	1 / 8	0.17 - 0.17	0.15	NC [b]	0 / 8	All ND	NA	NC [a]	1 / 16	0.17 - 0.17	0.14	NC [b]	0 / 16	All ND	NA	NC [a]
Benzo(a)anthracene	160	7	3,000	3 / 8	0.16 - 0.83	0.24	0.43 NP [c]	0 / 8	All ND	NA	NC [a]	3 / 16	0.16 - 0.83	0.17	0.25 NP [c]	0 / 16	All ND	NA	NC [a]
Benzo(a)pyrene	16	2	300	3 / 8	0.17 - 0.86	0.24	0.86 NP [d]	0 / 8	All ND	NA	NC [a]	3 / 16	0.17 - 0.86	0.17	0.26 NP [c]	0 / 16	All ND	NA	NC [a]
Benzo(b)fluoranthene	160	7	3,000	5 / 8	0.16 - 1.21	0.32	0.53 NP [e]	0 / 8	All ND	NA	NC [a]	5 / 16	0.16 - 1.21	0.20	0.30 NP [c]	0 / 16	All ND	NA	NC [a]
Benzo(g,h,i)perylene	120,000	1,000	10,000	1 / 8	0.67 - 0.67	0.21	NC [b]	0 / 8	All ND	NA	NC [a]	1 / 16	0.67 - 0.67	0.16	NC [b]	0 / 16	All ND	NA	NC [a]
Benzo(k)fluoranthene	1,600	70	10,000	1 / 8	0.41 - 0.41	0.18	NC [b]	0 / 8	All ND	NA	NC [a]	1 / 16	0.41 - 0.41	0.15	NC [b]	0 / 16	All ND	NA	NC [a]
Chrysene	16,000	70	10,000	3 / 8	0.21 - 0.95	0.26	0.95 NP [d]	0 / 8	All ND	NA	NC [a]	3 / 16	0.21 - 0.95	0.18	0.32 NP [c]	0 / 16	All ND	NA	NC [a]
Dibenz(a,h)anthracene	16	0.7	300	1 / 8	0.16 - 0.16	0.15	NC [b]	0 / 8	All ND	NA	NC [a]	1 / 16	0.16 - 0.16	0.14	NC [b]	0 / 16	All ND	NA	NC [a]
Fluoranthene	120,000	1,000	10,000	5 / 8	0.2 - 1.66	0.41	0.79 NP [e]	0 / 8	All ND	NA	NC [a]	5 / 16	0.2 - 1.66	0.23	0.39 NP [c]	0 / 16	All ND	NA	NC [a]
Fluorene	120,000	1,000	10,000	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Indeno(1,2,3-cd)pyrene	160	7	3,000	3 / 8	0.15 - 0.72	0.22	0.72 NP [d]	0 / 8	All ND	NA	NC [a]	3 / 16	0.15 - 0.72	0.16	0.23 NP [c]	0 / 16	All ND	NA	NC [a]
Naphthalene	61,000	100	10,000	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Phenanthrene	120,000	500	10,000	3 / 8	0.2 - 0.85	0.25	0.85 NP [d]	0 / 8	All ND	NA	NC [a]	3 / 16	0.2 - 0.85	0.17	0.85 NP [d]	0 / 16	All ND	NA	NC [a]
Pyrene	92,000	1,000	10,000	5 / 8	0.17 - 1.54	0.37	0.57 NP [e]	0 / 8	All ND	NA	NC [a]	5 / 16	0.17 - 1.54	0.21	0.42 NP [d]	0 / 16	All ND	NA	NC [a]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Aroclor-1254	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Aroclor-1260	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Aroclor-1262	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
PCBs (Total)	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]

Table P-066
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
Inorganics (mg/Kg)																			
Aluminum		NS	NS	8 / 8	7155 - 11762	9822	10870 N [g]	8 / 8	6513 - 10741	7918	8905 N [g]	16 / 16	6513 - 11762	8553	9174 G [i]	16 / 16	2370 - 10046	4669	5634 N [g]
Antimony		20	300	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Arsenic	40	20	200	3 / 8	3 - 4.5	2.2	4.5 NP [d]	0 / 8	All ND	NA	NC [a]	3 / 16	3 - 4.5	1.6	3.2 NP [c]	0 / 16	All ND	NA	NC [a]
Barium	200,000	1,000	10,000	8 / 8	13.7 - 83.7	24	61 NP [f]	8 / 8	8.6 - 26.5	14.2	17.9 N [g]	16 / 16	8.6 - 83.7	17.6	23 N [h]	16 / 16	6.3 - 58.7	17.0	22 LN [j]
Beryllium		100	2,000	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Cadmium	60	2	300	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Calcium		NS	NS	8 / 8	274 - 1361	548	809 G [i]	8 / 8	223 - 281	236	250 G [i]	16 / 16	223 - 1361	340	431 N [h]	16 / 16	207 - 687	486	543 N [g]
Chromium	200	30	2,000	8 / 8	6.2 - 12.4	9.1	10.3 N [g]	8 / 8	7.3 - 12.4	9.1	10.1 N [g]	16 / 16	6.2 - 12.4	9.1	9.6 N [h]	16 / 16	4.1 - 16.5	7.7	9.2 G [i]
Cobalt		NS	NS	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Copper		NS	NS	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Iron		NS	NS	8 / 8	7317 - 11316	8963	9785 N [g]	8 / 8	6291 - 9709	8209	8933 N [g]	16 / 16	6291 - 11316	8460	8859 N [g]	16 / 16	3361 - 10972	5865	6827 N [g]
Lead	1,000	300	3,000	8 / 8	16.5 - 246	79	158 G [i]	8 / 8	3.3 - 11.3	5.4	7.5 G [i]	16 / 16	3.3 - 246	30	79 NP [f]	6 / 16	2.3 - 5	1.9	3.2 NP [d]
Magnesium		NS	NS	8 / 8	345 - 1493	728	962 N [g]	8 / 8	890 - 2479	1404	1754 N [g]	16 / 16	345 - 2479	1179	1373 N [g]	16 / 16	774 - 3529	1522	1847 G [i]
Manganese		NS	NS	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Mercury		20	300	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Nickel		20	7,000	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Potassium		NS	NS	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Selenium		400	8,000	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Silver		100	2,000	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Sodium		NS	NS	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Thallium		8	800	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	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

N - Normal Distribution
[g] 95% Student's-t UCL
[h] 95% Modified-t UCL

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

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

LN - Log Normal Distribution
[j] 95% H-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 02/02/11
Checked by / Date: KJC 02/02/11

MassDEP
Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

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Lieutenant Governor

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Secretary

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Commissioner

July 8, 2011

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

NEW BEDFORD
Release Tracking Number 4-0015685
Parker Street Waste Site
Property P-068
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 from data generated during the first phase of SAP implementation and was followed-up with property by property risk evaluations for the purpose of typology chart development and risk communication with property owners of Phase I properties.

MassDEP is in the process of providing USEPA with both a preliminary risk evaluation and a final risk evaluation for all Phase I properties. The preliminary evaluation was performed without consideration of data from surrounding properties that was not available until later during SAP implementation for inclusion in the final evaluation. Properties evaluated in all subsequent SAP implementation phases receive only one (final) risk evaluation because, as SAP implementation progressed, the data necessary to perform the final evaluation was available. Property P-068 was evaluated during the second implementation phase.

Property P-068 Risk Evaluation and Response Action Recommendations: Enclosed is a copy of the results from the risk evaluation conducted by MACTEC for the property identified as P-068. MassDEP uses these results along with information related to the boring logs, the nature of COCs observed, the property use and other pertinent information to complete its risk evaluation and make a response action recommendation.

MassDEP's evaluation compared the sample results from the soil samples collected from the ten boring locations on this property to the MCP Method 1 category S-1 soil standards and to either potential Imminent Hazard values listed in the MCP or site-specific Imminent Hazard (IH) values to determine if an IH may exist and/or if a Condition of No Significant Risk did or did not exist. 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. The 95% UCL evaluation criteria was used for Preliminary Risk Evaluations of Phase 1 properties when data from surrounding properties was not yet available. When data from surrounding properties is available it can be used to determine whether the data collected from the property in question is consistent with surrounding data and adequately representative of likely COC distribution such that there is no need to apply the 95% UCL. In most cases, the 95% UCL evaluation criteria is not applicable to the Final Risk Evaluations or Phase 2 properties.

Based on this evaluation, MassDEP has determined the following for Property P-068:

- A condition of No Significant Risk to human health, 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 for a portion of the property. Specifically, for the 0 – 3 foot below ground surface interval, four of the borings on the property contained contaminated fill that appears consistent in description and contaminant concentrations with fill that has been observed at other properties evaluated as part of the SAP. These borings are identified as P-068-SB-01, P-068-SB-04, P-068-SB-05 and P-068-SB-07. The actual average for COCs at this depth interval is slightly above the applicable MCP Method 1 S-1 soil standard. Additional response actions are necessary for this soil. Boring P-068-SB-07 exhibits COC contaminant levels at or above the applicable MCP Method 1 S-1 soil standard only in the top one foot of soil.

- In addition, there are four borings on the property that exhibit concentrations above the applicable MCP Method 1 S-1 soil standard, but only in the top foot of soil. These borings are identified as P-068-SB-02, P-068-SB-03, P-068-SB-06 and P-068-SB-08. The descriptions of the fill for this interval in these borings are not consistent with the majority of the fill descriptions for the other properties evaluated as part of the SAP. However, the concentration of lead in the samples collected from the top foot of soil in each of these borings is above the applicable MCP Method 1 S-1 soil standard. Boring P-068-SB-06 contained an estimated lead concentration level of 1640 parts per million (ppm) in the top one foot of soil.

- In addition, 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. Both the average concentrations and the 95% UCL calculated for all COCs are below the applicable MCP Method 1 S-1 soil standards and no further response actions are necessary for this soil.

- Based on the findings above, and after a careful review of all available data and information, MassDEP is of the opinion that the boundary of the fill layer associated with the PSWS is across Property P-068. No further assessment is required to the immediate west of property P-068 to further define the PSWS boundary at this location.

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/lm
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

Ec: 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-068

Table P-068
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	1 / 10	0.11 - 0.11	0.16	NC [a]	0 / 10	All ND	NA	NC [b]	1 / 20	0.11 - 0.11	0.34	NC [a]	1 / 20	0.18 - 0.18	0.16	NC [a]
Acenaphthene	180,000	1,000	10,000	0 / 10	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]	1 / 20	0.16 - 0.16	0.16	NC [a]
Acenaphthylene	180,000	1,000	10,000	1 / 10	0.07 - 0.07	0.15	NC [a]	0 / 10	All ND	NA	NC [b]	1 / 20	0.07 - 0.07	0.33	NC [a]	0 / 20	All ND	NA	NC [b]
Anthracene	920,000	1,000	10,000	4 / 10	0.09 - 0.34	0.16	0.21 NP [c]	1 / 10	0.1 - 0.1	0.43	NC [a]	5 / 20	0.09 - 0.34	0.34	0.16 NP [f]	1 / 20	0.34 - 0.34	0.17	NC [a]
Benzo(a)anthracene	160	7	3,000	9 / 10	0.09 - 0.97	0.31	0.75 NP [d]	4 / 10	0.08 - 2.36	0.54	1.0 NP [c]	13 / 20	0.08 - 2.36	0.46	1.1 NP [g]	3 / 20	0.12 - 0.57	0.18	0.57 NP [c]
Benzo(a)pyrene	16	2	300	9 / 10	0.09 - 0.99	0.32	0.75 NP [d]	5 / 10	0.05 - **2.26**	0.52	0.84 NP [f]	14 / 20	0.05 - **2.26**	0.45	1.1 NP [g]	3 / 20	0.1 - 0.51	0.17	0.18 NP [f]
Benzo(b)fluoranthene	160	7	3,000	10 / 10	0.09 - 1.3	0.46	0.82 G [i]	5 / 10	0.08 - 3.21	0.65	1.1 NP [f]	15 / 20	0.08 - 3.21	0.58	1.4 NP [g]	3 / 20	0.12 - 0.72	0.18	0.23 NP [f]
Benzo(g,h,i)perylene	120,000	1,000	10,000	9 / 10	0.06 - 0.8	0.23	0.55 NP [d]	3 / 10	0.04 - 1.36	0.42	0.53 NP [f]	12 / 20	0.04 - 1.36	0.36	0.37 NP [f]	3 / 20	0.06 - 0.25	0.16	0.25 NP [c]
Benzo(k)fluoranthene	1,600	70	10,000	8 / 10	0.05 - 0.61	0.21	0.30 NP [e]	2 / 10	0.32 - 1.01	0.39	1.0 NP [c]	10 / 20	0.05 - 1.01	0.33	0.33 NP [f]	3 / 20	0.05 - 0.22	0.15	0.21 NP [f]
Chrysene	16,000	70	10,000	10 / 10	0.08 - 1.1	0.34	0.62 G [i]	5 / 10	0.05 - 2.16	0.52	0.82 NP [f]	15 / 20	0.05 - 2.16	0.46	1.0 NP [g]	3 / 20	0.07 - 0.55	0.17	0.55 NP [c]
Dibenz(a,h)anthracene	16	0.7	300	5 / 10	0.06 - 0.25	0.15	0.19 NP [f]	4 / 10	0.05 - **0.81**	0.25	0.51 NP [c]	9 / 20	0.05 - **0.81**	0.21	0.25 NP [f]	2 / 20	0.12 - 0.13	0.15	0.13 NP [f]
Fluoranthene	120,000	1,000	10,000	10 / 10	0.12 - 1.9	0.60	1.1 G [i]	7 / 10	0.07 - 4.18	0.68	1.4 NP [e]	17 / 20	0.07 - 4.18	0.65	1.9 NP [g]	3 / 20	0.14 - 1.14	0.21	1.1 NP [c]
Fluorene	120,000	1,000	10,000	1 / 10	0.05 - 0.05	0.14	NC [a]	0 / 10	All ND	NA	NC [b]	1 / 20	0.05 - 0.05	0.33	NC [a]	1 / 20	0.18 - 0.18	0.16	NC [a]
Indeno(1,2,3-cd)pyrene	160	7	3,000	8 / 10	0.06 - 0.6	0.21	0.31 NP [e]	2 / 10	0.37 - 1.31	0.43	1.3 NP [c]	10 / 20	0.06 - 1.31	0.36	0.36 NP [f]	3 / 20	0.07 - 0.28	0.16	0.28 NP [c]
Naphthalene	61,000	100	10,000	0 / 10	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]	1 / 20	0.28 - 0.28	0.16	NC [a]
Phenanthrene	120,000	500	10,000	10 / 10	0.08 - 1.2	0.33	0.62 G [i]	3 / 10	0.11 - 0.84	0.39	0.84 NP [c]	13 / 20	0.08 - 1.2	0.37	0.38 NP [f]	3 / 20	0.06 - 1.14	0.20	1.1 NP [c]
Pyrene	92,000	1,000	10,000	10 / 10	0.12 - 1.8	0.55	1.0 G [i]	5 / 10	0.09 - 3.33	0.68	1.2 NP [f]	15 / 20	0.09 - 3.33	0.64	1.6 NP [g]	3 / 20	0.13 - 0.98	0.20	0.98 NP [c]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 10	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]
Aroclor-1221	10	2	100	0 / 10	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]
Aroclor-1232	10	2	100	0 / 10	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]
Aroclor-1242	10	2	100	0 / 10	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]
Aroclor-1248	10	2	100	0 / 10	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]
Aroclor-1254	10	2	100	7 / 10	0.024 - 2	0.47	0.91 NP [e]	4 / 10	0.058 - 0.13	0.047	0.10 NP [c]	11 / 20	0.024 - 2	0.19	0.38 NP [e]	1 / 20	0.022 - 0.022	0.018	NC [a]
Aroclor-1260	10	2	100	4 / 10	0.015 - 0.12	0.047	0.065 NP [c]	2 / 10	0.007 - 0.085	0.023	0.080 NP [g]	6 / 20	0.007 - 0.12	0.031	0.037 NP [c]	0 / 20	All ND	NA	NC [b]
Aroclor-1262	10	2	100	0 / 10	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]
Aroclor-1268	10	2	100	0 / 10	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]
PCBs (Total)	10	2	100	8 / 10	0.015 - 2	0.31	1.2 NP [d]	5 / 10	0.007 - 0.215	0.054	0.11 NP [c]	13 / 20	0.007 - 2	0.14	0.56 NP [g]	1 / 20	0.022 - 0.022	0.018	NC [a]

Table P-068
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	10 / 10	7080 - 9231	7906	8326 N [j]	10 / 10	4330 - 11018	7446	8640 N [j]	20 / 20	4330 - 11018	7600	8123 N [j]	20 / 20	3252 - 9296	5243	5963 LN [k]
Antimony		20	300	0 / 10	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]
Arsenic	40	20	200	10 / 10	2.5 - 8.1	4.4	5.4 N [j]	10 / 10	1.7 - 6.9	3.7	4.8 N [j]	20 / 20	1.7 - 8.1	3.9	4.6 G [i]	13 / 20	0.69 - 3.9	1.2	1.6 NP [c]
Barium	200,000	1,000	10,000	10 / 10	14.6 - 548	128	247 G [i]	10 / 10	8.1 - 280	96	210 G [i]	20 / 20	8.1 - 548	107	153 G [i]	20 / 20	8.1 - 93.3	23	44 NP [h]
Beryllium		100	2,000	0 / 10	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]
Cadmium	60	2	300	1 / 10	**6.7 - 6.7**	0.82	NC [a]	0 / 10	All ND	NA	NC [b]	1 / 20	**6.7 - 6.7**	0.40	NC [a]	0 / 20	All ND	NA	NC [b]
Calcium		NS	NS	10 / 10	297 - 5328	1822	2923 G [i]	10 / 10	242 - 12099	1954	4634 G [i]	20 / 20	242 - 12099	1910	4266 NP [h]	20 / 20	215 - 1372	825	956 N [j]
Chromium	200	30	2,000	10 / 10	9 - 19.9	13.1	14.8 N [j]	10 / 10	7.1 - 19.4	12.1	14.1 N [j]	20 / 20	7.1 - 19.9	12.4	13.4 N [j]	20 / 20	6.6 - 13.1	10.1	10.9 N [j]
Cobalt		NS	NS	0 / 10	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]
Copper		NS	NS	0 / 10	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]
Iron		NS	NS	10 / 10	8323 - 16355	10921	12517 N [j]	10 / 10	6812 - 20148	10878	13230 N [j]	20 / 20	6812 - 20148	10893	12026 LN [k]	20 / 20	4554 - 11530	7299	7994 N [j]
Lead	1,000	300	3,000	10 / 10	17.2 - **1640**	**476**	**903** G [i]	10 / 10	3 - **1220**	297	**772** G [i]	20 / 20	3 - **1640**	**357**	**543** G [i]	20 / 20	1.6 - **442**	27	123 NP [h]
Magnesium		NS	NS	10 / 10	1040 - 1642	1313	1428 N [j]	10 / 10	1020 - 1882	1459	1615 N [j]	20 / 20	1020 - 1882	1410	1488 N [j]	20 / 20	1066 - 2389	1702	1832 N [j]
Manganese		NS	NS	0 / 10	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]
Mercury		20	300	0 / 10	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]
Nickel		20	7,000	0 / 10	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]
Potassium		NS	NS	0 / 10	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]
Selenium		400	8,000	0 / 10	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]
Silver		100	2,000	0 / 10	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]
Sodium		NS	NS	0 / 10	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]
Thallium		8	800	0 / 10	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]
Vanadium		600	10,000	0 / 10	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]
Zinc		2,500	10,000	0 / 10	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]
Cyanide		100	4,000	0 / 10	All ND	NA	NC [b]	0 / 10	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]	0 / 20	All ND	NA	NC [b]

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] Only one or two distinct data values were detected
[b] All values non detect

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

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

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

LN - Log Normal Distribution
[k] 95% H-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 02/02/11
Checked by / Date: KJC 02/02/11

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

DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lieutenant Governor

RICHARD K. SULLIVAN JR.
Secretary

KENNETH L. KIMMELL
Commissioner

July 14, 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-008
SAP Data Risk Evaluation – No USEPA Action Recommended

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-008 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-008. 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 nine 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-008, 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, although the average concentrations of all COCs, including lead, detected in samples collected from the top 3 feet are below the applicable MCP Method 1 S-1 soil standards, the 95% UCL calculated for lead is above the applicable 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 not determined to exist for the soil located between 3 feet and 12 feet below the ground surface. This is because, although the average concentration of all COCs, including lead, 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, the 95% UCL calculated for one PAH and for lead for this interval were above the applicable standard. Because this soil is at depth, it does not necessarily need to be removed to be protective of the current use of the property.

Property P-008 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-008:

- A condition of No Significant Risk to human health, as defined in the MCP, was determined to exist for current use of the property for the soil located between the ground surface and 3 feet in depth. Applying the 95% UCL for data evaluation of the soil located between 0 and 3 feet bgs is not necessary for Property P-008. The actual average for COCs at this depth interval is below the applicable MCP Method 1 S-1 soil standard. No further response actions are necessary for this soil.

- Furthermore, 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. Applying the 95% UCL for data evaluation of the soil located between 0 and 3 feet bgs is not necessary for Property P-008. The actual average for COCs at this depth interval is below the applicable MCP Method 1 S-1 soil standard. 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/lm

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-008

Table P-008
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	1 / 9	0.143 - 0.143	0.33	NC [a]	0 / 9	All ND	NA	NC [b]	1 / 18	0.143 - 0.143	0.38	NC [a]	1 / 18	0.695 - 0.695	0.38	NC [a]
Acenaphthene	180,000	1,000	10,000	1 / 9	0.204 - 0.204	0.34	NC [a]	2 / 9	0.04 - 0.046	0.38	0.049 NP [c]	3 / 18	0.04 - 0.204	0.37	0.13 NP [c]	2 / 18	0.057 - 1.13	0.45	1.2 NP [i]
Acenaphthylene	180,000	1,000	10,000	2 / 9	0.526 - 0.55	0.40	0.54 NP [c]	3 / 9	0.13 - 0.3	0.40	0.30 NP [d]	5 / 18	0.13 - 0.55	0.40	0.27 NP [d]	3 / 18	0.108 - 2.03	0.47	2.0 NP [d]
Anthracene	920,000	1,000	10,000	4 / 9	0.143 - 1.31	0.43	0.84 NP [d]	5 / 9	0.12 - 0.39	0.39	0.36 NP [d]	9 / 18	0.12 - 1.31	0.41	0.39 NP [c]	5 / 18	0.06 - 6.62	0.90	1.9 NP [d]
Benzo(a)anthracene	160	7	3,000	7 / 9	0.086 - 2.29	0.78	1.3 NP [c]	9 / 9	0.12 - 1.08	0.58	0.82 N [k]	16 / 18	0.086 - 2.29	0.65	1.1 NP [f]	9 / 18	0.06 - **12.3**	1.5	2.8 NP [c]
Benzo(a)pyrene	16	2	300	8 / 9	0.06 - **2.2**	0.73	1.2 NP [c]	9 / 9	0.14 - 1.13	0.62	0.87 N [k]	17 / 18	0.06 - **2.2**	0.66	1.1 NP [f]	11 / 18	0.042 - **9.95**	1.4	**2.8** NP [e]
Benzo(b)fluoranthene	160	7	3,000	8 / 9	0.07 - 3.19	1.0	1.8 NP [c]	9 / 9	0.15 - 1.55	0.81	1.1 N [k]	17 / 18	0.07 - 3.19	0.88	1.5 NP [f]	11 / 18	0.056 - **13.4**	1.7	3.3 NP [e]
Benzo(g,h,i)perylene	120,000	1,000	10,000	6 / 9	0.04 - 1.1	0.41	0.57 NP [e]	9 / 9	0.07 - 0.818	0.33	0.64 G [j]	15 / 18	0.04 - 1.1	0.36	0.72 NP [g]	10 / 18	0.04 - 5.07	0.62	1.2 NP [e]
Benzo(k)fluoranthene	1,600	70	10,000	6 / 9	0.12 - 1.26	0.45	0.74 NP [c]	8 / 9	0.06 - 0.566	0.44	0.46 NP [c]	14 / 18	0.06 - 1.26	0.44	0.46 NP [e]	7 / 18	0.09 - 4.46	0.76	1.3 NP [c]
Chrysene	16,000	70	10,000	9 / 9	0.049 - 3.01	0.86	2.2 G [j]	9 / 9	0.15 - 1.41	0.70	0.98 N [k]	18 / 18	0.049 - 3.01	0.75	1.0 G [j]	11 / 18	0.047 - 10.3	1.4	2.8 NP [e]
Dibenz(a,h)anthracene	16	0.7	300	3 / 9	0.089 - 0.298	0.31	0.30 NP [d]	5 / 9	0.04 - 0.238	0.30	0.18 NP [c]	8 / 18	0.04 - 0.298	0.30	0.17 NP [c]	5 / 18	0.05 - **1.58**	0.42	0.50 NP [d]
Fluoranthene	120,000	1,000	10,000	9 / 9	0.079 - 4.78	1.5	3.8 G [j]	9 / 9	0.23 - 2.4	1.2	1.7 N [k]	18 / 18	0.079 - 4.78	1.3	1.8 G [j]	11 / 18	0.089 - 27.1	3.0	6.3 NP [e]
Fluorene	120,000	1,000	10,000	2 / 9	0.18 - 0.532	0.36	0.53 NP [d]	4 / 9	0.06 - 0.5	0.40	0.30 NP [c]	6 / 18	0.06 - 0.532	0.39	0.24 NP [c]	3 / 18	0.076 - 2.41	0.47	2.4 NP [d]
Indeno(1,2,3-cd)pyrene	160	7	3,000	4 / 9	0.05 - 0.975	0.43	0.62 NP [d]	9 / 9	0.08 - 0.648	0.29	0.52 G [j]	13 / 18	0.05 - 0.975	0.34	0.52 NP [f]	7 / 18	0.05 - 4.79	0.66	1.1 NP [c]
Naphthalene	61,000	100	10,000	1 / 9	0.212 - 0.212	0.34	NC [a]	2 / 9	0.063 - 0.07	0.38	0.073 NP [c]	3 / 18	0.063 - 0.212	0.37	0.15 NP [c]	2 / 18	0.073 - 0.452	0.41	0.45 NP [e]
Phenanthrene	120,000	500	10,000	8 / 9	0.06 - 4.41	1.2	3.4 NP [f]	9 / 9	0.13 - 2.04	0.85	1.3 N [k]	17 / 18	0.06 - 4.41	0.96	1.8 NP [f]	10 / 18	0.06 - 18.7	2.1	4.2 NP [e]
Pyrene	92,000	1,000	10,000	8 / 9	0.12 - 4.35	1.4	3.9 NP [f]	9 / 9	0.24 - 2.73	1.2	1.8 N [k]	17 / 18	0.12 - 4.35	1.3	2.3 NP [f]	10 / 18	0.086 - 23.7	3.1	6.3 NP [e]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 9	All ND	NA	NC [b]	0 / 9	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]
Aroclor-1221	10	2	100	0 / 9	All ND	NA	NC [b]	0 / 9	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]
Aroclor-1232	10	2	100	0 / 9	All ND	NA	NC [b]	0 / 9	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]
Aroclor-1242	10	2	100	0 / 9	All ND	NA	NC [b]	0 / 9	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]
Aroclor-1248	10	2	100	0 / 9	All ND	NA	NC [b]	0 / 9	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]
Aroclor-1254	10	2	100	5 / 9	0.016 - 0.073	0.024	0.039 NP [c]	1 / 9	0.027 - 0.027	0.014	NC [a]	6 / 18	0.016 - 0.073	0.017	0.028 NP [d]	2 / 18	0.03 - 0.084	0.017	0.084 NP [d]
Aroclor-1260	10	2	100	8 / 9	0.008 - 0.15	0.042	0.068 NP [e]	5 / 9	0.017 - 0.49	0.10	0.23 NP [d]	13 / 18	0.008 - 0.49	0.082	0.13 NP [e]	4 / 18	0.019 - 0.14	0.023	0.058 NP [d]
Aroclor-1262	10	2	100	0 / 9	All ND	NA	NC [b]	0 / 9	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]
Aroclor-1268	10	2	100	0 / 9	All ND	NA	NC [b]	0 / 9	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]
PCBs (Total)	10	2	100	8 / 9	0.008 - 0.223	0.060	0.16 NP [f]	5 / 9	0.017 - 0.49	0.11	0.23 NP [d]	13 / 18	0.008 - 0.49	0.090	0.14 NP [e]	4 / 18	0.019 - 0.224	0.029	0.089 NP [d]

Table P-008
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
Inorganics (mg/Kg)																			
Aluminum		NS	NS	9 / 9	4630 - 8620	6813	7608 N [k]	9 / 9	3860 - 7450	5320	5977 N [k]	18 / 18	3860 - 8620	5818	6247 N [k]	18 / 18	1960 - 7490	4354	4831 N [k]
Antimony		20	300	0 / 9	All ND	NA	NC [b]	0 / 9	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]
Arsenic	40	20	200	4 / 9	2.7 - 4.7	2.3	4.1 NP [d]	5 / 9	3.4 - 6.4	3.4	5.5 NP [d]	9 / 18	2.7 - 6.4	3.0	4.4 NP [d]	5 / 18	3.1 - 9.6	1.9	4.3 NP [c]
Barium	200,000	1,000	10,000	9 / 9	20.5 - 150	64	107 G [j]	9 / 9	38.2 - 111	76	95 N [k]	18 / 18	20.5 - 150	72	84 N [k]	18 / 18	9.2 - 211	60	91 G [j]
Beryllium		100	2,000	0 / 9	All ND	NA	NC [b]	0 / 9	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]
Cadmium	60	2	300	0 / 9	All ND	NA	NC [b]	0 / 9	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]	1 / 18	**2.3 - 2.3**	0.38	NC [a]
Calcium		NS	NS	9 / 9	470 - 1930	1121	1442 N [k]	9 / 9	818 - 7310	2346	3817 G [j]	18 / 18	470 - 7310	1938	2502 LN [m]	18 / 18	310 - 21400	3422	7314 LN [n]
Chromium	200	30	2,000	9 / 9	10.4 - 16.5	12.9	14.0 N [k]	9 / 9	6.6 - 12.3	9.8	11.2 N [k]	18 / 18	6.6 - 16.5	10.8	11.7 N [k]	18 / 18	4 - 22.2	10.9	13.1 G [j]
Cobalt		NS	NS	0 / 9	All ND	NA	NC [b]	0 / 9	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]
Copper		NS	NS	0 / 9	All ND	NA	NC [b]	0 / 9	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]
Iron		NS	NS	9 / 9	7140 - 9350	7870	8285 N [k]	9 / 9	6550 - 11200	7989	8945 N [k]	18 / 18	6550 - 11200	7949	8375 N [l]	18 / 18	3640 - 13600	6388	7237 G [j]
Lead	1,000	300	3,000	9 / 9	26.9 - **473**	194	295 N [k]	9 / 9	57.8 - **460**	229	**312** N [k]	18 / 18	26.9 - **473**	217	**334** NP [h]	17 / 18	2.6 - **914**	140	**374** NP [f]
Magnesium		NS	NS	9 / 9	1020 - 1340	1199	1266 N [k]	9 / 9	864 - 1550	1223	1385 N [k]	18 / 18	864 - 1550	1215	1285 N [k]	18 / 18	604 - 2290	1389	1573 N [k]
Manganese		NS	NS	0 / 9	All ND	NA	NC [b]	0 / 9	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]
Mercury		20	300	0 / 9	All ND	NA	NC [b]	0 / 9	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]
Nickel		20	7,000	0 / 9	All ND	NA	NC [b]	0 / 9	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]
Potassium		NS	NS	0 / 9	All ND	NA	NC [b]	0 / 9	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]
Selenium		400	8,000	0 / 9	All ND	NA	NC [b]	0 / 9	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]
Silver		100	2,000	0 / 9	All ND	NA	NC [b]	0 / 9	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]
Sodium		NS	NS	0 / 9	All ND	NA	NC [b]	0 / 9	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]
Thallium		8	800	0 / 9	All ND	NA	NC [b]	0 / 9	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]
Vanadium		600	10,000	0 / 9	All ND	NA	NC [b]	0 / 9	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]
Zinc		2,500	10,000	0 / 9	All ND	NA	NC [b]	0 / 9	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]
Cyanide		100	4,000	0 / 9	All ND	NA	NC [b]	0 / 9	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]	0 / 18	All ND	NA	NC [b]

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] Only one distinct data value was detected
[b] All values non detect

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

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

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

LN - Log Normal Distribution
[m] 95% H-UCL
[n] 95% Chebyshev (MVUE) 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 08/05/10
Checked by / Date: KJC 08/06/10

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Evaluations as of 09 20 10, P-008

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

July 14, 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-018
SAP Data Risk Evaluation – No USEPA Action Recommended

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-018 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-018. 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 nine 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-018, 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, although the average concentrations of all COCs, including PAHs, detected in samples collected from the top 3 feet are below the applicable MCP Method 1 S-1 soil standards, the 95% UCL calculated for one PAH is above the applicable 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-018 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. For Property P-018, MassDEP also took into consideration the soil boring analytical data generated by the City of New Bedford as part of the City's assessment of this property. Based on this evaluation, MassDEP has determined the following for Property P-018:

- A condition of No Significant Risk to human health, as defined in the MCP, was determined to exist for current use of the property for the soil located between the ground surface and 3 feet in depth. Applying the 95% UCL for data evaluation of the data for soil located between 0 and 3 feet bgs is not necessary for Property P-018. The actual average for COC concentrations as calculated using SAP generated data from this depth interval is below the applicable MCP Method 1 S-1 soil standard. Additionally, the actual average for COC concentrations at this depth interval as calculated using both SAP generated data along with City of New Bedford generated data is below the applicable MCP Method 1 S-1 soil standard. No further response actions are necessary for this soil.

- Furthermore, 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. Applying the 95% UCL for data evaluation of the data for the soil located between 3 feet and 12 feet bgs is not necessary for Property P-018. The actual average for COC concentrations as calculated using SAP generated data from this depth interval is below the applicable MCP Method 1 S-1 soil standard. Additionally, the actual average for COC concentrations at this depth interval as calculated using both SAP generated data along with City of New Bedford generated data is below the applicable MCP Method 1 S-1 soil standard. 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/lm

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-018

Table P-018
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	1 / 14	0.2 - 0.2	0.63	NC [a]	1 / 14	1.6 - 1.6	0.43	NC [a]	2 / 28	0.2 - 1.6	0.50	1.6 NP [e]	1 / 27	0.075 - 0.075	0.23	NC [a]
Acenaphthene	180,000	1,000	10,000	3 / 14	0.069 - 0.52	0.63	0.26 NP [c]	1 / 14	0.86 - 0.86	0.38	NC [a]	4 / 28	0.069 - 0.86	0.46	0.56 NP [d]	0 / 27	All ND	NA	NC [b]
Acenaphthylene	180,000	1,000	10,000	4 / 14	0.055 - 0.12	0.61	0.12 NP [d]	4 / 14	0.097 - 3.2	0.51	0.79 NP [c]	8 / 28	0.055 - 3.2	0.54	0.45 NP [e]	3 / 27	0.096 - 1.4	0.24	1.4 NP [d]
Anthracene	920,000	1,000	10,000	7 / 14	0.072 - 0.98	0.67	0.43 NP [c]	5 / 14	0.069 - 5.4	0.75	1.4 NP [c]	12 / 28	0.069 - 5.4	0.72	0.83 NP [e]	5 / 27	0.061 - 0.3	0.21	0.16 NP [d]
Benzo(a)anthracene	160	7	3,000	10 / 14	0.18 - 2.1	0.86	0.89 NP [e]	13 / 14	0.061 - **9.8**	1.3	5.6 NP [h]	23 / 28	0.061 - **9.8**	1.1	2.5 NP [f]	10 / 27	0.098 - 1.2	0.28	0.37 NP [c]
Benzo(a)pyrene	16	2	300	12 / 14	0.2 - **2.2**	0.79	0.89 NP [e]	14 / 14	0.053 - **8.3**	1.1	**2.4** G [j]	26 / 28	0.053 - **8.3**	1.0	**2.2** NP [f]	11 / 27	0.07 - **2.4**	0.36	0.52 NP [c]
Benzo(b)fluoranthene	160	7	3,000	12 / 14	0.38 - 3	1.1	1.3 NP [e]	14 / 14	0.087 - **12**	1.7	3.6 G [j]	26 / 28	0.087 - **12**	1.5	3.2 NP [f]	11 / 27	0.091 - 3.2	0.45	0.69 NP [c]
Benzo(g,h,i)perylene	120,000	1,000	10,000	9 / 14	0.078 - 1.1	0.63	0.47 NP [d]	11 / 14	0.046 - 3.9	0.63	1.8 NP [f]	20 / 28	0.046 - 3.9	0.63	1.1 NP [f]	10 / 27	0.05 - 1	0.23	0.27 NP [c]
Benzo(k)fluoranthene	1,600	70	10,000	9 / 14	0.14 - 1.2	0.77	0.66 NP [c]	11 / 14	0.051 - 4.4	0.69	2.0 NP [f]	20 / 28	0.051 - 4.4	0.72	1.3 NP [f]	10 / 27	0.061 - 1.2	0.24	0.29 NP [c]
Chrysene	16,000	70	10,000	12 / 14	0.2 - 2	0.77	0.85 NP [e]	14 / 14	0.062 - 8.8	1.2	2.6 G [j]	26 / 28	0.062 - 8.8	1.1	2.3 NP [f]	13 / 27	0.037 - 1.3	0.27	0.38 NP [c]
Dibenz(a,h)anthracene	16	0.7	300	5 / 14	0.046 - 0.34	0.61	0.18 NP [c]	6 / 14	0.047 - **1.5**	0.38	0.45 NP [c]	11 / 28	0.046 - **1.5**	0.46	0.30 NP [e]	5 / 27	0.047 - 0.26	0.17	0.23 NP [c]
Fluoranthene	120,000	1,000	10,000	13 / 14	0.25 - 4.3	1.2	2.4 NP [f]	14 / 14	0.099 - 20	2.6	5.7 G [j]	27 / 28	0.099 - 20	2.1	5.0 NP [f]	13 / 27	0.044 - 1.8	0.35	0.50 NP [d]
Fluorene	120,000	1,000	10,000	3 / 14	0.078 - 0.53	0.63	0.26 NP [c]	4 / 14	0.064 - 6.8	0.76	1.5 NP [c]	7 / 28	0.064 - 6.8	0.72	1.4 NP [f]	2 / 27	0.052 - 0.058	0.23	0.060 NP [c]
Indeno(1,2,3-cd)pyrene	160	7	3,000	8 / 14	0.091 - 1	0.66	0.46 NP [c]	10 / 14	0.054 - 3.8	0.60	1.7 NP [f]	18 / 28	0.054 - 3.8	0.62	1.0 NP [f]	9 / 27	0.061 - 0.77	0.22	0.24 NP [c]
Naphthalene	61,000	100	10,000	2 / 14	0.16 - 0.27	0.63	0.31 NP [c]	0 / 14	All ND	NA	NC [b]	2 / 28	0.16 - 0.27	0.46	0.31 NP [c]	3 / 27	0.087 - 0.14	0.23	0.14 NP [d]
Phenanthrene	120,000	500	10,000	11 / 14	0.19 - 3.9	0.98	1.3 NP [e]	14 / 14	0.05 - 21	2.3	17.1 NP [i]	25 / 28	0.05 - 21	1.8	4.8 NP [f]	10 / 27	0.065 - 0.81	0.26	0.35 NP [d]
Pyrene	92,000	1,000	10,000	10 / 14	0.3 - 3.8	1.2	1.5 NP [d]	14 / 14	0.085 - 19	2.3	5.2 G [j]	24 / 28	0.085 - 19	1.9	4.6 NP [f]	10 / 27	0.15 - 1.8	0.37	0.55 NP [d]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 27	All ND	NA	NC [b]
Aroclor-1221	10	2	100	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 27	All ND	NA	NC [b]
Aroclor-1232	10	2	100	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 27	All ND	NA	NC [b]
Aroclor-1242	10	2	100	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 27	All ND	NA	NC [b]
Aroclor-1248	10	2	100	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 27	All ND	NA	NC [b]
Aroclor-1254	10	2	100	5 / 14	0.024 - 0.43	0.071	0.16 NP [d]	3 / 14	0.032 - 0.41	0.058	0.41 NP [d]	8 / 28	0.024 - 0.43	0.062	0.10 NP [c]	5 / 27	0.014 - 0.24	0.023	0.042 NP [c]
Aroclor-1260	10	2	100	14 / 14	0.018 - 0.98	0.28	0.47 G [j]	14 / 14	0.029 - 0.43	0.16	0.25 G [j]	28 / 28	0.018 - 0.98	0.20	0.26 G [j]	14 / 27	0.0065 - 0.6	0.054	0.098 NP [e]
Aroclor-1262	10	2	100	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 27	All ND	NA	NC [b]
Aroclor-1268	10	2	100	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 27	All ND	NA	NC [b]
PCBs (Total)	10	2	100	14 / 14	0.042 - 0.98	0.35	0.57 G [j]	14 / 14	0.029 - 0.76	0.21	0.35 G [j]	28 / 28	0.029 - 0.98	0.26	0.65 NP [i]	15 / 27	0.0065 - 0.6	0.067	0.24 NP [h]

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Evaluations as of 09 20 10, P-018

Table P-018
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	14 / 14	4160 - 8930	6307	6908 N [k]	14 / 14	4050 - 8030	6241	6862 N [k]	28 / 28	4050 - 8930	6263	6616 G [j]	27 / 27	2720 - 11100	6207	6861 N [k]
Antimony		20	300	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 27	All ND	NA	NC [b]
Arsenic	40	20	200	12 / 14	1.9 - 6.9	3.8	4.8 NP [d]	14 / 14	2.3 - 19.9	6.8	9.9 G [j]	26 / 28	1.9 - 19.9	5.8	9.0 NP [f]	20 / 27	0.54 - **34.1**	4.0	12.3 NP [h]
Barium	200,000	1,000	10,000	14 / 14	10.2 - 91.6	46	57 N [k]	14 / 14	13.1 - 168	65	96 G [j]	28 / 28	10.2 - 168	59	71 G [j]	27 / 27	6.3 - 293	44	169 NP [i]
Beryllium		100	2,000	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 27	All ND	NA	NC [b]
Cadmium	60	2	300	9 / 14	0.27 - 1.5	0.53	0.71 NP [e]	9 / 14	0.19 - **5.9**	0.73	**3.3** NP [h]	18 / 28	0.19 - **5.9**	0.66	1.0 NP [e]	17 / 27	0.098 - **6.4**	0.49	1.9 NP [h]
Calcium		NS	NS	14 / 14	526 - 25200	3399	10771 NP [g]	14 / 14	375 - 2700	1371	1756 N [k]	28 / 28	375 - 25200	2047	4569 NP [g]	27 / 27	243 - 10200	1778	6870 NP [i]
Chromium	200	30	2,000	14 / 14	6.1 - **35.3**	11.9	15.5 N [l]	14 / 14	7.2 - 12.1	9.2	10.1 N [k]	28 / 28	6.1 - **35.3**	10.1	11.3 N [l]	27 / 27	4.4 - 15.3	8.4	9.1 N [k]
Cobalt		NS	NS	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 27	All ND	NA	NC [b]
Copper		NS	NS	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 27	All ND	NA	NC [b]
Iron		NS	NS	14 / 14	6440 - 15800	9374	10540 N [k]	14 / 14	6900 - 12100	8799	9595 N [k]	28 / 28	6440 - 15800	8991	9506 N [l]	27 / 27	4410 - 18000	8297	9306 G [j]
Lead	1,000	300	3,000	13 / 14	24.2 - **492**	149	**305** NP [f]	14 / 14	21 - 218	117	148 N [k]	27 / 28	21 - **492**	128	152 NP [e]	26 / 27	1.9 - **1260**	91	297 NP [f]
Magnesium		NS	NS	14 / 14	838 - 4330	1521	1915 G [j]	14 / 14	713 - 1320	999	1067 N [k]	28 / 28	713 - 4330	1173	1330 N [l]	27 / 27	538 - 2120	1157	1276 G [j]
Manganese		NS	NS	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 27	All ND	NA	NC [b]
Mercury		20	300	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 27	All ND	NA	NC [b]
Nickel		20	7,000	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 27	All ND	NA	NC [b]
Potassium		NS	NS	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 27	All ND	NA	NC [b]
Selenium		400	8,000	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 27	All ND	NA	NC [b]
Silver		100	2,000	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 27	All ND	NA	NC [b]
Sodium		NS	NS	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 27	All ND	NA	NC [b]
Thallium		8	800	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 27	All ND	NA	NC [b]
Vanadium		600	10,000	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 27	All ND	NA	NC [b]
Zinc		2,500	10,000	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 27	All ND	NA	NC [b]
Cyanide		100	4,000	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 27	All ND	NA	NC [b]

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] Only one distinct data value was detected
[b] All values non detect

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

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

N - Normal Distribution
[k] 95% Student's-t UCL
[l] 95% Modified-t 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 8/30/10
Checked by / Date: KJC 9/3/10

Table P-018
TRC Data (2008) and Weston Data (2010)
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	1 / 14	0.2 - 0.2	0.63	NC [a]	1 / 19	1.6 - 1.6	0.34	NC [a]	2 / 33	0.2 - 1.6	0.45	1.6 NP [e]	1 / 42	0.075 - 0.075	0.19	NC [a]
Acenaphthene	180,000	1,000	10,000	3 / 14	0.069 - 0.52	0.63	0.26 NP [c]	2 / 19	0.2 - 0.86	0.31	0.86 NP [e]	5 / 33	0.069 - 0.86	0.43	0.31 NP [d]	0 / 42	All ND	NA	NC [b]
Acenaphthylene	180,000	1,000	10,000	4 / 14	0.055 - 0.12	0.61	0.12 NP [d]	4 / 19	0.097 - 3.2	0.40	0.61 NP [c]	8 / 33	0.055 - 3.2	0.49	0.45 NP [e]	3 / 42	0.096 - 1.4	0.19	0.20 NP [c]
Anthracene	920,000	1,000	10,000	7 / 14	0.072 - 0.98	0.67	0.43 NP [c]	6 / 19	0.069 - 5.4	0.60	1.0 NP [c]	13 / 33	0.069 - 5.4	0.66	0.79 NP [e]	5 / 42	0.061 - 0.3	0.17	0.16 NP [d]
Benzo(a)anthracene	160	7	3,000	10 / 14	0.18 - 2.1	0.86	0.89 NP [e]	17 / 19	0.061 - **9.8**	1.1	4.3 NP [h]	27 / 33	0.061 - **9.8**	1.1	2.3 NP [f]	11 / 42	0.098 - 1.2	0.22	0.28 NP [c]
Benzo(a)pyrene	16	2	300	12 / 14	0.2 - **2.2**	0.79	0.89 NP [e]	18 / 19	0.053 - **8.3**	0.95	**3.7** NP [h]	30 / 33	0.053 - **8.3**	0.96	2.0 NP [f]	12 / 42	0.07 - **2.4**	0.27	0.38 NP [c]
Benzo(b)fluoranthene	160	7	3,000	12 / 14	0.38 - 3	1.1	1.3 NP [e]	18 / 19	0.087 - **12**	1.4	5.4 NP [h]	30 / 33	0.087 - **12**	1.4	2.9 NP [f]	14 / 42	0.091 - 3.2	0.34	0.50 NP [e]
Benzo(g,h,i)perylene	120,000	1,000	10,000	9 / 14	0.078 - 1.1	0.63	0.47 NP [d]	13 / 19	0.046 - 3.9	0.51	0.78 NP [e]	22 / 33	0.046 - 3.9	0.58	0.97 NP [f]	10 / 42	0.05 - 1	0.18	0.21 NP [c]
Benzo(k)fluoranthene	1,600	70	10,000	9 / 14	0.14 - 1.2	0.77	0.66 NP [c]	13 / 19	0.051 - 4.4	0.56	0.95 NP [e]	22 / 33	0.051 - 4.4	0.66	1.1 NP [f]	10 / 42	0.061 - 1.2	0.19	0.22 NP [c]
Chrysene	16,000	70	10,000	12 / 14	0.2 - 2	0.77	0.85 NP [e]	18 / 19	0.062 - 8.8	1.0	3.9 NP [h]	30 / 33	0.062 - 8.8	1.0	2.1 NP [f]	15 / 42	0.037 - 1.3	0.22	0.29 NP [c]
Dibenz(a,h)anthracene	16	0.7	300	5 / 14	0.046 - 0.34	0.61	0.18 NP [c]	6 / 19	0.047 - **1.5**	0.31	0.35 NP [c]	11 / 33	0.046 - **1.5**	0.42	0.28 NP [e]	5 / 42	0.047 - 0.26	0.15	0.20 NP [d]
Fluoranthene	120,000	1,000	10,000	13 / 14	0.25 - 4.3	1.2	2.4 NP [f]	18 / 19	0.099 - 20	2.1	6.7 NP [f]	31 / 33	0.099 - 20	2.0	4.6 NP [f]	16 / 42	0.044 - 1.8	0.28	0.35 NP [c]
Fluorene	120,000	1,000	10,000	3 / 14	0.078 - 0.53	0.63	0.26 NP [c]	5 / 19	0.064 - 6.8	0.59	1.1 NP [c]	8 / 33	0.064 - 6.8	0.65	1.3 NP [f]	2 / 42	0.052 - 0.058	0.18	0.060 NP [c]
Indeno(1,2,3-cd)pyrene	160	7	3,000	8 / 14	0.091 - 1	0.66	0.46 NP [c]	12 / 19	0.054 - 3.8	0.50	1.7 NP [h]	20 / 33	0.054 - 3.8	0.58	0.95 NP [f]	9 / 42	0.061 - 0.77	0.18	0.18 NP [c]
Naphthalene	61,000	100	10,000	2 / 14	0.16 - 0.27	0.63	0.31 NP [c]	0 / 19	All ND	NA	NC [b]	2 / 33	0.16 - 0.27	NA	0.21 NP [d]	3 / 42	0.087 - 0.14	0.18	0.14 NP [d]
Phenanthrene	120,000	500	10,000	11 / 14	0.19 - 3.9	0.98	1.3 NP [e]	18 / 19	0.05 - 21	1.9	12.8 NP[j]	29 / 33	0.05 - 21	1.7	4.4 NP [f]	13 / 42	0.065 - 0.81	0.22	0.29 NP [d]
Pyrene	92,000	1,000	10,000	10 / 14	0.3 - 3.8	1.2	1.5 NP [d]	18 / 19	0.085 - 19	1.9	6.2 NP [f]	28 / 33	0.085 - 19	1.8	4.2 NP [f]	12 / 42	0.15 - 1.8	0.28	0.39 NP [c]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 14	All ND	NA	NC [b]	0 / 19	All ND	NA	NC [b]	0 / 33	All ND	NA	NC [b]	0 / 42	All ND	NA	NC [b]
Aroclor-1221	10	2	100	0 / 14	All ND	NA	NC [b]	0 / 19	All ND	NA	NC [b]	0 / 33	All ND	NA	NC [b]	0 / 42	All ND	NA	NC [b]
Aroclor-1232	10	2	100	0 / 14	All ND	NA	NC [b]	0 / 19	All ND	NA	NC [b]	0 / 33	All ND	NA	NC [b]	0 / 42	All ND	NA	NC [b]
Aroclor-1242	10	2	100	0 / 14	All ND	NA	NC [b]	0 / 19	All ND	NA	NC [b]	0 / 33	All ND	NA	NC [b]	0 / 42	All ND	NA	NC [b]
Aroclor-1248	10	2	100	0 / 14	All ND	NA	NC [b]	0 / 19	All ND	NA	NC [b]	0 / 33	All ND	NA	NC [b]	0 / 42	All ND	NA	NC [b]
Aroclor-1254	10	2	100	5 / 14	0.024 - 0.43	0.071	0.16 NP [d]	4 / 19	0.032 - 0.41	0.060	0.25 NP [d]	9 / 33	0.024 - 0.43	0.063	0.098 NP [c]	5 / 42	0.014 - 0.24	0.025	0.034 NP [c]
Aroclor-1260	10	2	100	14 / 14	0.018 - 0.98	0.28	0.47 G [k]	18 / 19	0.029 - **2.3**	0.27	0.77 NP [f]	32 / 33	0.018 - **2.3**	0.24	0.47 NP [f]	17 / 42	0.0065 - 0.6	0.057	0.84 NP [c]
Aroclor-1262	10	2	100	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 27	All ND	NA	NC [b]
Aroclor-1268	10	2	100	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 27	All ND	NA	NC [b]
PCBs (Total)	10	2	100	14 / 14	0.042 - 0.98	0.35	0.57 G [k]	18 / 19	0.029 - **2.3**	0.32	0.83 NP [f]	32 / 33	0.029 - **2.3**	0.29	0.54 NP [f]	18 / 42	0.0065 - 0.6	0.065	0.096 NP [c]

Table P-018
TRC Data (2008) and Weston Data (2010)
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	14 / 14	4,160 - 8,930	6,307	6,908 N [l]	14 / 14	4,050 - 8,030	6,241	6,862 N [l]	28 / 28	4,050 - 8,930	6,263	6,616 G [k]	27 / 27	2,720 - 11,100	6,207	6,861 N [l]
Antimony		20	300	0 / 14	All ND	NA	NC [b]	0 / 19	All ND	NA	NC [b]	0 / 33	All ND	NA	NC [b]	0 / 42	All ND	NA	NC [b]
Arsenic	40	20	200	12 / 14	1.9 - 6.9	3.8	4.8 NP [d]	17 / 19	2.3 - 19.9	5.9	7.9 NP [e]	29 / 33	1.9 - 19.9	5.5	8.5 NP [f]	27 / 42	0.54 - **34.1**	4.8	6.9 NP [e]
Barium	200,000	1,000	10,000	14 / 14	10.2 - 92	46	57 N [l]	19 / 19	11.3 - 168	59	81 G [k]	33 / 33	10.2 - 168	57	68 G [k]	42 / 42	6.3 - 293	45	84 NP [i]
Beryllium		100	2,000	0 / 14	All ND	NA	NC [b]	0 / 19	All ND	NA	NC [b]	0 / 33	All ND	NA	NC [b]	5 / 42	0.34 - 0.55	0.23	0.41 NP [d]
Cadmium	60	2	300	9 / 14	0.27 - 1.5	0.53	0.71 NP [e]	12 / 19	0.19 - **5.9**	0.76	1.3 NP [e]	21 / 33	0.19 - **5.9**	0.68	0.99 NP [e]	22 / 42	0.098 - **6.4**	0.47	1.1 NP [f]
Calcium		NS	NS	14 / 14	526 - 25,200	3,399	10,771 NP [g]	14 / 14	375 - 2,700	1,371	1,756 N [l]	28 / 28	375 - 25,200	2,047	4,569 NP [g]	27 / 27	243 - 10,200	1,778	4,009 NP [i]
Chromium	200	30	2,000	14 / 14	6.1 - **35**	11.9	15.5 N [m]	19 / 19	4.9 - 16.9	9.3	10.4 N [l]	33 / 33	4.92 - **35**	10.1	11.2 N [m]	41 / 42	4.4 - 15.3	7.9	8.5 G [k]
Cobalt		NS	NS	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 27	All ND	NA	NC [b]
Copper		NS	NS	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 27	All ND	NA	NC [b]
Iron		NS	NS	14 / 14	6,440 - 15,800	9,374	10,540 N [l]	14 / 14	6,900 - 12,100	8,799	9,595 N [l]	28 / 28	6,440 - 15,800	8,991	9,506 N [m]	27 / 27	4,410 - 18,000	8,297	9,306 G [k]
Lead	1,000	300	3,000	13 / 14	24 - **492**	149	**305** NP [f]	19 / 19	2.5 - **453**	131	192 G [k]	32 / 33	2.5 - **492**	132	199 NP [f]	41 / 42	1.76 - **1,260**	69	202 NP [f]
Magnesium		NS	NS	14 / 14	838 - 4,330	1,521	1,915 G [k]	14 / 14	713 - 1,320	999	1,067 N [l]	28 / 28	713 - 4,330	1,173	1,330 N [m]	27 / 27	538 - 2,120	1,157	1,276 G [k]
Manganese		NS	NS	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 27	All ND	NA	NC [b]
Mercury		20	300	0 / 14	All ND	NA	NC [b]	5 / 19	0.045 - 0.27	0.079	0.13 NP [d]	5 / 33	0.045 - 0.27	0.066	0.11 NP [d]	10 / 42	0.016 - 0.788	0.064	0.085 NP [c]
Nickel		20	7,000	0 / 14	All ND	NA	NC [b]	5 / 19	3.9 - 18.8	3.7	6.5 NP [c]	5 / 33	3.9 - 18.8	2.9	5.0 NP [c]	15 / 42	2.63 - 18	3.5	5.4 NP [c]
Potassium		NS	NS	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 27	All ND	NA	NC [b]
Selenium		400	8,000	0 / 14	All ND	NA	NC [b]	0 / 19	All ND	NA	NC [b]	0 / 33	All ND	NA	NC [b]	0 / 42	All ND	NA	NC [b]
Silver		100	2,000	0 / 14	All ND	NA	NC [b]	0 / 19	All ND	NA	NC [b]	0 / 33	All ND	NA	NC [b]	0 / 42	All ND	NA	NC [b]
Sodium		NS	NS	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 27	All ND	NA	NC [b]
Thallium		8	800	0 / 14	All ND	NA	NC [b]	0 / 19	All ND	NA	NC [b]	0 / 33	All ND	NA	NC [b]	0 / 42	All ND	NA	NC [b]
Vanadium		600	10,000	0 / 14	All ND	NA	NC [b]	5 / 19	9.6 - 20	6.1	16.4 NP [d]	5 / 33	9.6 - 20	4.2	15.7 NP [d]	15 / 42	7.84 - 19.9	6.5	11.6 NP [d]
Zinc		2,500	10,000	0 / 14	All ND	NA	NC [b]	5 / 19	13.5 - 233	32	124 NP [d]	5 / 33	13.5 - 233	14.9	113 NP [d]	15 / 42	10.7 - 322	20	39 NP [c]
Cyanide		100	4,000	0 / 14	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]	0 / 28	All ND	NA	NC [b]	0 / 27	All ND	NA	NC [b]

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. 4.01.00).

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

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

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

N - Normal Distribution
[l] 95% Student's-t UCL
[m] 95% Modified-t UCL

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

Prepared by / Date: EYM 6/20/2011
Checked by / Date: SFR 6/20/2011

Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

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Commissioner

July 20, 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-037
SAP Data Risk Evaluation – USEPA Action Recommended

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-037 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-037. 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 eleven 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-037, 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 of lead, and the boring-specific concentrations of lead detected in samples collected from the top 3 feet in all 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 not determined to exist for the soil located between 3 feet and 12 feet below the ground surface. This is because, although the average concentration of all COCs, including lead, 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, the 95% UCL calculated for lead for this interval was above the applicable standard. Because this soil is at depth, it does not necessarily need to be removed to be protective of the current use of the property.

Property P-037 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-037:

- 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, as described above. Response actions are necessary to address the COC contamination in the area of all of the soil borings at this interval.

- Furthermore, 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. Applying the 95% UCL for data evaluation of the soil located between 3 and 12 feet bgs is not necessary. The actual average for COCs at this depth interval is below the applicable MCP Method 1 S-1 soil standard. 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/lm

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-037

Table P-037
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	11 / 11	3980 - 7020	5286	5801 N [k]	11 / 11	3350 - 6900	4817	5369 N [k]	22 / 22	3350 - 7020	4974	5263 N [k]	14 / 14	3200 - 6630	4083	4506 G [j]
Antimony		20	300	0 / 11	All ND	NA	NC [b]	0 / 11	All ND	NA	NC [b]	0 / 22	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]
Arsenic	40	20	200	11 / 11	2.7 - 15	8.6	12.9 G [j]	10 / 11	1.9 - **45.4**	9.1	**26** NP [f]	21 / 22	1.9 - **45.4**	8.9	16.8 NP [f]	10 / 14	0.44 - 6	1.9	2.8 NP [e]
Barium	200,000	1,000	10,000	11 / 11	50.5 - **1620**	368	706 G [j]	11 / 11	29.7 - 461	229	316 N [k]	22 / 22	29.7 - **1620**	275	363 G [j]	14 / 14	13.5 - 227	55	136 NP [h]
Beryllium		100	2,000	0 / 11	All ND	NA	NC [b]	0 / 11	All ND	NA	NC [b]	0 / 22	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]
Cadmium	60	2	300	11 / 11	0.32 - 1.8	0.77	1.0 N [k]	11 / 11	0.088 - **2.3**	0.88	1.5 G [j]	22 / 22	0.088 - **2.3**	0.84	1.1 G [j]	14 / 14	0.083 - 0.83	0.24	0.53 NP [h]
Calcium		NS	NS	11 / 11	1830 - 7560	3729	4682 N [k]	11 / 11	1380 - 7530	3420	4509 N [k]	22 / 22	1380 - 7560	3523	4120 G [j]	14 / 14	738 - 8590	2140	3155 G [j]
Chromium	200	30	2,000	11 / 11	10.6 - **52.5**	18.9	26 G [j]	11 / 11	8.3 - 19.5	13.6	15.6 N [k]	22 / 22	8.3 - **52.5**	15.4	17.8 N [l]	14 / 14	5.2 - 23.5	10.9	13.0 G [j]
Cobalt		NS	NS	0 / 11	All ND	NA	NC [b]	0 / 11	All ND	NA	NC [b]	0 / 22	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]
Copper		NS	NS	0 / 11	All ND	NA	NC [b]	0 / 11	All ND	NA	NC [b]	0 / 22	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]
Iron		NS	NS	11 / 11	7220 - 13500	9867	11027 N [k]	11 / 11	3880 - 46700	14726	30381 LN [m]	22 / 22	3880 - 46700	13107	22713 NP [h]	14 / 14	3350 - 12900	6072	7415 G [j]
Lead	1,000	300	3,000	11 / 11	112 - **1350**	**685**	**935** N [k]	11 / 11	66.2 - **1100**	**537**	**720** N [k]	22 / 22	66.2 - **1350**	**586**	**731** G [j]	14 / 14	2.6 - **564**	111	**613** NP [i]
Magnesium		NS	NS	11 / 11	872 - 2430	1630	1880 N [k]	11 / 11	816 - 2800	1415	1722 G [j]	22 / 22	816 - 2800	1487	1637 G [j]	14 / 14	868 - 3580	1725	2102 N [k]
Manganese		NS	NS	0 / 11	All ND	NA	NC [b]	0 / 11	All ND	NA	NC [b]	0 / 22	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]
Mercury		20	300	0 / 11	All ND	NA	NC [b]	0 / 11	All ND	NA	NC [b]	0 / 22	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]
Nickel		20	7,000	0 / 11	All ND	NA	NC [b]	0 / 11	All ND	NA	NC [b]	0 / 22	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]
Potassium		NS	NS	0 / 11	All ND	NA	NC [b]	0 / 11	All ND	NA	NC [b]	0 / 22	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]
Selenium		400	8,000	0 / 11	All ND	NA	NC [b]	0 / 11	All ND	NA	NC [b]	0 / 22	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]
Silver		100	2,000	0 / 11	All ND	NA	NC [b]	0 / 11	All ND	NA	NC [b]	0 / 22	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]
Sodium		NS	NS	0 / 11	All ND	NA	NC [b]	0 / 11	All ND	NA	NC [b]	0 / 22	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]
Thallium		8	800	0 / 11	All ND	NA	NC [b]	0 / 11	All ND	NA	NC [b]	0 / 22	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]
Vanadium		600	10,000	0 / 11	All ND	NA	NC [b]	0 / 11	All ND	NA	NC [b]	0 / 22	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]
Zinc		2,500	10,000	0 / 11	All ND	NA	NC [b]	0 / 11	All ND	NA	NC [b]	0 / 22	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]
Cyanide		100	4,000	0 / 11	All ND	NA	NC [b]	0 / 11	All ND	NA	NC [b]	0 / 22	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]

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 (BCA) UCL
[e] 95% KM (t) UCL
[f] 95% KM (Chebyshev) UCL
[g] 97.5% KM (Chebyshev) UCL
[h] 95% Chebyshev (Mean, Sd) UCL
[i] 99% Chebyshev (Mean, Sd) UCL

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

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

LN - Log Normal Distribution
[m] 95% H-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 8/13/10
Checked by / Date: KJC 8/13/10

Table P-037
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
PAHs (mg/Kg)																			
2-Methylnaphthalene	61,000	300	5,000	1 / 11	0.22 - 0.22	0.60	NC [a]	1 / 11	0.26 - 0.26	0.37	NC [a]	2 / 22	0.22 - 0.26	0.45	0.27 NP [e]	0 / 14	All ND	NA	NC [b]
Acenaphthene	180,000	1,000	10,000	3 / 11	0.09 - 0.73	0.54	0.73 NP [c]	1 / 11	0.2 - 0.2	0.37	NC [a]	4 / 22	0.09 - 0.73	0.42	0.29 NP [e]	1 / 14	0.12 - 0.12	0.17	NC [a]
Acenaphthylene	180,000	1,000	10,000	0 / 11	All ND	NA	NC [b]	1 / 11	0.06 - 0.06	0.35	NC [a]	1 / 22	0.06 - 0.06	0.44	NC [a]	2 / 14	0.07 - 0.22	0.17	0.28 NP [e]
Anthracene	920,000	1,000	10,000	6 / 11	0.2 - 4.14	0.86	1.4 NP [d]	3 / 11	0.08 - 0.78	0.39	0.78 NP [c]	9 / 22	0.08 - 4.14	0.55	0.61 NP [e]	3 / 14	0.17 - 0.38	0.18	0.24 NP [e]
Benzo(a)anthracene	160	7	3,000	11 / 11	0.2 - 4.8	1.0	1.8 G [j]	10 / 11	0.09 - 1.02	0.43	0.61 NP [e]	21 / 22	0.09 - 4.8	0.63	1.3 NP [f]	5 / 14	0.1 - 0.98	0.27	0.60 NP [c]
Benzo(a)pyrene	16	2	300	11 / 11	0.18 - **4.11**	1.0	1.7 G [j]	10 / 11	0.09 - 0.99	0.42	0.59 NP [e]	21 / 22	0.09 - **4.11**	0.61	1.2 NP [f]	5 / 14	0.11 - 1	0.26	0.59 NP [c]
Benzo(b)fluoranthene	160	7	3,000	11 / 11	0.26 - 4.49	1.2	2.0 G [j]	11 / 11	0.06 - 1.68	0.60	0.88 N [k]	22 / 22	0.06 - 4.49	0.81	1.1 G [j]	5 / 14	0.15 - 1.33	0.31	0.72 NP [c]
Benzo(g,h,i)perylene	120,000	1,000	10,000	9 / 11	0.09 - 0.97	0.64	0.69 NP [e]	7 / 11	0.06 - 0.49	0.35	0.30 NP [e]	16 / 22	0.06 - 0.97	0.45	0.40 NP [c]	5 / 14	0.07 - 0.35	0.15	0.18 NP [c]
Benzo(k)fluoranthene	1,600	70	10,000	9 / 11	0.1 - 1.97	0.69	0.84 NP [d]	7 / 11	0.09 - 0.56	0.30	0.35 NP [e]	16 / 22	0.09 - 1.97	0.43	0.46 NP [c]	5 / 14	0.06 - 0.5	0.18	0.28 NP [c]
Chrysene	16,000	70	10,000	11 / 11	0.26 - 4.76	1.1	1.9 G [j]	11 / 11	0.05 - 1.03	0.45	0.64 N [k]	22 / 22	0.05 - 4.76	0.67	0.90 G [j]	5 / 14	0.13 - 1.19	0.29	0.65 NP [c]
Dibenz(a,h)anthracene	16	0.7	300	5 / 11	0.09 - **0.79**	0.52	0.46 NP [c]	2 / 11	0.11 - 0.13	0.33	0.14 NP [e]	7 / 22	0.09 - **0.79**	0.40	0.23 NP [c]	2 / 14	0.07 - 0.14	0.16	0.17 NP [e]
Fluoranthene	120,000	1,000	10,000	11 / 11	0.43 - 12.9	2.4	4.6 G [j]	11 / 11	0.07 - 2.45	0.93	1.4 N [k]	22 / 22	0.07 - 12.9	1.4	2.0 G [j]	5 / 14	0.21 - 2.29	0.49	1.4 NP [c]
Fluorene	120,000	1,000	10,000	3 / 11	0.11 - 1.14	0.59	1.1 NP [c]	1 / 11	0.46 - 0.46	0.39	NC [a]	4 / 22	0.11 - 1.14	0.46	0.52 NP [c]	2 / 14	0.06 - 0.14	0.16	0.17 NP [e]
Indeno(1,2,3-cd)pyrene	160	7	3,000	8 / 11	0.07 - 1.14	0.59	0.62 NP [e]	7 / 11	0.05 - 0.38	0.33	0.24 NP [e]	15 / 22	0.05 - 1.14	0.42	0.33 NP [c]	5 / 14	0.05 - 0.38	0.16	0.20 NP [e]
Naphthalene	61,000	100	10,000	2 / 11	0.52 - 0.96	0.70	0.96 NP [c]	1 / 11	0.57 - 0.57	0.40	NC [a]	3 / 22	0.52 - 0.96	0.50	0.63 NP [c]	0 / 14	All ND	NA	NC [b]
Phenanthrene	120,000	500	10,000	11 / 11	0.29 - 9.76	1.9	3.7 G [j]	10 / 11	0.1 - 3.13	0.73	1.9 NP [f]	21 / 22	0.1 - 9.76	1.1	3.0 NP [g]	6 / 14	0.05 - 1.43	0.35	0.60 NP [c]
Pyrene	92,000	1,000	10,000	10 / 11	0.42 - 8.73	1.9	5.1 NP [f]	10 / 11	0.17 - 1.8	0.73	1.1 NP [e]	20 / 22	0.17 - 8.73	1.1	2.3 NP [f]	5 / 14	0.2 - 1.79	0.40	1.0 NP [c]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 11	All ND	NA	NC [b]	1 / 11	0.17 - 0.17	0.028	NC [a]	1 / 22	0.17 - 0.17	0.023	NC [a]	0 / 14	All ND	NA	NC [b]
Aroclor-1221	10	2	100	0 / 11	All ND	NA	NC [b]	0 / 11	All ND	NA	NC [b]	0 / 22	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]
Aroclor-1232	10	2	100	0 / 11	All ND	NA	NC [b]	0 / 11	All ND	NA	NC [b]	0 / 22	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]
Aroclor-1242	10	2	100	0 / 11	All ND	NA	NC [b]	0 / 11	All ND	NA	NC [b]	0 / 22	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]
Aroclor-1248	10	2	100	0 / 11	All ND	NA	NC [b]	0 / 11	All ND	NA	NC [b]	0 / 22	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]
Aroclor-1254	10	2	100	5 / 11	0.016 - 0.043	0.022	0.037 NP [c]	0 / 11	All ND	NA	NC [b]	5 / 22	0.016 - 0.043	0.016	0.036 NP [c]	0 / 14	All ND	NA	NC [b]
Aroclor-1260	10	2	100	7 / 11	0.016 - 0.21	0.045	0.079 NP [c]	4 / 11	0.01 - 0.25	0.055	0.19 NP [c]	11 / 22	0.01 - 0.25	0.052	0.073 NP [e]	3 / 14	0.04 - 0.097	0.025	0.097 NP [c]
Aroclor-1262	10	2	100	0 / 11	All ND	NA	NC [b]	0 / 11	All ND	NA	NC [b]	0 / 22	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]
Aroclor-1268	10	2	100	0 / 11	All ND	NA	NC [b]	0 / 11	All ND	NA	NC [b]	0 / 22	All ND	NA	NC [b]	0 / 14	All ND	NA	NC [b]
PCBs (Total)	10	2	100	11 / 11	0.016 - 0.21	0.055	0.088 G [j]	4 / 11	0.01 - 0.35	0.071	0.27 NP [c]	15 / 22	0.01 - 0.35	0.065	0.097 NP [d]	3 / 14	0.04 - 0.097	0.025	0.097 NP [c]

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

DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lieutenant Governor

RICHARD K. SULLIVAN JR.
Secretary

KENNETH L. KIMMELL
Commissioner

July 20, 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-043
SAP Data Risk Evaluation – No USEPA Action Recommended

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-043 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-043. 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-043, 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, although the average concentrations of all COCs, including lead, detected in samples collected from the top 3 feet are below the applicable MCP Method 1 S-1 soil standards, the 95% UCL calculated for lead is above the applicable 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-043 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-043:

- A condition of No Significant Risk to human health, as defined in the MCP, was determined to exist for current use of the property for the soil located between the ground surface and 3 feet in depth. Applying the 95% UCL for data evaluation of the soil located between 0 and 3 feet bgs is not necessary. The actual average for COCs at this depth interval is below the applicable MCP Method 1 S-1 soil standard. No further response actions are necessary for this soil.

- 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/lm

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-043

Table P-043
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
PAHs (mg/Kg)																			
2-Methylnaphthalene	61,000	300	5,000	2 / 5	0.1 - 0.13	0.16	0.15 NP [a]	0 / 5	All ND	NA	NC [f]	2 / 10	0.1 - 0.13	0.18	0.14 NP [a]	0 / 9	All ND	NA	NC [f]
Acenaphthene	180,000	1,000	10,000	1 / 5	0.09 - 0.09	0.17	NC [e]	1 / 5	0.1 - 0.1	0.17	NC [e]	2 / 10	0.09 - 0.1	0.17	0.10 NP [a]	0 / 9	All ND	NA	NC [f]
Acenaphthylene	180,000	1,000	10,000	5 / 5	0.08 - 0.73	0.27	0.53 N [g]	3 / 5	0.14 - 0.2	0.17	0.20 NP [a]	8 / 10	0.08 - 0.73	0.21	0.27 NP [c]	1 / 9	0.11 - 0.11	0.18	NC [e]
Anthracene	920,000	1,000	10,000	5 / 5	0.2 - 1.1	0.61	0.99 N [g]	4 / 5	0.12 - 0.87	0.36	0.66 NP [a]	9 / 10	0.12 - 1.1	0.44	0.59 NP [c]	2 / 9	0.17 - 0.72	0.24	0.72 NP [c]
Benzo(a)anthracene	160	7	3,000	5 / 5	0.73 - 2.5	1.4	2.1 N [g]	5 / 5	0.17 - 2.3	0.85	1.7 N [g]	10 / 10	0.17 - 2.5	1.0	1.6 G [h]	2 / 9	0.93 - 0.97	0.35	0.95 NP [a]
Benzo(a)pyrene	16	2	300	5 / 5	0.67 - 2	1.3	1.8 N [g]	5 / 5	0.19 - 1.7	0.69	1.3 N [g]	10 / 10	0.19 - 2	0.88	1.3 G [h]	2 / 9	0.53 - 0.71	0.28	0.71 NP [b]
Benzo(b)fluoranthene	160	7	3,000	5 / 5	0.78 - 2.4	1.5	2.1 N [g]	5 / 5	0.14 - 2.2	0.88	1.7 N [g]	10 / 10	0.14 - 2.4	1.1	1.4 N [g]	3 / 9	0.09 - 1	0.32	0.50 NP [a]
Benzo(g,h,i)perylene	120,000	1,000	10,000	5 / 5	0.41 - 1.1	0.74	1.0 N [g]	5 / 5	0.11 - 0.96	0.42	0.74 N [g]	10 / 10	0.11 - 1.1	0.52	0.68 N [g]	2 / 9	0.27 - 0.49	0.23	0.49 NP [b]
Benzo(k)fluoranthene	1,600	70	10,000	5 / 5	0.39 - 1.4	0.78	1.2 N [g]	5 / 5	0.11 - 1	0.43	0.76 N [g]	10 / 10	0.11 - 1.4	0.55	0.79 G [h]	2 / 9	0.39 - 0.46	0.24	0.42 NP [a]
Chrysene	16,000	70	10,000	5 / 5	0.82 - 2.5	1.4	2.1 N [g]	5 / 5	0.22 - 2.1	0.84	1.6 N [g]	10 / 10	0.22 - 2.5	1.0	1.5 G [h]	2 / 9	0.9 - 0.95	0.35	0.92 NP [a]
Dibenz(a,h)anthracene	16	0.7	300	5 / 5	0.11 - 0.45	0.24	0.39 N [g]	3 / 5	0.1 - 0.29	0.18	0.30 NP [a]	8 / 10	0.1 - 0.45	0.20	0.25 NP [c]	2 / 9	0.1 - 0.14	0.17	0.16 NP [a]
Fluoranthene	120,000	1,000	10,000	5 / 5	1.5 - 5.9	2.9	4.6 N [g]	5 / 5	0.36 - 5.7	1.9	4.0 N [g]	10 / 10	0.36 - 5.9	2.2	3.5 G [h]	4 / 9	0.08 - 2.1	0.56	1.9 NP [b]
Fluorene	120,000	1,000	10,000	3 / 5	0.18 - 0.27	0.20	0.28 NP [a]	2 / 5	0.12 - 0.18	0.17	0.21 NP [a]	5 / 10	0.12 - 0.27	0.18	0.21 NP [a]	1 / 9	0.31 - 0.31	0.20	NC [e]
Indeno(1,2,3-cd)pyrene	160	7	3,000	5 / 5	0.35 - 1	0.66	0.94 N [g]	5 / 5	0.1 - 0.88	0.37	0.67 N [g]	10 / 10	0.1 - 1	0.47	0.68 G [h]	2 / 9	0.23 - 0.44	0.22	0.44 NP [b]
Naphthalene	61,000	100	10,000	4 / 5	0.09 - 0.24	0.16	0.22 NP [a]	2 / 5	0.09 - 0.12	0.16	0.14 NP [a]	6 / 10	0.09 - 0.24	0.16	0.16 NP [a]	0 / 9	All ND	NA	NC [f]
Phenanthrene	120,000	500	10,000	5 / 5	0.49 - 2.6	1.2	2.0 N [g]	5 / 5	0.16 - 1.6	0.64	1.2 N [g]	10 / 10	0.16 - 2.6	0.81	1.2 G [h]	2 / 9	0.16 - 0.71	0.24	0.71 NP [c]
Pyrene	92,000	1,000	10,000	5 / 5	1.6 - 4.5	2.7	4.0 N [g]	5 / 5	0.34 - 4.3	1.7	3.2 N [g]	10 / 10	0.34 - 4.5	2.0	3.1 G [h]	4 / 9	0.09 - 1.6	0.47	1.5 NP [b]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 5	All ND	NA	NC [f]	0 / 5	All ND	NA	NC [f]	0 / 10	All ND	NA	NC [f]	0 / 9	All ND	NA	NC [f]
Aroclor-1221	10	2	100	0 / 5	All ND	NA	NC [f]	0 / 5	All ND	NA	NC [f]	0 / 10	All ND	NA	NC [f]	0 / 9	All ND	NA	NC [f]
Aroclor-1232	10	2	100	0 / 5	All ND	NA	NC [f]	0 / 5	All ND	NA	NC [f]	0 / 10	All ND	NA	NC [f]	0 / 9	All ND	NA	NC [f]
Aroclor-1242	10	2	100	0 / 5	All ND	NA	NC [f]	0 / 5	All ND	NA	NC [f]	0 / 10	All ND	NA	NC [f]	0 / 9	All ND	NA	NC [f]
Aroclor-1248	10	2	100	0 / 5	All ND	NA	NC [f]	0 / 5	All ND	NA	NC [f]	0 / 10	All ND	NA	NC [f]	0 / 9	All ND	NA	NC [f]
Aroclor-1254	10	2	100	3 / 5	0.13 - 0.75	0.24	0.75 NP [b]	1 / 5	0.12 - 0.12	0.040	NC [e]	4 / 10	0.12 - 0.75	0.11	0.26 NP [a]	0 / 9	All ND	NA	NC [f]
Aroclor-1260	10	2	100	2 / 5	0.19 - 0.63	0.18	0.52 NP [a]	0 / 5	All ND	NA	NC [f]	2 / 10	0.19 - 0.63	0.071	0.63 NP [b]	0 / 9	All ND	NA	NC [f]
Aroclor-1262	10	2	100	0 / 5	All ND	NA	NC [f]	0 / 5	All ND	NA	NC [f]	0 / 10	All ND	NA	NC [f]	0 / 9	All ND	NA	NC [f]
Aroclor-1268	10	2	100	0 / 5	All ND	NA	NC [f]	0 / 5	All ND	NA	NC [f]	0 / 10	All ND	NA	NC [f]	0 / 9	All ND	NA	NC [f]
PCBs (Total)	10	2	100	3 / 5	0.13 - 1.38	0.41	1.4 NP [b]	1 / 5	0.12 - 0.12	0.040	NC [e]	4 / 10	0.12 - 1.38	0.16	0.39 NP [a]	0 / 9	All ND	NA	NC [f]

Table P-043
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	3780 - 7260	5186	6411 N [g]	5 / 5	3670 - 7420	5104	6526 N [g]	10 / 10	3670 - 7420	5131	5770 G [h]	9 / 9	1590 - 7160	4374	5514 N [g]
Antimony		20	300	0 / 5	All ND	NA	NC [f]	0 / 5	All ND	NA	NC [f]	0 / 10	All ND	NA	NC [f]	0 / 9	All ND	NA	NC [f]
Arsenic	40	20	200	5 / 5	2.9 - 9.4	4.7	8.4 G [h]	5 / 5	1.8 - 7.3	4.5	6.8 N [g]	10 / 10	1.8 - 9.4	4.6	5.7 N [g]	9 / 9	0.33 - 2.9	1.4	2.0 N [g]
Barium	200,000	1,000	10,000	5 / 5	68.5 - 332	133	309 G [h]	5 / 5	24.3 - 108	71	102 N [g]	10 / 10	24.3 - 332	92	172 NP [d]	9 / 9	3.6 - 42.7	16.5	24 N [g]
Beryllium		100	2,000	0 / 5	All ND	NA	NC [f]	0 / 5	All ND	NA	NC [f]	0 / 10	All ND	NA	NC [f]	0 / 9	All ND	NA	NC [f]
Cadmium	60	2	300	5 / 5	0.21 - 0.83	0.51	0.74 N [g]	3 / 5	0.22 - 0.71	0.34	0.71 NP [b]	8 / 10	0.21 - 0.83	0.39	0.51 NP [a]	5 / 9	0.12 - 0.25	0.18	0.22 NP [a]
Calcium		NS	NS	5 / 5	1300 - 2840	1922	2491 N [g]	5 / 5	499 - 1900	1269	1810 N [g]	10 / 10	499 - 2840	1487	1770 N [g]	9 / 9	197 - 2010	718	1205 G [h]
Chromium	200	30	2,000	5 / 5	6.8 - 20.6	12.7	17.8 N [g]	5 / 5	4.8 - 10.4	7.7	9.9 N [g]	10 / 10	4.8 - 20.6	9.4	11.4 G [h]	9 / 9	2.3 - 9.7	5.8	7.2 N [g]
Cobalt		NS	NS	0 / 5	All ND	NA	NC [f]	0 / 5	All ND	NA	NC [f]	0 / 10	All ND	NA	NC [f]	0 / 9	All ND	NA	NC [f]
Copper		NS	NS	0 / 5	All ND	NA	NC [f]	0 / 5	All ND	NA	NC [f]	0 / 10	All ND	NA	NC [f]	0 / 9	All ND	NA	NC [f]
Iron		NS	NS	5 / 5	4900 - 11700	8120	10435 N [g]	5 / 5	5510 - 16700	9056	13298 N [g]	10 / 10	4900 - 16700	8744	10538 LN [i]	9 / 9	2430 - 9710	5328	6669 N [g]
Lead	1,000	300	3,000	5 / 5	177 - **1220**	**513**	**912** N [g]	5 / 5	64.9 - 284	186	267 N [g]	10 / 10	64.9 - **1220**	295	**428** G [h]	9 / 9	1.2 - 124	48	77 N [g]
Magnesium		NS	NS	5 / 5	723 - 1280	1069	1269 N [g]	5 / 5	768 - 886	837	889 N [g]	10 / 10	723 - 1280	914	992 LN [i]	9 / 9	526 - 1190	824	976 N [g]
Manganese		NS	NS	0 / 5	All ND	NA	NC [f]	0 / 5	All ND	NA	NC [f]	0 / 10	All ND	NA	NC [f]	0 / 9	All ND	NA	NC [f]
Mercury		20	300	0 / 5	All ND	NA	NC [f]	0 / 5	All ND	NA	NC [f]	0 / 10	All ND	NA	NC [f]	0 / 9	All ND	NA	NC [f]
Nickel		20	7,000	0 / 5	All ND	NA	NC [f]	0 / 5	All ND	NA	NC [f]	0 / 10	All ND	NA	NC [f]	0 / 9	All ND	NA	NC [f]
Potassium		NS	NS	0 / 5	All ND	NA	NC [f]	0 / 5	All ND	NA	NC [f]	0 / 10	All ND	NA	NC [f]	0 / 9	All ND	NA	NC [f]
Selenium		400	8,000	0 / 5	All ND	NA	NC [f]	0 / 5	All ND	NA	NC [f]	0 / 10	All ND	NA	NC [f]	0 / 9	All ND	NA	NC [f]
Silver		100	2,000	0 / 5	All ND	NA	NC [f]	0 / 5	All ND	NA	NC [f]	0 / 10	All ND	NA	NC [f]	0 / 9	All ND	NA	NC [f]
Sodium		NS	NS	0 / 5	All ND	NA	NC [f]	0 / 5	All ND	NA	NC [f]	0 / 10	All ND	NA	NC [f]	0 / 9	All ND	NA	NC [f]
Thallium		8	800	0 / 5	All ND	NA	NC [f]	0 / 5	All ND	NA	NC [f]	0 / 10	All ND	NA	NC [f]	0 / 9	All ND	NA	NC [f]
Vanadium		600	10,000	0 / 5	All ND	NA	NC [f]	0 / 5	All ND	NA	NC [f]	0 / 10	All ND	NA	NC [f]	0 / 9	All ND	NA	NC [f]
Zinc		2,500	10,000	0 / 5	All ND	NA	NC [f]	0 / 5	All ND	NA	NC [f]	0 / 10	All ND	NA	NC [f]	0 / 9	All ND	NA	NC [f]
Cyanide		100	4,000	0 / 5	All ND	NA	NC [f]	0 / 5	All ND	NA	NC [f]	0 / 10	All ND	NA	NC [f]	0 / 9	All ND	NA	NC [f]

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).

NP - Non-Parametric Distribution
- [a] 95% KM (t) UCL
- [b] 95% KM (Percentile Bootstrap) UCL
- [c] 95% KM (BCA) UCL
- [d] 95% Chebyshev (Mean, Sd) UCL

N - Normal Distribution
- [g] 95% Student's-t UCL

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

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

LN - Log Normal Distribution
- [i] 95% H-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

MassDEP

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

DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lieutenant Governor

RICHARD K. SULLIVAN JR.
Secretary

KENNETH L. KIMMELL
Commissioner

July 27, 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-009
SAP Data Risk Evaluation – No USEPA Action Recommended

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-009 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-009. 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-009, MassDEP provided you the following preliminary determinations:

- A condition of No Significant Risk, as defined in the MCP, was determined to exist for current use of the property for the soil located between the ground surface and 3 feet in depth. Both the average concentrations and the 95% UCL calculated for all COCs for this interval are below the applicable standard. No further action is required for the soils at this interval.

- Furthermore, a condition of No Significant Risk, as defined in the MCP, for foreseeable future use of the property was not determined to exist for the soil located between 3 feet and 12 feet below the ground surface. This is because, although the average concentration of all COCs, including all of the PAHs, 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, the 95% UCL calculated for two of the PAHs for this interval were above the applicable standard. Because this soil is at depth, it does not necessarily need to be removed to be protective of the current use of the property.

Property P-009 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-009:

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

- Furthermore, 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. Applying the 95% UCL for data evaluation of the soil

located between 3 and 12 feet bgs is not necessary for Property P-009. 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/lm

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-009

Table P-009
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 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	0 / 5	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	1 / 9	0.22 - 0.22	0.17	NC [b]
Acenaphthylene	180,000	1,000	10,000	0 / 5	All ND	NA	NC [a]	4 / 5	0.16 - 0.47	0.25	0.39 NP [f]	4 / 10	0.16 - 0.47	0.22	0.30 NP [f]	3 / 9	0.4 - 1.3	0.36	1.3 NP [g]
Anthracene	920,000	1,000	10,000	1 / 5	0.22 - 0.22	0.18	NC [b]	4 / 5	0.21 - 0.95	0.38	0.71 NP [f]	5 / 10	0.21 - 0.95	0.31	0.46 NP [f]	3 / 9	0.38 - 1.3	0.44	1.3 NP [g]
Benzo(a)anthracene	160	7	3,000	5 / 5	0.19 - 0.54	0.32	0.46 N [c]	5 / 5	0.19 - 1.7	1.1	1.7 N [c]	10 / 10	0.19 - 1.7	0.86	1.5 NP [h]	5 / 9	0.16 - 6.2	1.2	2.6 NP [g]
Benzo(a)pyrene	16	2	300	5 / 5	0.18 - 0.52	0.30	0.44 N [c]	5 / 5	0.17 - 1.6	1.1	1.6 N [c]	10 / 10	0.17 - 1.6	0.80	1.4 NP [h]	4 / 9	0.27 - **5.4**	1.1	**2.9** NP [g]
Benzo(b)fluoranthene	160	7	3,000	5 / 5	0.22 - 0.69	0.40	0.59 N [c]	5 / 5	0.24 - 2	1.4	2.1 N [c]	10 / 10	0.22 - 2	1.1	1.9 NP [h]	5 / 9	0.16 - 6.42	1.4	3.0 NP [g]
Benzo(g,h,i)perylene	120,000	1,000	10,000	5 / 5	0.16 - 1.8	0.57	2.0 G [e]	4 / 5	0.83 - 1.3	0.83	1.2 NP [f]	9 / 10	0.16 - 1.8	0.74	0.97 NP [f]	4 / 9	0.24 - 2.7	0.75	1.8 NP [g]
Benzo(k)fluoranthene	1,600	70	10,000	2 / 5	0.19 - 0.26	0.18	0.30 NP [f]	4 / 5	0.55 - 0.73	0.52	0.68 NP [f]	6 / 10	0.19 - 0.73	0.41	0.60 NP [i]	3 / 9	0.67 - 2.9	0.60	2.9 NP [g]
Chrysene	16,000	70	10,000	5 / 5	0.21 - 0.55	0.33	0.47 N [c]	5 / 5	0.21 - 1.6	1.1	1.6 N [c]	10 / 10	0.21 - 1.6	0.83	1.4 NP [h]	4 / 9	0.26 - 5.4	1.1	2.9 NP [g]
Dibenz(a,h)anthracene	16	0.7	300	0 / 5	All ND	NA	NC [a]	4 / 5	0.19 - 0.27	0.21	0.26 NP [f]	4 / 10	0.19 - 0.27	0.20	0.25 NP [f]	3 / 9	0.31 - **0.84**	0.28	**0.84** NP [g]
Fluoranthene	120,000	1,000	10,000	5 / 5	0.29 - 1.2	0.66	1.0 N [c]	5 / 5	0.38 - 5.2	2.7	4.3 N [c]	10 / 10	0.29 - 5.2	2.0	3.1 G [e]	5 / 9	0.35 - 15.5	3.0	7.2 NP [g]
Fluorene	120,000	1,000	10,000	0 / 5	All ND	NA	NC [a]	2 / 5	0.18 - 0.47	0.22	0.39 NP [f]	2 / 10	0.18 - 0.47	0.20	0.27 NP [f]	3 / 9	0.29 - 0.61	0.25	0.41 NP [f]
Indeno(1,2,3-cd)pyrene	160	7	3,000	5 / 5	0.16 - 0.41	0.25	0.36 N [c]	4 / 5	0.93 - 1.2	0.85	1.1 NP [f]	9 / 10	0.16 - 1.2	0.65	1.1 NP [j]	4 / 9	0.27 - 3.6	0.84	2.0 NP [g]
Naphthalene	61,000	100	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]
Phenanthrene	120,000	500	10,000	3 / 5	0.4 - 1	0.45	1.0 NP [g]	5 / 5	0.19 - 5.1	1.8	3.7 N [c]	8 / 10	0.19 - 5.1	1.4	3.2 NP [j]	6 / 9	0.17 - 7.4	1.8	3.6 NP [f]
Pyrene	92,000	1,000	10,000	5 / 5	0.3 - 1	0.59	0.88 N [c]	5 / 5	0.37 - 3.9	2.2	3.4 N [c]	10 / 10	0.3 - 3.9	1.6	2.5 G [e]	5 / 9	0.34 - 9.48	2.1	4.6 NP [g]
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]	1 / 5	0.11 - 0.11	0.037	NC [b]	1 / 10	0.11 - 0.11	0.031	NC [b]	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]	1 / 5	0.11 - 0.11	0.037	NC [b]	1 / 10	0.11 - 0.11	0.031	NC [b]	0 / 9	All ND	NA	NC [a]

Table P-009
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	6200 - 7460	7010	7530 N [c]	5 / 5	6290 - 8840	7422	8453 N [c]	10 / 10	6200 - 8840	7285	7690 N [c]	9 / 9	5720 - 9560	7611	8506 N [c]
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 - 2.5	2.3	2.5 N [c]	5 / 5	2.3 - 4.1	3.1	3.8 N [c]	10 / 10	2 - 4.1	2.8	3.2 LN [k]	7 / 9	1.8 - 6.7	2.6	3.9 NP [i]
Barium	200,000	1,000	10,000	5 / 5	26.4 - 50.5	35	44 N [c]	5 / 5	26.1 - 122	71	111 N [c]	10 / 10	26.1 - 122	59	100 NP [h]	9 / 9	17.3 - 126	39	67 LN [k]
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]	2 / 5	1 - 1.3	0.62	1.3 NP [g]	2 / 10	1 - 1.3	0.50	1.1 NP [f]	2 / 9	0.75 - 1.3	0.44	1.3 NP [g]
Calcium		NS	NS	5 / 5	520 - 862	615	778 G [e]	5 / 5	479 - 1000	719	924 N [c]	10 / 10	479 - 1000	684	782 LN [k]	9 / 9	503 - 2810	1091	1720 LN [k]
Chromium	200	30	2,000	5 / 5	8.5 - 11.1	9.8	10.8 N [c]	5 / 5	8.2 - 16.4	11.0	14.1 N [c]	10 / 10	8.2 - 16.4	10.6	11.8 N [d]	9 / 9	7.6 - 17.6	11.8	13.7 N [c]
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	7410 - 8410	7932	8395 N [c]	5 / 5	7690 - 14800	10602	13513 N [c]	10 / 10	7410 - 14800	9712	10953 N [d]	9 / 9	7900 - 18400	11079	13038 N [c]
Lead	1,000	300	3,000	5 / 5	70.1 - 183	106	149 N [c]	5 / 5	48.3 - **336**	206	**307** N [c]	10 / 10	48.3 - **336**	173	217 N [c]	9 / 9	5 - 166	58	95 N [c]
Magnesium		NS	NS	5 / 5	1010 - 1260	1168	1264 N [c]	5 / 5	1090 - 2090	1402	1785 N [c]	10 / 10	1010 - 2090	1324	1480 N [d]	9 / 9	897 - 3170	1470	1917 G [e]
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

N - Normal Distribution
[c] 95% Student's-t UCL
[d] 95% Modified-t UCL

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

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

LN - Log Normal Distribution
[k] 95% H-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 08/03/10
Checked by / Date: KJC 08/06/10

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

DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lieutenant Governor

RICHARD K. SULLIVAN JR.
Secretary

KENNETH L. KIMMELL
Commissioner

July 27, 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-024
SAP Data Risk Evaluation – No USEPA Action Recommended

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-024 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-024. 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 ten 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-024, MassDEP provided you the following preliminary determinations:

- A condition of No Significant Risk, as defined in the MCP, was determined to exist for current use of the property for the soil located between the ground surface and 3 feet in depth. Both the average concentrations and the 95% UCL calculated for all COCs for this interval are below the applicable standard. No further action is required for the soils at this interval.

- Furthermore, a condition of No Significant Risk, as defined in the MCP, for foreseeable future use of the property was not determined to exist for the soil located between 3 feet and 12 feet below the ground surface. This is because, although the average concentration of all COCs, including lead and PAHs, 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, the 95% UCL calculated for one PAH and for lead for this interval were above the applicable standard. Because this soil is at depth, it does not necessarily need to be removed to be protective of the current use of the property.

Property P-024 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-024:

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

- Furthermore, 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. Applying the 95% UCL for data evaluation of the soil

located between 3 and 12 feet bgs is not necessary for Property P-024. 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/lm

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-024

Table P-024
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
PAHs (mg/Kg)																			
2-Methylnaphthalene	61,000	300	5,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Acenaphthene	180,000	1,000	10,000	0 / 10	All ND	NA	NC [a]	1 / 10	0.38 - 0.38	0.42	NC [b]	1 / 20	0.38 - 0.38	0.41	NC [b]	1 / 17	0.9 - 0.9	0.47	NC [b]
Acenaphthylene	180,000	1,000	10,000	0 / 10	All ND	NA	NC [a]	2 / 10	0.28 - 0.62	0.39	0.62 NP [c]	2 / 20	0.28 - 0.62	0.39	0.36 NP [d]	1 / 17	1.5 - 1.5	0.51	NC [b]
Anthracene	920,000	1,000	10,000	3 / 10	0.057 - 0.28	0.33	0.28 NP [c]	3 / 10	0.49 - 2.7	0.61	1.2 NP [d]	6 / 20	0.057 - 2.7	0.51	0.58 NP [d]	3 / 17	0.45 - 6.7	0.78	3.5 NP [g]
Benzo(a)anthracene	160	7	3,000	8 / 10	0.097 - 0.56	0.26	0.35 NP [d]	5 / 10	0.35 - 5.3	1.0	2.2 NP [c]	13 / 20	0.097 - 5.3	0.75	1.2 NP [f]	8 / 17	0.12 - **13**	1.2	2.9 NP [f]
Benzo(a)pyrene	16	2	300	8 / 10	0.095 - 0.63	0.26	0.36 NP [d]	6 / 10	0.05 - **4.3**	0.86	1.6 NP [c]	14 / 20	0.05 - **4.3**	0.66	1.0 NP [f]	8 / 17	0.11 - **10**	0.98	**2.4** NP [f]
Benzo(b)fluoranthene	160	7	3,000	8 / 10	0.13 - 0.86	0.35	0.48 NP [d]	6 / 10	0.073 - 5	1.1	2.1 NP [c]	14 / 20	0.073 - 5	0.83	1.3 NP [f]	8 / 17	0.14 - **15**	1.4	3.4 NP [f]
Benzo(g,h,i)perylene	120,000	1,000	10,000	3 / 10	0.044 - 0.25	0.33	0.27 NP [d]	5 / 10	0.045 - 1.4	0.41	0.71 NP [c]	8 / 20	0.044 - 1.4	0.39	0.44 NP [d]	7 / 17	0.071 - 1.3	0.33	0.51 NP [c]
Benzo(k)fluoranthene	1,600	70	10,000	6 / 10	0.051 - 0.16	0.34	0.13 NP [d]	4 / 10	0.38 - 2.5	0.58	1.3 NP [c]	10 / 20	0.051 - 2.5	0.50	0.60 NP [d]	6 / 17	0.31 - 4.7	0.55	1.4 NP [f]
Chrysene	16,000	70	10,000	10 / 10	0.09 - 0.68	0.28	0.39 N [j]	6 / 10	0.058 - 5.2	1.0	2.2 NP [f]	16 / 20	0.058 - 5.2	0.76	1.8 NP [h]	8 / 17	0.13 - 13	1.2	3.0 NP [f]
Dibenz(a,h)anthracene	16	0.7	300	0 / 10	All ND	NA	NC [a]	2 / 10	0.24 - 0.64	0.39	0.43 NP [d]	2 / 20	0.24 - 0.64	0.39	0.33 NP [d]	1 / 17	**0.79** - **0.79**	0.46	NC [b]
Fluoranthene	120,000	1,000	10,000	10 / 10	0.07 - 1.19	0.45	0.67 N [j]	7 / 10	0.05 - 12	2.2	4.5 NP [f]	17 / 20	0.05 - 12	1.6	4.0 NP [h]	8 / 17	0.26 - 27	2.4	6.9 NP [f]
Fluorene	120,000	1,000	10,000	0 / 10	All ND	NA	NC [a]	1 / 10	0.9 - 0.9	0.47	NC [b]	1 / 20	0.9 - 0.9	0.44	NC [b]	1 / 17	2.4 - 2.4	0.56	NC [b]
Indeno(1,2,3-cd)pyrene	160	7	3,000	2 / 10	0.15 - 0.24	0.34	0.28 NP [d]	4 / 10	0.28 - 1.6	0.45	0.87 NP [c]	6 / 20	0.15 - 1.6	0.41	0.49 NP [d]	5 / 17	0.061 - 1.9	0.47	0.66 NP [c]
Naphthalene	61,000	100	10,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Phenanthrene	120,000	500	10,000	8 / 10	0.1 - 1	0.33	0.49 NP [d]	5 / 10	0.52 - 6.2	1.3	2.8 NP [c]	13 / 20	0.1 - 6.2	0.95	1.6 NP [f]	7 / 17	0.13 - 16	1.4	3.1 NP [d]
Pyrene	92,000	1,000	10,000	7 / 10	0.17 - 0.83	0.47	0.49 NP [d]	5 / 10	0.57 - 9.3	1.7	3.8 NP [c]	12 / 20	0.17 - 9.3	1.3	2.0 NP [f]	8 / 17	0.24 - 22	1.9	5.0 NP [f]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Aroclor-1254	10	2	100	9 / 10	0.009 - 0.11	0.047	0.070 NP [d]	5 / 10	0.012 - 0.42	0.077	0.17 NP [c]	14 / 20	0.009 - 0.42	0.067	0.099 NP [f]	9 / 17	0.022 - 0.16	0.052	0.088 NP [c]
Aroclor-1260	10	2	100	3 / 10	0.0077 - 0.046	0.015	0.022 NP [d]	6 / 10	0.018 - 0.42	0.067	0.16 NP [f]	9 / 20	0.0077 - 0.42	0.050	0.088 NP [f]	5 / 17	0.0069 - 0.16	0.029	0.069 NP [c]
Aroclor-1262	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
PCBs (Total)	10	2	100	9 / 10	0.012 - 0.11	0.054	0.077 NP [d]	6 / 10	0.03 - 0.84	0.14	0.34 NP [f]	15 / 20	0.012 - 0.84	0.11	0.35 NP [g]	9 / 17	0.022 - 0.32	0.073	0.13 NP [c]

Table P-024
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1]				1-3 ft [1]				0-3 ft [1, 2]				3+ ft [1]			
				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	10 / 10	4420 - 8470	6368	7086 N [j]	10 / 10	2050 - 8200	5719	6739 N [j]	20 / 20	2050 - 8470	5935	6425 N [j]	17 / 17	1860 - 7570	4846	5578 N [j]
Antimony		20	300	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Arsenic	40	20	200	10 / 10	1.4 - 5.7	2.5	3.3 N [k]	10 / 10	0.81 - 7.6	3.0	4.6 G [l]	20 / 20	0.81 - 7.6	2.8	4.4 NP [e]	16 / 17	0.28 - 5.4	1.6	3.0 NP [h]
Barium	200,000	1,000	10,000	10 / 10	17.3 - 164	48	78 G [l]	10 / 10	17.2 - 146	49	74 G [l]	20 / 20	17.2 - 164	49	60 G [l]	17 / 17	4.3 - 323	62	108 G [l]
Beryllium		100	2,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Cadmium	60	2	300	1 / 10	**3.8** - **3.8**	0.59	NC [b]	3 / 10	0.12 - **2.2**	0.41	1.8 NP [g]	4 / 20	0.12 - **3.8**	0.47	1.4 NP [g]	5 / 17	0.13 - **2.5**	0.47	1.0 NP [c]
Calcium		NS	NS	10 / 10	587 - 2270	1259	1593 N [j]	10 / 10	475 - 2450	1165	1563 N [j]	20 / 20	475 - 2450	1196	1699 NP [e]	17 / 17	136 - 8610	1403	2451 LN [m]
Chromium	200	30	2,000	10 / 10	5.8 - 17.8	9.6	11.7 G [l]	10 / 10	3.6 - 22.1	10.7	14.0 N [j]	20 / 20	3.6 - 22.1	10.3	11.9 N [k]	17 / 17	3.1 - 18.4	8.8	10.6 N [j]
Cobalt		NS	NS	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Copper		NS	NS	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Iron		NS	NS	10 / 10	6630 - 15400	8769	10228 G [l]	10 / 10	4370 - 24600	9236	12741 N [k]	20 / 20	4370 - 24600	9080	10590 N [k]	17 / 17	1980 - 24200	7629	10154 G [l]
Lead	1,000	300	3,000	10 / 10	27.1 - **425**	87	255 NP [e]	10 / 10	7.3 - **521**	108	243 G [l]	20 / 20	7.3 - **521**	101	166 LN [m]	17 / 17	1.5 - **417**	107	**450** NP [i]
Magnesium		NS	NS	10 / 10	884 - 1860	1203	1373 G [l]	10 / 10	446 - 3610	1349	1912 G [l]	20 / 20	446 - 3610	1300	1526 N [k]	17 / 17	358 - 2820	1141	1416 G [l]
Manganese		NS	NS	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Mercury		20	300	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Nickel		20	7,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Potassium		NS	NS	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Selenium		400	8,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Silver		100	2,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Sodium		NS	NS	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Thallium		8	800	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 17	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 17	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 or two distinct data values were detected

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

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

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

LN - Log Normal Distribution
[m] 95% H-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 8/31/10
Checked by / Date: KJC 9/9/10

July 27, 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-031
SAP Data Risk Evaluation – No USEPA Action Recommended

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-031 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-031. 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 thirty 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-031, 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, although the average concentrations of all COCs, including lead, detected in samples collected from the top 3 feet are below the applicable MCP Method 1 S-1 soil standards, the 95% UCL calculated for one PAH is above the applicable 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. Both the average concentration of all COCs and the 95% UCL calculated for all COCs were below the applicable standard. No further action is required for the soils at this interval on this property.

Property P-031 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-031:

- A condition of No Significant Risk to human health, as defined in the MCP, was determined to exist for current use of the property for the soil located between the ground surface and 3 feet in depth. Applying the 95% UCL for data evaluation of the soil located between 0 and 3 feet bgs is not necessary for Property P-031. The actual average for COCs at this depth interval is below the applicable MCP Method 1 S-1 soil standard. No further response actions are necessary for this soil.

- MassDEP has verified its determination 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/lm
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-031

Table P-031
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
PAHs (mg/Kg)																			
2-Methylnaphthalene	61,000	300	5,000	1 / 30	2.42 - 2.42	0.79	NC [a]	2 / 30	0.43 - 1.2	0.67	0.59 NP [c]	3 / 60	0.43 - 2.42	0.71	1.2 NP [g]	2 / 50	0.49 - 0.59	0.35	0.59 NP [g]
Acenaphthene	180,000	1,000	10,000	5 / 30	0.1 - 7.95	0.94	1.0 NP [c]	3 / 30	0.05 - 1.52	0.71	1.5 NP [g]	8 / 60	0.05 - 7.95	0.79	0.44 NP [c]	7 / 50	0.07 - 1.55	0.37	0.32 NP [c]
Acenaphthylene	180,000	1,000	10,000	2 / 30	0.11 - 0.74	0.73	0.74 NP [d]	5 / 30	0.05 - 1.6	0.71	0.71 NP [g]	7 / 60	0.05 - 1.6	0.71	0.34 NP [c]	4 / 50	0.16 - 3.61	0.40	0.38 NP [c]
Anthracene	920,000	1,000	10,000	12 / 30	0.1 - 10.6	1.1	1.5 NP [d]	11 / 30	0.088 - 7.59	0.94	1.1 NP [d]	23 / 60	0.088 - 10.6	1.0	1.0 NP [d]	13 / 50	0.11 - 9.46	0.65	1.1 NP [d]
Benzo(a)anthracene	160	7	3,000	27 / 30	0.19 - **12.5**	1.5	3.5 NP [e]	24 / 30	0.053 - **14.4**	1.5	4.5 NP [f]	51 / 60	0.053 - **14.4**	1.5	2.7 NP [e]	21 / 50	0.08 - **16.1**	1.0	1.6 NP [c]
Benzo(a)pyrene	16	2	300	28 / 30	0.21 - **11.6**	1.4	**3.4** NP [e]	27 / 30	0.05 - **13.5**	1.4	**3.4** NP [e]	55 / 60	0.05 - **13.5**	1.4	**2.5** NP [e]	22 / 50	0.06 - **14.8**	0.93	1.5 NP [c]
Benzo(b)fluoranthene	160	7	3,000	28 / 30	0.35 - **15.2**	2.0	4.5 NP [e]	27 / 30	0.07 - **17.4**	1.8	5.5 NP [f]	55 / 60	0.07 - **17.4**	1.8	3.3 NP [e]	22 / 50	0.1 - **20.7**	1.2	2.0 NP [c]
Benzo(g,h,i)perylene	120,000	1,000	10,000	23 / 30	0.08 - 5.3	0.97	2.5 NP [f]	19 / 30	0.09 - 6.63	0.84	1.1 NP [d]	42 / 60	0.08 - 6.63	0.88	1.4 NP [e]	16 / 50	0.05 - 6.88	0.52	0.67 NP [c]
Benzo(k)fluoranthene	1,600	70	10,000	24 / 30	0.14 - 5.06	0.95	1.2 NP [d]	21 / 30	0.08 - 6.84	0.81	2.2 NP [f]	45 / 60	0.08 - 6.84	0.86	0.99 NP [d]	18 / 50	0.08 - 6.77	0.56	0.74 NP [c]
Chrysene	16,000	70	10,000	29 / 30	0.23 - 12.5	1.5	3.5 NP [e]	27 / 30	0.05 - 12.7	1.4	3.3 NP [e]	56 / 60	0.05 - 12.7	1.4	2.5 NP [e]	23 / 50	0.07 - 14.8	0.98	1.5 NP [c]
Dibenz(a,h)anthracene	16	0.7	300	12 / 30	0.07 - **1.32**	0.66	0.43 NP [c]	9 / 30	0.038 - **1.66**	0.63	0.41 NP [c]	21 / 60	0.038 - **1.66**	0.64	0.35 NP [d]	9 / 50	0.05 - **1.75**	0.34	0.27 NP [c]
Fluoranthene	120,000	1,000	10,000	29 / 30	0.37 - 34.8	3.2	8.7 NP [e]	28 / 30	0.07 - 36.8	3.0	10.8 NP [f]	57 / 60	0.07 - 36.8	3.1	6.2 NP [e]	23 / 50	0.14 - 41.5	2.1	3.6 NP [c]
Fluorene	120,000	1,000	10,000	4 / 30	0.24 - 6.3	0.91	2.0 NP [g]	5 / 30	0.06 - 2.5	0.75	0.81 NP [g]	9 / 60	0.06 - 6.3	0.80	0.57 NP [c]	6 / 50	0.11 - 4.14	0.47	0.82 NP [g]
Indeno(1,2,3-cd)pyrene	160	7	3,000	20 / 30	0.12 - 4.58	0.90	1.1 NP [d]	18 / 30	0.09 - 5.92	0.80	1.1 NP [d]	38 / 60	0.09 - 5.92	0.83	0.92 NP [d]	16 / 50	0.07 - 6.41	0.50	0.65 NP [c]
Naphthalene	61,000	100	10,000	2 / 30	0.5 - 4.68	0.86	1.9 NP [f]	2 / 30	1.1 - 1.32	0.70	1.3 NP [g]	4 / 60	0.5 - 4.68	0.75	1.3 NP [g]	3 / 50	0.3 - 1.06	0.35	0.36 NP [c]
Phenanthrene	120,000	500	10,000	26 / 30	0.17 - 45.4	3.0	12.6 NP [f]	23 / 30	0.1 - 33.5	2.5	9.6 NP [f]	49 / 60	0.1 - 45.4	2.7	5.8 NP [e]	22 / 50	0.07 - 44.8	2.0	3.6 NP [c]
Pyrene	92,000	1,000	10,000	27 / 30	0.3 - 33.5	3.3	11.2 NP [f]	25 / 30	0.089 - 32.7	3.1	10.2 NP [f]	52 / 60	0.089 - 33.5	3.2	6.1 NP [e]	22 / 50	0.13 - 37.2	2.2	3.6 NP [c]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 30	All ND	NA	NC [b]	0 / 30	All ND	NA	NC [b]	0 / 60	All ND	NA	NC [b]	0 / 50	All ND	NA	NC [b]
Aroclor-1221	10	2	100	0 / 30	All ND	NA	NC [b]	0 / 30	All ND	NA	NC [b]	0 / 60	All ND	NA	NC [b]	0 / 50	All ND	NA	NC [b]
Aroclor-1232	10	2	100	0 / 30	All ND	NA	NC [b]	0 / 30	All ND	NA	NC [b]	0 / 60	All ND	NA	NC [b]	0 / 50	All ND	NA	NC [b]
Aroclor-1242	10	2	100	0 / 30	All ND	NA	NC [b]	0 / 30	All ND	NA	NC [b]	0 / 60	All ND	NA	NC [b]	0 / 50	All ND	NA	NC [b]
Aroclor-1248	10	2	100	0 / 30	All ND	NA	NC [b]	0 / 30	All ND	NA	NC [b]	0 / 60	All ND	NA	NC [b]	0 / 50	All ND	NA	NC [b]
Aroclor-1254	10	2	100	11 / 30	0.022 - 0.073	0.023	0.037 NP [g]	5 / 30	0.016 - 0.065	0.017	0.035 NP [g]	16 / 60	0.016 - 0.073	0.019	0.028 NP [g]	4 / 50	0.05 - 0.16	0.020	0.095 NP [g]
Aroclor-1260	10	2	100	25 / 30	0.012 - 0.21	0.071	0.089 NP [c]	20 / 30	0.013 - 0.76	0.10	0.16 NP [d]	45 / 60	0.012 - 0.76	0.094	0.12 NP [g]	23 / 50	0.009 - 0.34	0.059	0.079 NP [c]
Aroclor-1262	10	2	100	0 / 30	All ND	NA	NC [b]	0 / 30	All ND	NA	NC [b]	0 / 60	All ND	NA	NC [b]	0 / 50	All ND	NA	NC [b]
Aroclor-1268	10	2	100	0 / 30	All ND	NA	NC [b]	0 / 30	All ND	NA	NC [b]	0 / 60	All ND	NA	NC [b]	0 / 50	All ND	NA	NC [b]
PCBs (Total)	10	2	100	29 / 30	0.012 - 0.21	0.085	0.10 NP [c]	21 / 30	0.016 - 0.76	0.11	0.16 NP [g]	50 / 60	0.012 - 0.76	0.10	0.13 NP [d]	23 / 50	0.009 - 0.34	0.066	0.089 NP [c]

Table P-031
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/Kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
Inorganics (mg/Kg)																			
Aluminum		NS	NS	30 / 30	1260 - 6690	4851	5161 N [h]	30 / 30	3740 - 9980	5429	5800 G [j]	60 / 60	1260 - 9980	5236	5441 N [i]	50 / 50	1800 - 7190	4353	4654 N [h]
Antimony		20	300	0 / 30	All ND	NA	NC [b]	0 / 30	All ND	NA	NC [b]	0 / 60	All ND	NA	NC [b]	0 / 50	All ND	NA	NC [b]
Arsenic	40	20	200	30 / 30	2.4 - 20	6.1	7.1 G [j]	27 / 30	2 - 7.2	3.9	5.3 NP [e]	57 / 60	2 - 20	4.6	5.2 NP [d]	43 / 50	0.54 - 8.9	3.4	3.9 NP [c]
Barium	200,000	1,000	10,000	29 / 30	39.5 - 262	89	131 NP [e]	30 / 30	15.2 - 163	59	70 G [j]	59 / 60	15.2 - 262	69	76 NP [d]	50 / 50	6.7 - 185	36	44 G [j]
Beryllium		100	2,000	0 / 30	All ND	NA	NC [b]	0 / 30	All ND	NA	NC [b]	0 / 60	All ND	NA	NC [b]	0 / 50	All ND	NA	NC [b]
Cadmium	60	2	300	5 / 30	0.13 - 0.56	0.27	0.42 NP [g]	4 / 30	0.22 - 1.3	0.29	1.3 NP [g]	9 / 60	0.13 - 1.3	0.28	0.34 NP [c]	5 / 50	0.22 - 1.3	0.30	0.76 NP [g]
Calcium		NS	NS	30 / 30	103 - 4020	2162	2414 N [h]	30 / 30	625 - 4610	2110	2457 G [j]	60 / 60	103 - 4610	2127	2314 G [j]	50 / 50	328 - 8670	2171	2775 LN [k]
Chromium	200	30	2,000	30 / 30	3.5 - 18.9	11.9	12.9 N [h]	30 / 30	7.4 - **33.1**	12.7	14.1 G [j]	60 / 60	3.5 - **33.1**	12.5	13.2 N [i]	50 / 50	4.5 - 24	11.1	12.0 N [h]
Cobalt		NS	NS	0 / 30	All ND	NA	NC [b]	0 / 30	All ND	NA	NC [b]	0 / 60	All ND	NA	NC [b]	0 / 50	All ND	NA	NC [b]
Copper		NS	NS	0 / 30	All ND	NA	NC [b]	0 / 30	All ND	NA	NC [b]	0 / 60	All ND	NA	NC [b]	0 / 50	All ND	NA	NC [b]
Iron		NS	NS	30 / 30	3850 - 27600	8134	9483 N [i]	30 / 30	3030 - 25700	8137	9516 N [i]	60 / 60	3030 - 27600	8136	8883 N [i]	50 / 50	1880 - 16300	6385	7123 G [j]
Lead	1,000	300	3,000	29 / 30	101 - **491**	254	291 NP [d]	30 / 30	14.3 - **424**	135	169 G [j]	59 / 60	14.3 - **491**	175	195 NP [d]	46 / 50	1.5 - **690**	79	189 NP [f]
Magnesium		NS	NS	30 / 30	470 - 3110	1402	1562 G [j]	30 / 30	655 - 4680	1806	2092 G [j]	60 / 60	470 - 4680	1671	1805 G [j]	50 / 50	475 - 3710	1707	1921 G [j]
Manganese		NS	NS	0 / 30	All ND	NA	NC [b]	0 / 30	All ND	NA	NC [b]	0 / 60	All ND	NA	NC [b]	0 / 50	All ND	NA	NC [b]
Mercury		20	300	0 / 30	All ND	NA	NC [b]	0 / 30	All ND	NA	NC [b]	0 / 60	All ND	NA	NC [b]	0 / 50	All ND	NA	NC [b]
Nickel		20	7,000	0 / 30	All ND	NA	NC [b]	0 / 30	All ND	NA	NC [b]	0 / 60	All ND	NA	NC [b]	0 / 50	All ND	NA	NC [b]
Potassium		NS	NS	0 / 30	All ND	NA	NC [b]	0 / 30	All ND	NA	NC [b]	0 / 60	All ND	NA	NC [b]	0 / 50	All ND	NA	NC [b]
Selenium		400	8,000	0 / 30	All ND	NA	NC [b]	0 / 30	All ND	NA	NC [b]	0 / 60	All ND	NA	NC [b]	0 / 50	All ND	NA	NC [b]
Silver		100	2,000	0 / 30	All ND	NA	NC [b]	0 / 30	All ND	NA	NC [b]	0 / 60	All ND	NA	NC [b]	0 / 50	All ND	NA	NC [b]
Sodium		NS	NS	0 / 30	All ND	NA	NC [b]	0 / 30	All ND	NA	NC [b]	0 / 60	All ND	NA	NC [b]	0 / 50	All ND	NA	NC [b]
Thallium		8	800	0 / 30	All ND	NA	NC [b]	0 / 30	All ND	NA	NC [b]	0 / 60	All ND	NA	NC [b]	0 / 50	All ND	NA	NC [b]
Vanadium		600	10,000	0 / 30	All ND	NA	NC [b]	0 / 30	All ND	NA	NC [b]	0 / 60	All ND	NA	NC [b]	0 / 50	All ND	NA	NC [b]
Zinc		2,500	10,000	0 / 30	All ND	NA	NC [b]	0 / 30	All ND	NA	NC [b]	0 / 60	All ND	NA	NC [b]	0 / 50	All ND	NA	NC [b]
Cyanide		100	4,000	0 / 30	All ND	NA	NC [b]	0 / 30	All ND	NA	NC [b]	0 / 60	All ND	NA	NC [b]	0 / 50	All ND	NA	NC [b]

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] Only one distinct data value was detected
[b] All values non detect

N - Normal Distribution
[h] 95% Student's-t UCL
[i] 95% Modified-t UCL

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

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

LN - Log Normal Distribution
[k] 95% H-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 08/06/10
Checked by / Date: KJC 08/06/10

July 27, 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-041
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-041 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-041.

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 seven 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-041, 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 of lead detected in samples collected from the top 3 feet is above the applicable MCP S-1 soil standards. 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 not determined to exist for the soil located between 3 feet and 12 feet below the ground surface. This is because, although the average concentration of all COCs, including lead, 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, the 95% UCL calculated for lead for this interval was above the applicable standard. Because this soil is at depth, it does not necessarily need to be removed to be protective of the current use of the property.

Property P-041 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-041:

- 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. Specifically, the average concentration, and the boring-specific concentrations, of lead in three of the seven soil borings on the property are above the applicable MCP Method 1 S-1 soil standard. These borings are identified as P-041-SB-03, P-041-SB-04 and P-041-SB-07. Response actions are necessary to address the COC contamination in the area of these soil borings at this interval.

- Furthermore, 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. Applying the 95% UCL for data evaluation of the soil located between 0 and 3 feet bgs is not necessary for Property P-041. The actual average for COCs at this depth interval is below the applicable MCP Method 1 S-1 soil standard. 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/lm

Enclosure

Ecc: 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

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

cc: Owner, Property P-041

Table P-041
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 / 7	All ND	NA	NC [a]	2 / 7	0.22 - 0.22	0.13	NC [b]	2 / 14	0.22 - 0.22	0.12	NC [b]	0 / 14	All ND	NA	NC [a]
Acenaphthene	180,000	1,000	10,000	0 / 7	All ND	NA	NC [a]	2 / 7	0.18 - 0.24	0.13	0.21 NP [d]	2 / 14	0.18 - 0.24	0.11	0.19 NP [d]	0 / 14	All ND	NA	NC [a]
Acenaphthylene	180,000	1,000	10,000	2 / 7	0.26 - 0.4	0.16	0.40 NP [c]	1 / 7	2.2 - 2.2	0.39	NC [b]	3 / 14	0.26 - 2.2	0.32	2.2 NP [c]	2 / 14	0.21 - 0.55	0.14	0.55 NP [c]
Anthracene	920,000	1,000	10,000	2 / 7	0.73 - 0.76	0.28	0.75 NP [d]	2 / 7	1.2 - 1.5	0.45	1.5 NP [c]	4 / 14	0.73 - 1.5	0.39	1.2 NP [c]	2 / 14	0.33 - 0.34	0.13	0.34 NP [c]
Benzo(a)anthracene	160	7	3,000	6 / 7	0.23 - 1.3	0.59	0.94 NP [d]	6 / 7	0.21 - 1.7	0.60	1.6 NP [e]	12 / 14	0.21 - 1.7	0.60	1.1 NP [e]	6 / 14	0.26 - 1.9	0.38	0.75 NP [c]
Benzo(a)pyrene	16	2	300	6 / 7	0.25 - 1.2	0.56	0.88 NP [d]	6 / 7	0.21 - **2.4**	0.66	**2.0** NP [e]	12 / 14	0.21 - **2.4**	0.62	1.3 NP [e]	6 / 14	0.31 - 1.8	0.39	0.76 NP [c]
Benzo(b)fluoranthene	160	7	3,000	6 / 7	0.36 - 1.5	0.71	1.6 NP [e]	7 / 7	0.22 - 2.4	0.76	2.4 LN [k]	13 / 14	0.22 - 2.4	0.74	1.4 NP [e]	6 / 14	0.42 - 2.5	0.51	1.0 NP [c]
Benzo(g,h,i)perylene	120,000	1,000	10,000	5 / 7	0.26 - 0.8	0.36	0.58 NP [d]	5 / 7	0.21 - 2.2	0.51	1.8 NP [e]	10 / 14	0.21 - 2.2	0.46	0.72 NP [f]	6 / 14	0.22 - 1.4	0.30	0.55 NP [d]
Benzo(k)fluoranthene	1,600	70	10,000	5 / 7	0.19 - 0.63	0.27	0.44 NP [d]	3 / 7	0.19 - 1.1	0.32	1.1 NP [c]	8 / 14	0.19 - 1.1	0.30	0.46 NP [d]	4 / 14	0.25 - 1	0.23	0.76 NP [c]
Chrysene	16,000	70	10,000	6 / 7	0.26 - 1.2	0.57	0.89 NP [d]	6 / 7	0.23 - 1.8	0.68	1.0 NP [f]	12 / 14	0.23 - 1.8	0.64	1.1 NP [e]	6 / 14	0.35 - 1.9	0.41	0.79 NP [d]
Dibenz(a,h)anthracene	16	0.7	300	0 / 7	All ND	NA	NC [a]	1 / 7	0.38 - 0.38	0.13	NC [b]	1 / 14	0.38 - 0.38	0.12	NC [b]	1 / 14	0.31 - 0.31	0.11	NC [b]
Fluoranthene	120,000	1,000	10,000	6 / 7	0.53 - 2.8	1.3	2.0 NP [d]	7 / 7	0.26 - 2.9	1.1	2.3 G [l]	13 / 14	0.26 - 2.9	1.2	2.1 NP [e]	6 / 14	0.65 - 2.9	0.68	1.4 NP [d]
Fluorene	120,000	1,000	10,000	1 / 7	0.23 - 0.23	0.11	NC [b]	2 / 7	0.3 - 0.44	0.17	0.44 NP [c]	3 / 14	0.23 - 0.44	0.15	0.33 NP [c]	0 / 14	All ND	NA	NC [a]
Indeno(1,2,3-cd)pyrene	160	7	3,000	6 / 7	0.2 - 0.84	0.37	0.59 NP [f]	5 / 7	0.19 - 1.8	0.46	1.5 NP [e]	11 / 14	0.19 - 1.8	0.43	0.65 NP [f]	6 / 14	0.21 - 1.4	0.30	0.55 NP [c]
Naphthalene	61,000	100	10,000	0 / 7	All ND	NA	NC [a]	2 / 7	0.27 - 0.45	0.17	0.45 NP [c]	2 / 14	0.27 - 0.45	0.14	0.31 NP [d]	0 / 14	All ND	NA	NC [a]
Phenanthrene	120,000	500	10,000	6 / 7	0.25 - 2.2	0.87	2.3 NP [e]	6 / 7	0.26 - 3.4	0.89	2.9 NP [e]	12 / 14	0.25 - 3.4	0.88	1.9 NP [e]	7 / 14	0.18 - 1.3	0.32	0.57 NP [c]
Pyrene	92,000	1,000	10,000	6 / 7	0.44 - 2.3	1.1	1.7 NP [d]	7 / 7	0.22 - 2.9	1.1	2.4 G [l]	13 / 14	0.22 - 2.9	1.1	2.0 NP [e]	6 / 14	0.58 - 2.7	0.61	1.3 NP [c]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Aroclor-1254	10	2	100	1 / 7	0.045 - 0.045	0.016	NC [b]	0 / 7	All ND	NA	NC [a]	1 / 14	0.045 - 0.045	0.012	NC [b]	0 / 14	All ND	NA	NC [a]
Aroclor-1260	10	2	100	4 / 7	0.017 - 0.039	0.018	0.029 NP [c]	2 / 7	0.02 - 0.11	0.024	0.11 NP [f]	6 / 14	0.017 - 0.11	0.022	0.039 NP [d]	1 / 14	0.032 - 0.032	0.0095	NC [b]
Aroclor-1262	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
PCBs (Total)	10	2	100	5 / 7	0.017 - 0.045	0.024	0.035 NP [c]	2 / 7	0.02 - 0.11	0.026	0.11 NP [f]	7 / 14	0.017 - 0.11	0.025	0.041 NP [d]	1 / 14	0.032 - 0.032	0.013	NC [b]

Table P-041
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	7 / 7	4500 - 5130	4846	5021 N [i]	7 / 7	4160 - 5460	4714	5112 N [i]	14 / 14	4160 - 5460	4758	4925 N [i]	14 / 14	2420 - 7200	4368	5018 N [i]
Antimony		20	300	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Arsenic	40	20	200	7 / 7	1.4 - 5.7	3.4	4.5 N [i]	7 / 7	1.1 - 12.3	4.1	8.7 G [l]	14 / 14	1.1 - 12.3	3.8	5.1 G [l]	13 / 14	0.46 - 16.2	4.5	10.4 NP [e]
Barium	200,000	1,000	10,000	7 / 7	31.1 - 96	63	82 N [i]	7 / 7	23.5 - 428	117	301 G [l]	14 / 14	23.5 - 428	99	210 NP [g]	14 / 14	10.3 - 436	98	414 NP [h]
Beryllium		100	2,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Cadmium	60	2	300	7 / 7	0.27 - 0.46	0.37	0.41 N [i]	7 / 7	0.21 - 1.4	0.46	0.85 G [l]	14 / 14	0.21 - 1.4	0.43	0.75 NP [g]	13 / 14	0.087 - **2.1**	0.51	1.2 NP [e]
Calcium		NS	NS	7 / 7	1000 - 2510	1519	1945 N [i]	7 / 7	925 - 10800	2778	8650 NP [g]	14 / 14	925 - 10800	2358	5064 NP [g]	14 / 14	424 - 5710	2162	3461 G [l]
Chromium	200	30	2,000	7 / 7	8.6 - 15.2	12.1	13.9 N [i]	7 / 7	7.6 - 14	9.3	11.0 N [j]	14 / 14	7.6 - 15.2	10.2	11.2 N [j]	14 / 14	6.1 - 16.5	10.1	11.7 N [i]
Cobalt		NS	NS	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Copper		NS	NS	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Iron		NS	NS	7 / 7	6690 - 9820	7746	8535 N [i]	7 / 7	6810 - 17400	8739	11790 N [j]	14 / 14	6690 - 17400	8408	9627 N [j]	14 / 14	3070 - 17400	8945	11166 N [i]
Lead	1,000	300	3,000	7 / 7	64.4 - **309**	186	259 N [i]	7 / 7	39.2 - **1300**	**425**	**1338** G [l]	14 / 14	39.2 - **1300**	**346**	**1250** NP [h]	14 / 14	3.2 - **1060**	263	**741** G [m]
Magnesium		NS	NS	7 / 7	1290 - 1750	1577	1690 N [i]	7 / 7	670 - 1870	1440	1823 N [i]	14 / 14	670 - 1870	1486	1643 N [i]	14 / 14	634 - 1690	1006	1157 N [i]
Manganese		NS	NS	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Mercury		20	300	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Nickel		20	7,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Potassium		NS	NS	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Selenium		400	8,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Silver		100	2,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Sodium		NS	NS	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Thallium		8	800	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	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 (Chebyshev) UCL
- [f] 95% KM (BCA) UCL
- [g] 95% Chebyshev (Mean, Sd) UCL
- [h] 99% Chebyshev (Mean, Sd) UCL

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

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

G - Gamma Distribution
- [l] 95% Approximate Gamma UCL
- [m] 95% Adjusted 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 9/10/10
Checked by / Date: KJC 9/10/10

P:\Documents\SITES\PSWS-NEW BEDFORD\Supplemental Assessment\Results & Communication\
Evaluations as of 09 20 10, P-041

MassDEP
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

August 5, 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-007
SAP Data Risk Evaluation – No USEPA Action Recommended

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-007 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-007. 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 thirteen 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-007, MassDEP provided you the following preliminary determinations:

- A condition of No Significant Risk, as defined in the MCP, was determined to exist for current use of the property for the soil located between the ground surface and 3 feet in depth. Specifically, the average concentrations and the 95% UCL calculated for all COCs detected in samples collected from the top 3 feet are below the applicable MCP Method 1 S-1 soil standards. No further action is required for the soils at this interval on this property.

- 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. Both the average concentration of all COCs and the 95% UCL calculated for all COCs were below the applicable standards. No further action is required for the soils at this interval on this property.

Property P-007 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-007:

- MassDEP has verified its Preliminary Risk Evaluation determination that a condition of No Significant Risk to human health, as defined in the MCP, exists for both current and foreseeable future use of the property for the soil located between 0 to 3 feet and 3 to 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/lm

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-007

Table P-007
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	1 / 13	0.37 - 0.37	0.22	NC [a]	0 / 13	All ND	NA	NC [b]	1 / 26	0.37 - 0.37	0.16	NC [a]	0 / 25	All ND	NA	NC [b]
Acenaphthene	180,000	1,000	10,000	1 / 13	0.86 - 0.86	0.25	NC [a]	0 / 13	All ND	NA	NC [b]	1 / 26	0.86 - 0.86	0.17	NC [a]	0 / 25	All ND	NA	NC [b]
Acenaphthylene	180,000	1,000	10,000	5 / 13	0.3 - 1.1	0.38	0.65 NP [c]	1 / 13	0.49 - 0.49	0.16	NC [a]	6 / 26	0.3 - 1.1	0.23	0.52 NP [c]	1 / 25	0.32 - 0.32	0.16	NC [a]
Anthracene	920,000	1,000	10,000	6 / 13	0.19 - 3.1	0.58	0.99 NP [d]	3 / 13	0.19 - 2.8	0.35	2.8 NP [c]	9 / 26	0.19 - 3.1	0.42	0.66 NP [d]	3 / 25	0.24 - 0.6	0.19	0.60 NP [c]
Benzo(a)anthracene	160	7	3,000	12 / 13	0.35 - 5.4	1.3	3.0 NP [e]	8 / 13	0.19 - 6.7	0.76	4.0 NP [g]	20 / 26	0.19 - 6.7	1.0	2.1 NP [e]	13 / 25	0.2 - 1.9	0.41	0.60 NP [c]
Benzo(a)pyrene	16	2	300	12 / 13	0.34 - **4.6**	1.2	**2.6** NP [e]	7 / 13	0.2 - **5.8**	0.67	**3.5** NP [g]	19 / 26	0.2 - **5.8**	0.85	1.3 NP [f]	12 / 25	0.2 - 2	0.40	0.59 NP [d]
Benzo(b)fluoranthene	160	7	3,000	10 / 13	0.32 - 3.6	0.96	1.4 NP [f]	7 / 13	0.18 - 5	0.57	3.0 NP [g]	17 / 26	0.18 - 5	0.70	1.9 NP [g]	12 / 25	0.2 - 1.4	0.35	0.50 NP [d]
Benzo(g,h,i)perylene	120,000	1,000	10,000	9 / 13	0.23 - 2.5	0.70	1.0 NP [c]	3 / 13	0.4 - 3.4	0.41	1.1 NP [d]	12 / 26	0.23 - 3.4	0.50	0.82 NP [c]	11 / 25	0.19 - 1.6	0.31	0.45 NP [d]
Benzo(k)fluoranthene	1,600	70	10,000	10 / 13	0.26 - 3.3	0.87	1.4 NP [f]	5 / 13	0.19 - 4.8	0.54	1.5 NP [f]	15 / 26	0.19 - 4.8	0.65	1.0 NP [f]	10 / 25	0.19 - 1.6	0.33	0.49 NP [d]
Chrysene	16,000	70	10,000	12 / 13	0.34 - 4.5	1.2	2.6 NP [e]	7 / 13	0.22 - 6.4	0.73	1.7 NP [f]	19 / 26	0.22 - 6.4	0.90	1.4 NP [f]	13 / 25	0.2 - 2	0.42	0.61 NP [c]
Dibenz(a,h)anthracene	16	0.7	300	4 / 13	0.22 - 0.7	0.28	0.43 NP [c]	1 / 13	**1** - **1**	0.17	NC [a]	5 / 26	0.22 - **1**	0.21	0.40 NP [c]	1 / 25	0.3 - 0.3	0.16	NC [a]
Fluoranthene	120,000	1,000	10,000	13 / 13	0.2 - 14	2.9	4.9 G [i]	11 / 13	0.26 - 15	1.6	8.7 NP [g]	24 / 26	0.2 - 15	2.0	5.9 NP [g]	18 / 25	0.2 - 3.5	0.84	1.2 NP [c]
Fluorene	120,000	1,000	10,000	3 / 13	0.19 - 1.1	0.31	1.1 NP [c]	1 / 13	1.1 - 1.1	0,18	NC [a]	4 / 26	0.19 - 1.1	0.22	1.1 NP [c]	1 / 25	0.24 - 0.24	0.16	NC [a]
Indeno(1,2,3-cd)pyrene	160	7	3,000	9 / 13	0.2 - 2.2	0.62	0.90 NP [c]	3 / 13	0.34 - 3.1	0.37	3.1 NP [f]	12 / 26	0.2 - 3.1	0.45	0.72 NP [c]	6 / 25	0.21 - 1.2	0.25	0.51 NP [c]
Naphthalene	61,000	100	10,000	1 / 13	0.3 - 0.3	0.21	NC [a]	0 / 13	All ND	NA	NC [b]	1 / 26	0.3 - 0.3	0.16	NC [a]	0 / 25	All ND	NA	NC [b]
Phenanthrene	120,000	500	10,000	11 / 13	0.38 - 12	1.9	5.8 NP [e]	7 / 13	0.21 - 13	1.2	7.6 NP [g]	18 / 26	0.21 - 13	1.5	4.9 NP [g]	13 / 25	0.21 - 3.2	0.50	0.77 NP [d]
Pyrene	92,000	1,000	10,000	12 / 13	0.56 - 12	2.6	6.2 NP [e]	11 / 13	0.23 - 12	1.4	7.0 NP [g]	23 / 26	0.23 - 12	1.8	4.9 NP [g]	17 / 25	0.18 - 4	0.78	1.1 NP [c]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 13	All ND	NA	NC [b]	0 / 13	All ND	NA	NC [b]	0 / 26	All ND	NA	NC [b]	0 / 25	All ND	NA	NC [b]
Aroclor-1221	10	2	100	0 / 13	All ND	NA	NC [b]	0 / 13	All ND	NA	NC [b]	0 / 26	All ND	NA	NC [b]	0 / 25	All ND	NA	NC [b]
Aroclor-1232	10	2	100	0 / 13	All ND	NA	NC [b]	0 / 13	All ND	NA	NC [b]	0 / 26	All ND	NA	NC [b]	0 / 25	All ND	NA	NC [b]
Aroclor-1242	10	2	100	0 / 13	All ND	NA	NC [b]	0 / 13	All ND	NA	NC [b]	0 / 26	All ND	NA	NC [b]	0 / 25	All ND	NA	NC [b]
Aroclor-1248	10	2	100	0 / 13	All ND	NA	NC [b]	0 / 13	All ND	NA	NC [b]	0 / 26	All ND	NA	NC [b]	0 / 25	All ND	NA	NC [b]
Aroclor-1254	10	2	100	12 / 13	0.117 - 1.91	0.69	0.98 NP [d]	12 / 13	0.022 - 0.94	0.20	0.56 NP [e]	24 / 26	0.022 - 1.91	0.36	0.83 NP [g]	15 / 25	0.0228 - 0.108	0.033	0.044 NP [d]
Aroclor-1260	10	2	100	2 / 13	0.077 - 0.22	0.050	0.12 NP [d]	3 / 13	0.015 - 0.016	0.017	0.016 NP [c]	5 / 26	0.015 - 0.22	0.028	0.033 NP [f]	11 / 25	0.018 - 0.057	0.019	0.030 NP [c]
Aroclor-1262	10	2	100	0 / 13	All ND	NA	NC [b]	0 / 13	All ND	NA	NC [b]	0 / 26	All ND	NA	NC [b]	0 / 25	All ND	NA	NC [b]
Aroclor-1268	10	2	100	0 / 13	All ND	NA	NC [b]	1 / 13	0.01 - 0.01	0.0078	NC [a]	1 / 26	0.01 - 0.01	0.0099	NC [a]	2 / 25	0.016 - 0.021	0.0051	0.021 NP [c]
PCBs (Total)	10	2	100	12 / 13	0.117 - 1.91	0.71	1.0 NP [d]	13 / 13	0.0151 - 0.94	0.20	0.39 G [i]	25 / 26	0.0151 - 1.91	0.37	0.84 NP [g]	18 / 25	0.019 - 0.1484	0.048	0.063 NP [c]

Table P-007
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	13 / 13	2920 - 6230	4845	5262 N [j]	13 / 13	3180 - 6530	5013	5612 N [j]	26 / 26	2920 - 6530	4957	5273 G [i]	25 / 25	2250 - 9050	5274	5751 N [j]
Antimony		20	300	0 / 13	All ND	NA	NC [b]	0 / 13	All ND	NA	NC [b]	0 / 26	All ND	NA	NC [b]	0 / 25	All ND	NA	NC [b]
Arsenic	40	20	200	11 / 13	2.5 - 4.8	3.3	4.0 NP [d]	5 / 13	2.4 - 3.4	1.8	3.1 NP [c]	16 / 26	2.4 - 4.8	2.3	3.1 NP [d]	16 / 25	3.4 - 15.7	4.6	6.6 NP [c]
Barium	200,000	1,000	10,000	13 / 13	20.4 - 151	68	85 N [j]	13 / 13	21.5 - 75	49	58 N [j]	26 / 26	20.4 - 151	55	63 G [i]	25 / 25	10.8 - 131	57	67 N [j]
Beryllium		100	2,000	0 / 13	All ND	NA	NC [b]	0 / 13	All ND	NA	NC [b]	0 / 26	All ND	NA	NC [b]	0 / 25	All ND	NA	NC [b]
Cadmium	60	2	300	0 / 13	All ND	NA	NC [b]	0 / 13	All ND	NA	NC [b]	0 / 26	All ND	NA	NC [b]	0 / 25	All ND	NA	NC [b]
Calcium		NS	NS	13 / 13	654 - 9360	2288	3920 LN [l]	13 / 13	595 - 1830	983	1152 N [j]	26 / 26	595 - 9360	1418	2478 NP [h]	25 / 25	301 - 4020	1518	1845 G [i]
Chromium	200	30	2,000	13 / 13	5.8 - 22.7	9.8	12.0 G [i]	13 / 13	4.4 - 13	8.7	10.1 N [j]	26 / 26	4.4 - 22.7	9.0	10.0 G [i]	25 / 25	3.2 - **52.4**	13.1	16.4 N [k]
Cobalt		NS	NS	0 / 13	All ND	NA	NC [b]	0 / 13	All ND	NA	NC [b]	0 / 26	All ND	NA	NC [b]	0 / 25	All ND	NA	NC [b]
Copper		NS	NS	0 / 13	All ND	NA	NC [b]	0 / 13	All ND	NA	NC [b]	0 / 26	All ND	NA	NC [b]	0 / 25	All ND	NA	NC [b]
Iron		NS	NS	13 / 13	6030 - 13700	9350	10449 N [j]	13 / 13	4670 - 16100	9059	10720 N [j]	26 / 26	4670 - 16100	9156	9953 N [j]	25 / 25	3080 - 19900	8717	10149 G [i]
Lead	1,000	300	3,000	13 / 13	31.2 - **419**	198	255 N [j]	13 / 13	36.4 - 195	104	130 N [j]	26 / 26	31.2 - **419**	136	162 G [i]	25 / 25	3.6 - **357**	134	169 N [j]
Magnesium		NS	NS	13 / 13	541 - 2830	1323	1700 G [i]	13 / 13	843 - 2030	1385	1588 N [j]	26 / 26	541 - 2830	1365	1507 G [i]	25 / 25	627 - 6450	1613	2008 N [k]
Manganese		NS	NS	0 / 13	All ND	NA	NC [b]	0 / 13	All ND	NA	NC [b]	0 / 26	All ND	NA	NC [b]	0 / 25	All ND	NA	NC [b]
Mercury		20	300	0 / 13	All ND	NA	NC [b]	0 / 13	All ND	NA	NC [b]	0 / 26	All ND	NA	NC [b]	0 / 25	All ND	NA	NC [b]
Nickel		20	7,000	0 / 13	All ND	NA	NC [b]	0 / 13	All ND	NA	NC [b]	0 / 26	All ND	NA	NC [b]	0 / 25	All ND	NA	NC [b]
Potassium		NS	NS	0 / 13	All ND	NA	NC [b]	0 / 13	All ND	NA	NC [b]	0 / 26	All ND	NA	NC [b]	0 / 25	All ND	NA	NC [b]
Selenium		400	8,000	0 / 13	All ND	NA	NC [b]	0 / 13	All ND	NA	NC [b]	0 / 26	All ND	NA	NC [b]	0 / 25	All ND	NA	NC [b]
Silver		100	2,000	0 / 13	All ND	NA	NC [b]	0 / 13	All ND	NA	NC [b]	0 / 26	All ND	NA	NC [b]	0 / 25	All ND	NA	NC [b]
Sodium		NS	NS	0 / 13	All ND	NA	NC [b]	0 / 13	All ND	NA	NC [b]	0 / 26	All ND	NA	NC [b]	0 / 25	All ND	NA	NC [b]
Thallium		8	800	0 / 13	All ND	NA	NC [b]	0 / 13	All ND	NA	NC [b]	0 / 26	All ND	NA	NC [b]	0 / 25	All ND	NA	NC [b]
Vanadium		600	10,000	0 / 13	All ND	NA	NC [b]	0 / 13	All ND	NA	NC [b]	0 / 26	All ND	NA	NC [b]	0 / 25	All ND	NA	NC [b]
Zinc		2,500	10,000	0 / 13	All ND	NA	NC [b]	0 / 13	All ND	NA	NC [b]	0 / 26	All ND	NA	NC [b]	0 / 25	All ND	NA	NC [b]
Cyanide		100	4,000	0 / 13	All ND	NA	NC [b]	0 / 13	All ND	NA	NC [b]	0 / 26	All ND	NA	NC [b]	0 / 25	All ND	NA	NC [b]

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] Only one distinct data value was detected
[b] All values non detect

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

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

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

LN - Log Normal Distribution
[l] 95% H-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 08/05/10
Checked by / Date: KJC 08/06/10

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

DEVAL L. PATRICK
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TIMOTHY P. MURRAY
Lieutenant Governor

RICHARD K. SULLIVAN JR.
Secretary

KENNETH L. KIMMELL
Commissioner

August 5, 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-015
SAP Data Risk Evaluation – No USEPA Action Recommended

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-015 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-015. 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 ten 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-015, MassDEP provided you the following preliminary determinations:

- A condition of No Significant Risk, as defined in the MCP, was determined to exist for current use of the property for the soil located between the ground surface and 3 feet in depth. Specifically, the average concentrations and the 95% UCL calculated for all COCs detected in samples collected from the top 3 feet are below the applicable MCP Method 1 S-1 soil standards. No further action is required for the soils at this interval on this property.

- 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. Both the average concentration of all COCs and the 95% UCL calculated for all COCs were below the applicable standards. No further action is required for the soils at this interval on this property.

Property P-015 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-015:

- MassDEP has verified its Preliminary risk Evaluation determination that a condition of No Significant Risk to human health, as defined in the MCP, exists for both current and foreseeable future use of the property for the soil located between 0 to 3 feet and 3 to 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/lm

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-015

Table P-015
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 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Acenaphthene	180,000	1,000	10,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Acenaphthylene	180,000	1,000	10,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	1 / 16	0.32 - 0.32	0.16	NC [b]
Anthracene	920,000	1,000	10,000	1 / 10	0.06 - 0.06	0.17	NC [b]	0 / 10	All ND	NA	NC [a]	1 / 20	0.06 - 0.06	0.15	NC [b]	1 / 16	0.11 - 0.11	0.15	NC [b]
Benzo(a)anthracene	160	7	3,000	8 / 10	0.08 - 0.3	0.18	0.21 NP [c]	2 / 10	0.06 - 0.14	0.14	0.17 NP [c]	10 / 20	0.06 - 0.3	0.15	0.17 NP [c]	1 / 16	0.65 - 0.65	0.19	NC [b]
Benzo(a)pyrene	16	2	300	10 / 10	0.02 - 0.4	0.19	0.25 N [h]	4 / 10	0.04 - 0.18	0.12	0.15 NP [c]	14 / 20	0.02 - 0.4	0.14	0.17 NP [c]	3 / 16	0.04 - 1.24	0.21	0.68 NP [g]
Benzo(b)fluoranthene	160	7	3,000	10 / 10	0.09 - 0.61	0.30	0.39 N [h]	3 / 10	0.06 - 0.21	0.14	0.21 NP [c]	13 / 20	0.06 - 0.61	0.20	0.24 NP [c]	2 / 16	0.09 - 1.46	0.23	0.91 NP [g]
Benzo(g,h,i)perylene	120,000	1,000	10,000	7 / 10	0.05 - 0.24	0.16	0.18 NP [c]	3 / 10	0.04 - 0.07	0.12	0.073 NP [c]	10 / 20	0.04 - 0.24	0.13	0.13 NP [c]	1 / 16	0.76 - 0.76	0.19	NC [b]
Benzo(k)fluoranthene	1,600	70	10,000	9 / 10	0.06 - 0.22	0.12	0.15 NP [c]	2 / 10	0.05 - 0.08	0.13	0.093 NP [c]	11 / 20	0.05 - 0.22	0.13	0.13 NP [c]	1 / 16	0.58 - 0.58	0.18	NC [b]
Chrysene	16,000	70	10,000	10 / 10	0.11 - 0.7	0.27	0.39 G [j]	4 / 10	0.05 - 0.82	0.20	0.33 NP [d]	14 / 20	0.05 - 0.82	0.22	0.29 NP [c]	6 / 16	0.03 - 0.77	0.18	0.20 NP [c]
Dibenz(a,h)anthracene	16	0.7	300	4 / 10	0.04 - 0.46	0.18	0.19 NP [c]	0 / 10	All ND	NA	NC [a]	4 / 20	0.04 - 0.46	0.16	0.098 NP [c]	1 / 16	0.19 - 0.19	0.16	NC [b]
Fluoranthene	120,000	1,000	10,000	10 / 10	0.1 - 0.56	0.29	0.37 N [h]	4 / 10	0.06 - 0.27	0.14	0.22 NP [c]	14 / 20	0.06 - 0.56	0.19	0.24 NP [c]	3 / 16	0.07 - 0.64	0.17	0.19 NP [c]
Fluorene	120,000	1,000	10,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Indeno(1,2,3-cd)pyrene	160	7	3,000	6 / 10	0.05 - 0.15	0.14	0.13 NP [c]	1 / 10	0.07 - 0.07	0.14	NC [b]	7 / 20	0.05 - 0.15	0.14	0.12 NP [c]	1 / 16	0.65 - 0.65	0.19	NC [b]
Naphthalene	61,000	100	10,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Phenanthrene	120,000	500	10,000	9 / 10	0.08 - 0.35	0.17	0.22 NP [c]	3 / 10	0.06 - 0.14	0.13	0.14 NP [d]	12 / 20	0.06 - 0.35	0.14	0.16 NP [c]	2 / 16	0.06 - 0.19	0.15	0.24 NP [c]
Pyrene	92,000	1,000	10,000	8 / 10	0.16 - 0.59	0.31	0.40 NP [c]	3 / 10	0.1 - 0.27	0.15	0.27 NP [d]	11 / 20	0.1 - 0.59	0.21	0.26 NP [c]	2 / 16	0.1 - 0.86	0.19	0.55 NP [g]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Aroclor-1254	10	2	100	3 / 10	0.033 - 0.066	0.024	0.066 NP [d]	0 / 10	All ND	NA	NC [a]	3 / 20	0.033 - 0.066	0.016	0.066 NP [d]	5 / 16	0.008 - 0.013	0.012	0.012 NP [c]
Aroclor-1260	10	2	100	9 / 10	0.031 - 0.23	0.10	0.15 NP [c]	9 / 10	0.019 - 0.07	0.035	0.046 NP [e]	18 / 20	0.019 - 0.23	0.058	0.10 NP [f]	2 / 16	0.008 - 0.037	0.014	0.037 NP [e]
Aroclor-1262	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
PCBs (Total)	10	2	100	10 / 10	0.031 - 0.23	0.12	0.16 N [h]	9 / 10	0.019 - 0.07	0.035	0.047 NP [e]	19 / 20	0.019 - 0.23	0.062	0.11 NP [f]	7 / 16	0.008 - 0.037	0.013	0.015 NP [d]

Table P-015
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	10 / 10	3510 - 8690	7012	7994 N [h]	10 / 10	4610 - 9150	6533	7442 N [h]	20 / 20	3510 - 9150	6693	7180 N [h]	16 / 16	3260 - 9050	5979	6726 N [h]
Antimony		20	300	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Arsenic	40	20	200	10 / 10	1.9 - 3.8	2.7	3.0 N [h]	10 / 10	1.2 - 3.2	1.9	2.2 N [h]	20 / 20	1.2 - 3.8	2.1	2.3 N [h]	16 / 16	0.48 - 3.7	1.9	2.2 N [h]
Barium	200,000	1,000	10,000	10 / 10	11.6 - 34.7	20	24 G [j]	10 / 10	10.7 - 24.4	15.6	18.3 G [j]	20 / 20	10.7 - 34.7	17.1	18.7 G [j]	16 / 16	7.2 - 32.2	15.3	17.9 G [j]
Beryllium		100	2,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Cadmium	60	2	300	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Calcium		NS	NS	10 / 10	288 - 776	507	595 N [h]	10 / 10	158 - 561	384	458 N [h]	20 / 20	158 - 776	425	470 N [h]	16 / 16	127 - 683	361	430 N [h]
Chromium	200	30	2,000	10 / 10	6.6 - 21.7	9.7	12.5 N [i]	10 / 10	6.6 - 10	8.3	8.9 N [h]	20 / 20	6.6 - 21.7	8.8	9.7 N [i]	16 / 16	4.6 - 11.7	7.8	8.6 N [h]
Cobalt		NS	NS	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Copper		NS	NS	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Iron		NS	NS	10 / 10	6120 - 10300	8183	8862 N [h]	10 / 10	6090 - 10300	7881	8706 N [h]	20 / 20	6090 - 10300	7982	8387 N [h]	16 / 16	3690 - 10500	7414	8163 N [h]
Lead	1,000	300	3,000	10 / 10	25.7 - 109	57	70 N [h]	10 / 10	6.3 - 85.2	27	50 G [j]	20 / 20	6.3 - 109	37	49 G [j]	16 / 16	2.8 - 101	16.0	26 G [j]
Magnesium		NS	NS	10 / 10	337 - 2390	1116	1496 G [j]	10 / 10	855 - 1740	1284	1438 N [h]	20 / 20	337 - 2390	1228	1342 N [h]	16 / 16	713 - 1830	1195	1320 N [h]
Manganese		NS	NS	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Mercury		20	300	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Nickel		20	7,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Potassium		NS	NS	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Selenium		400	8,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Silver		100	2,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Sodium		NS	NS	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Thallium		8	800	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 16	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

N - Normal Distribution
[h] 95% Student's-t UCL
[i] 95% Modified-t UCL

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

G - Gamma Distribution
[j] 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 8/13/10
Checked by / Date: KJC 8/13/10

P:\Documents\SITES\PSWS NEW BEDFORD\Supplemental Assessment\Results & Communication\ Evaluations as of 09 20 10, P-015

MassDEP

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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Secretary

KENNETH L. KIMMELL
Commissioner

August 5, 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-016
SAP Data Risk Evaluation – No USEPA Action Recommended

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-016 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-016. 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 eleven 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-016, MassDEP provided you the following preliminary determinations:

- A condition of No Significant Risk, as defined in the MCP, was determined to exist for current use of the property for the soil located between the ground surface and 3 feet in depth. Specifically, the average concentrations and the 95% UCL calculated for all COCs detected in samples collected from the top 3 feet are below the applicable MCP Method 1 S-1 soil standards. No further action is required for the soils at this interval on this property.

- 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. Both the average concentration of all COCs and the 95% UCL calculated for all COCs were below the applicable standards. No further action is required for the soils at this interval on this property.

Property P-016 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-016:

- MassDEP has verified its Preliminary Risk Evaluation determination that a condition of No Significant Risk to human health, as defined in the MCP, exists for both current and foreseeable future use of the property for the soil located between 0 to 3 feet and 3 to 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/lm

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-016

Table P-016
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 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Acenaphthene	180,000	1,000	10,000	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Acenaphthylene	180,000	1,000	10,000	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Anthracene	920,000	1,000	10,000	1 / 11	0.083 - 0.083	0.15	NC [b]	0 / 11	All ND	NA	NC [a]	1 / 22	0.083 - 0.083	0.15	NC [b]	0 / 11	All ND	NA	NC [a]
Benzo(a)anthracene	160	7	3,000	2 / 11	0.059 - 0.23	0.15	0.30 NP [c]	0 / 11	All ND	NA	NC [a]	2 / 22	0.059 - 0.23	0.15	0.29 NP [c]	0 / 11	All ND	NA	NC [a]
Benzo(a)pyrene	16	2	300	7 / 11	0.042 - 0.21	0.10	0.13 NP [d]	0 / 11	All ND	NA	NC [a]	7 / 22	0.042 - 0.21	0.13	0.11 NP [f]	0 / 11	All ND	NA	NC [a]
Benzo(b)fluoranthene	160	7	3,000	7 / 11	0.058 - 0.3	0.12	0.15 NP [d]	0 / 11	All ND	NA	NC [a]	7 / 22	0.058 - 0.3	0.14	0.096 NP [f]	0 / 11	All ND	NA	NC [a]
Benzo(g,h,i)perylene	120,000	1,000	10,000	1 / 11	0.11 - 0.11	0.15	NC [b]	0 / 11	All ND	NA	NC [a]	1 / 22	0.11 - 0.11	0.15	NC [b]	0 / 11	All ND	NA	NC [a]
Benzo(k)fluoranthene	1,600	70	10,000	1 / 11	0.11 - 0.11	0.15	NC [b]	0 / 11	All ND	NA	NC [a]	1 / 22	0.11 - 0.11	0.15	NC [b]	0 / 11	All ND	NA	NC [a]
Chrysene	16,000	70	10,000	9 / 11	0.035 - 0.25	0.089	0.17 NP [e]	1 / 11	0.041 - 0.041	0.14	NC [b]	10 / 22	0.035 - 0.25	1.1	0.10 NP [f]	0 / 11	All ND	NA	NC [a]
Dibenz(a,h)anthracene	16	0.7	300	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Fluoranthene	120,000	1,000	10,000	10 / 11	0.05 - 0.5	0.13	0.29 NP [e]	2 / 11	0.044 - 0.093	0.13	0.11 NP [c]	12 / 22	0.044 - 0.5	1.2	0.12 NP [f]	0 / 11	All ND	NA	NC [a]
Fluorene	120,000	1,000	10,000	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Indeno(1,2,3-cd)pyrene	160	7	3,000	1 / 11	0.1 - 0.1	0.15	NC [b]	0 / 11	All ND	NA	NC [a]	1 / 22	0.1 - 0.1	0.15	NC [b]	0 / 11	All ND	NA	NC [a]
Naphthalene	61,000	100	10,000	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Phenanthrene	120,000	500	10,000	2 / 11	0.061 - 0.36	0.17	0.36 NP [d]	1 / 11	0.097 - 0.097	0.14	NC [b]	3 / 22	0.061 - 0.36	1.3	0.12 NP [c]	0 / 11	All ND	NA	NC [a]
Pyrene	92,000	1,000	10,000	3 / 11	0.088 - 0.43	0.17	0.19 NP [c]	0 / 11	All ND	NA	NC [a]	3 / 22	0.088 - 0.43	0.15	0.43 NP [f]	0 / 11	All ND	NA	NC [a]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Aroclor-1254	10	2	100	4 / 11	0.009 - 0.054	0.018	0.033 NP [f]	1 / 11	0.013 - 0.013	0.012	NC [b]	5 / 22	0.009 - 0.054	0.13	0.017 NP [c]	0 / 11	All ND	NA	NC [a]
Aroclor-1260	10	2	100	7 / 11	0.0052 - 0.025	0.013	0.018 NP [c]	1 / 11	0.01 - 0.01	0.012	NC [b]	8 / 22	0.0052 - 0.025	0.11	0.015 NP [f]	0 / 11	All ND	NA	NC [a]
Aroclor-1262	10	2	100	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
PCBs (Total)	10	2	100	7 / 11	0.0052 - 0.068	0.023	0.035 NP [c]	2 / 11	0.01 - 0.013	0.012	0.014 NP [c]	9 / 22	0.0052 - 0.068	0.14	0.020 NP [c]	0 / 11	All ND	NA	NC [a]

Table P-016
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	11 / 11	6490 - 8780	7886	8275 N [h]	11 / 11	4130 - 7740	6215	6913 N [h]	22 / 22	4130 - 8780	60952	7170 N [h]	11 / 11	2070 - 6570	3630	4348 N [h]
Antimony		20	300	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Arsenic	40	20	200	8 / 11	3.4 - 8.4	4.0	5.4 NP [c]	1 / 11	3 - 3	1.1	NC [b]	9 / 22	3 - 8.4	18.8	4.0 NP [f]	0 / 11	All ND	NA	NC [a]
Barium	200,000	1,000	10,000	11 / 11	11.2 - 26.8	16.4	19.1 N [h]	11 / 11	7.3 - 18.3	10.5	12.5 G [k]	22 / 22	7.3 - 26.8	112	13.9 G [k]	11 / 11	4.4 - 26.9	11.2	15.1 G [k]
Beryllium		100	2,000	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Cadmium	60	2	300	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Calcium		NS	NS	11 / 11	276 - 2320	812	1342 LN [j]	11 / 11	173 - 531	289	357 LN [j]	22 / 22	173 - 2320	4169	820 NP [g]	11 / 11	177 - 829	524	623 N [h]
Chromium	200	30	2,000	11 / 11	9.9 - 20.2	14.6	16.5 N [h]	11 / 11	5.7 - 16.4	10.3	12.2 N [h]	22 / 22	5.7 - 20.2	**105**	12.9 N [h]	11 / 11	3.8 - 8.7	5.8	6.6 N [h]
Cobalt		NS	NS	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Copper		NS	NS	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Iron		NS	NS	11 / 11	6740 - 9300	7820	8247 N [h]	11 / 11	5170 - 8490	6776	7333 N [h]	22 / 22	5170 - 9300	64118	7432 N [h]	11 / 11	3560 - 8890	5606	6458 N [h]
Lead	1,000	300	3,000	11 / 11	10.2 - 34.9	20	25 N [h]	11 / 11	2.7 - 14.8	7.3	9.7 N [h]	22 / 22	2.7 - 34.9	104	18.0 NP [g]	11 / 11	1.3 - 3.3	2.2	2.5 N [h]
Magnesium		NS	NS	11 / 11	927 - 2140	1248	1470 G [k]	11 / 11	883 - 2380	1254	1503 G [k]	22 / 22	883 - 2380	11269	1377 N [i]	11 / 11	685 - 3450	1404	1836 G [k]
Manganese		NS	NS	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Mercury		20	300	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Nickel		20	7,000	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Potassium		NS	NS	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Selenium		400	8,000	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Silver		100	2,000	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Sodium		NS	NS	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Thallium		8	800	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 11	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

N - Normal Distribution
[h] 95% Student's-t UCL
[i] 95% Modified-t UCL

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

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

G - Gamma Distribution
[k] 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 07/30/10
Checked by / Date: KJC 08/02/10

August 5, 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-019
SAP Data Risk Evaluation – No USEPA Action Recommended

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-019 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-019. 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 nine 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-019, MassDEP provided you the following preliminary determinations:

- A condition of No Significant Risk, as defined in the MCP, was determined to exist for current use of the property for the soil located between the ground surface and 3 feet in depth. Specifically, the average concentrations and the 95% UCL calculated for all COCs detected in samples collected from the top 3 feet are below the applicable MCP Method 1 S-1 soil standards. No further action is required for the soils at this interval on this property.

- 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. Both the average concentration of all COCs and the 95% UCL calculated for all COCs were below the applicable standards. No further action is required for the soils at this interval on this property.

Property P-019 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-019:

- MassDEP has verified its Preliminary Risk Evaluation determination that a condition of No Significant Risk to human health, as defined in the MCP, exists for both current and foreseeable future use of the property for the soil located between 0 to 3 feet and 3 to 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/lm

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-019

Table P-019
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 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Acenaphthene	180,000	1,000	10,000	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Acenaphthylene	180,000	1,000	10,000	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Anthracene	920,000	1,000	10,000	1 / 9	0.22 - 0.22	0.10	NC [b]	0 / 9	All ND	NA	NC [a]	1 / 18	0.22 - 0.22	0.096	NC [b]	0 / 15	All ND	NA	NC [a]
Benzo(a)anthracene	160	7	3,000	2 / 9	0.24 - 0.47	0.15	0.47 NP [c]	0 / 9	All ND	NA	NC [a]	2 / 18	0.24 - 0.47	0.11	0.27 NP [d]	0 / 15	All ND	NA	NC [a]
Benzo(a)pyrene	16	2	300	2 / 9	0.21 - 0.39	0.14	0.39 NP [c]	0 / 9	All ND	NA	NC [a]	2 / 18	0.21 - 0.39	0.11	0.23 NP [d]	0 / 15	All ND	NA	NC [a]
Benzo(b)fluoranthene	160	7	3,000	4 / 9	0.18 - 0.59	0.19	0.39 NP [c]	1 / 9	0.25 - 0.25	0.11	NC [b]	5 / 18	0.18 - 0.59	0.14	0.24 NP [d]	0 / 15	All ND	NA	NC [a]
Benzo(g,h,i)perylene	120,000	1,000	10,000	1 / 9	0.25 - 0.25	0.11	NC [b]	0 / 9	All ND	NA	NC [a]	1 / 18	0.25 - 0.25	0.097	NC [b]	0 / 15	All ND	NA	NC [a]
Benzo(k)fluoranthene	1,600	70	10,000	1 / 9	0.21 - 0.21	0.10	NC [b]	0 / 9	All ND	NA	NC [a]	1 / 18	0.21 - 0.21	0.095	NC [b]	0 / 15	All ND	NA	NC [a]
Chrysene	16,000	70	10,000	2 / 9	0.24 - 0.46	0.15	0.33 NP [d]	1 / 9	0.19 - 0.19	0.10	NC [b]	3 / 18	0.19 - 0.46	0.12	0.26 NP [c]	0 / 15	All ND	NA	NC [a]
Dibenz(a,h)anthracene	16	0.7	300	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Fluoranthene	120,000	1,000	10,000	6 / 9	0.2 - 0.97	0.30	0.50 NP [c]	1 / 9	0.39 - 0.39	0.12	NC [b]	7 / 18	0.2 - 0.97	0.18	0.32 NP [d]	0 / 15	All ND	NA	NC [a]
Fluorene	120,000	1,000	10,000	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Indeno(1,2,3-cd)pyrene	160	7	3,000	1 / 9	0.27 - 0.27	0.11	NC [b]	0 / 9	All ND	NA	NC [a]	1 / 18	0.27 - 0.27	0.097	NC [b]	0 / 15	All ND	NA	NC [a]
Naphthalene	61,000	100	10,000	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Phenanthrene	120,000	500	10,000	3 / 9	0.18 - 0.86	0.21	0.44 NP [d]	1 / 9	0.28 - 0.28	0.11	NC [b]	4 / 18	0.18 - 0.86	0.15	0.27 NP [d]	0 / 15	All ND	NA	NC [a]
Pyrene	92,000	1,000	10,000	4 / 9	0.22 - 0.8	0.23	0.50 NP [c]	1 / 9	0.31 - 0.31	0.12	NC [b]	5 / 18	0.22 - 0.8	0.15	0.30 NP [d]	0 / 15	All ND	NA	NC [a]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Aroclor-1254	10	2	100	1 / 9	0.026 - 0.026	0.012	NC [b]	0 / 9	All ND	NA	NC [a]	1 / 18	0.026 - 0.026	0.011	NC [b]	0 / 15	All ND	NA	NC [a]
Aroclor-1260	10	2	100	2 / 9	0.024 - 0.026	0.011	0.025 NP [d]	0 / 9	All ND	NA	NC [a]	2 / 18	0.024 - 0.026	0.0086	0.024 NP [d]	1 / 15	0.12 - 0.12	0.015	NC [b]
Aroclor-1262	10	2	100	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	1 / 15	0.0438 - 0.0438	0.0062	NC [b]
PCBs (Total)	10	2	100	3 / 9	0.024 - 0.026	0.016	0.026 NP [c]	0 / 9	All ND	NA	NC [a]	3 / 18	0.024 - 0.026	0.013	0.026 NP [c]	1 / 15	0.12 - 0.12	0.018	NC [b]

Table P-019
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
Inorganics (mg/Kg)																			
Aluminum		NS	NS	9 / 9	5330 - 8410	7134	7770 N [f]	9 / 9	4910 - 9560	7634	8609 N [f]	18 / 18	4910 - 9560	7468	7920 N [f]	15 / 15	3380 - 9840	6173	7158 N [f]
Antimony		20	300	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Arsenic	40	20	200	9 / 9	1.7 - 15	4.7	11.7 NP [e]	9 / 9	1.2 - 2.8	1.9	2.2 N [f]	18 / 18	1.2 - 15	2.8	5.3 NP [e]	15 / 15	0.46 - 2.1	1.1	1.3 G [h]
Barium	200,000	1,000	10,000	9 / 9	10.7 - 24.9	19.4	22 N [f]	9 / 9	8.6 - 25.4	15.8	18.8 N [f]	18 / 18	8.6 - 25.4	17.0	18.6 N [f]	15 / 15	7.2 - 56.9	18.9	25 G [h]
Beryllium		100	2,000	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Cadmium	60	2	300	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Calcium		NS	NS	9 / 9	643 - 2480	1200	1568 N [f]	9 / 9	241 - 775	424	528 N [f]	18 / 18	241 - 2480	682	850 G [h]	15 / 15	166 - 903	491	599 N [f]
Chromium	200	30	2,000	9 / 9	7.1 - 24.1	11.6	14.9 G [h]	9 / 9	7.4 - 14.4	9.9	11.2 N [f]	18 / 18	7.1 - 24.1	10.5	11.6 N [g]	15 / 15	6.4 - **43.1**	13.1	25 NP [e]
Cobalt		NS	NS	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Copper		NS	NS	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Iron		NS	NS	9 / 9	6030 - 9740	8068	8777 N [f]	9 / 9	6910 - 9120	8160	8644 N [f]	18 / 18	6030 - 9740	8129	8419 N [f]	15 / 15	5260 - 10500	7579	8307 N [f]
Lead	1,000	300	3,000	9 / 9	11.6 - 51.6	26	34 N [f]	9 / 9	2.9 - 25	14.3	18.9 N [f]	18 / 18	2.9 - 51.6	18.2	23 G [h]	15 / 15	1.5 - 14.7	4.6	6.8 LN [i]
Magnesium		NS	NS	9 / 9	994 - 2290	1646	1914 N [f]	9 / 9	966 - 2030	1430	1643 N [f]	18 / 18	966 - 2290	1502	1625 N [f]	15 / 15	781 - 5340	1916	2459 N [g]
Manganese		NS	NS	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Mercury		20	300	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Nickel		20	7,000	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Potassium		NS	NS	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Selenium		400	8,000	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Silver		100	2,000	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Sodium		NS	NS	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Thallium		8	800	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 9	All ND	NA	NC [a]	0 / 9	All ND	NA	NC [a]	0 / 18	All ND	NA	NC [a]	0 / 15	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

N - Normal Distribution
[f] 95% Student's-t UCL
[g] 95% Modified-t UCL

NP - Non-Parametric Distribution
[c] 95% KM (Percentile Bootstrap) UCL
[d] 95% KM (t) UCL
[e] 95% Chebyshev (Mean, Sd) UCL

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

LN - Log Normal Distribution
[i] 95% H-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 9/16/10
Checked by / Date: KJC 9/17/10

August 5, 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-032
SAP Data Risk Evaluation – No USEPA Action Recommended

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-032 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-032. 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 seven 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-032, MassDEP provided you the following preliminary determinations:

- A condition of No Significant Risk, as defined in the MCP, was determined to exist for current use of the property for the soil located between the ground surface and 3 feet in depth. Both the average concentrations and the 95% UCL calculated for all COCs for this interval are below the applicable standard. No further action is required for the soils at this interval.

- Furthermore, a condition of No Significant Risk, as defined in the MCP, for foreseeable future use of the property was not determined to exist for the soil located between 3 feet and 12 feet below the ground surface. This is because, although the average concentration of all COCs, including lead, 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, the 95% UCL calculated for lead for this interval was above the applicable standard. Because this soil is at depth, it does not necessarily need to be removed to be protective of the current use of the property.

Property P-032 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-032:

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

- Furthermore, 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. Applying the 95% UCL for data evaluation of the soil

located between 3 and 12 feet bgs is not necessary for Property P-032. 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/lm

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-032

Table P-032
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 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	1 / 14	0.21 - 0.21	0.24	NC [b]
Acenaphthene	180,000	1,000	10,000	1 / 7	0.25 - 0.25	0.19	NC [b]	2 / 7	0.05 - 0.23	0.17	0.23 NP [g]	3 / 14	0.05 - 0.25	0.18	0.24 NP [e]	1 / 14	0.12 - 0.12	0.23	NC [b]
Acenaphthylene	180,000	1,000	10,000	0 / 7	All ND	NA	NC [a]	2 / 7	0.07 - 0.13	0.14	0.16 NP [e]	2 / 14	0.07 - 0.13	0.16	0.13 NP [e]	2 / 14	0.12 - 0.13	0.23	0.13 NP [e]
Anthracene	920,000	1,000	10,000	4 / 7	0.06 - 0.72	0.22	0.78 NP [c]	5 / 7	0.06 - 1.3	0.32	1.1 NP [h]	9 / 14	0.06 - 1.3	0.28	0.79 NP [c]	2 / 14	0.21 - 0.33	0.25	0.31 NP [e]
Benzo(a)anthracene	160	7	3,000	7 / 7	0.25 - 1.17	0.41	0.96 NP [d]	7 / 7	0.13 - 3.62	0.81	2.3 G [l]	14 / 14	0.13 - 3.62	0.67	1.6 NP [d]	7 / 14	0.15 - 1.1	0.32	0.46 NP [e]
Benzo(a)pyrene	16	2	300	7 / 7	0.28 - 0.94	0.41	0.60 N [j]	7 / 7	0.14 - **3.72**	0.84	**2.4** G [l]	14 / 14	0.14 - **3.72**	0.69	1.7 NP [d]	9 / 14	0.06 - 0.82	0.28	0.39 NP [f]
Benzo(b)fluoranthene	160	7	3,000	7 / 7	0.41 - 1.3	0.59	0.84 N [j]	7 / 7	0.17 - 5.3	1.2	3.4 G [l]	14 / 14	0.17 - 5.3	0.99	2.4 NP [d]	9 / 14	0.11 - 1.11	0.36	0.53 NP [f]
Benzo(g,h,i)perylene	120,000	1,000	10,000	7 / 7	0.17 - 0.44	0.24	0.32 G [l]	7 / 7	0.09 - 1.87	0.46	1.8 LN [m]	14 / 14	0.09 - 1.87	0.39	0.86 NP [d]	8 / 14	0.07 - 0.47	0.20	0.24 NP [e]
Benzo(k)fluoranthene	1,600	70	10,000	7 / 7	0.13 - 0.53	0.21	0.32 N [j]	7 / 7	0.07 - 1.74	0.40	0.94 LN [n]	14 / 14	0.07 - 1.74	0.34	0.79 NP [d]	7 / 14	0.08 - 0.41	0.20	0.23 NP [e]
Chrysene	16,000	70	10,000	7 / 7	0.26 - 1.07	0.42	0.65 N [j]	7 / 7	0.15 - 3.6	0.82	2.3 G [l]	14 / 14	0.15 - 3.6	0.68	1.6 NP [d]	11 / 14	0.04 - 1.28	0.29	0.69 NP [h]
Dibenz(a,h)anthracene	16	0.7	300	6 / 7	0.05 - 0.12	0.11	0.092 NP [e]	5 / 7	0.06 - 0.64	0.18	0.33 NP [g]	11 / 14	0.05 - 0.64	0.16	0.22 NP [g]	2 / 14	0.06 - 0.15	0.23	0.19 NP [e]
Fluoranthene	120,000	1,000	10,000	7 / 7	0.44 - 2.61	0.83	2.1 NP [d]	7 / 7	0.26 - 7.19	1.6	4.7 G [l]	14 / 14	0.26 - 7.19	1.4	3.3 NP [d]	11 / 14	0.06 - 1.75	0.46	1.1 NP [h]
Fluorene	120,000	1,000	10,000	1 / 7	0.25 - 0.25	0.19	NC [b]	3 / 7	0.05 - 0.38	0.16	0.38 NP [f]	4 / 14	0.05 - 0.38	0.17	0.20 NP [e]	2 / 14	0.12 - 0.42	0.25	0.22 NP [e]
Indeno(1,2,3-cd)pyrene	160	7	3,000	7 / 7	0.15 - 0.38	0.21	0.28 G [l]	7 / 7	0.08 - 1.84	0.43	0.98 LN [n]	14 / 14	0.08 - 1.84	0.36	0.83 NP [d]	7 / 14	0.06 - 0.43	0.20	0.24 NP [e]
Naphthalene	61,000	100	10,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Phenanthrene	120,000	500	10,000	7 / 7	0.2 - 2.49	0.58	2.0 NP [d]	7 / 7	0.13 - 4.38	1.1	3.1 G [l]	14 / 14	0.13 - 4.38	0.91	3.7 NP [l]	8 / 14	0.09 - 3.27	0.55	1.0 NP [g]
Pyrene	92,000	1,000	10,000	7 / 7	0.43 - 2.15	0.78	1.8 NP [d]	7 / 7	0.24 - 6.18	1.4	4.0 G [l]	14 / 14	0.24 - 6.18	1.2	2.8 NP [d]	7 / 14	0.29 - 2.86	0.55	0.95 NP [e]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Aroclor-1254	10	2	100	4 / 7	0.011 - 0.028	0.018	0.029 NP [e]	0 / 7	All ND	NA	NC [a]	4 / 14	0.011 - 0.028	0.015	0.027 NP [e]	0 / 14	All ND	NA	NC [a]
Aroclor-1260	10	2	100	3 / 7	0.01 - 0.024	0.014	0.024 NP [f]	3 / 7	0.011 - 0.034	0.016	0.022 NP [e]	6 / 14	0.01 - 0.034	0.015	0.019 NP [f]	0 / 14	All ND	NA	NC [a]
Aroclor-1262	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
PCBs (Total)	10	2	100	5 / 7	0.013 - 0.052	0.023	0.035 NP [e]	3 / 7	0.011 - 0.034	0.016	0.022 NP [e]	8 / 14	0.011 - 0.052	0.018	0.024 NP [e]	0 / 14	All ND	NA	NC [a]

Table P-032
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	7 / 7	4110 - 6040	4894	5449 N [k]	7 / 7	3750 - 8020	5111	6217 N [k]	14 / 14	3750 - 8020	5039	5520 N [j]	14 / 14	2310 - 8490	5635	6611 N [k]
Antimony		20	300	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Arsenic	40	20	200	7 / 7	4 - 7.3	5.7	6.5 N [k]	7 / 7	2.8 - 8.7	6.3	7.7 N [k]	14 / 14	2.8 - 8.7	6.1	6.7 N [k]	14 / 14	1.3 - 12.9	7.2	9.2 N [k]
Barium	200,000	1,000	10,000	7 / 7	89.3 - 170	119	139 N [k]	7 / 7	39.4 - 182	112	145 N [k]	14 / 14	39.4 - 182	114	129 N [k]	14 / 14	30.1 - **1280**	211	372 G [l]
Beryllium		100	2,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Cadmium	60	2	300	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Calcium		NS	NS	7 / 7	1280 - 2910	1937	2346 N [k]	7 / 7	506 - 2980	1827	2446 N [k]	14 / 14	506 - 2980	1863	2135 N [k]	14 / 14	1200 - 7490	3533	4457 N [k]
Chromium	200	30	2,000	7 / 7	8.4 - 18.4	12.4	15.0 N [k]	7 / 7	6.6 - 13.5	10.0	11.9 N [k]	14 / 14	6.6 - 18.4	10.8	11.9 N [k]	14 / 14	5.4 - 23.9	11.9	14.4 N [k]
Cobalt		NS	NS	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Copper		NS	NS	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Iron		NS	NS	7 / 7	5620 - 11700	8091	9637 N [k]	7 / 7	4710 - 12000	7373	9206 N [k]	14 / 14	4710 - 12000	7612	8521 G [l]	14 / 14	3140 - 44100	11333	16320 G [l]
Lead	1,000	300	3,000	7 / 7	194 - **339**	270	**306** N [k]	7 / 7	111 - **363**	221	281 N [k]	14 / 14	111 - **363**	237	265 N [k]	14 / 14	27.3 - **671**	216	**361** G [l]
Magnesium		NS	NS	7 / 7	524 - 2010	1177	1551 N [k]	7 / 7	429 - 1350	821	1092 N [k]	14 / 14	429 - 2010	940	1103 N [k]	14 / 14	261 - 1150	687	824 N [k]
Manganese		NS	NS	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Mercury		20	300	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Nickel		20	7,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Potassium		NS	NS	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Selenium		400	8,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Silver		100	2,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Sodium		NS	NS	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Thallium		8	800	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 14	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] 97.5% KM (Chebyshev) UCL
[d] 95% Chebyshev (Mean, Sd) UCL
[e] 95% KM (t) UCL
[f] 95% KM (Percentile Bootstrap) UCL
[g] 95% KM (BCA) UCL
[h] 95% KM (Chebyshev) UCL
[i] 99% Chebyshev (Mean, Sd) UCL

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

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

LN - Log Normal Distribution
[m] 95% H-UCL
[n] 95% Chebyshev (MVUE) 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 8/20/10
Checked by / Date: KJC 8/25/10

P:\Documents\SITES\PSWS NEW BEDFORD\Supplemental Assessment\Results & Communication\
Evaluations as of 09 20 10, P-032

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

DEVAL L. PATRICK
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Secretary

KENNETH L. KIMMELL
Commissioner

August 5, 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-036
SAP Data Risk Evaluation – No USEPA Action Recommended

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-036 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-036. 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 eight 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-036, MassDEP provided you the following preliminary determinations:

- A condition of No Significant Risk, as defined in the MCP, was determined to exist for current use of the property for the soil located between the ground surface and 3 feet in depth. Both the average concentrations and the 95% UCL calculated for all COCs for this interval are below the applicable standard. No further action is required for the soils at this interval.

- Furthermore, a condition of No Significant Risk, as defined in the MCP, for foreseeable future use of the property was not determined to exist for the soil located between 3 feet and 12 feet below the ground surface. This is because, although the average concentration of all COCs, including lead, 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, the 95% UCL calculated for lead for this interval was above the applicable standard. Because this soil is at depth, it does not necessarily need to be removed to be protective of the current use of the property.

Property P-036 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-036:

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

- Furthermore, 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. Applying the 95% UCL for data evaluation of the soil

located between 3 and 12 feet bgs is not necessary for Property P-036. 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/lm

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-036

Table P-036
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 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	1 / 16	1.5 - 1.5	0.25	NC [b]
Acenaphthene	180,000	1,000	10,000	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	3 / 16	0.27 - 1.98	0.29	2.0 NP [h]
Acenaphthylene	180,000	1,000	10,000	1 / 8	0.22 - 0.22	0.17	NC [b]	2 / 8	0.27 - 0.46	0.20	0.46 NP [f]	3 / 16	0.22 - 0.46	0.19	0.31 NP [f]	2 / 16	0.29 - 0.54	0.20	0.54 NP [f]
Anthracene	920,000	1,000	10,000	8 / 8	0.16 - 0.84	0.39	0.57 N [c]	6 / 8	0.18 - 0.97	0.34	0.53 NP [f]	14 / 16	0.16 - 0.97	0.36	0.59 NP [g]	4 / 16	0.24 - 4.25	0.54	1.8 NP [f]
Benzo(a)anthracene	160	7	3,000	8 / 8	0.49 - 1.68	0.93	1.2 N [c]	6 / 8	0.54 - 1.74	0.78	1.2 NP [e]	14 / 16	0.49 - 1.74	0.83	1.0 NP [h]	7 / 16	0.18 - 4.89	0.80	1.5 NP [e]
Benzo(a)pyrene	16	2	300	8 / 8	0.53 - 1.45	0.85	1.1 N [c]	8 / 8	0.22 - 1.31	0.73	1.0 N [c]	16 / 16	0.22 - 1.45	0.77	0.90 N [c]	7 / 16	0.26 - **3.81**	0.71	1.3 NP [e]
Benzo(b)fluoranthene	160	7	3,000	8 / 8	0.66 - 1.99	1.1	1.4 N [c]	8 / 8	0.21 - 1.66	0.96	1.3 N [c]	16 / 16	0.21 - 1.99	1.0	1.2 N [c]	7 / 16	0.26 - 4.94	0.92	1.8 NP [f]
Benzo(g,h,i)perylene	120,000	1,000	10,000	8 / 8	0.27 - 0.97	0.53	0.71 N [c]	6 / 8	0.16 - 0.83	0.42	0.60 NP [e]	14 / 16	0.16 - 0.97	0.46	0.56 NP [f]	6 / 16	0.17 - 2.78	0.54	1.1 NP [f]
Benzo(k)fluoranthene	1,600	70	10,000	8 / 8	0.22 - 0.63	0.38	0.48 N [c]	6 / 8	0.23 - 0.58	0.34	0.45 NP [e]	14 / 16	0.22 - 0.63	0.35	0.41 NP [e]	6 / 16	0.2 - 1.89	0.39	0.69 NP [f]
Chrysene	16,000	70	10,000	8 / 8	0.47 - 1.41	0.85	1.1 N [c]	6 / 8	0.54 - 1.71	0.76	1.1 NP [e]	14 / 16	0.47 - 1.71	0.79	0.99 NP [h]	7 / 16	0.18 - 4.24	0.76	1.4 NP [f]
Dibenz(a,h)anthracene	16	0.7	300	2 / 8	0.19 - 0.27	0.18	0.31 NP [e]	2 / 8	0.18 - 0.21	0.16	0.22 NP [e]	4 / 16	0.18 - 0.27	0.17	0.23 NP [e]	3 / 16	0.2 - 0.6	0.22	0.60 NP [f]
Fluoranthene	120,000	1,000	10,000	8 / 8	0.9 - 3.15	1.8	2.4 N [c]	8 / 8	0.24 - 2.74	1.4	2.0 N [c]	16 / 16	0.24 - 3.15	1.5	1.8 N [c]	8 / 16	0.22 - 12	1.8	3.4 NP [e]
Fluorene	120,000	1,000	10,000	3 / 8	0.18 - 0.25	0.18	0.25 NP [e]	2 / 8	0.17 - 0.26	0.17	0.30 NP [e]	5 / 16	0.17 - 0.26	0.17	0.24 NP [e]	3 / 16	0.39 - 2.41	0.33	0.78 NP [e]
Indeno(1,2,3-cd)pyrene	160	7	3,000	8 / 8	0.36 - 0.97	0.59	0.82 LN [k]	6 / 8	0.21 - 0.85	0.47	0.66 NP [e]	14 / 16	0.21 - 0.97	0.51	0.61 NP [f]	5 / 16	0.49 - 2.74	0.57	1.4 NP [f]
Naphthalene	61,000	100	10,000	1 / 8	0.16 - 0.16	0.16	NC [b]	1 / 8	0.18 - 0.18	0.15	NC [b]	2 / 16	0.16 - 0.18	0.16	0.19 NP [e]	2 / 16	0.35 - 2.21	0.30	2.2 NP [h]
Phenanthrene	120,000	500	10,000	8 / 8	0.52 - 2.76	1.3	1.8 N [c]	6 / 8	0.52 - 2.09	0.90	1.4 NP [e]	14 / 16	0.52 - 2.76	1.0	1.3 NP [h]	6 / 16	0.24 - 13.2	1.6	3.8 NP [f]
Pyrene	92,000	1,000	10,000	8 / 8	0.84 - 2.62	1.5	2.0 N [c]	8 / 8	0.22 - 3.25	1.3	2.0 N [c]	16 / 16	0.22 - 3.25	1.4	1.7 N [c]	8 / 16	0.2 - 9.76	1.5	2.8 NP [e]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Aroclor-1254	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Aroclor-1260	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Aroclor-1262	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
PCBs (Total)	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]

Table P-036
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	8 / 8	5050 - 5900	5544	5753 N [c]	8 / 8	4720 - 7170	5919	6501 N [c]	16 / 16	4720 - 7170	5794	6051 G [l]	16 / 16	3250 - 8140	5364	5988 N [c]
Antimony		20	300	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Arsenic	40	20	200	8 / 8	2.5 - 4.8	3.3	3.8 N [c]	8 / 8	1.3 - 5.6	2.7	3.7 N [c]	16 / 16	1.3 - 5.6	2.9	3.4 G [l]	16 / 16	0.3 - 16.1	4.5	7.5 G [l]
Barium	200,000	1,000	10,000	8 / 8	42.4 - 73.8	57	65 N [c]	8 / 8	25.7 - 88.4	52	69 N [c]	16 / 16	25.7 - 88.4	54	61 N [c]	16 / 16	14.4 - 316	117	192 G [l]
Beryllium		100	2,000	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Cadmium	60	2	300	8 / 8	0.31 - 0.57	0.37	0.43 G [l]	8 / 8	0.22 - 0.58	0.36	0.45 N [c]	16 / 16	0.22 - 0.58	0.36	0.40 G [l]	16 / 16	0.093 - **4**	0.65	1.1 G [l]
Calcium		NS	NS	8 / 8	864 - 1750	1318	1501 N [c]	8 / 8	617 - 12900	2794	6467 G [l]	16 / 16	617 - 12900	2302	5244 NP [i]	16 / 16	648 - 4430	2316	3142 G [l]
Chromium	200	30	2,000	8 / 8	9.5 - 12.5	11.2	11.9 N [c]	8 / 8	8.8 - 12.8	10.8	11.8 N [c]	16 / 16	8.8 - 12.8	10.9	11.4 N [c]	16 / 16	8.1 - 23.7	13.6	15.5 N [c]
Cobalt		NS	NS	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Copper		NS	NS	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Iron		NS	NS	8 / 8	7380 - 8930	8080	8438 N [c]	8 / 8	6840 - 13000	8656	10009 G [l]	16 / 16	6840 - 13000	8464	9030 N [d]	16 / 16	4570 - 31100	10181	18202 NP [i]
Lead	1,000	300	3,000	8 / 8	120 - 232	151	176 N [d]	8 / 8	41.3 - **317**	150	214 N [c]	16 / 16	41.3 - **317**	150	182 G [l]	16 / 16	2.2 - **859**	294	**1074** NP [j]
Magnesium		NS	NS	8 / 8	1220 - 1690	1450	1540 N [c]	8 / 8	1190 - 2260	1698	1975 N [c]	16 / 16	1190 - 2260	1615	1741 N [d]	16 / 16	428 - 2030	1264	1492 N [c]
Manganese		NS	NS	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Mercury		20	300	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Nickel		20	7,000	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Potassium		NS	NS	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Selenium		400	8,000	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Silver		100	2,000	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Sodium		NS	NS	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Thallium		8	800	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	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

N - Normal Distribution
[c] 95% Student's-t UCL
[d] 95% Modified-t UCL

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

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

G - Gamma Distribution
[l] 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 9/9/10
Checked by / Date: KJC 9/10/10

MassDEP
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

DEVAL L. PATRICK
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Secretary

KENNETH L. KIMMELL
Commissioner

August 10, 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-034
SAP Data Risk Evaluation – No USEPA Action Recommended

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-034 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-034. 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 nineteen 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-034, MassDEP provided you the following preliminary determinations:

- A condition of No Significant Risk, as defined in the MCP, was determined to exist for current use of the property for the soil located between the ground surface and 3 feet in depth. Specifically, the average concentrations and the 95% UCL calculated for all COCs detected in samples collected from the top 3 feet are below the applicable MCP Method 1 S-1 soil standards. No further action is required for the soils at this interval on this property.

- 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. Both the average concentration of all COCs and the 95% UCL calculated for all COCs were below the applicable standards. No further action is required for the soils at this interval on this property.

Property P-034 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-034:

- MassDEP has verified its Preliminary Risk Evaluation determination that a condition of No Significant Risk to human health, as defined in the MCP, exists for both current and foreseeable future use of the property for the soil located between 0 to 3 feet and 3 to 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/lm

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-034

Table P-034
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
PAHs (mg/Kg)																			
2-Methylnaphthalene	61,000	300	5,000	0 / 19	All ND	NA	NC [a]	2 / 19	0.19 - 0.3	0.22	0.22 NP [c]	2 / 38	0.19 - 0.3	0.21	0.20 NP [c]	2 / 27	0.22 - 2.59	0.29	1.1 NP [h]
Acenaphthene	180,000	1,000	10,000	1 / 19	0.05 - 0.05	0.18	NC [b]	3 / 19	0.05 - 0.77	0.25	0.77 NP [e]	4 / 38	0.05 - 0.77	0.22	0.15 NP [e]	3 / 27	0.12 - 1.14	0.24	1.1 NP [e]
Acenaphthylene	180,000	1,000	10,000	1 / 19	0.15 - 0.15	0.19	NC [b]	4 / 19	0.07 - 0.15	0.20	0.14 NP [c]	5 / 38	0.07 - 0.15	0.19	0.13 NP [c]	2 / 27	0.08 - 0.87	0.23	0.37 NP [h]
Anthracene	920,000	1,000	10,000	2 / 19	0.06 - 0.23	0.19	0.29 NP [c]	6 / 19	0.2 - 1.74	0.30	0.50 NP [c]	8 / 38	0.06 - 1.74	0.26	0.36 NP [e]	3 / 27	0.28 - 1.5	0.27	0.43 NP [c]
Benzo(a)anthracene	160	7	3,000	8 / 19	0.05 - 0.55	0.18	0.20 NP [c]	12 / 19	0.06 - 2.46	0.49	0.79 NP [d]	20 / 38	0.05 - 2.46	0.39	0.73 NP [f]	3 / 27	1 - 1.8	0.33	1.8 NP [e]
Benzo(a)pyrene	16	2	300	11 / 19	0.04 - 0.54	0.16	0.19 NP [c]	13 / 19	0.04 - **2.29**	0.46	0.74 NP [d]	24 / 38	0.04 - **2.29**	0.36	0.67 NP [f]	3 / 27	0.94 - 1.4	0.31	1.4 NP [e]
Benzo(b)fluoranthene	160	7	3,000	13 / 19	0.06 - 0.79	0.19	0.26 NP [d]	12 / 19	0.08 - 2.6	0.54	0.83 NP [d]	25 / 38	0.06 - 2.6	0.42	0.79 NP [f]	3 / 27	1.06 - 1.36	0.32	1.4 NP [e]
Benzo(g,h,i)perylene	120,000	1,000	10,000	5 / 19	0.04 - 0.29	0.18	0.12 NP [c]	10 / 19	0.04 - 1.35	0.27	0.40 NP [d]	15 / 38	0.04 - 1.35	0.24	0.28 NP [d]	3 / 27	0.55 - 0.6	0.25	0.60 NP [e]
Benzo(k)fluoranthene	1,600	70	10,000	4 / 19	0.05 - 0.24	0.18	0.20 NP [e]	8 / 19	0.08 - 1.09	0.28	0.37 NP [e]	12 / 38	0.05 - 1.09	0.25	0.25 NP [e]	3 / 27	0.42 - 0.45	0.23	0.45 NP [e]
Chrysene	16,000	70	10,000	17 / 19	0.03 - 0.55	0.13	0.27 NP [f]	15 / 19	0.04 - 2.49	0.49	1.2 NP [f]	32 / 38	0.03 - 2.49	0.37	0.72 NP [f]	3 / 27	0.95 - 2.06	0.34	2.1 NP [e]
Dibenz(a,h)anthracene	16	0.7	300	2 / 19	0.04 - 0.07	0.18	0.081 NP [c]	4 / 19	0.04 - 0.34	0.22	0.30 NP [e]	6 / 38	0.04 - 0.34	0.20	0.13 NP [c]	3 / 27	0.15 - 0.25	0.20	0.24 NP [c]
Fluoranthene	120,000	1,000	10,000	19 / 19	0.05 - 1.17	0.20	0.49 NP [g]	14 / 19	0.07 - 4.82	0.84	2.2 NP [f]	33 / 38	0.05 - 4.82	0.63	1.3 NP [f]	4 / 27	0.05 - 2.96	0.43	2.3 NP [e]
Fluorene	120,000	1,000	10,000	1 / 19	0.08 - 0.08	0.18	NC [b]	3 / 19	0.08 - 0.73	0.24	0.22 NP [c]	4 / 38	0.08 - 0.73	0.22	0.17 NP [e]	3 / 27	0.1 - 1.7	0.26	1.7 NP [e]
Indeno(1,2,3-cd)pyrene	160	7	3,000	3 / 19	0.05 - 0.23	0.18	0.23 NP [e]	8 / 19	0.05 - 1.06	0.24	0.37 NP [c]	11 / 38	0.05 - 1.06	0.22	0.27 NP [c]	3 / 27	0.42 - 0.48	0.23	0.48 NP [e]
Naphthalene	61,000	100	10,000	0 / 19	All ND	NA	NC [a]	2 / 19	0.2 - 0.21	0.21	0.21 NP [c]	2 / 38	0.2 - 0.21	0.20	0.21 NP [c]	3 / 27	0.07 - 2.26	0.28	0.42 NP [c]
Phenanthrene	120,000	500	10,000	9 / 19	0.06 - 1.07	0.20	0.26 NP [c]	11 / 19	0.05 - 5.11	0.68	1.2 NP [d]	20 / 38	0.05 - 5.11	0.52	1.1 NP [f]	3 / 27	1.01 - 5.09	0.48	5.1 NP [e]
Pyrene	92,000	1,000	10,000	8 / 19	0.09 - 1.16	0.25	0.36 NP [c]	13 / 19	0.09 - 5.54	0.93	1.6 NP [d]	21 / 38	0.09 - 5.54	0.70	1.5 NP [f]	3 / 27	2.28 - 3.36	0.49	3.4 NP [e]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 19	All ND	NA	NC [a]	1 / 19	0.17 - 0.17	0.021	NC [b]	1 / 38	0.17 - 0.17	0.018	NC [b]	0 / 27	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 27	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 27	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 27	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 27	All ND	NA	NC [a]
Aroclor-1254	10	2	100	11 / 19	0.015 - 0.047	0.021	0.028 NP [c]	14 / 19	0.009 - 1.9	0.15	0.77 NP [h]	25 / 38	0.009 - 1.9	0.11	0.31 NP [f]	18 / 28	0.007 - 0.57	0.065	0.11 NP [d]
Aroclor-1260	10	2	100	10 / 19	0.007 - 0.032	0.015	0.020 NP [c]	7 / 19	0.022 - 0.63	0.075	0.17 NP [d]	17 / 38	0.007 - 0.63	0.055	0.088 NP [d]	4 / 27	0.018 - 0.47	0.051	0.097 NP [c]
Aroclor-1262	10	2	100	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 27	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 27	All ND	NA	NC [a]
PCBs (Total)	10	2	100	15 / 19	0.007 - 0.075	0.028	0.036 NP [c]	16 / 19	0.009 - 1.9	0.21	0.88 NP [h]	31 / 38	0.007 - 1.9	0.15	0.37 NP [f]	19 / 28	0.007 - 1.04	0.10	0.17 NP [d]

Table P-034
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1]				1-3 ft [1]				0-3 ft [1, 2]				3+ ft [1]			
				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	19 / 19	3010 - 7360	5305	5828 N [i]	19 / 19	3530 - 8760	5338	5842 N [i]	38 / 38	3010 - 8760	5327	5606 N [i]	29 / 29	1890 - 9550	5608	6242 N [i]
Antimony		20	300	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 29	All ND	NA	NC [a]
Arsenic	40	20	200	18 / 19	0.49 - 1.7	1.1	1.2 NP [c]	16 / 19	0.49 - 1.9	1.2	1.4 NP [c]	34 / 38	0.49 - 1.9	1.2	1.3 NP [c]	23 / 29	0.26 - 4	1.4	1.7 NP [e]
Barium	200,000	1,000	10,000	19 / 19	14.3 - 71.4	36	43 N [i]	19 / 19	13.5 - 82.1	30	37 G [l]	38 / 38	13.5 - 82.1	32	36 LN [k]	29 / 29	6.1 - 83.3	32	38 N [i]
Beryllium		100	2,000	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 29	All ND	NA	NC [a]
Cadmium	60	2	300	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	1 / 29	0.56 - 0.56	0.34	NC [b]
Calcium		NS	NS	19 / 19	598 - 1970	1177	1419 LN [k]	19 / 19	535 - 2420	1021	1234 G [l]	38 / 38	535 - 2420	1073	1187 N [j]	29 / 29	331 - 11900	2078	2801 G [l]
Chromium	200	30	2,000	19 / 19	4.3 - **43.3**	18.7	26 G [l]	19 / 19	5 - **40.7**	12.2	15.5 G [l]	38 / 38	4.3 - **43.3**	14.4	21 NP [g]	28 / 29	3.2 - 19	10.2	11.5 NP [c]
Cobalt		NS	NS	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 29	All ND	NA	NC [a]
Copper		NS	NS	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 29	All ND	NA	NC [a]
Iron		NS	NS	19 / 19	5080 - 10400	7855	8492 N [i]	19 / 19	5220 - 9570	7615	8052 N [i]	38 / 38	5080 - 10400	7695	7976 N [i]	29 / 29	2530 - 16900	6637	7587 G [l]
Lead	1,000	300	3,000	19 / 19	7 - 45.7	18.6	23 N [i]	19 / 19	4.5 - 150	44	65 G [l]	38 / 38	4.5 - 150	36	45 LN [k]	28 / 29	2.1 - 126	26	50 NP [f]
Magnesium		NS	NS	19 / 19	961 - 5720	2866	4662 NP [g]	19 / 19	921 - 6330	2040	2575 N [j]	38 / 38	921 - 6330	2315	3178 NP [g]	29 / 29	660 - 4920	1628	1885 G [l]
Manganese		NS	NS	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 29	All ND	NA	NC [a]
Mercury		20	300	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 29	All ND	NA	NC [a]
Nickel		20	7,000	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 29	All ND	NA	NC [a]
Potassium		NS	NS	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 29	All ND	NA	NC [a]
Selenium		400	8,000	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 29	All ND	NA	NC [a]
Silver		100	2,000	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 29	All ND	NA	NC [a]
Sodium		NS	NS	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 29	All ND	NA	NC [a]
Thallium		8	800	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 29	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 29	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 29	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 29	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

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

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

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

G - Gamma Distribution
[l] 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 9/2/10
Checked by / Date: KJC 9/9/10

August 10, 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-038
SAP Data Risk Evaluation – No USEPA Action Recommended

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-038 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-038. 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 ten 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-038, MassDEP provided you the following preliminary determinations:

- A condition of No Significant Risk, as defined in the MCP, was determined to exist for current use of the property for the soil located between the ground surface and 3 feet in depth. Specifically, the average concentrations and the 95% UCL calculated for all COCs detected in samples collected from the top 3 feet are below the applicable MCP Method 1 S-1 soil standards. No further action is required for the soils at this interval on this property.

- 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. Both the average concentration of all COCs and the 95% UCL calculated for all COCs were below the applicable standards. No further action is required for the soils at this interval on this property.

Property P-038 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-038:

- MassDEP has verified its Preliminary Risk Evaluation determination that a condition of No Significant Risk to human health, as defined in the MCP, exists for both current and foreseeable future use of the property for the soil located between 0 to 3 feet and 3 to 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/lm

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-038

Table P-038
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 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Acenaphthene	180,000	1,000	10,000	0 / 10	All ND	NA	NC [a]	1 / 10	0.27 - 0.27	0.16	NC [b]	1 / 20	0.27 - 0.27	0.16	NC [b]	2 / 15	0.2 - 0.2	0.15	NC [b]
Acenaphthylene	180,000	1,000	10,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	2 / 15	0.16 - 0.17	0.15	0.17 NP [c]
Anthracene	920,000	1,000	10,000	0 / 10	All ND	NA	NC [a]	3 / 10	0.15 - 0.52	0.19	0.52 NP [d]	3 / 20	0.15 - 0.52	0.18	0.24 NP [c]	4 / 15	0.21 - 0.76	0.23	0.56 NP [d]
Benzo(a)anthracene	160	7	3,000	2 / 10	0.24 - 0.24	0.17	NC [b]	5 / 10	0.25 - 0.66	0.29	0.46 NP [d]	7 / 20	0.24 - 0.66	0.25	0.34 NP [c]	5 / 15	0.28 - 1.4	0.39	0.89 NP [d]
Benzo(a)pyrene	16	2	300	5 / 10	0.16 - 0.3	0.18	0.23 NP [c]	7 / 10	0.19 - 0.55	0.31	0.42 NP [d]	12 / 20	0.16 - 0.55	0.26	0.32 NP [d]	4 / 15	0.62 - 1.25	0.35	1.1 NP [d]
Benzo(b)fluoranthene	160	7	3,000	4 / 10	0.16 - 0.33	0.18	0.27 NP [d]	7 / 10	0.2 - 0.65	0.34	0.49 NP [d]	11 / 20	0.16 - 0.65	0.29	0.36 NP [c]	4 / 15	0.8 - 1.8	0.45	1.5 NP [d]
Benzo(g,h,i)perylene	120,000	1,000	10,000	1 / 10	0.21 - 0.21	0.16	NC [b]	5 / 10	0.16 - 0.42	0.23	0.35 NP [d]	6 / 20	0.16 - 0.42	0.20	0.28 NP [d]	4 / 15	0.28 - 0.83	0.23	0.54 NP [d]
Benzo(k)fluoranthene	1,600	70	10,000	0 / 10	All ND	NA	NC [a]	4 / 10	0.18 - 0.21	0.17	0.21 NP [c]	4 / 20	0.18 - 0.21	0.16	0.20 NP [c]	4 / 15	0.31 - 0.61	0.23	0.55 NP [d]
Chrysene	16,000	70	10,000	2 / 10	0.22 - 0.24	0.17	0.25 NP [c]	5 / 10	0.28 - 0.67	0.29	0.46 NP [d]	7 / 20	0.22 - 0.67	0.25	0.35 NP [d]	4 / 15	0.6 - 1.3	0.37	1.3 NP [d]
Dibenz(a,h)anthracene	16	0.7	300	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	1 / 15	0.23 - 0.23	0.15	NC [b]
Fluoranthene	120,000	1,000	10,000	3 / 10	0.24 - 0.59	0.24	0.59 NP [d]	7 / 10	0.21 - 1.51	0.52	0.81 NP [d]	10 / 20	0.21 - 1.51	0.43	0.57 NP [c]	4 / 15	1.21 - 2.74	0.65	2.6 NP [d]
Fluorene	120,000	1,000	10,000	0 / 10	All ND	NA	NC [a]	1 / 10	0.19 - 0.19	0.15	NC [b]	1 / 20	0.19 - 0.19	0.15	NC [b]	2 / 15	0.23 - 0.28	0.16	0.28 NP [d]
Indeno(1,2,3-cd)pyrene	160	7	3,000	1 / 10	0.22 - 0.22	0.16	NC [b]	5 / 10	0.17 - 0.37	0.22	0.33 NP [d]	6 / 20	0.17 - 0.37	0.20	0.28 NP [d]	4 / 15	0.31 - 0.91	0.25	0.59 NP [d]
Naphthalene	61,000	100	10,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Phenanthrene	120,000	500	10,000	2 / 10	0.28 - 0.44	0.19	0.44 NP [d]	5 / 10	0.27 - 1.72	0.42	0.76 NP [c]	7 / 20	0.27 - 1.72	0.35	0.56 NP [d]	4 / 15	0.74 - 2.36	0.51	1.8 NP [d]
Pyrene	92,000	1,000	10,000	4 / 10	0.15 - 0.44	0.21	0.42 NP [d]	7 / 10	0.18 - 1.63	0.50	0.80 NP [d]	11 / 20	0.15 - 1.63	0.40	0.54 NP [c]	4 / 15	1.04 - 2.43	0.58	2.4 NP [d]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Aroclor-1254	10	2	100	0 / 10	All ND	NA	NC [a]	2 / 10	0.19 - 0.239	0.057	0.24 NP [d]	2 / 20	0.19 - 0.239	0.044	0.20 NP [c]	4 / 15	0.162 - 0.439	0.10	0.39 NP [d]
Aroclor-1260	10	2	100	1 / 10	0.104 - 0.104	0.026	NC [b]	4 / 10	0.097 - 0.158	0.060	0.13 NP [d]	5 / 20	0.097 - 0.158	0.049	0.11 NP [d]	5 / 15	0.06 - 0.406	0.079	0.23 NP [d]
Aroclor-1262	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
PCBs (Total)	10	2	100	1 / 10	0.104 - 0.104	0.026	NC [b]	4 / 10	0.097 - 0.397	0.10	0.33 NP [d]	5 / 20	0.097 - 0.397	0.077	0.16 NP [c]	5 / 15	0.06 - 0.845	0.17	0.60 NP [d]

Table P-038
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
Inorganics (mg/Kg)																			
Aluminum		NS	NS	10 / 10	5180 - 8290	6775	7381 N [h]	10 / 10	4140 - 9150	6622	7604 N [h]	20 / 20	4140 - 9150	6673	7125 N [h]	15 / 15	2600 - 8470	5113	5988 N [h]
Antimony		20	300	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Arsenic	40	20	200	10 / 10	3.2 - 7.3	4.2	4.9 N [i]	8 / 10	1.6 - 4.3	2.3	3.0 NP [c]	18 / 20	1.6 - 7.3	2.9	3.5 NP [e]	10 / 15	1.1 - 2.4	1.6	2.1 NP [e]
Barium	200,000	1,000	10,000	10 / 10	10.5 - 24.1	17.4	19.9 N [h]	10 / 10	8.8 - 23.2	16.4	19.1 N [h]	20 / 20	8.8 - 24.1	16.8	18.1 N [h]	15 / 15	6.2 - 35.4	16.7	22 G [j]
Beryllium		100	2,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Cadmium	60	2	300	10 / 10	0.13 - 0.25	0.20	0.22 N [h]	10 / 10	0.096 - 0.25	0.16	0.19 N [h]	20 / 20	0.096 - 0.25	0.17	0.19 N [h]	10 / 15	0.11 - 0.29	0.20	0.23 NP [c]
Calcium		NS	NS	10 / 10	355 - 1560	981	1219 N [h]	10 / 10	354 - 825	561	651 N [h]	20 / 20	354 - 1560	701	807 G [j]	15 / 15	287 - 3920	780	1793 NP [f]
Chromium	200	30	2,000	10 / 10	6.1 - 20.4	12.9	15.5 N [h]	10 / 10	5.7 - 16.4	8.7	10.7 G [j]	20 / 20	5.7 - 20.4	10.1	11.4 N [i]	15 / 15	3.7 - 12.6	7.7	9.0 N [h]
Cobalt		NS	NS	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Copper		NS	NS	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Iron		NS	NS	10 / 10	7680 - 10200	8901	9394 N [h]	10 / 10	5450 - 11900	7931	8929 N [h]	20 / 20	5450 - 11900	8254	8723 N [h]	15 / 15	4080 - 10800	6826	7578 N [h]
Lead	1,000	300	3,000	10 / 10	8.1 - 54.3	23	31 N [h]	10 / 10	2.9 - 74.3	42	57 N [h]	20 / 20	2.9 - 74.3	36	55 NP [f]	15 / 15	1.5 - 221	46	227 NP [g]
Magnesium		NS	NS	10 / 10	1080 - 1600	1284	1387 N [h]	10 / 10	845 - 1480	1133	1257 N [h]	20 / 20	845 - 1600	1184	1248 N [h]	15 / 15	801 - 2380	1267	1473 G [j]
Manganese		NS	NS	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Mercury		20	300	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Nickel		20	7,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Potassium		NS	NS	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Selenium		400	8,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Silver		100	2,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Sodium		NS	NS	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Thallium		8	800	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 15	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 or two distinct data values were detected

N - Normal Distribution
[h] 95% Student's-t UCL
[i] 95% Modified-t UCL

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

G - Gamma Distribution
[j] 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 9/10/10
Checked by / Date: KJC 9/10/10

MassDEP

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

August 10, 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-044
SAP Data Risk Evaluation – No USEPA Action Recommended

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-044 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-044. 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 seven 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-044, MassDEP provided you the following preliminary determinations:

- A condition of No Significant Risk, as defined in the MCP, was determined to exist for current use of the property for the soil located between the ground surface and 3 feet in depth. Specifically, the average concentrations and the 95% UCL calculated for all COCs detected in samples collected from the top 3 feet are below the applicable MCP Method 1 S-1 soil standards. No further action is required for the soils at this interval on this property.

- 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. Both the average concentration of all COCs and the 95% UCL calculated for all COCs were below the applicable standards. No further action is required for the soils at this interval on this property.

Property P-044 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-044:

- MassDEP has verified its Preliminary Risk Evaluation determination that a condition of No Significant Risk to human health, as defined in the MCP, exists for both current and foreseeable future use of the property for the soil located between 0 to 3 feet and 3 to 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/lm

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-044

Table P-044
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
PAHs (mg/Kg)																			
2-Methylnaphthalene	61,000	300	5,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Acenaphthene	180,000	1,000	10,000	2 / 7	0.16 - 0.25	0.19	0.29 NP [c]	0 / 7	All ND	NA	NC [a]	2 / 14	0.16 - 0.25	0.19	0.28 NP [c]	0 / 11	All ND	NA	NC [a]
Acenaphthylene	180,000	1,000	10,000	2 / 7	0.11 - 0.16	0.18	0.18 NP [c]	1 / 7	0.09 - 0.09	0.17	NC [b]	3 / 14	0.09 - 0.16	0.17	0.14 NP [d]	0 / 11	All ND	NA	NC [a]
Anthracene	920,000	1,000	10,000	3 / 7	0.42 - 1.3	0.43	1.3 NP [d]	1 / 7	0.15 - 0.15	0.18	NC [b]	4 / 14	0.15 - 1.3	0.26	0.50 NP [d]	1 / 11	0.11 - 0.11	0.17	NC [b]
Benzo(a)anthracene	160	7	3,000	7 / 7	0.12 - 2.2	0.78	1.4 N [h]	3 / 7	0.14 - 0.55	0.23	0.55 NP [d]	10 / 14	0.12 - 2.2	0.41	0.63 NP [f]	1 / 11	0.34 - 0.34	0.19	NC [b]
Benzo(a)pyrene	16	2	300	7 / 7	0.11 - 1.7	0.64	1.1 N [h]	3 / 7	0.11 - 0.44	0.20	0.44 NP [d]	10 / 14	0.11 - 1.7	0.35	0.50 NP [f]	1 / 11	0.26 - 0.26	0.18	NC [b]
Benzo(b)fluoranthene	160	7	3,000	7 / 7	0.15 - 1.9	0.81	1.3 N [h]	3 / 7	0.16 - 0.5	0.22	0.32 NP [c]	10 / 14	0.15 - 1.9	0.42	0.62 NP [d]	1 / 11	0.33 - 0.33	0.19	NC [b]
Benzo(g,h,i)perylene	120,000	1,000	10,000	7 / 7	0.09 - 0.93	0.41	0.67 N [h]	2 / 7	0.09 - 0.28	0.18	0.37 NP [c]	9 / 14	0.09 - 0.93	0.26	0.34 NP [c]	1 / 11	0.19 - 0.19	0.18	NC [b]
Benzo(k)fluoranthene	1,600	70	10,000	6 / 7	0.12 - 1.2	0.46	0.77 NP [c]	1 / 7	0.26 - 0.26	0.19	NC [b]	7 / 14	0.12 - 1.2	0.28	0.39 NP [c]	1 / 11	0.2 - 0.2	0.18	NC [b]
Chrysene	16,000	70	10,000	7 / 7	0.14 - 2.2	0.86	1.5 N [h]	3 / 7	0.15 - 0.53	0.23	0.33 NP [c]	10 / 14	0.14 - 2.2	0.44	0.67 NP [f]	1 / 11	0.35 - 0.35	0.19	NC [b]
Dibenz(a,h)anthracene	16	0.7	300	3 / 7	0.18 - 0.26	0.20	0.26 NP [c]	0 / 7	All ND	NA	NC [a]	3 / 14	0.18 - 0.26	0.19	0.26 NP [d]	0 / 11	All ND	NA	NC [a]
Fluoranthene	120,000	1,000	10,000	7 / 7	0.24 - 5.5	1.8	5.0 G [j]	3 / 7	0.27 - 0.96	0.32	0.59 NP [c]	10 / 14	0.24 - 5.5	0.82	2.7 NP [g]	1 / 11	0.71 - 0.71	0.23	NC [b]
Fluorene	120,000	1,000	10,000	3 / 7	0.09 - 0.31	0.19	0.31 NP [c]	0 / 7	All ND	NA	NC [a]	3 / 14	0.09 - 0.31	0.19	0.31 NP [d]	0 / 11	All ND	NA	NC [a]
Indeno(1,2,3-cd)pyrene	160	7	3,000	7 / 7	0.08 - 0.82	0.36	0.95 LN [k]	2 / 7	0.07 - 0.24	0.18	0.32 NP [c]	9 / 14	0.07 - 0.82	0.24	0.30 NP [c]	1 / 11	0.15 - 0.15	0.17	NC [b]
Naphthalene	61,000	100	10,000	1 / 7	0.08 - 0.08	0.17	NC [b]	0 / 7	All ND	NA	NC [a]	1 / 14	0.08 - 0.08	0.18	NC [b]	0 / 11	All ND	NA	NC [a]
Phenanthrene	120,000	500	10,000	7 / 7	0.13 - 3.9	1.1	3.4 G [j]	3 / 7	0.11 - 0.45	0.20	0.45 NP [d]	10 / 14	0.11 - 3.9	0.51	1.7 NP [g]	1 / 11	0.4 - 0.4	0.20	NC [b]
Pyrene	92,000	1,000	10,000	7 / 7	0.24 - 3.8	1.4	2.4 N [h]	3 / 7	0.23 - 0.88	0.30	0.88 NP [d]	10 / 14	0.23 - 3.8	0.66	1.0 NP [f]	1 / 11	0.6 - 0.6	0.22	NC [b]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Aroclor-1254	10	2	100	2 / 7	0.085 - 0.13	0.045	0.13 NP [d]	0 / 7	All ND	NA	NC [a]	2 / 14	0.085 - 0.13	0.027	0.13 NP [d]	0 / 11	All ND	NA	NC [a]
Aroclor-1260	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Aroclor-1262	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
PCBs (Total)	10	2	100	2 / 7	0.085 - 0.13	0.045	0.13 NP [d]	0 / 7	All ND	NA	NC [a]	2 / 14	0.085 - 0.13	0.027	0.13 NP [d]	0 / 11	All ND	NA	NC [a]

Table P-044
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	7 / 7	6320 - 9700	7936	8718 N [h]	7 / 7	5980 - 9740	7474	8460 N [h]	14 / 14	5980 - 9740	7628	8084 N [h]	11 / 11	2070 - 6640	4766	5604 N [h]
Antimony		20	300	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Arsenic	40	20	200	7 / 7	6 - 8.7	7.3	8.0 N [h]	7 / 7	2.2 - 7.9	3.4	5.0 N [i]	14 / 14	2.2 - 8.7	4.7	7.1 NP [e]	11 / 11	0.51 - 3.5	1.4	1.9 N [h]
Barium	200,000	1,000	10,000	7 / 7	26 - 57.8	36	44 N [h]	7 / 7	13.6 - 46.1	21	31 G [j]	14 / 14	13.6 - 57.8	26	31 N [i]	11 / 11	6.2 - 21.3	13.5	16.3 N [h]
Beryllium		100	2,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Cadmium	60	2	300	7 / 7	0.27 - 0.46	0.36	0.40 N [h]	7 / 7	0.15 - 0.32	0.20	0.24 G [j]	14 / 14	0.15 - 0.46	0.25	0.29 N [i]	8 / 11	0.09 - 0.22	0.16	0.16 NP [c]
Calcium		NS	NS	7 / 7	1310 - 15500	3889	12362 NP [e]	7 / 7	455 - 2430	882	1497 G [j]	14 / 14	455 - 15500	1884	4942 NP [e]	11 / 11	311 - 1020	674	793 N [h]
Chromium	200	30	2,000	7 / 7	9.7 - 14	11.2	12.3 N [h]	7 / 7	7.4 - 11.4	8.8	9.8 N [h]	14 / 14	7.4 - 14	9.6	10.3 N [h]	11 / 11	3.2 - 12.9	7.6	9.1 N [h]
Cobalt		NS	NS	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Copper		NS	NS	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Iron		NS	NS	7 / 7	8250 - 10700	9306	9983 N [h]	7 / 7	6940 - 9570	8470	9145 N [h]	14 / 14	6940 - 10700	8749	9110 N [h]	11 / 11	3660 - 8780	6685	7592 N [h]
Lead	1,000	300	3,000	7 / 7	106 - 188	142	166 N [h]	7 / 7	15 - 194	53	123 G [j]	14 / 14	15 - 194	83	147 NP [e]	11 / 11	1.3 - 48.6	8.5	16.7 G [j]
Magnesium		NS	NS	7 / 7	979 - 1530	1287	1433 N [h]	7 / 7	1120 - 1470	1303	1399 N [h]	14 / 14	979 - 1530	1298	1354 N [h]	11 / 11	826 - 2140	1485	1724 N [h]
Manganese		NS	NS	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Mercury		20	300	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Nickel		20	7,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Potassium		NS	NS	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Selenium		400	8,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Silver		100	2,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Sodium		NS	NS	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Thallium		8	800	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	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

N - Normal Distribution
[h] 95% Student's-t UCL
[i] 95% Modified-t UCL

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

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

LN - Log Normal Distribution
[k] 95% Chebyshev (MVUE) 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 9/15/10
Checked by / Date: KJC 9/17/10

MassDEP
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

DEVAL L. PATRICK
Governor

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Lieutenant Governor

RICHARD K. SULLIVAN JR.
Secretary

KENNETH L. KIMMELL
Commissioner

August 10, 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-045
SAP Data Risk Evaluation – No USEPA Action Recommended

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-045 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-045. 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 six 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-045, MassDEP provided you the following preliminary determinations:

- A condition of No Significant Risk, as defined in the MCP, was determined to exist for current use of the property for the soil located between the ground surface and 3 feet in depth. Specifically, the average concentrations and the 95% UCL calculated for all COCs detected in samples collected from the top 3 feet are below the applicable MCP Method 1 S-1 soil standards. No further action is required for the soils at this interval on this property.

- 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. Both the average concentration of all COCs and the 95% UCL calculated for all COCs were below the applicable standards. No further action is required for the soils at this interval on this property.

Property P-045 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-045:

- MassDEP has verified its Preliminary Risk Evaluation determination that a condition of No Significant Risk to human health, as defined in the MCP, exists for both current and foreseeable future use of the property for the soil located between 0 to 3 feet and 3 to 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/lm

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-045

Table P-045
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 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Acenaphthene	180,000	1,000	10,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Acenaphthylene	180,000	1,000	10,000	2 / 6	0.13 - 0.25	0.19	0.31 NP [c]	0 / 6	All ND	NA	NC [a]	2 / 12	0.13 - 0.25	0.19	0.29 NP [c]	0 / 11	All ND	NA	NC [a]
Anthracene	920,000	1,000	10,000	2 / 6	0.1 - 0.21	0.18	0.27 NP [c]	1 / 6	0.1 - 0.1	0.18	NC [b]	3 / 12	0.1 - 0.21	0.18	0.18 NP [c]	0 / 11	All ND	NA	NC [a]
Benzo(a)anthracene	160	7	3,000	6 / 6	0.1 - 0.37	0.22	0.32 N [g]	4 / 6	0.09 - 0.3	0.17	0.27 NP [c]	10 / 12	0.09 - 0.37	0.19	0.23 NP [d]	0 / 11	All ND	NA	NC [a]
Benzo(a)pyrene	16	2	300	5 / 6	0.1 - 0.37	0.22	0.32 NP [c]	2 / 6	0.14 - 0.26	0.19	0.32 NP [c]	7 / 12	0.1 - 0.37	0.20	0.26 NP [c]	0 / 11	All ND	NA	NC [a]
Benzo(b)fluoranthene	160	7	3,000	6 / 6	0.11 - 0.37	0.21	0.31 N [g]	4 / 6	0.08 - 0.23	0.15	0.21 NP [c]	10 / 12	0.08 - 0.37	0.17	0.21 NP [d]	0 / 11	All ND	NA	NC [a]
Benzo(g,h,i)perylene	120,000	1,000	10,000	6 / 6	0.07 - 0.32	0.17	0.25 N [g]	2 / 6	0.09 - 0.16	0.17	0.20 NP [c]	8 / 12	0.07 - 0.32	0.17	0.19 NP [c]	0 / 11	All ND	NA	NC [a]
Benzo(k)fluoranthene	1,600	70	10,000	6 / 6	0.1 - 0.26	0.20	0.26 N [g]	1 / 6	0.16 - 0.16	0.19	NC [b]	7 / 12	0.1 - 0.26	0.19	0.23 NP [c]	0 / 11	All ND	NA	NC [a]
Chrysene	16,000	70	10,000	6 / 6	0.13 - 0.51	0.27	0.40 N [g]	3 / 6	0.1 - 0.27	0.19	0.28 NP [c]	9 / 12	0.1 - 0.51	0.22	0.26 NP [c]	0 / 11	All ND	NA	NC [a]
Dibenz(a,h)anthracene	16	0.7	300	1 / 6	0.11 - 0.11	0.18	NC [b]	0 / 6	All ND	NA	NC [a]	1 / 12	0.11 - 0.11	0.19	NC [b]	0 / 11	All ND	NA	NC [a]
Fluoranthene	120,000	1,000	10,000	6 / 6	0.18 - 0.75	0.44	0.65 N [g]	4 / 6	0.14 - 0.46	0.23	0.35 NP [c]	10 / 12	0.14 - 0.75	0.30	0.39 NP [d]	0 / 11	All ND	NA	NC [a]
Fluorene	120,000	1,000	10,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Indeno(1,2,3-cd)pyrene	160	7	3,000	4 / 6	0.09 - 0.25	0.17	0.24 NP [c]	1 / 6	0.13 - 0.13	0.18	NC [b]	5 / 12	0.09 - 0.25	0.18	0.20 NP [c]	0 / 11	All ND	NA	NC [a]
Naphthalene	61,000	100	10,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Phenanthrene	120,000	500	10,000	6 / 6	0.08 - 0.59	0.25	0.41 N [g]	4 / 6	0.09 - 0.35	0.18	0.30 NP [c]	10 / 12	0.08 - 0.59	0.21	0.26 NP [d]	0 / 11	All ND	NA	NC [a]
Pyrene	92,000	1,000	10,000	6 / 6	0.16 - 0.65	0.37	0.55 N [g]	5 / 6	0.11 - 0.43	0.21	0.32 NP [c]	11 / 12	0.11 - 0.65	0.26	0.33 NP [e]	1 / 11	0.08 - 0.08	0.17	NC [b]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Aroclor-1254	10	2	100	1 / 6	0.24 - 0.24	0.056	NC [b]	1 / 6	0.28 - 0.28	0.063	NC [b]	2 / 12	0.24 - 0.28	0.061	0.25 NP [c]	0 / 11	All ND	NA	NC [a]
Aroclor-1260	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Aroclor-1262	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
PCBs (Total)	10	2	100	1 / 6	0.24 - 0.24	0.056	NC [b]	1 / 6	0.28 - 0.28	0.063	NC [b]	2 / 12	0.24 - 0.28	0.061	0.28 NP [d]	0 / 11	All ND	NA	NC [a]

Table P-045
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1]				1-3 ft [1]				0-3 ft [1, 2]				3+ ft [1]			
				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	6 / 6	3180 - 6640	4997	6193 N [g]	6 / 6	5000 - 6760	6045	6700 N [g]	12 / 12	3180 - 6760	5696	6245 G [i]	11 / 11	2170 - 8900	5059	6272 N [g]
Antimony		20	300	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Arsenic	40	20	200	6 / 6	1.4 - 5.7	2.8	4.1 N [g]	6 / 6	1.8 - 4.5	2.7	3.4 N [g]	12 / 12	1.4 - 5.7	2.7	3.2 G [i]	11 / 11	0.37 - 1.7	0.99	1.2 N [g]
Barium	200,000	1,000	10,000	6 / 6	13.5 - 164	61	108 N [g]	6 / 6	15.7 - 60.5	33	46 N [g]	12 / 12	13.5 - 164	42	57 G [i]	11 / 11	5.6 - 16	9.8	11.8 N [g]
Beryllium		100	2,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Cadmium	60	2	300	6 / 6	0.18 - 0.57	0.37	0.50 N [g]	6 / 6	0.22 - 0.4	0.33	0.38 N [g]	12 / 12	0.18 - 0.57	0.34	0.38 N [g]	11 / 11	0.1 - 0.29	0.17	0.20 N [g]
Calcium		NS	NS	6 / 6	470 - 6080	1931	4734 G [i]	6 / 6	336 - 1500	682	1134 G [i]	12 / 12	336 - 6080	1098	2452 NP [f]	11 / 11	185 - 434	325	374 N [g]
Chromium	200	30	2,000	6 / 6	4.2 - **34.2**	14.7	24 N [g]	6 / 6	7.7 - 8.8	8.2	8.6 N [g]	12 / 12	4.2 - **34.2**	10.4	13.5 N [h]	11 / 11	4 - 10.4	7.3	8.5 N [g]
Cobalt		NS	NS	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Copper		NS	NS	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Iron		NS	NS	6 / 6	3940 - 10300	7137	9335 N [g]	6 / 6	6070 - 7210	6605	7025 N [g]	12 / 12	3940 - 10300	6782	7407 N [g]	11 / 11	3910 - 7460	5801	6482 N [g]
Lead	1,000	300	3,000	6 / 6	24.4 - 256	119	196 N [g]	6 / 6	38.3 - 125	78	103 N [g]	12 / 12	24.4 - 256	92	119 G [i]	11 / 11	1.5 - 35.5	6.6	12.4 G [i]
Magnesium		NS	NS	6 / 6	585 - 4570	1802	3138 N [g]	6 / 6	544 - 1030	797	941 N [g]	12 / 12	544 - 4570	1132	2176 NP [f]	11 / 11	614 - 1620	1129	1297 N [g]
Manganese		NS	NS	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Mercury		20	300	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Nickel		20	7,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Potassium		NS	NS	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Selenium		400	8,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Silver		100	2,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Sodium		NS	NS	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Thallium		8	800	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 11	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

N - Normal Distribution
[g] 95% Student's-t UCL
[h] 95% Modified-t UCL

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

G - Gamma Distribution
[i] 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 9/16/10
Checked by / Date: KJC 9/17/10

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

DEVAL L. PATRICK
Governor

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KENNETH L. KIMMELL
Commissioner

August 19, 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-028
SAP Data Evaluation Status - Additional Analysis or USEPA Remedial Action Recommended

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-028 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-028. 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-028, 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 95% UCL for lead calculated for samples collected from the top 3 feet is above the applicable MCP S-1 soil standards. Actions may be required 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 additional evaluation is complete.

- Furthermore, a condition of No Significant Risk, as defined in the MCP, for foreseeable future use of the property was determined not to exist for the soil located between 3 feet and 12 feet below the ground surface. The 95% UCL for lead which was calculated based on the analytical data from soils collected from greater than 3 feet bgs, was above the applicable MCP Method 1 S-1 soil standards. Because this soil is located at depth, it does not necessarily need to be removed or capped to be protective. Additional evaluation of this data is required to determine whether these concentrations at this depth constitute a Condition of No Significant Risk. No activities should occur at the property that will disrupt soil located from 3 feet below ground surface to a depth of 12 feet until this additional evaluation is complete.

Property P-028 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-028:

- MassDEP has verified its previous request for USEPA assistance to address that, based on the SAP data, a determination that a condition of No Significant Risk, as defined in the MCP, cannot be made for current property use for soil located between the ground surface and 3 feet in depth. The preliminary risk evaluation determination was made because the 95% UCL calculated for average lead contamination levels in soil located between 0 and 3 feet bgs exceeded the applicable MCP Method 1 S-1 soil standard. Evaluation of available COC concentration data from surrounding properties indicates that COC concentration levels in this depth zone vary enough such that relying solely on the average data from the five boring locations is insufficient to adequately characterize contaminant levels throughout the property in this depth zone. On property P-028, lead was detected in samples collected from the 0 to 3 foot bgs interval that slightly exceed the applicable MCP Method 1 S-1 standard of 300 ppm in soil borings P-028-SB-04 (390 ppm) and P-028-SB-05 (378 ppm). However, SAP data from P-004, which abuts P-028 to the east, exhibited levels of lead in three borings along the western boundary of P-004 as high as 1540 ppm in this depth zone in the vicinity of the property line between P-004 and P-028. A removal action was conducted on P-004 and lead was subsequently detected above the applicable standard in two of the four sidewall samples collected at the 3 foot interval along the property boundary abutting P-028. Specifically, sidewall samples identified as P-004-WW4 and P-004-WW3 contained lead at concentrations of 990 and 454 ppm, respectively. Based on its review of all available information, MassDEP recommends that either additional samples be collected from the soil in the 0-3 foot interval on the eastern boundary of P-028 and analyzed for lead to better delineate the lead contamination so additional risk evaluation can be performed, or Response Actions be conducted in this interval to address the lead contamination in proximity of borings P-028-SB-04 and P-028-SB-05 as well as sidewall samples P-004-WW4 and P-004-WW3.

No activities should occur at the property that will disrupt soil located from the ground surface to a depth of 3 feet until either remediation activities are complete or until additional analysis and risk evaluation are complete that demonstrate that a condition of No Significant Risk, as defined by the MCP, exists.

- Furthermore, 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. Applying the 95% UCL for data evaluation of the soil located between 3 and 12 feet bgs is not necessary for Property P-028. 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/lm

Enclosure

Ecc: 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
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-028

Table P-028
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 / 7	All ND	NA	NC [a]
Acenaphthene	180,000	1,000	10,000	0 / 5	All ND	NA	NC [a]	2 / 5	0.21 - 0.24	0.19	0.26 NP [e]	2 / 10	0.21 - 0.24	0.18	0.24 NP [e]	0 / 7	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 / 7	All ND	NA	NC [a]
Anthracene	920,000	1,000	10,000	3 / 5	0.16 - 0.49	0.24	0.49 NP [c]	2 / 5	0.67 - 0.71	0.38	0.71 NP [c]	5 / 10	0.16 - 0.71	0.33	0.57 NP [c]	2 / 7	0.17 - 0.25	0.18	0.29 NP [e]
Benzo(a)anthracene	160	7	3,000	5 / 5	0.21 - 1	0.62	0.96 N [g]	4 / 5	0.36 - 2	1.0	1.8 NP [c]	9 / 10	0.21 - 2	0.88	1.2 NP [d]	3 / 7	0.3 - 0.82	0.34	0.82 NP [c]
Benzo(a)pyrene	16	2	300	5 / 5	0.17 - 0.87	0.53	0.82 N [g]	4 / 5	0.37 - 1.7	0.94	1.7 NP [c]	9 / 10	0.17 - 1.7	0.80	1.1 NP [d]	3 / 7	0.27 - 0.77	0.32	0.77 NP [c]
Benzo(b)fluoranthene	160	7	3,000	5 / 5	0.27 - 1.2	0.77	1.2 N [g]	4 / 5	0.58 - 2.4	1.3	2.4 NP [c]	9 / 10	0.27 - 2.4	1.1	1.5 NP [d]	3 / 7	0.39 - 1.1	0.40	1.1 NP [c]
Benzo(g,h,i)perylene	120,000	1,000	10,000	5 / 5	0.15 - 0.66	0.42	0.63 N [g]	4 / 5	0.34 - 1.4	0.79	1.4 NP [c]	9 / 10	0.15 - 1.4	0.67	0.92 NP [d]	3 / 7	0.26 - 0.69	0.29	0.69 NP [c]
Benzo(k)fluoranthene	1,600	70	10,000	4 / 5	0.18 - 0.45	0.28	0.43 NP [c]	3 / 5	0.35 - 0.86	0.47	0.86 NP [c]	7 / 10	0.18 - 0.86	0.40	0.55 NP [c]	2 / 7	0.27 - 0.33	0.21	0.33 NP [c]
Chrysene	16,000	70	10,000	5 / 5	0.21 - 1.1	0.64	1.0 N [g]	4 / 5	0.41 - 1.9	1.0	1.9 NP [c]	9 / 10	0.21 - 1.9	0.90	1.3 NP [d]	3 / 7	0.32 - 0.9	0.35	0.90 NP [c]
Dibenz(a,h)anthracene	16	0.7	300	1 / 5	0.16 - 0.16	0.15	NC [b]	2 / 5	0.32 - 0.32	0.23	NC [b]	3 / 10	0.16 - 0.32	0.20	0.32 NP [c]	0 / 7	All ND	NA	NC [a]
Fluoranthene	120,000	1,000	10,000	5 / 5	0.36 - 2.7	1.5	2.4 N [g]	4 / 5	0.6 - 4.9	2.3	4.6 NP [c]	9 / 10	0.36 - 4.9	2.0	2.9 NP [d]	3 / 7	0.55 - 1.7	0.59	1.7 NP [c]
Fluorene	120,000	1,000	10,000	1 / 5	0.22 - 0.22	0.16	NC [b]	2 / 5	0.27 - 0.31	0.22	0.32 NP [e]	3 / 10	0.22 - 0.31	0.20	0.29 NP [e]	0 / 7	All ND	NA	NC [a]
Indeno(1,2,3-cd)pyrene	160	7	3,000	5 / 5	0.15 - 0.7	0.43	0.65 N [g]	4 / 5	0.34 - 1.4	0.79	1.4 NP [c]	9 / 10	0.15 - 1.4	0.67	0.91 NP [d]	3 / 7	0.26 - 0.68	0.29	0.68 NP [c]
Naphthalene	61,000	100	10,000	0 / 5	All ND	NA	NC [a]	1 / 5	0.19 - 0.19	0.17	NC [b]	1 / 10	0.19 - 0.19	0.16	NC [b]	0 / 7	All ND	NA	NC [a]
Phenanthrene	120,000	500	10,000	5 / 5	0.17 - 1.6	0.91	1.5 N [g]	3 / 5	0.74 - 3.3	1.4	3.3 NP [c]	8 / 10	0.17 - 3.3	1.3	1.8 NP [c]	3 / 7	0.33 - 0.76	0.36	0.76 NP [c]
Pyrene	92,000	1,000	10,000	5 / 5	0.35 - 2.2	1.3	2.0 N [g]	4 / 5	0.62 - 3.9	2.0	3.9 NP [c]	9 / 10	0.35 - 3.9	1.7	2.4 NP [d]	3 / 7	0.54 - 1.6	0.57	1.6 NP [c]
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 / 7	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 / 7	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 / 7	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 / 7	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 / 7	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 / 7	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 / 7	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 / 7	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 / 7	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 / 7	All ND	NA	NC [a]

Table P-028
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
Inorganics (mg/Kg)																			
Aluminum		NS	NS	5 / 5	4600 - 6590	5536	6314 N [g]	5 / 5	4290 - 5460	4976	5413 N [g]	10 / 10	4290 - 6590	5163	5445 N [g]	7 / 7	1730 - 6760	4020	5238 N [g]
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 / 7	All ND	NA	NC [a]
Arsenic	40	20	200	4 / 5	2.3 - 3	2.4	3.0 NP [d]	5 / 5	2.4 - 7.6	5.0	7.1 N [g]	9 / 10	2.3 - 7.6	4.1	5.2 NP [d]	5 / 7	2.6 - 7.3	3.4	5.3 NP [e]
Barium	200,000	1,000	10,000	5 / 5	20.6 - 36.9	28	34 N [g]	5 / 5	52.6 - 141	91	123 N [g]	10 / 10	20.6 - 141	70	88 N [g]	7 / 7	10.5 - 229	74	211 G [h]
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 / 7	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 / 7	1.2 - 1.2	0.45	NC [b]
Calcium		NS	NS	5 / 5	797 - 1120	939	1051 N [g]	5 / 5	1570 - 2540	2106	2492 N [g]	10 / 10	797 - 2540	1717	2012 N [g]	7 / 7	792 - 6430	2802	4498 N [g]
Chromium	200	30	2,000	5 / 5	7.2 - 10.6	9.0	10.3 N [g]	5 / 5	9.5 - 13.4	11.7	13.1 N [g]	10 / 10	7.2 - 13.4	10.8	11.7 N [g]	7 / 7	4 - 28.7	13.8	21 N [g]
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 / 7	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 / 7	All ND	NA	NC [a]
Iron		NS	NS	5 / 5	6910 - 9780	8344	9624 N [g]	5 / 5	6700 - 10000	8930	10186 N [g]	10 / 10	6700 - 10000	8735	9308 N [g]	7 / 7	2060 - 51000	11436	25895 LN [j]
Lead	1,000	300	3,000	5 / 5	41.7 - 68	57	68.2 N [g]	5 / 5	168 - **390**	300	**385** N [g]	10 / 10	41.7 - **390**	219	**373** NP [f]	7 / 7	3.8 - **492**	165	**1243** G [i]
Magnesium		NS	NS	5 / 5	871 - 1420	1112	1309 N [g]	5 / 5	879 - 1990	1360	1770 N [g]	10 / 10	871 - 1990	1277	1455 G [h]	7 / 7	478 - 3120	1498	2189 N [g]
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 / 7	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 / 7	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 / 7	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 / 7	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 / 7	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 / 7	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 / 7	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 / 7	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 / 7	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 / 7	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 / 7	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 (BCA) UCL
[e] 95% KM (t) UCL
[f] 95% Chebyshev (Mean, Sd) UCL

N - Normal Distribution
[g] 95% Student's-t UCL

G - Gamma Distribution
[h] 95% Approximate Gamma UCL
[i] 95% Adjusted Gamma UCL

LN - Log Normal Distribution
[j] 95% Chebyshev (MVUE) 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 8/25/10
Checked by / Date: KJC 8/25/10

August 25, 2011

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

NEW BEDFORD
Release Tracking Number 4-0015685
Parker Street Waste Site
Property P-052
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 from data generated during the first phase of SAP implementation and was followed-up with property by property risk evaluations for the purpose of typology chart development and risk communication with property owners of Phase I properties.

MassDEP is in the process of providing USEPA with both a preliminary risk evaluation and a final risk evaluation for all Phase I properties. The preliminary evaluation was performed without consideration of data from surrounding properties that was not available until later during SAP implementation for inclusion in the final evaluation. Properties evaluated in all subsequent SAP implementation phases receive only one (final) risk evaluation because, as SAP implementation progressed, the data necessary to perform the final evaluation was available. Property P-052 was evaluated during the second implementation phase.

Property P-052 Risk Evaluation and Response Action Recommendations: Enclosed is a copy of the results from the risk evaluation conducted by MACTEC for the property identified as P-052. MassDEP uses these results along with information related to the boring logs, the nature of COCs observed, the property use and other pertinent information to complete its risk evaluation and make a response action recommendation.

MassDEP's evaluation compared the sample results from the soil samples collected from the twenty-six boring locations on this property to the MCP Method 1 category S-1 soil standards and to either potential Imminent Hazard values listed in the MCP or site-specific Imminent Hazard (IH) values to determine if an IH may exist and/or if a Condition of No Significant Risk did or did not exist. 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. The 95% UCL evaluation criteria was used for Preliminary Risk Evaluations of Phase 1 properties when data from surrounding properties was not yet available. When data from surrounding properties is available it can be used to determine whether the data collected from the property in question is consistent with surrounding data and adequately representative of likely COC distribution such that there is no need to apply the 95% UCL. In most cases, the 95% UCL evaluation criteria is not applicable to the Final Risk Evaluations or Phase 2 properties.

Based on this evaluation, MassDEP has determined the following for Property P-052:

- A condition of No Significant Risk to human health, 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 for a portion of the property. Specifically, for the 0 – 3 foot below ground surface interval, the actual average concentration of PAHs and the boring specific concentrations of several of the PAHs in the majority of the borings on the property 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 this layer of soil and replacing it with clean soil or covering it with an appropriate cap material. No activities should occur on this property that will disrupt the soil located from the ground surface to a depth of three feet until removal or cover measures are completed.

- Furthermore, a condition of No Significant Risk to human health, as defined in the MCP, for foreseeable future use of the property was determined not to exist for the soil located between 3 feet and 12 feet below the ground surface. Both the average concentration calculated for lead and the boring specific concentrations of lead in the majority of the borings at this interval are above the applicable MCP Method 1 S-1 soil standards. Because this soil is at depth, it does not necessarily need to be removed to be protective of the current use of the property. Soil below three feet should not be disturbed on this property unless it is under the direction of a Licensed Site Professional, and performed in accordance with the MCP. If this soil is to remain in place, land use restrictions and/or controls defined as a Notice of Activity & Use Limitation (or AUL) in the MCP, may be necessary for the property to ensure that future activities or changes in use do not create the potential for humans to be exposed to the soil below 3 feet in depth.

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/lm

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-052

Table P-052
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 / 26	All ND	NA	NC [a]	6 / 26	0.38 - 7.6	0.82	2.1 NP [d]	6 / 52	0.38 - 7.6	0.62	0.97 NP [c]	8 / 52	0.56 - 5.1	0.51	1.1 NP [d]
Acenaphthene	180,000	1,000	10,000	0 / 26	All ND	NA	NC [a]	13 / 26	0.45 - 13	1.4	2.3 NP [c]	13 / 52	0.45 - 13	0.99	1.6 NP [d]	8 / 52	1.1 - 7.1	0.76	1.8 NP [c]
Acenaphthylene	180,000	1,000	10,000	12 / 26	0.27 - 2.2	0.48	0.64 NP [c]	20 / 26	0.26 - 11	2.8	3.8 NP [e]	32 / 52	0.26 - 11	2.0	3.4 NP [f]	16 / 52	0.48 - 9.9	1.5	2.4 NP [c]
Anthracene	920,000	1,000	10,000	16 / 26	0.18 - 2.5	0.57	0.77 NP [d]	23 / 26	0.19 - 42	6.1	13.5 NP [f]	39 / 52	0.18 - 42	4.3	7.9 NP [f]	21 / 52	0.24 - 28	2.9	4.5 NP [c]
Benzo(a)anthracene	160	7	3,000	22 / 26	0.26 - 4.5	1.2	1.6 NP [e]	25 / 26	0.39 - **64**	**10.2**	**22** NP [f]	47 / 52	0.26 - **64**	**7.2**	**13.0** NP [f]	22 / 52	0.17 - **52**	5.0	**7.7** NP [c]
Benzo(a)pyrene	16	2	300	23 / 26	0.24 - **4.6**	1.2	1.6 NP [e]	25 / 26	0.39 - **58**	**8.8**	**19.2** NP [f]	48 / 52	0.24 - **58**	**6.3**	**11.4** NP [f]	22 / 52	0.2 - **44**	**4.3**	**6.5** NP [c]
Benzo(b)fluoranthene	160	7	3,000	24 / 26	0.34 - 4.7	1.4	2.5 NP [f]	25 / 26	0.51 - **62**	**10.9**	**23** NP [f]	49 / 52	0.34 - **62**	**7.7**	**13.7** NP [f]	24 / 52	0.2 - **53**	5.6	**8.5** NP [c]
Benzo(g,h,i)perylene	120,000	1,000	10,000	21 / 26	0.26 - 2.8	0.80	1.1 NP [e]	25 / 26	0.27 - 32	5.6	11.6 NP [f]	46 / 52	0.26 - 32	4.0	7.0 NP [f]	20 / 52	0.37 - 27	2.9	4.5 NP [c]
Benzo(k)fluoranthene	1,600	70	10,000	18 / 26	0.21 - 3.2	0.62	0.83 NP [d]	23 / 26	0.21 - 28	4.2	9.1 NP [f]	41 / 52	0.21 - 28	3.0	5.4 NP [f]	20 / 52	0.17 - 21	2.3	3.4 NP [c]
Chrysene	16,000	70	10,000	23 / 26	0.28 - 4.4	1.2	1.6 NP [e]	25 / 26	0.45 - 56	9.5	19.7 NP [f]	48 / 52	0.28 - 56	6.7	11.9 NP [f]	21 / 52	0.2 - 49	4.8	7.4 NP [c]
Dibenz(a,h)anthracene	16	0.7	300	5 / 26	0.13 - **0.79**	0.20	0.50 NP [d]	17 / 26	0.17 - **10**	**1.5**	**2.4** NP [e]	22 / 52	0.13 - **10**	**1.1**	**1.4** NP [c]	14 / 52	0.14 - **9.4**	**0.87**	**1.3** NP [c]
Fluoranthene	120,000	1,000	10,000	26 / 26	0.48 - 8.4	2.4	3.2 G [k]	25 / 26	0.74 - 130	22	47 NP [f]	51 / 52	0.48 - 130	15.6	34 NP [g]	26 / 52	0.26 - 120	11.4	17.5 NP [c]
Fluorene	120,000	1,000	10,000	1 / 26	0.99 - 0.99	0.26	NC [b]	17 / 26	0.39 - 13	2.0	3.1 NP [d]	18 / 52	0.39 - 13	1.4	2.0 NP [c]	11 / 52	0.94 - 9.8	1.2	2.7 NP [d]
Indeno(1,2,3-cd)pyrene	160	7	3,000	22 / 26	0.21 - 3.2	0.92	1.2 NP [e]	25 / 26	0.32 - **37**	6.5	**13.6** NP [f]	47 / 52	0.21 - **37**	4.7	**8.2** NP [f]	19 / 52	0.45 - **31**	3.4	5.3 NP [c]
Naphthalene	61,000	100	10,000	0 / 26	All ND	NA	NC [a]	6 / 26	0.59 - 6	0.85	2.5 NP [d]	6 / 52	0.59 - 6	0.64	1.3 NP [d]	8 / 52	0.54 - 11	0.85	1.9 NP [d]
Phenanthrene	120,000	500	10,000	22 / 26	0.25 - 6.8	1.5	2.1 NP [e]	25 / 26	0.43 - 150	21	49 NP [f]	47 / 52	0.25 - 150	14.7	34 NP [g]	25 / 52	0.19 - 110	10.4	16.2 NP [c]
Pyrene	92,000	1,000	10,000	26 / 26	0.41 - 8.2	2.2	3.0 G [k]	25 / 26	0.68 - 140	21	46 NP [f]	51 / 52	0.41 - 140	14.6	32 NP [g]	25 / 52	0.23 - 110	10.0	15.6 NP [c]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]
Aroclor-1242	10	2	100	1 / 26	0.114 - 0.114	0.016	NC [b]	0 / 26	All ND	NA	NC [a]	1 / 52	0.114 - 0.114	0.016	NC [b]	0 / 52	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]
Aroclor-1254	10	2	100	8 / 26	0.026 - 0.684	0.058	0.12 NP [c]	5 / 26	0.036 - 1.96	0.11	0.26 NP [c]	13 / 52	0.026 - 1.96	0.091	0.17 NP [e]	1 / 52	0.198 - 0.198	0.018	NC [b]
Aroclor-1260	10	2	100	14 / 26	0.016 - 0.302	0.028	0.053 NP [d]	11 / 26	0.016 - 0.507	0.037	0.077 NP [d]	25 / 52	0.016 - 0.507	0.034	0.055 NP [d]	1 / 52	0.104 - 0.104	0.011	NC [b]
Aroclor-1262	10	2	100	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]
PCBs (Total)	10	2	100	17 / 26	0.016 - 0.986	0.083	0.33 NP [g]	13 / 26	0.016 - **2.467**	0.13	0.33 NP [e]	30 / 52	0.016 - **2.467**	0.12	0.32 NP [f]	1 / 52	0.302 - 0.302	0.020	NC [b]

Table P-052
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	26 / 26	4582 - 9404	6900	7393 N [l]	26 / 26	4276 - 8753	5624	6011 N [m]	52 / 52	4276 - 9404	6050	6311 N [m]	52 / 52	2141 - 12401	4961	5408 N [l]
Antimony		20	300	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]
Arsenic	40	20	200	20 / 26	2.4 - 5.7	3.3	3.9 NP [c]	24 / 26	2.6 - 12.5	5.3	6.5 NP [e]	44 / 52	2.4 - 12.5	4.6	5.3 NP [e]	32 / 52	0.35 - **127**	6.1	11.0 NP [e]
Barium	200,000	1,000	10,000	26 / 26	13.3 - 116	60	69 N [l]	26 / 26	20.2 - 230	95	116 G [k]	52 / 52	13.3 - 230	83	93 G [k]	52 / 52	5.9 - **1030**	110	272 NP [i]
Beryllium		100	2,000	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]
Cadmium	60	2	300	0 / 26	All ND	NA	NC [a]	1 / 26	**3.2 - 3.2**	0.32	NC [b]	1 / 52	**3.2 - 3.2**	0.27	NC [b]	3 / 52	1.2 - **11.9**	0.46	**11.9** NP [d]
Calcium		NS	NS	26 / 26	481 - 4260	1459	1718 G [k]	26 / 26	671 - 6483	1788	2235 N [m]	52 / 52	481 - 6483	1678	1896 N [m]	52 / 52	473 - 8795	2212	2698 LN [n]
Chromium	200	30	2,000	26 / 26	5.9 - **43.1**	16.6	20 LN [n]	26 / 26	7.1 - **30.1**	14.4	16.2 G [k]	52 / 52	5.9 - **43.1**	15.2	16.5 N [m]	52 / 52	3.6 - **37.8**	12.1	14.0 LN [n]
Cobalt		NS	NS	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]
Copper		NS	NS	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]
Iron		NS	NS	26 / 26	6054 - 35431	10994	12927 N [m]	26 / 26	7187 - 51154	13897	17136 N [m]	52 / 52	6054 - 51154	12929	14510 N [m]	52 / 52	2180 - 59733	11679	14660 LN [n]
Lead	1,000	300	3,000	26 / 26	19.3 - **349**	153	183 N [l]	26 / 26	32.2 - **1290**	**349**	**447** G [k]	52 / 52	19.3 - **1290**	284	**403** NP [h]	45 / 52	2.2 - **4530**	**394**	**1592** NP [j]
Magnesium		NS	NS	26 / 26	602 - 5901	2101	3472 NP [h]	26 / 26	692 - 3787	1618	1851 G [k]	52 / 52	602 - 5901	1779	1988 N [m]	52 / 52	383 - 3709	1378	1562 G [k]
Manganese		NS	NS	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]
Mercury		20	300	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]
Nickel		20	7,000	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]
Potassium		NS	NS	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]
Selenium		400	8,000	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]
Silver		100	2,000	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]
Sodium		NS	NS	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]
Thallium		8	800	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]	0 / 52	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 (t) UCL
[d] 95% KM (% Bootstrap) UCL
[e] 95% KM (BCA) UCL
[f] 95% KM (Chebyshev) UCL
[g] 97.5% KM (Chebyshev) UCL
[h] 95% Chebyshev (Mean, Sd) UCL
[i] 97.5% Chebyshev (Mean, Sd) UCL
[j] 99% KM (Chebyshev) UCL

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

N - Normal Distribution
[l] 95% Student's-t UCL
[m] 95% Modified-t UCL

LN - Log Normal Distribution
[n] 95% H-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 01/26/11
Checked by / Date: KJC 01/27/11

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IH-EPC-110225, P-052

MassDEP

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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RICHARD K. SULLIVAN JR.
Secretary

KENNETH L. KIMMELL
Commissioner

August 25, 2011

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

NEW BEDFORD
Release Tracking Number 4-0015685
Parker Street Waste Site
Property P-053
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 from data generated during the first phase of SAP implementation and was followed-up with property by property risk evaluations for the purpose of typology chart development and risk communication with property owners of Phase I properties.

MassDEP is in the process of providing USEPA with both a preliminary risk evaluation and a final risk evaluation for all Phase I properties. The preliminary evaluation was performed without consideration of data from surrounding properties that was not available until later during SAP implementation for inclusion in the final evaluation. Properties evaluated in all subsequent SAP implementation phases receive only one (final) risk evaluation because, as SAP implementation progressed, the data necessary to perform the final evaluation was available. Property P-053 was evaluated during the second implementation phase.

Property P-053 Risk Evaluation and Response Action Recommendations: Enclosed is a copy of the results from the risk evaluation conducted by MACTEC for the property identified as P-053. MassDEP uses these results along with information related to the boring logs, the nature of COCs observed, the property use and other pertinent information to complete its risk evaluation and make a response action recommendation.

MassDEP's evaluation compared the sample results from the soil samples collected from the three boring locations on this property to the MCP Method 1 category S-1 soil standards and to either potential Imminent Hazard values listed in the MCP or site-specific Imminent Hazard (IH) values to determine if an IH may exist and/or if a Condition of No Significant Risk did or did not exist. 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. The 95% UCL evaluation criteria was used for Preliminary Risk Evaluations of Phase 1 properties when data from surrounding properties was not yet available. When data from surrounding properties is available it can be used to determine whether the data collected from the property in question is consistent with surrounding data and adequately representative of likely COC distribution such that there is no need to apply the 95% UCL. In most cases, the 95% UCL evaluation criteria is not applicable to the Final Risk Evaluations or Phase 2 properties.

Based on this evaluation, MassDEP has determined the following for Property P-053:

- An Imminent Hazard condition, as defined in the MCP, could potentially exist for the current use of the property for the top 1 foot of soil. Specifically, the average concentration of lead calculated for the top foot of soil, and one boring-specific concentration of lead in this interval, are greater than or equal to the site-specific IH level of lead established by MassDEP for this Site. The MCP requires elimination or control of all Imminent Hazards. This may be accomplished by removing the top foot of soil in the vicinity of the boring that exceeds the site-specific IH concentration for lead and replacing it with clean soil or it can be accomplished by otherwise covering it with clean soil or an impervious surface or cap. No activities should occur on this property that will disrupt the top foot of soil until removal or cover measures are complete.

- A condition of No Significant Risk to human health, 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 for a portion of the property. Specifically, for the 0 – 3 foot bgs interval, the average concentration of lead and the boring-specific concentrations of lead in all of the borings on the property are above the applicable MCP Method 1 S-1 soil standard. However, the samples that exceed the applicable MCP Method 1 S-1 standard are all designated as "A" samples, meaning they were collected from the top foot of soil in the three borings. Both the average concentration of lead and the boring specific concentrations of lead in the "B" samples, collected from 1 – 3 foot bgs interval, are below the applicable standard. As such, the MCP requires actions to be taken to address this condition on this property in the 0 – 1 foot bgs interval only. This may include removal of this layer of soil and replacing it with clean soil or covering it with an appropriate cap material. No activities should occur on this property that will disrupt the soil located from the ground surface to a depth of one foot until removal or cover measures are completed.

- Furthermore, a condition of No Significant Risk to human health, as defined in the MCP, for foreseeable future use of the property was determined not to exist for the soil located between 3 feet and 12 feet bgs. The average concentration calculated for lead from samples collected at this interval and the boring-specific concentration of lead in one of the borings at this interval are above the applicable MCP Method 1 S-1 soil standard. Specifically, one of the borings, identified as P-053-SB-02C, exhibits a concentration of lead above the Site-specific MCP Upper Concentration Limit established for lead. When evaluating the results for property P-053 without the result from this sample location, the average concentration for lead at this interval is below the applicable MCP Method 1 S-1 soil standard, which would be considered a Condition of No Significant Risk for this depth interval and would require no further response action. However, if this soil is to remain in place, land use restrictions and/or controls, defined as a Notice of Activity & Use Limitation (or AUL) in the MCP, may be necessary for the property to ensure that future activities or changes in use do not create the potential for humans to be exposed to the soil below 3 feet in depth. The soil at this interval should not be disturbed unless it is under the direction of a Licensed Site Professional (LSP) and performed in accordance with the MCP.

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/lm

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-053

Table P-053
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1]				1-3 ft [1]				0-3 ft [1, 2]				3+ ft [1]			
				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 / 3	All ND	NA	NC [a]	0 / 3	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]
Acenaphthene	180,000	1,000	10,000	1 / 3	0.05 - 0.05	0.22	NC [b]	1 / 3	0.27 - 0.27	0.23	NC [b]	2 / 6	0.05 - 0.27	0.23	0.33 NP [d]	0 / 5	All ND	NA	NC [a]
Acenaphthylene	180,000	1,000	10,000	1 / 3	0.11 - 0.11	0.24	NC [b]	1 / 3	0.05 - 0.05	0.35	NC [b]	2 / 6	0.05 - 0.11	0.32	0.11 NP [e]	2 / 5	0.06 - 0.1	0.11	0.12 NP [d]
Anthracene	920,000	1,000	10,000	2 / 3	0.17 - 0.22	0.23	NC [b]	2 / 3	0.1 - 0.83	0.41	NC [b]	4 / 6	0.1 - 0.83	0.35	0.46 NP [f]	2 / 5	0.06 - 0.16	0.13	0.22 NP [d]
Benzo(a)anthracene	160	7	3,000	3 / 3	0.38 - 0.65	0.55	NC [b]	3 / 3	0.32 - 1.38	0.68	NC [b]	6 / 6	0.32 - 1.38	0.64	1.3 NP [g]	3 / 5	0.11 - 0.83	0.32	0.83 NP [e]
Benzo(a)pyrene	16	2	300	3 / 3	0.44 - 0.71	0.61	NC [b]	3 / 3	0.34 - 1.26	0.67	NC [b]	6 / 6	0.34 - 1.26	0.65	0.93 G [h]	3 / 5	0.11 - 0.82	0.32	0.82 NP [e]
Benzo(b)fluoranthene	160	7	3,000	3 / 3	0.59 - 1.09	0.85	NC [b]	3 / 3	0.49 - 1.51	0.87	NC [b]	6 / 6	0.49 - 1.51	0.86	1.2 G [h]	3 / 5	0.17 - 0.93	0.37	0.93 NP [e]
Benzo(g,h,i)perylene	120,000	1,000	10,000	3 / 3	0.24 - 0.41	0.33	NC [b]	3 / 3	0.17 - 0.65	0.34	NC [b]	6 / 6	0.17 - 0.65	0.34	0.49 G [h]	3 / 5	0.06 - 0.4	0.20	0.40 NP [e]
Benzo(k)fluoranthene	1,600	70	10,000	3 / 3	0.24 - 0.33	0.30	NC [b]	3 / 3	0.13 - 0.47	0.25	NC [b]	6 / 6	0.13 - 0.47	0.27	0.35 N [j]	3 / 5	0.05 - 0.3	0.16	0.30 NP [e]
Chrysene	16,000	70	10,000	3 / 3	0.44 - 0.76	0.63	NC [b]	3 / 3	0.33 - 1.35	0.69	NC [b]	6 / 6	0.33 - 1.35	0.67	0.99 G [h]	3 / 5	0.12 - 0.7	0.29	0.70 NP [e]
Dibenz(a,h)anthracene	16	0.7	300	3 / 3	0.13 - 0.19	0.16	NC [b]	3 / 3	0.09 - 0.38	0.20	NC [b]	6 / 6	0.09 - 0.38	0.19	0.27 G [h]	3 / 5	0.05 - 0.14	0.11	0.15 NP [d]
Fluoranthene	120,000	1,000	10,000	3 / 3	0.85 - 1.4	1.2	NC [b]	3 / 3	0.62 - 3.12	1.5	NC [b]	6 / 6	0.62 - 3.12	1.4	2.2 G [h]	3 / 5	0.26 - 0.99	0.48	0.99 NP [e]
Fluorene	120,000	1,000	10,000	1 / 3	0.07 - 0.07	0.23	NC [b]	1 / 3	0.33 - 0.33	0.25	NC [b]	2 / 6	0.07 - 0.33	0.24	0.30 NP [d]	1 / 5	0.06 - 0.06	0.12	NC [c]
Indeno(1,2,3-cd)pyrene	160	7	3,000	3 / 3	0.26 - 0.4	0.33	NC [b]	3 / 3	0.16 - 0.69	0.35	NC [b]	6 / 6	0.16 - 0.69	0.34	0.51 G [h]	3 / 5	0.06 - 0.33	0.18	0.35 NP [d]
Naphthalene	61,000	100	10,000	1 / 3	0.08 - 0.08	0.23	NC [b]	1 / 3	0.06 - 0.06	0.36	NC [b]	2 / 6	0.06 - 0.08	0.31	0.080 NP [e]	0 / 5	All ND	NA	NC [a]
Phenanthrene	120,000	500	10,000	3 / 3	0.42 - 0.88	0.73	NC [b]	3 / 3	0.35 - 2.94	1.2	NC [b]	6 / 6	0.35 - 2.94	1.1	2.6 NP [g]	3 / 5	0.16 - 0.6	0.25	0.47 NP [d]
Pyrene	92,000	1,000	10,000	3 / 3	0.71 - 1.22	1.0	NC [b]	3 / 3	0.54 - 2.54	1.2	NC [b]	6 / 6	0.54 - 2.54	1.2	1.8 G [h]	3 / 5	0.21 - 1.1	0.45	1.1 NP [e]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 3	All ND	NA	NC [a]	0 / 3	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 3	All ND	NA	NC [a]	0 / 3	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 3	All ND	NA	NC [a]	0 / 3	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 3	All ND	NA	NC [a]	0 / 3	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 3	All ND	NA	NC [a]	0 / 3	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]
Aroclor-1254	10	2	100	3 / 3	0.061 - 0.42	0.19	NC [b]	2 / 3	0.024 - 0.22	0.088	NC [b]	5 / 6	0.024 - 0.42	0.12	0.21 NP [d]	0 / 5	All ND	NA	NC [a]
Aroclor-1260	10	2	100	0 / 3	All ND	NA	NC [a]	1 / 3	0.045 - 0.045	0.027	NC [b]	1 / 6	0.045 - 0.045	0.025	NC [c]	0 / 5	All ND	NA	NC [a]
Aroclor-1262	10	2	100	0 / 3	All ND	NA	NC [a]	0 / 3	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 3	All ND	NA	NC [a]	0 / 3	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]
PCBs (Total)	10	2	100	3 / 3	0.061 - 0.42	0.19	NC [b]	2 / 3	0.024 - 0.265	0.10	NC [b]	5 / 6	0.024 - 0.42	0.13	0.23 NP [d]	0 / 5	All ND	NA	NC [a]

Table P-053
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	3 / 3	5288 - 6455	5848	NC [b]	3 / 3	4548 - 5467	4954	NC [b]	6 / 6	4548 - 6455	5252	5642 N [j]	5 / 5	2879 - 5031	3944	4701 N [j]
Antimony		20	300	0 / 3	All ND	NA	NC [a]	0 / 3	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]
Arsenic	40	20	200	3 / 3	3.8 - 5.4	4.5	NC [b]	2 / 3	3.8 - 4.7	3.2	NC [b]	5 / 6	3.8 - 5.4	3.7	4.6 NP [d]	1 / 5	2.4 - 2.4	0.97	NC [c]
Barium	200,000	1,000	10,000	3 / 3	64 - 132	98	NC [b]	3 / 3	28.5 - 98.1	64	NC [b]	6 / 6	28.5 - 132	75	97 N [j]	5 / 5	10.7 - 56.3	25	42 N [j]
Beryllium		100	2,000	0 / 3	All ND	NA	NC [a]	0 / 3	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]
Cadmium	60	2	300	0 / 3	All ND	NA	NC [a]	0 / 3	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]
Calcium		NS	NS	3 / 3	1265 - 3495	2721	NC [b]	3 / 3	718 - 1457	1206	NC [b]	6 / 6	718 - 3495	1711	2751 LN [k]	5 / 5	619 - 1005	817	966 N [j]
Chromium	200	30	2,000	3 / 3	12.2 - 15.5	14.2	NC [b]	3 / 3	5.8 - 9.9	8.0	NC [b]	6 / 6	5.8 - 15.5	10.1	12.3 N [j]	5 / 5	4.5 - 8.5	6.4	7.8 N [j]
Cobalt		NS	NS	0 / 3	All ND	NA	NC [a]	0 / 3	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]
Copper		NS	NS	0 / 3	All ND	NA	NC [a]	0 / 3	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]
Iron		NS	NS	3 / 3	8107 - 9564	8608	NC [b]	3 / 3	6868 - 7544	7144	NC [b]	6 / 6	6868 - 9564	7632	8176 N [j]	5 / 5	2809 - 8308	5703	7584 N [j]
Lead	1,000	300	3,000	3 / 3	**666** - **2700**	**1390**	NC [b]	3 / 3	231 - **319**	279	NC [b]	6 / 6	231 - **2700**	**650**	**1805** NP [g]	5 / 5	3.1 - **4190**	**857**	**24060** G [i]
Magnesium		NS	NS	3 / 3	1336 - 1475	1387	NC [b]	3 / 3	1182 - 1573	1322	NC [b]	6 / 6	1182 - 1573	1343	1444 N [j]	5 / 5	918 - 2201	1440	1901 N [j]
Manganese		NS	NS	0 / 3	All ND	NA	NC [a]	0 / 3	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]
Mercury		20	300	0 / 3	All ND	NA	NC [a]	0 / 3	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]
Nickel		20	7,000	0 / 3	All ND	NA	NC [a]	0 / 3	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]
Potassium		NS	NS	0 / 3	All ND	NA	NC [a]	0 / 3	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]
Selenium		400	8,000	0 / 3	All ND	NA	NC [a]	0 / 3	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]
Silver		100	2,000	0 / 3	All ND	NA	NC [a]	0 / 3	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]
Sodium		NS	NS	0 / 3	All ND	NA	NC [a]	0 / 3	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]
Thallium		8	800	0 / 3	All ND	NA	NC [a]	0 / 3	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 3	All ND	NA	NC [a]	0 / 3	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 3	All ND	NA	NC [a]	0 / 3	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 5	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 3	All ND	NA	NC [a]	0 / 3	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 5	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. 4.00.05).

NC - Not Calculated
[a] All values non detect
[b] Dataset too small to calculate UCL
[c] Only one distinct data value was detected

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

G - Gamma Distribution
[h] 95% Approximate Gamma UCL
[i] 95% Adjusted Gamma UCL

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

LN - Log Normal Distribution
[k] 95% H-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 2/11/11
Checked by / Date: KJC 2/11/11

C:\Documents and Settings\MCote\Local Settings\Temporary Internet Files\Content.Outlook\3XTDEHRR\ BI-EPC-110225, P-053

August 25, 2011

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

NEW BEDFORD
Release Tracking Number 4-0015685
Parker Street Waste Site
Property P-058
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 from data generated during the first phase of SAP implementation and was followed-up with property by property risk evaluations for the purpose of typology chart development and risk communication with property owners of Phase I properties.

MassDEP is in the process of providing USEPA with both a preliminary risk evaluation and a final risk evaluation for all Phase I properties. The preliminary evaluation was performed without consideration of data from surrounding properties that was not available until later during SAP implementation for inclusion in the final evaluation. Properties evaluated in all subsequent SAP implementation phases receive only one (final) risk evaluation because, as SAP implementation progressed, the data necessary to perform the final evaluation was available. Property P-058 was evaluated during the second implementation phase.

Property P-058 Risk Evaluation and Response Action Recommendations: Enclosed is a copy of the results from the risk evaluation conducted by MACTEC for the property identified as P-058. MassDEP uses these results along with information related to the boring logs, the nature of COCs observed, the property use and other pertinent information to complete its risk evaluation and make a response action recommendation.

MassDEP's evaluation compared the sample results from the soil samples collected from the six boring locations on this property to the MCP Method 1 category S-1 soil standards and to either potential Imminent Hazard values listed in the MCP or site-specific Imminent Hazard (IH) values to determine if an IH may exist and/or if a Condition of No Significant Risk did or did not exist. 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. The 95% UCL evaluation criteria was used for Preliminary Risk Evaluations of Phase 1 properties when data from surrounding properties was not yet available. When data from surrounding properties is available it can be used to determine whether the data collected from the property in question is consistent with surrounding data and adequately representative of likely COC distribution such that there is no need to apply the 95% UCL. In most cases, the 95% UCL evaluation criteria is not applicable to the Final Risk Evaluations or Phase 2 properties.

Based on this evaluation, MassDEP has determined the following for Property P-058:

- An Imminent Hazard condition, as defined in the MCP, could potentially exist for the current use of the property for the top 1 foot of soil. Specifically, the average concentration of lead calculated for the top foot of soil, and two boring-specific concentrations of lead in this interval, are greater than or equal to the site-specific Imminent Hazard level of lead established by MassDEP for this Site. The MCP requires elimination or control of all Imminent Hazards. This may be accomplished by removing the top foot of soil in the vicinity of these two borings and replacing it with clean soil or it can be accomplished by otherwise covering the area with clean soil or an impervious surface or cap. No activities should occur on this property that will disrupt the top foot of soil until removal or cover measures are complete.

- A condition of No Significant Risk to human health, 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 for a portion of the property. Specifically, for the 0 – 3 foot bgs interval, the average concentration of lead and several PAHs and the boring-specific concentrations of lead and PAHs in several of the borings on the property are above the applicable MCP Method 1 S-1 soil standard. The MCP requires actions to be taken to address this condition on this property in the 0 – 1 foot bgs interval only. This may include removal of this layer of soil and replacing it with clean soil or covering it with an appropriate cap material. No activities should occur on this property that will disrupt the soil located from the ground surface to a depth of three feet until removal or cover measures are completed.

- Furthermore, a condition of No Significant Risk to human health, as defined in the MCP, for foreseeable future use of the property was determined not to exist for the soil located between 3 feet and 12 feet bgs. The average concentration calculated for several PAHs from samples collected at this interval and the boring-specific concentration of PAHs in two of the borings, identified as P-058-SB-01 and P-058-SB-02, at this interval are above the applicable MCP Method 1 S-1 soil standard. If this soil is to remain in place, land use restrictions and/or controls, defined as a Notice of Activity & Use Limitation (or AUL) in the MCP, may be necessary for the property to ensure that future activities or changes in use do not create the potential for humans to be exposed to the soil below 3 feet in depth. The soil at this interval should not be disturbed unless it is under the direction of a Licensed Site Professional (LSP) and performed in accordance with the MCP.

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/lm

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-058

Table P-058
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	2 / 6	0.07 - 0.64	0.29	0.93 NP [a]	4 / 6	0.09 - 6.46	1.3	4.5 NP [b]	6 / 12	0.07 - 6.46	0.95	5.8 NP [g]	2 / 12	0.21 - 7.4	0.77	8.9 NP [g]
Acenaphthene	180,000	1,000	10,000	2 / 6	0.22 - 1.66	0.48	1.7 NP [b]	4 / 6	0.15 - 13	2.7	7.2 NP [b]	6 / 12	0.15 - 13	1.9	11.7 NP [g]	3 / 12	0.09 - 7.76	0.81	7.8 NP [c]
Acenaphthylene	180,000	1,000	10,000	4 / 6	0.09 - 1.59	0.57	1.1 NP [c]	6 / 6	0.13 - 3.45	1.6	2.8 N [k]	10 / 12	0.09 - 3.45	1.3	2.6 NP [d]	4 / 12	0.09 - 19	1.8	4.9 NP [e]
Anthracene	920,000	1,000	10,000	5 / 6	0.13 - 6.93	1.7	6.6 NP [d]	6 / 6	0.36 - 36	9.2	44 G [i]	11 / 12	0.13 - 36	6.7	18.4 NP [d]	5 / 12	0.18 - 55.7	5.1	13.9 NP [e]
Benzo(a)anthracene	160	7	3,000	6 / 6	0.59 - **13.8**	4.3	**14.7** G [i]	6 / 6	1.44 - **58.8**	**16.7**	**67** G [i]	12 / 12	0.59 - **58.8**	**12.6**	**23** G [i]	10 / 12	0.07 - **89.7**	**8.3**	**83** NP [g]
Benzo(a)pyrene	16	2	300	6 / 6	0.68 - **12**	**4.2**	**8.0** N [k]	6 / 6	1.48 - **57.2**	**16.2**	**64** G [i]	12 / 12	0.68 - **57.2**	**12.2**	**32** LN [o]	10 / 12	0.06 - **85**	**7.8**	**78** NP [g]
Benzo(b)fluoranthene	160	7	3,000	6 / 6	1.01 - **16.6**	5.9	**11.0** N [k]	6 / 6	1.95 - **82.5**	**23**	**96** G [i]	12 / 12	1.01 - **82.5**	**17.6**	**46** LN [o]	10 / 12	0.09 - **116**	**10.7**	**107** NP [g]
Benzo(g,h,i)perylene	120,000	1,000	10,000	6 / 6	0.39 - 4.88	1.9	3.4 N [k]	6 / 6	0.77 - 21.6	7.1	14.0 N [k]	12 / 12	0.39 - 21.6	5.3	9.2 G [i]	9 / 12	0.06 - 41.3	3.9	38 NP [g]
Benzo(k)fluoranthene	1,600	70	10,000	6 / 6	0.34 - 4.98	1.7	3.2 N [k]	6 / 6	0.72 - 17.7	5.7	11.3 N [k]	12 / 12	0.34 - 17.7	4.4	7.5 G [i]	9 / 12	0.05 - 21.1	2.1	19.6 NP [g]
Chrysene	16,000	70	10,000	6 / 6	0.67 - 12.2	4.1	7.8 N [k]	6 / 6	1.31 - 54.9	15.3	61 G [i]	12 / 12	0.67 - 54.9	11.5	21 G [i]	11 / 12	0.04 - **80.3**	7.4	**74** NP [g]
Dibenz(a,h)anthracene	16	0.7	300	6 / 6	0.18 - **1.73**	0.61	**1.5** G [i]	6 / 6	0.22 - **5.59**	**2.0**	**3.8** N [k]	12 / 12	0.18 - **5.59**	**1.5**	**2.6** G [i]	7 / 12	0.07 - **11.6**	**1.1**	**10.9** NP [g]
Fluoranthene	120,000	1,000	10,000	6 / 6	1.19 - 29.5	8.9	31 G [i]	6 / 6	2.8 - 141	38	159 G [i]	12 / 12	1.19 - 141	28	53 G [i]	11 / 12	0.08 - 216	19.7	198 NP [g]
Fluorene	120,000	1,000	10,000	4 / 6	0.06 - 2.83	0.70	1.6 NP [e]	6 / 6	0.08 - 13.3	3.4	34 G [j]	10 / 12	0.06 - 13.3	2.5	6.8 NP [d]	5 / 12	0.05 - 21.6	2.0	5.4 NP [e]
Indeno(1,2,3-cd)pyrene	160	7	3,000	6 / 6	0.35 - 5.47	1.9	3.6 N [k]	6 / 6	0.72 - **20.4**	6.6	**13.1** N [k]	12 / 12	0.35 - **20.4**	5.0	**8.8** G [i]	9 / 12	0.05 - **39.1**	3.7	**36** NP [g]
Naphthalene	61,000	100	10,000	4 / 6	0.06 - 1.13	0.38	0.69 NP [e]	6 / 6	0.07 - 12.9	2.5	32 G [j]	10 / 12	0.06 - 12.9	1.8	11.4 NP [g]	3 / 12	0.06 - 14.6	1.4	14.6 NP [c]
Phenanthrene	120,000	500	10,000	6 / 6	0.48 - 20.9	5.5	24 G [i]	6 / 6	1.05 - 148	37	185 G [i]	12 / 12	0.48 - 148	26	59 G [j]	9 / 12	0.12 - 219	19.6	100 NP [d]
Pyrene	92,000	1,000	10,000	6 / 6	1.07 - 21.7	7.1	13.9 N [k]	6 / 6	2.38 - 112	30	125 G [i]	12 / 12	1.07 - 112	23	42 G [i]	10 / 12	0.13 - 165	15.1	152 NP [g]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 6	All ND	NA	NC [l]	1 / 6	0.043 - 0.043	0.022	NC [m]	1 / 12	0.043 - 0.043	0.021	NC [m]	0 / 12	All ND	NA	NC [l]
Aroclor-1221	10	2	100	0 / 6	All ND	NA	NC [l]	1 / 6	0.053 - 0.053	0.024	NC [m]	1 / 12	0.053 - 0.053	0.022	NC [m]	0 / 12	All ND	NA	NC [l]
Aroclor-1232	10	2	100	0 / 6	All ND	NA	NC [l]	1 / 6	0.048 - 0.048	0.023	NC [m]	1 / 12	0.048 - 0.048	0.021	NC [m]	0 / 12	All ND	NA	NC [l]
Aroclor-1242	10	2	100	0 / 6	All ND	NA	NC [l]	1 / 6	0.041 - 0.041	0.022	NC [m]	1 / 12	0.041 - 0.041	0.021	NC [m]	0 / 12	All ND	NA	NC [l]
Aroclor-1248	10	2	100	0 / 6	All ND	NA	NC [l]	1 / 6	0.048 - 0.048	0.023	NC [m]	1 / 12	0.048 - 0.048	0.021	NC [m]	0 / 12	All ND	NA	NC [l]
Aroclor-1254	10	2	100	4 / 6	0.054 - 1.3	0.31	0.75 NP [e]	4 / 6	0.023 - 0.19	0.066	0.13 NP [c]	8 / 12	0.023 - 1.3	0.15	0.29 NP [b]	1 / 12	0.14 - 0.14	0.030	NC [m]
Aroclor-1260	10	2	100	3 / 6	0.044 - 0.25	0.067	0.25 NP [c]	1 / 6	0.013 - 0.013	0.017	NC [m]	4 / 12	0.013 - 0.25	0.034	0.055 NP [e]	0 / 12	All ND	NA	NC [l]
Aroclor-1262	10	2	100	0 / 6	All ND	NA	NC [l]	1 / 6	0.097 - 0.097	0.031	NC [m]	1 / 12	0.097 - 0.097	0.027	NC [m]	0 / 12	All ND	NA	NC [l]
Aroclor-1268	10	2	100	0 / 6	All ND	NA	NC [l]	1 / 6	0.01 - 0.01	0.017	NC [m]	1 / 12	0.01 - 0.01	0.017	NC [m]	0 / 12	All ND	NA	NC [l]
PCBs (Total)	10	2	100	5 / 6	0.044 - 1.55	0.36	1.4 NP [d]	4 / 6	0.023 - 0.473	0.13	0.29 NP [e]	9 / 12	0.023 - 1.55	0.20	0.59 NP [d]	1 / 12	0.14 - 0.14	0.030	NC [m]

Table P-058
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
Inorganics (mg/Kg)																			
Aluminum		NS	NS	6 / 6	3773 - 6876	5495	6375 N [k]	6 / 6	4185 - 6233	4910	5544 N [k]	12 / 12	3773 - 6876	5105	5464 N [k]	12 / 12	2061 - 5623	3602	4156 N [k]
Antimony		20	300	0 / 6	All ND	NA	NC [l]	0 / 6	All ND	NA	NC [l]	0 / 12	All ND	NA	NC [l]	0 / 12	All ND	NA	NC [l]
Arsenic	40	20	200	6 / 6	3.8 - 6.2	4.7	5.6 N [k]	6 / 6	3.6 - **34.2**	10.4	**35** LN [n]	12 / 12	3.6 - **34.2**	8.5	18.2 NP [h]	10 / 12	1.8 - 13	4.7	6.9 NP [b]
Barium	200,000	1,000	10,000	6 / 6	46.5 - 143	80	109 N [k]	6 / 6	54.3 - 152	98	126 N [k]	12 / 12	46.5 - 152	92	106 N [k]	12 / 12	10.5 - 438	82	185 LN [o]
Beryllium		100	2,000	0 / 6	All ND	NA	NC [l]	0 / 6	All ND	NA	NC [l]	0 / 12	All ND	NA	NC [l]	0 / 12	All ND	NA	NC [l]
Cadmium	60	2	300	3 / 6	0.27 - 0.84	0.50	0.84 NP [c]	2 / 6	0.23 - 0.73	0.37	0.73 NP [c]	5 / 12	0.23 - 0.84	0.41	0.52 NP [c]	4 / 12	1.3 - **6.3**	1.1	**2.6** NP [e]
Calcium		NS	NS	6 / 6	910 - 6222	2294	5039 G [i]	6 / 6	944 - 3267	1949	2690 N [k]	12 / 12	910 - 6222	2064	2646 G [i]	12 / 12	828 - 13286	3021	5206 LN [n]
Chromium	200	30	2,000	6 / 6	7.6 - 10.7	9.2	10.2 N [k]	6 / 6	5.8 - 10.3	8.5	9.8 N [k]	12 / 12	5.8 - 10.7	8.7	9.3 N [k]	12 / 12	4.1 - 11.3	6.6	7.6 N [k]
Cobalt		NS	NS	0 / 6	All ND	NA	NC [l]	0 / 6	All ND	NA	NC [l]	0 / 12	All ND	NA	NC [l]	0 / 12	All ND	NA	NC [l]
Copper		NS	NS	0 / 6	All ND	NA	NC [l]	0 / 6	All ND	NA	NC [l]	0 / 12	All ND	NA	NC [l]	0 / 12	All ND	NA	NC [l]
Iron		NS	NS	6 / 6	5607 - 9709	7390	8501 N [k]	6 / 6	5597 - 8101	6888	7754 N [k]	12 / 12	5597 - 9709	7055	7513 N [k]	12 / 12	2722 - 10900	5879	7195 N [k]
Lead	1,000	300	3,000	6 / 6	276 - **3240**	**1137**	**6345** NP [f]	6 / 6	233 - **707**	**454**	**609** N [k]	12 / 12	233 - **3240**	**681**	**1487** NP [h]	12 / 12	4.8 - **1950**	297	**911** G [j]
Magnesium		NS	NS	6 / 6	1097 - 1329	1194	1269 N [k]	6 / 6	897 - 2170	1257	1785 G [i]	12 / 12	897 - 2170	1236	1399 G [i]	12 / 12	496 - 1236	919	1056 N [k]
Manganese		NS	NS	0 / 6	All ND	NA	NC [l]	0 / 6	All ND	NA	NC [l]	0 / 12	All ND	NA	NC [l]	0 / 12	All ND	NA	NC [l]
Mercury		20	300	0 / 6	All ND	NA	NC [l]	0 / 6	All ND	NA	NC [l]	0 / 12	All ND	NA	NC [l]	0 / 12	All ND	NA	NC [l]
Nickel		20	7,000	0 / 6	All ND	NA	NC [l]	0 / 6	All ND	NA	NC [l]	0 / 12	All ND	NA	NC [l]	0 / 12	All ND	NA	NC [l]
Potassium		NS	NS	0 / 6	All ND	NA	NC [l]	0 / 6	All ND	NA	NC [l]	0 / 12	All ND	NA	NC [l]	0 / 12	All ND	NA	NC [l]
Selenium		400	8,000	0 / 6	All ND	NA	NC [l]	0 / 6	All ND	NA	NC [l]	0 / 12	All ND	NA	NC [l]	0 / 12	All ND	NA	NC [l]
Silver		100	2,000	0 / 6	All ND	NA	NC [l]	0 / 6	All ND	NA	NC [l]	0 / 12	All ND	NA	NC [l]	0 / 12	All ND	NA	NC [l]
Sodium		NS	NS	0 / 6	All ND	NA	NC [l]	0 / 6	All ND	NA	NC [l]	0 / 12	All ND	NA	NC [l]	0 / 12	All ND	NA	NC [l]
Thallium		8	800	0 / 6	All ND	NA	NC [l]	0 / 6	All ND	NA	NC [l]	0 / 12	All ND	NA	NC [l]	0 / 12	All ND	NA	NC [l]
Vanadium		600	10,000	0 / 6	All ND	NA	NC [l]	0 / 6	All ND	NA	NC [l]	0 / 12	All ND	NA	NC [l]	0 / 12	All ND	NA	NC [l]
Zinc		2,500	10,000	0 / 6	All ND	NA	NC [l]	0 / 6	All ND	NA	NC [l]	0 / 12	All ND	NA	NC [l]	0 / 12	All ND	NA	NC [l]
Cyanide		100	4,000	0 / 6	All ND	NA	NC [l]	0 / 6	All ND	NA	NC [l]	0 / 12	All ND	NA	NC [l]	0 / 12	All ND	NA	NC [l]

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. 4.00.05).

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

G - Gamma Distribution
- [i] 95% Approximate Gamma UCL
- [j] 95% Adjusted Gamma UCL

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

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

LN - Log Normal Distribution
- [n] 95% H-UCL
- [o] 95% Chebyshev (MVUE) UCL

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

Note: Sample P-058-SB-02B contains anomalous levels of Aroclors inconsistent with the dataset and may warrant additional consideration.

Prepared by / Date: BJR 2/9/11
Checked by / Date: KJC 2/10/11

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IH-EPC-110225, P-058

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

DEVAL L. PATRICK
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Secretary

KENNETH L. KIMMELL
Commissioner

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

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1]				1-3 ft [1]				0-3 ft [1, 2]				3+ ft [1]			
				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 [i]	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

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

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

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

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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Secretary

KENNETH L. KIMMELL
Commissioner

September 1, 2011

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

NEW BEDFORD
Release Tracking Number 4-0015685
Parker Street Waste Site
Property P-051
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 from data generated during the first phase of SAP implementation and was followed-up with property by property risk evaluations for the purpose of typology chart development and risk communication with property owners of Phase I properties.

MassDEP is in the process of providing USEPA with both a preliminary risk evaluation and a final risk evaluation for all Phase I properties. The preliminary evaluation was performed without consideration of data from surrounding properties that was not available until later during SAP implementation for inclusion in the final evaluation. Properties evaluated in all subsequent SAP implementation phases receive only one (final) risk evaluation because, as SAP implementation progressed, the data necessary to perform the final evaluation was available. Property P-051 was evaluated during the second implementation phase.

Property P-051 Risk Evaluation and Response Action Recommendations: Enclosed is a copy of the results from the risk evaluation conducted by MACTEC for the property identified as P-051. MassDEP uses these results along with information related to the boring logs, the nature of COCs observed, the property use and other pertinent information to complete its risk evaluation and make a response action recommendation.

MassDEP's evaluation compared the sample results from the soil samples collected from the six boring locations on this property to the MCP Method 1 category S-1 soil standards and to either potential Imminent Hazard values listed in the MCP or site-specific Imminent Hazard (IH) values to determine if an IH may exist and/or if a Condition of No Significant Risk did or did not exist. 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. The 95% UCL evaluation criteria was used for Preliminary Risk Evaluations of Phase 1 properties when data from surrounding properties was not yet available. When data from surrounding properties is available it can be used to determine whether the data collected from the property in question is consistent with surrounding data and adequately representative of likely COC distribution such that there is no need to apply the 95% UCL. In most cases, the 95% UCL evaluation criteria is not applicable to the Final Risk Evaluations or Phase 2 properties.

Based on this evaluation, MassDEP has determined the following for Property P-051:

- A condition of No Significant Risk to human health, 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. The average concentration of chromium calculated from samples representing the 0 – 3 foot bgs interval is above the applicable MCP Method 1 S-1 soil standard. However, although the average chromium concentration exceeded standard within this depth interval, only the samples designated as "A" samples, collected from the top foot of soil exhibited concentrations above the applicable MCP Method 1 S-1 soil standard. Please note, the descriptions of this soil material from the soil borings on P-051 are not consistent with the descriptions of the fill material found on the other properties evaluated as part of the SAP. Additional response actions, which may include removal or capping, are only necessary for the soil in the 0 – 1 foot bgs interval. The soil in this interval should not be disturbed until removal or cover measures are complete. No further action is necessary for the soil located between 1 and 3 feet bgs.

- In addition, 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. Both the average concentrations and the 95% UCL calculated for the few COCs that were even detected in this interval are below the applicable MCP Method 1 S-1 soil standards and no further response actions are necessary for this soil.

- Based on the findings above, and after a careful review of all available data and information, MassDEP is of the opinion that the boundary of the fill layer associated with the PSWS has been determined in the vicinity of P-051. No further assessment is required to define the boundary in the vicinity of P-051.

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

CLEAN, President – Eddie Johnson Jhelijhnsn6@aol.com

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

cc: Owner, Property P-057

Table P-051
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 / 6	All ND	NA	NC [a]	1 / 6	0.15 - 0.15	0.17	NC [b]	1 / 12	0.15 - 0.15	0.18	NC [b]	3 / 10	0.098 - 0.27	0.18	0.29 NP [c]
Acenaphthene	180,000	1,000	10,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Acenaphthylene	180,000	1,000	10,000	3 / 6	0.085 - 0.11	0.14	0.11 NP [c]	0 / 6	All ND	NA	NC [a]	3 / 12	0.085 - 0.11	0.16	0.11 NP [d]	0 / 10	All ND	NA	NC [a]
Anthracene	920,000	1,000	10,000	3 / 6	0.091 - 0.15	0.15	0.16 NP [c]	0 / 6	All ND	NA	NC [a]	3 / 12	0.091 - 0.15	0.17	0.15 NP [c]	0 / 10	All ND	NA	NC [a]
Benzo(a)anthracene	160	7	3,000	6 / 6	0.11 - 0.54	0.29	0.43 N [g]	2 / 6	0.087 - 0.2	0.17	0.26 NP [c]	8 / 12	0.087 - 0.54	0.21	0.26 NP [c]	0 / 10	All ND	NA	NC [a]
Benzo(a)pyrene	16	2	300	5 / 6	0.12 - 0.57	0.29	0.45 NP [c]	2 / 6	0.083 - 0.18	0.16	0.23 NP [c]	7 / 12	0.083 - 0.57	0.20	0.26 NP [c]	0 / 10	All ND	NA	NC [a]
Benzo(b)fluoranthene	160	7	3,000	6 / 6	0.18 - 0.84	0.45	0.67 N [g]	2 / 6	0.12 - 0.25	0.18	0.32 NP [c]	8 / 12	0.12 - 0.84	0.27	0.36 NP [c]	0 / 10	All ND	NA	NC [a]
Benzo(g,h,i)perylene	120,000	1,000	10,000	6 / 6	0.096 - 0.41	0.23	0.33 N [g]	1 / 6	0.13 - 0.13	0.17	NC [b]	7 / 12	0.096 - 0.41	0.19	0.22 NP [c]	0 / 10	All ND	NA	NC [a]
Benzo(k)fluoranthene	1,600	70	10,000	5 / 6	0.097 - 0.39	0.23	0.34 NP [c]	1 / 6	0.13 - 0.13	0.17	NC [b]	6 / 12	0.097 - 0.39	0.19	0.23 NP [c]	0 / 10	All ND	NA	NC [a]
Chrysene	16,000	70	10,000	6 / 6	0.16 - 0.7	0.38	0.56 N [g]	2 / 6	0.1 - 0.22	0.17	0.28 NP [c]	8 / 12	0.1 - 0.7	0.24	0.32 NP [c]	0 / 10	All ND	NA	NC [a]
Dibenz(a,h)anthracene	16	0.7	300	1 / 6	0.11 - 0.11	0.17	NC [b]	0 / 6	All ND	NA	NC [a]	1 / 12	0.11 - 0.11	0.18	NC [b]	0 / 10	All ND	NA	NC [a]
Fluoranthene	120,000	1,000	10,000	6 / 6	0.25 - 1.2	0.67	1.0 N [g]	5 / 6	0.07 - 0.43	0.18	0.28 NP [c]	11 / 12	0.07 - 1.2	0.34	0.48 NP [e]	1 / 10	0.073 - 0.073	0.16	NC [b]
Fluorene	120,000	1,000	10,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Indeno(1,2,3-cd)pyrene	160	7	3,000	5 / 6	0.097 - 0.34	0.21	0.31 NP [c]	1 / 6	0.11 - 0.11	0.17	NC [b]	6 / 12	0.097 - 0.34	0.18	0.24 NP [c]	0 / 10	All ND	NA	NC [a]
Naphthalene	61,000	100	10,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Phenanthrene	120,000	500	10,000	5 / 6	0.13 - 0.58	0.31	0.48 NP [c]	2 / 6	0.08 - 0.27	0.18	0.37 NP [c]	7 / 12	0.08 - 0.58	0.22	0.28 NP [c]	0 / 10	All ND	NA	NC [a]
Pyrene	92,000	1,000	10,000	6 / 6	0.23 - 1.1	0.58	0.86 N [g]	3 / 6	0.1 - 0.36	0.19	0.36 NP [d]	9 / 12	0.1 - 1.1	0.32	0.43 NP [d]	0 / 10	All ND	NA	NC [a]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Aroclor-1254	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Aroclor-1260	10	2	100	2 / 6	0.057 - 0.084	0.036	0.084 NP [d]	0 / 6	All ND	NA	NC [a]	2 / 12	0.057 - 0.084	0.024	0.062 NP [c]	0 / 10	All ND	NA	NC [a]
Aroclor-1262	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
PCBs (Total)	10	2	100	2 / 6	0.057 - 0.084	0.036	0.084 NP [d]	0 / 6	All ND	NA	NC [a]	2 / 12	0.057 - 0.084	0.024	0.084 NP [d]	0 / 10	All ND	NA	NC [a]

Table P-051
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
Inorganics (mg/Kg)																			
Aluminum		NS	NS	6 / 6	7365 - 8941	8427	8962 N [g]	6 / 6	6770 - 10370	8354	9335 N [g]	12 / 12	6770 - 10370	8379	8781 N [g]	10 / 10	1949 - 5551	3661	4386 N [g]
Antimony		20	300	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Arsenic	40	20	200	6 / 6	4.4 - 7.2	5.7	6.5 N [g]	6 / 6	2.3 - 4.6	3.4	4.1 N [g]	12 / 12	2.3 - 7.2	4.2	4.7 N [g]	1 / 10	2.2 - 2.2	0.70	NC [b]
Barium	200,000	1,000	10,000	6 / 6	56.6 - 174	99	135 N [g]	6 / 6	24.9 - 86	50	83 G [h]	12 / 12	24.9 - 174	66	85 G [h]	10 / 10	7.2 - 23.4	12.4	15.5 N [g]
Beryllium		100	2,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Cadmium	60	2	300	1 / 6	0.77 - 0.77	0.33	NC [b]	0 / 6	All ND	NA	NC [a]	1 / 12	0.77 - 0.77	0.25	NC [b]	0 / 10	All ND	NA	NC [a]
Calcium		NS	NS	6 / 6	704 - 2622	1221	1950 G [h]	6 / 6	278 - 1709	795	1200 N [g]	12 / 12	278 - 2622	937	1198 G [h]	10 / 10	283 - 758	538	623 N [g]
Chromium	200	30	2,000	6 / 6	**31.4** - **90.8**	**54**	**70** N [g]	6 / 6	13.8 - 26.2	21	25 N [g]	12 / 12	13.8 - **90.8**	**32**	**41** LN [i]	10 / 10	3.9 - 17.6	7.9	10.4 N [g]
Cobalt		NS	NS	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Copper		NS	NS	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Iron		NS	NS	6 / 6	8198 - 9943	9317	9912 N [g]	6 / 6	7822 - 10420	9165	10100 N [g]	12 / 12	7822 - 10420	9216	9631 G [h]	10 / 10	3451 - 8043	5471	6272 N [g]
Lead	1,000	300	3,000	6 / 6	225 - **494**	**318**	**408** N [g]	6 / 6	45.1 - 159	89	152 G [h]	12 / 12	45.1 - **494**	165	232 G [h]	9 / 10	1.6 - 90.2	11.6	67 NP [f]
Magnesium		NS	NS	6 / 6	1030 - 1244	1180	1244 N [g]	6 / 6	877 - 2022	1574	1921 N [g]	12 / 12	877 - 2022	1442	1597 N [g]	10 / 10	797 - 2806	1411	1754 N [g]
Manganese		NS	NS	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Mercury		20	300	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Nickel		20	7,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Potassium		NS	NS	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Selenium		400	8,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Silver		100	2,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Sodium		NS	NS	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Thallium		8	800	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	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 (t) UCL
[d] 95% KM (% Bootstrap) UCL
[e] 95% KM (BCA) UCL
[f] 97.5% KM (Chebyshev) UCL

N - Normal Distribution
[g] 95% Student's-t UCL

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

LN - Log Normal Distribution
[i] 95% H-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 01/26/11
Checked by / Date: KJC 01/27/11

MassDEP

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

DEVAL L. PATRICK
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Secretary

KENNETH L. KIMMELL
Commissioner

COPY

September 1, 2011

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

NEW BEDFORD
Release Tracking Number 4-0015685
Parker Street Waste Site
Property P-051
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), polyc... arium, cadmium, chromium and lead. Soil borings were ... et below ground surface (bgs). The following vertical hori... – 12' bgs.

PSWS SAP Data Evaluation: As the S... laboratory and validated, MassDEP and its Site Assessm... tractor MACTEC have been performing evaluations of the... required under the MassDEP Waste Site Cleanup requ... Massachusetts Contingency Plan (the MCP). The MCP es... s for addressing releases of oil and/or hazardous material... sDEP requested USEPA assistance to address properties... or where COC concentrations in the top 3 feet of soil... soil standards, meaning a Condition of No Significant ... based on the information available at the time from dat... mentation and was followed-up with property by pro... ypology chart development and risk communication with

Steve,
(page 3 of 3)
changed cc:
owner, Property P-057 to P-051

MassDEP is in the process of providing USEPA with both a preliminary risk evaluation and a final risk evaluation for all Phase I properties. The preliminary evaluation was performed without consideration of data from surrounding properties that was not available until later during SAP implementation for inclusion in the final evaluation. Properties evaluated in all subsequent SAP implementation phases receive only one (final) risk evaluation because, as SAP implementation progressed, the data necessary to perform the final evaluation was available. Property P-051 was evaluated during the second implementation phase.

Property P-051 Risk Evaluation and Response Action Recommendations: Enclosed is a copy of the results from the risk evaluation conducted by MACTEC for the property identified as P-051. MassDEP uses these results along with information related to the boring logs, the nature of COCs observed, the property use and other pertinent information to complete its risk evaluation and make a response action recommendation.

MassDEP's evaluation compared the sample results from the soil samples collected from the six boring locations on this property to the MCP Method 1 category S-1 soil standards and to either potential Imminent Hazard values listed in the MCP or site-specific Imminent Hazard (IH) values to determine if an IH may exist and/or if a Condition of No Significant Risk did or did not exist. 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. The 95% UCL evaluation criteria was used for Preliminary Risk Evaluations of Phase 1 properties when data from surrounding properties was not yet available. When data from surrounding properties is available it can be used to determine whether the data collected from the property in question is consistent with surrounding data and adequately representative of likely COC distribution such that there is no need to apply the 95% UCL. In most cases, the 95% UCL evaluation criteria is not applicable to the Final Risk Evaluations or Phase 2 properties.

Based on this evaluation, MassDEP has determined the following for Property P-051:

- A condition of No Significant Risk to human health, 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. The average concentration of chromium calculated from samples representing the 0 – 3 foot bgs interval is above the applicable MCP Method 1 S-1 soil standard. However, although the average chromium concentration exceeded standard within this depth interval, only the samples designated as "A" samples, collected from the top foot of soil exhibited concentrations above the applicable MCP Method 1 S-1 soil standard. Please note, the descriptions of this soil material from the soil borings on P-051 are not consistent with the descriptions of the fill material found on the other properties evaluated as part of the SAP. Additional response actions, which may include removal or capping, are only necessary for the soil in the 0 – 1 foot bgs interval. The soil in this interval should not be disturbed until removal or cover measures are complete. No further action is necessary for the soil located between 1 and 3 feet bgs.

- In addition, 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. Both the average concentrations and the 95% UCL calculated for the few COCs that were even detected in this interval are below the applicable MCP Method 1 S-1 soil standards and no further response actions are necessary for this soil.

- Based on the findings above, and after a careful review of all available data and information, MassDEP is of the opinion that the boundary of the fill layer associated with the PSWS has been determined in the vicinity of P-051. No further assessment is required to define the boundary in the vicinity of P-051.

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

CLEAN, President – Eddie Johnson Jhelijhnsn6@aol.com

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

cc: Owner, Property ~~P-057~~ P-051 jm

Table P-051
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
PAHs (mg/Kg)																			
2-Methylnaphthalene	61,000	300	5,000	0 / 6	All ND	NA	NC [a]	1 / 6	0.15 - 0.15	0.17	NC [b]	1 / 12	0.15 - 0.15	0.18	NC [b]	3 / 10	0.098 - 0.27	0.18	0.29 NP [c]
Acenaphthene	180,000	1,000	10,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Acenaphthylene	180,000	1,000	10,000	3 / 6	0.085 - 0.11	0.14	0.11 NP [c]	0 / 6	All ND	NA	NC [a]	3 / 12	0.085 - 0.11	0.16	0.11 NP [d]	0 / 10	All ND	NA	NC [a]
Anthracene	920,000	1,000	10,000	3 / 6	0.091 - 0.15	0.15	0.16 NP [c]	0 / 6	All ND	NA	NC [a]	3 / 12	0.091 - 0.15	0.17	0.15 NP [c]	0 / 10	All ND	NA	NC [a]
Benzo(a)anthracene	160	7	3,000	6 / 6	0.11 - 0.54	0.29	0.43 N [g]	2 / 6	0.087 - 0.2	0.17	0.26 NP [c]	8 / 12	0.087 - 0.54	0.21	0.26 NP [c]	0 / 10	All ND	NA	NC [a]
Benzo(a)pyrene	16	2	300	5 / 6	0.12 - 0.57	0.29	0.45 NP [c]	2 / 6	0.083 - 0.18	0.16	0.23 NP [c]	7 / 12	0.083 - 0.57	0.20	0.26 NP [c]	0 / 10	All ND	NA	NC [a]
Benzo(b)fluoranthene	160	7	3,000	6 / 6	0.18 - 0.84	0.45	0.67 N [g]	2 / 6	0.12 - 0.25	0.18	0.32 NP [c]	8 / 12	0.12 - 0.84	0.27	0.36 NP [c]	0 / 10	All ND	NA	NC [a]
Benzo(g,h,i)perylene	120,000	1,000	10,000	6 / 6	0.096 - 0.41	0.23	0.33 N [g]	1 / 6	0.13 - 0.13	0.17	NC [b]	7 / 12	0.096 - 0.41	0.19	0.22 NP [c]	0 / 10	All ND	NA	NC [a]
Benzo(k)fluoranthene	1,600	70	10,000	5 / 6	0.097 - 0.39	0.23	0.34 NP [c]	1 / 6	0.13 - 0.13	0.17	NC [b]	6 / 12	0.097 - 0.39	0.19	0.23 NP [c]	0 / 10	All ND	NA	NC [a]
Chrysene	16,000	70	10,000	6 / 6	0.16 - 0.7	0.38	0.56 N [g]	2 / 6	0.1 - 0.22	0.17	0.28 NP [c]	8 / 12	0.1 - 0.7	0.24	0.32 NP [c]	0 / 10	All ND	NA	NC [a]
Dibenz(a,h)anthracene	16	0.7	300	1 / 6	0.11 - 0.11	0.17	NC [b]	0 / 6	All ND	NA	NC [a]	1 / 12	0.11 - 0.11	0.18	NC [b]	0 / 10	All ND	NA	NC [a]
Fluoranthene	120,000	1,000	10,000	6 / 6	0.25 - 1.2	0.67	1.0 N [g]	5 / 6	0.07 - 0.43	0.18	0.28 NP [c]	11 / 12	0.07 - 1.2	0.34	0.48 NP [e]	1 / 10	0.073 - 0.073	0.16	NC [b]
Fluorene	120,000	1,000	10,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Indeno(1,2,3-cd)pyrene	160	7	3,000	5 / 6	0.097 - 0.34	0.21	0.31 NP [c]	1 / 6	0.11 - 0.11	0.17	NC [b]	6 / 12	0.097 - 0.34	0.18	0.24 NP [c]	0 / 10	All ND	NA	NC [a]
Naphthalene	61,000	100	10,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Phenanthrene	120,000	500	10,000	5 / 6	0.13 - 0.58	0.31	0.48 NP [c]	2 / 6	0.08 - 0.27	0.18	0.37 NP [c]	7 / 12	0.08 - 0.58	0.22	0.28 NP [c]	0 / 10	All ND	NA	NC [a]
Pyrene	92,000	1,000	10,000	6 / 6	0.23 - 1.1	0.58	0.86 N [g]	3 / 6	0.1 - 0.36	0.19	0.36 NP [d]	9 / 12	0.1 - 1.1	0.32	0.43 NP [d]	0 / 10	All ND	NA	NC [a]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Aroclor-1254	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Aroclor-1260	10	2	100	2 / 6	0.057 - 0.084	0.036	0.084 NP [d]	0 / 6	All ND	NA	NC [a]	2 / 12	0.057 - 0.084	0.024	0.062 NP [c]	0 / 10	All ND	NA	NC [a]
Aroclor-1262	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
PCBs (Total)	10	2	100	2 / 6	0.057 - 0.084	0.036	0.084 NP [d]	0 / 6	All ND	NA	NC [a]	2 / 12	0.057 - 0.084	0.024	0.084 NP [d]	0 / 10	All ND	NA	NC [a]

Table P-051
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	6 / 6	7365 - 8941	8427	8962 N [g]	6 / 6	6770 - 10370	8354	9335 N [g]	12 / 12	6770 - 10370	8379	8781 N [g]	10 / 10	1949 - 5551	3661	4386 N [g]
Antimony		20	300	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Arsenic	40	20	200	6 / 6	4.4 - 7.2	5.7	6.5 N [g]	6 / 6	2.3 - 4.6	3.4	4.1 N [g]	12 / 12	2.3 - 7.2	4.2	4.7 N [g]	1 / 10	2.2 - 2.2	0.70	NC [b]
Barium	200,000	1,000	10,000	6 / 6	56.6 - 174	99	135 N [g]	6 / 6	24.9 - 86	50	83 G [h]	12 / 12	24.9 - 174	66	85 G [h]	10 / 10	7.2 - 23.4	12.4	15.5 N [g]
Beryllium		100	2,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Cadmium	60	2	300	1 / 6	0.77 - 0.77	0.33	NC [b]	0 / 6	All ND	NA	NC [a]	1 / 12	0.77 - 0.77	0.25	NC [b]	0 / 10	All ND	NA	NC [a]
Calcium		NS	NS	6 / 6	704 - 2622	1221	1950 G [h]	6 / 6	278 - 1709	795	1200 N [g]	12 / 12	278 - 2622	937	1198 G [h]	10 / 10	283 - 758	538	623 N [g]
Chromium	200	30	2,000	6 / 6	**31.4 - 90.8**	**54**	**70** N [g]	6 / 6	13.8 - 26.2	21	25 N [g]	12 / 12	13.8 - **90.8**	**32**	**41** LN [i]	10 / 10	3.9 - 17.6	7.9	10.4 N [g]
Cobalt		NS	NS	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Copper		NS	NS	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Iron		NS	NS	6 / 6	8198 - 9943	9317	9912 N [g]	6 / 6	7822 - 10420	9165	10100 N [g]	12 / 12	7822 - 10420	9216	9631 G [h]	10 / 10	3451 - 8043	5471	6272 N [g]
Lead	1,000	300	3,000	6 / 6	225 - **494**	**318**	**408** N [g]	6 / 6	45.1 - 159	89	152 G [h]	12 / 12	45.1 - **494**	165	232 G [h]	9 / 10	1.6 - 90.2	11.6	67 NP [f]
Magnesium		NS	NS	6 / 6	1030 - 1244	1180	1244 N [g]	6 / 6	877 - 2022	1574	1921 N [g]	12 / 12	877 - 2022	1442	1597 N [g]	10 / 10	797 - 2806	1411	1754 N [g]
Manganese		NS	NS	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Mercury		20	300	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Nickel		20	7,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Potassium		NS	NS	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Selenium		400	8,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Silver		100	2,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Sodium		NS	NS	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Thallium		8	800	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 6	All ND	NA	NC [a]	0 / 6	All ND	NA	NC [a]	0 / 12	All ND	NA	NC [a]	0 / 10	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 (t) UCL
[d] 95% KM (% Bootstrap) UCL
[e] 95% KM (BCA) UCL
[f] 97.5% KM (Chebyshev) UCL

N - Normal Distribution
[g] 95% Student's-t UCL

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

LN - Log Normal Distribution
[i] 95% H-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 01/26/11
Checked by / Date: KJC 01/27/11

MassDEP

Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lieutenant Governor

RICHARD K. SULLIVAN JR.
Secretary

KENNETH L. KIMMELL
Commissioner

September 1, 2011

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

NEW BEDFORD
Release Tracking Number 4-0015685
Parker Street Waste Site
Property P-061
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 from data generated during the first phase of SAP implementation and was followed-up with property by property risk evaluations for the purpose of typology chart development and risk communication with property owners of Phase I properties.

MassDEP is in the process of providing USEPA with both a preliminary risk evaluation and a final risk evaluation for all Phase I properties. The preliminary evaluation was performed without consideration

of data from surrounding properties that was not available until later during SAP implementation for inclusion in the final evaluation. Properties evaluated in all subsequent SAP implementation phases receive only one (final) risk evaluation because, as SAP implementation progressed, the data necessary to perform the final evaluation was available. Property P-061 was evaluated during the second implementation phase.

Property P-061 Risk Evaluation and Response Action Recommendations: Enclosed is a copy of the results from the risk evaluation conducted by MACTEC for the property identified as P-061. MassDEP uses these results along with information related to the boring logs, the nature of COCs observed, the property use and other pertinent information to complete its risk evaluation and make a response action recommendation.

MassDEP's evaluation compared the sample results from the soil samples collected from the four boring locations on this property to the MCP Method 1 category S-1 soil standards and to either potential Imminent Hazard values listed in the MCP or site-specific Imminent Hazard (IH) values to determine if an IH may exist and/or if a Condition of No Significant Risk did or did not exist. 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. The 95% UCL evaluation criteria was used for Preliminary Risk Evaluations of Phase 1 properties when data from surrounding properties was not yet available. When data from surrounding properties is available it can be used to determine whether the data collected from the property in question is consistent with surrounding data and adequately representative of likely COC distribution such that there is no need to apply the 95% UCL. In most cases, the 95% UCL evaluation criteria is not applicable to the Final Risk Evaluations or Phase 2 properties.

Based on this evaluation, MassDEP has determined the following for Property P-061:

- A condition of No Significant Risk to human health, 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 for a portion of the property. Specifically, for the 0 – 3 foot bgs interval, the average concentration of lead and the boring-specific concentrations of lead in all of the borings on the property are above the applicable MCP Method 1 S-1 soil standard. The MCP requires actions to be taken to address this condition on this property in the 0 – 3 foot bgs interval. This may include removal of this layer of soil and replacing it with clean soil or covering it with an appropriate cap material. No activities should occur on this property that will disrupt the soil located from the ground surface to a depth of three feet until removal or cover measures are completed.

- Furthermore, a condition of No Significant Risk to human health, as defined in the MCP, for foreseeable future use of the property was determined not to exist for the soil located between 3 feet and 12 feet bgs. The average concentration calculated for lead from samples collected at this interval and the boring-specific concentration of lead in all of the borings, specifically in the "C" samples, are above the applicable MCP Method 1 S-1 soil standard. Based on a review of the soil boring logs for this property, the "C" samples were collected from the 3-4 foot bgs interval. If this soil is to remain in place, land use restrictions and/or controls, defined as a Notice of Activity & Use Limitation (or AUL) in the MCP, may be necessary for the property to ensure that future activities or changes in use do not create the potential for humans to be exposed to the soil below 3 feet in depth. The soil at this interval should not be disturbed unless it is under the direction of a Licensed Site Professional (LSP) and performed in accordance with the MCP.

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-061

Table P-061
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 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]
Acenaphthene	180,000	1,000	10,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]
Acenaphthylene	180,000	1,000	10,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]
Anthracene	920,000	1,000	10,000	1 / 4	0.16 - 0.16	0.15	NC [b]	1 / 4	0.18 - 0.18	0.15	NC [b]	2 / 8	0.16 - 0.18	0.15	0.19 NP [d]	0 / 7	All ND	NA	NC [a]
Benzo(a)anthracene	160	7	3,000	4 / 4	0.31 - 0.72	0.56	NC [b]	3 / 4	0.16 - 0.75	0.31	NC [b]	7 / 8	0.16 - 0.75	0.39	0.52 NP [e]	2 / 7	0.2 - 0.33	0.18	0.28 NP [d]
Benzo(a)pyrene	16	2	300	4 / 4	0.29 - 0.76	0.56	NC [b]	3 / 4	0.16 - 0.67	0.29	NC [b]	7 / 8	0.16 - 0.76	0.38	0.70 NP [f]	3 / 7	0.15 - 0.39	0.19	0.39 NP [g]
Benzo(b)fluoranthene	160	7	3,000	4 / 4	0.43 - 1.05	0.77	NC [b]	3 / 4	0.21 - 0.83	0.36	NC [b]	7 / 8	0.21 - 1.05	0.50	0.68 NP [d]	4 / 7	0.19 - 0.55	0.23	0.36 NP [d]
Benzo(g,h,i)perylene	120,000	1,000	10,000	4 / 4	0.24 - 0.56	0.40	NC [b]	2 / 4	0.15 - 0.4	0.21	NC [b]	6 / 8	0.15 - 0.56	0.27	0.36 NP [d]	1 / 7	0.31 - 0.31	0.17	NC [c]
Benzo(k)fluoranthene	1,600	70	10,000	3 / 4	0.24 - 0.35	0.25	NC [b]	1 / 4	0.32 - 0.32	0.19	NC [b]	4 / 8	0.24 - 0.35	0.21	0.32 NP [g]	1 / 7	0.17 - 0.17	0.15	NC [c]
Chrysene	16,000	70	10,000	4 / 4	0.38 - 0.81	0.60	NC [b]	3 / 4	0.17 - 0.7	0.30	NC [b]	7 / 8	0.17 - 0.81	0.40	0.54 NP [d]	3 / 7	0.15 - 0.37	0.20	0.37 NP [g]
Dibenz(a,h)anthracene	16	0.7	300	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]
Fluoranthene	120,000	1,000	10,000	4 / 4	0.58 - 1.48	1.1	NC [b]	4 / 4	0.19 - 1.46	0.58	NC [b]	8 / 8	0.19 - 1.48	0.76	1.4 NP [h]	4 / 7	0.18 - 0.73	0.26	0.44 NP [d]
Fluorene	120,000	1,000	10,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]
Indeno(1,2,3-cd)pyrene	160	7	3,000	4 / 4	0.25 - 0.62	0.44	NC [b]	2 / 4	0.16 - 0.47	0.23	NC [b]	6 / 8	0.16 - 0.62	0.30	0.41 NP [g]	1 / 7	0.34 - 0.34	0.18	NC [c]
Naphthalene	61,000	100	10,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]
Phenanthrene	120,000	500	10,000	4 / 4	0.38 - 0.8	0.60	NC [b]	2 / 4	0.16 - 0.9	0.34	NC [b]	6 / 8	0.16 - 0.9	0.42	0.60 NP [g]	1 / 7	0.34 - 0.34	0.18	NC [c]
Pyrene	92,000	1,000	10,000	4 / 4	0.5 - 1.3	0.96	NC [b]	4 / 4	0.16 - 1.18	0.48	NC [b]	8 / 8	0.16 - 1.3	0.64	0.99 G [i]	3 / 7	0.2 - 0.64	0.24	0.64 NP [g]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]
Aroclor-1254	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	1 / 7	0.559 - 0.559	0.096	NC [c]
Aroclor-1260	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]
Aroclor-1262	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]
PCBs (Total)	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	1 / 7	0.559 - 0.559	0.096	NC [c]

Table P-061
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	4 / 4	4551 - 7468	5704	NC [b]	4 / 4	4490 - 8560	6091	NC [b]	8 / 8	4490 - 8560	5962	6784 G [i]	7 / 7	3406 - 7385	5489	6590 N [j]
Antimony		20	300	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]
Arsenic	40	20	200	4 / 4	3.6 - 6.4	4.6	NC [b]	4 / 4	2.3 - 5.8	4.3	NC [b]	8 / 8	2.3 - 6.4	4.4	5.1 N [j]	4 / 7	1.1 - 9.2	2.7	5.9 NP [g]
Barium	200,000	1,000	10,000	4 / 4	86.3 - 109	93	NC [b]	4 / 4	53.2 - 95	81	NC [b]	8 / 8	53.2 - 109	85	93 N [j]	7 / 7	15.1 - 593	151	477 G [i]
Beryllium		100	2,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]
Cadmium	60	2	300	1 / 4	0.63 - 0.63	0.32	NC [b]	0 / 4	All ND	NA	NC [a]	1 / 8	0.63 - 0.63	0.24	NC [c]	1 / 7	1.5 - 1.5	0.38	NC [c]
Calcium		NS	NS	4 / 4	1414 - 8528	4481	NC [b]	4 / 4	1033 - 2397	1519	NC [b]	8 / 8	1033 - 8528	2506	5292 NP [h]	7 / 7	629 - 6228	2027	4539 G [i]
Chromium	200	30	2,000	4 / 4	10 - 16.7	13.0	NC [b]	4 / 4	7.2 - 14	10.9	NC [b]	8 / 8	7.2 - 16.7	11.6	13.1 N [j]	7 / 7	8 - **41.1**	14.5	**34** NP [h]
Cobalt		NS	NS	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]
Copper		NS	NS	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]
Iron		NS	NS	4 / 4	8355 - 10339	9163	NC [b]	4 / 4	9007 - 17553	11785	NC [b]	8 / 8	8355 - 17553	10911	12647 N [k]	7 / 7	3960 - 19444	8378	12553 N [j]
Lead	1,000	300	3,000	4 / 4	**372** - **840**	**504**	NC [b]	4 / 4	191 - **341**	270	NC [b]	8 / 8	191 - **840**	**348**	**443** G [i]	7 / 7	2.1 - **1340**	**438**	**798** N [j]
Magnesium		NS	NS	4 / 4	1227 - 1500	1348	NC [b]	4 / 4	1106 - 1469	1339	NC [b]	8 / 8	1106 - 1500	1342	1412 N [j]	7 / 7	783 - 1485	1170	1374 N [j]
Manganese		NS	NS	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]
Mercury		20	300	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]
Nickel		20	7,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]
Potassium		NS	NS	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]
Selenium		400	8,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]
Silver		100	2,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]
Sodium		NS	NS	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]
Thallium		8	800	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 7	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. 4.00.05).

NC - Not Calculated
[a] All values non detect
[b] Dataset too small to calculate UCL
[c] Only one distinct data value was detected

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

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

N - Normal Distribution
[j] 95% Student's-t UCL
[k] 95% Modified-t 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 2/22/11
Checked by / Date: KJC 2/24/11

MassDEP

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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Secretary

KENNETH L. KIMMELL
Commissioner

September 16, 2011

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

NEW BEDFORD
Release Tracking Number 4-0015685
Parker Street Waste Site
Property P-048
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 from data generated during the first phase of SAP implementation and was followed-up with property by property risk evaluations for the purpose of typology chart development and risk communication with property owners of Phase I properties.

MassDEP is in the process of providing USEPA with both a preliminary risk evaluation and a final risk evaluation for all Phase I properties. The preliminary evaluation was performed without consideration of data from surrounding properties that was not available until later during SAP implementation for inclusion in the final evaluation. Properties evaluated in all subsequent SAP implementation phases receive only one (final) risk evaluation because, as SAP implementation progressed, the data necessary to perform the final evaluation was available. Property P-048 was evaluated during the second implementation phase.

Property P-048 Risk Evaluation and Response Action Recommendations: Enclosed is a copy of the results from the risk evaluation conducted by MACTEC for the property identified as P-048. MassDEP uses these results along with information related to the boring logs, the nature of COCs observed, the property use and other pertinent information to complete its risk evaluation and make a response action recommendation.

MassDEP's evaluation compared the sample results from the soil samples collected from the five boring locations on this property to the MCP Method 1 category S-1 soil standards and to either potential Imminent Hazard values listed in the MCP or site-specific Imminent Hazard (IH) values to determine if an IH may exist and/or if a Condition of No Significant Risk did or did not exist. 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. The 95% UCL evaluation criteria was used for Preliminary Risk Evaluations of Phase 1 properties when data from surrounding properties was not yet available. When data from surrounding properties is available it can be used to determine whether the data collected from the property in question is consistent with surrounding data and adequately representative of likely COC distribution such that there is no need to apply the 95% UCL. In most cases, the 95% UCL evaluation criteria is not applicable to the Final Risk Evaluations or Phase 2 properties.

Based on this evaluation, MassDEP has determined the following for Property P-048:

- A condition of No Significant Risk to human health, 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 for this property. Specifically, for the 0 – 3 foot below ground surface interval, the actual average and the boring specific concentrations of several PAHs and/or lead in all of the borings on the property 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 this layer of soil and replacing it with clean soil or covering it with an appropriate cap material. No activities should occur on this property that will disrupt the soil located from the ground surface to a depth of three feet until removal or cover measures are completed.

- In addition, 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. Both the average concentrations and the 95% UCL calculated for all COCs are below the applicable MCP Method 1 S-1 soil standards and 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/lm

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 – Bureau of Waste Site Cleanup

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-048

Table P-048
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
PAHs (mg/Kg)																			
2-Methylnaphthalene	61,000	300	5,000	0 / 5	All ND	NA	NC [a]	2 / 5	0.3 - 3.1	0.78	5.3 NP [e]	2 / 10	0.3 - 3.1	0.63	1.2 NP [c]	0 / 10	All ND	NA	NC [a]
Acenaphthene	180,000	1,000	10,000	0 / 5	All ND	NA	NC [a]	2 / 5	1.6 - 13	3.0	13.0 NP [f]	2 / 10	1.6 - 13	2.1	5.2 NP [c]	0 / 10	All ND	NA	NC [a]
Acenaphthylene	180,000	1,000	10,000	2 / 5	0.44 - 0.68	0.45	0.72 NP [c]	3 / 5	0.76 - 68	14.6	68 NP [d]	5 / 10	0.44 - 68	9.9	73 NP [h]	0 / 10	All ND	NA	NC [a]
Anthracene	920,000	1,000	10,000	4 / 5	0.47 - 1.6	0.86	1.4 NP [c]	4 / 5	0.44 - 80	18.9	88 NP [g]	8 / 10	0.44 - 80	12.9	84 NP [h]	1 / 10	0.26 - 0.26	0.14	NC [b]
Benzo(a)anthracene	160	7	3,000	5 / 5	1.6 - 6	3.0	4.6 N [k]	5 / 5	0.86 - **130**	**31**	**638** G [n]	10 / 10	0.86 - **130**	**22**	**135** NP [i]	2 / 10	0.26 - 0.99	0.23	0.51 NP [c]
Benzo(a)pyrene	16	2	300	5 / 5	1.7 - **5.9**	**3.0**	**4.6** N [k]	5 / 5	0.91 - **120**	**29**	**579** G [n]	10 / 10	0.91 - **120**	**20**	**125** NP [i]	2 / 10	0.26 - 0.74	0.21	0.44 NP [c]
Benzo(b)fluoranthene	160	7	3,000	5 / 5	1.6 - 5.2	2.7	4.1 N [k]	5 / 5	0.86 - **94**	**24**	**450** G [n]	10 / 10	0.86 - **94**	**17.1**	**99** NP [i]	2 / 10	0.32 - 1	0.24	1.0 NP [d]
Benzo(g,h,i)perylene	120,000	1,000	10,000	5 / 5	1.1 - 3.7	1.9	2.9 N [k]	5 / 5	0.68 - 65	15.9	295 G [n]	10 / 10	0.68 - 65	11.3	36 NP [j]	2 / 10	0.26 - 0.67	0.20	0.67 NP [d]
Benzo(k)fluoranthene	1,600	70	10,000	5 / 5	1.5 - 5.3	2.6	4.8 G [m]	5 / 5	0.73 - **93**	21	**438** G [n]	10 / 10	0.73 - **93**	15.1	51 NP [j]	2 / 10	0.31 - 0.9	0.23	0.90 NP [d]
Chrysene	16,000	70	10,000	5 / 5	1.8 - 5.7	3.0	4.5 N [k]	5 / 5	0.91 - **110**	27	**520** G [n]	10 / 10	0.91 - **110**	18.9	**115** NP [i]	2 / 10	0.27 - 1	0.24	1.0 NP [d]
Dibenz(a,h)anthracene	16	0.7	300	3 / 5	0.36 - **1.1**	0.52	**1.1** NP [d]	5 / 5	0.2 - **19**	**4.7**	**33** G [m]	8 / 10	0.2 - **19**	**3.3**	**10.6** NP [g]	1 / 10	0.21 - 0.21	0.093	NC [b]
Fluoranthene	120,000	1,000	10,000	5 / 5	3.4 - 13	6.9	10.4 N [k]	5 / 5	1.6 - 480	108	**2571** G [n]	10 / 10	1.6 - 480	75	499 NP [i]	2 / 10	0.51 - 2.4	0.40	2.4 NP [f]
Fluorene	120,000	1,000	10,000	0 / 5	All ND	NA	NC [a]	3 / 5	0.99 - 36	8.2	36 NP [d]	3 / 10	0.99 - 36	5.6	11.9 NP [c]	0 / 10	All ND	NA	NC [a]
Indeno(1,2,3-cd)pyrene	160	7	3,000	5 / 5	1 - 3.5	1.8	2.7 N [k]	5 / 5	0.59 - **64**	**15.9**	**302** G [n]	10 / 10	0.59 - **64**	**11.2**	**67** NP [i]	2 / 10	0.22 - 0.61	0.19	0.61 NP [d]
Naphthalene	61,000	100	10,000	0 / 5	All ND	NA	NC [a]	2 / 5	0.74 - 7.6	1.8	13.0 NP [e]	2 / 10	0.74 - 7.6	1.3	2.9 NP [c]	0 / 10	All ND	NA	NC [a]
Phenanthrene	120,000	500	10,000	5 / 5	2 - 8.1	4.2	6.4 N [k]	5 / 5	0.79 - 400	90	**2244** G [n]	10 / 10	0.79 - 400	61	416 NP [i]	2 / 10	0.23 - 1.3	0.26	1.3 NP [f]
Pyrene	92,000	1,000	10,000	5 / 5	3.1 - 11	5.8	8.7 N [k]	5 / 5	1.5 - 370	84	**1955** G [n]	10 / 10	1.5 - 370	58	385 NP [i]	2 / 10	0.47 - 1.9	0.35	0.97 NP [c]
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 / 10	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 / 10	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 / 10	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 / 10	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 / 10	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 / 10	All ND	NA	NC [a]
Aroclor-1260	10	2	100	5 / 5	0.027 - 0.051	0.040	0.049 N [k]	0 / 5	All ND	NA	NC [a]	5 / 10	0.027 - 0.051	0.021	0.043 NP [d]	0 / 10	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 / 10	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 / 10	All ND	NA	NC [a]
PCBs (Total)	10	2	100	5 / 5	0.027 - 0.051	0.040	0.049 N [k]	0 / 5	All ND	NA	NC [a]	5 / 10	0.027 - 0.051	0.025	0.043 NP [d]	0 / 10	All ND	NA	NC [a]

Table P-048
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
Inorganics (mg/Kg)																			
Aluminum		NS	NS	5 / 5	5069 - 6464	5694	6244 N [k]	5 / 5	3387 - 5320	4439	5272 N [k]	10 / 10	3387 - 6464	4858	5290 N [k]	10 / 10	2067 - 6488	4399	5380 N [k]
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 / 10	All ND	NA	NC [a]
Arsenic	40	20	200	5 / 5	5 - 10.5	7.4	9.6 N [k]	5 / 5	2.2 - 7.7	5.2	7.2 N [k]	10 / 10	2.2 - 10.5	5.9	7.0 N [k]	5 / 10	1.7 - 15.3	4.3	9.7 NP [d]
Barium	200,000	1,000	10,000	5 / 5	90.5 - 185	129	167 N [k]	5 / 5	67.5 - 198	139	201 N [k]	10 / 10	67.5 - 198	136	160 N [k]	10 / 10	9.7 - 890	162	**1024** NP [i]
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 / 10	All ND	NA	NC [a]
Cadmium	60	2	300	1 / 5	0.7 - 0.7	0.32	NC [b]	0 / 5	All ND	NA	NC [a]	1 / 10	0.7 - 0.7	0.23	NC [b]	0 / 10	All ND	NA	NC [a]
Calcium		NS	NS	5 / 5	1802 - 2375	2071	2273 N [k]	5 / 5	1001 - 3162	2012	2744 N [k]	10 / 10	1001 - 3162	2032	2303 N [l]	10 / 10	696 - 4492	2193	3009 N [k]
Chromium	200	30	2,000	5 / 5	10 - 14.7	12.9	14.9 N [k]	5 / 5	5.6 - 10.7	8.2	10.4 N [k]	10 / 10	5.6 - 14.7	9.7	11.2 N [k]	10 / 10	3.3 - 15	9.0	11.1 N [k]
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 / 10	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 / 10	All ND	NA	NC [a]
Iron		NS	NS	5 / 5	8014 - 11919	9517	11046 N [k]	5 / 5	5809 - 9617	8251	9719 N [k]	10 / 10	5809 - 11919	8673	9388 N [k]	10 / 10	2643 - 23016	7729	12133 G [m]
Lead	1,000	300	3,000	5 / 5	**461** - **686**	**554**	**652** N [k]	5 / 5	141 - **550**	**309**	**473** N [k]	10 / 10	141 - **686**	**391**	**475** N [k]	10 / 10	3 - **1190**	247	**1018** G [n]
Magnesium		NS	NS	5 / 5	1082 - 1474	1305	1458 N [k]	5 / 5	858 - 1900	1271	1698 N [k]	10 / 10	858 - 1900	1282	1441 N [k]	10 / 10	597 - 1631	1073	1250 N [k]
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 / 10	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 / 10	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 / 10	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 / 10	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 / 10	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 / 10	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 / 10	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 / 10	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 / 10	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 / 10	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 / 10	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. 4.00.05).

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

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

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

G - Gamma Distribution
[m] 95% Approximate Gamma UCL
[n] 95% Adjusted 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 2/18/11
Checked by / Date: KJC 2/18/11

September 16, 2011

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

NEW BEDFORD
Release Tracking Number 4-0015685
Parker Street Waste Site
Property P-049
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 from data generated during the first phase of SAP implementation and was followed-up with property by property risk evaluations for the purpose of typology chart development and risk communication with property owners of Phase I properties.

MassDEP is in the process of providing USEPA with both a preliminary risk evaluation and a final risk evaluation for all Phase I properties. The preliminary evaluation was performed without consideration

of data from surrounding properties that was not available until later during SAP implementation for inclusion in the final evaluation. Properties evaluated in all subsequent SAP implementation phases receive only one (final) risk evaluation because, as SAP implementation progressed, the data necessary to perform the final evaluation was available. Property P-049 was evaluated during the second implementation phase.

Property P-049 Risk Evaluation and Response Action Recommendations: Enclosed is a copy of the results from the risk evaluation conducted by MACTEC for the property identified as P-049. MassDEP uses these results along with information related to the boring logs, the nature of COCs observed, the property use and other pertinent information to complete its risk evaluation and make a response action recommendation.

MassDEP's evaluation compared the sample results from the soil samples collected from the two boring locations on this property to the MCP Method 1 category S-1 soil standards and to either potential Imminent Hazard values listed in the MCP or site-specific Imminent Hazard (IH) values to determine if an IH may exist and/or if a Condition of No Significant Risk did or did not exist. 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. The 95% UCL evaluation criteria was used for Preliminary Risk Evaluations of Phase 1 properties when data from surrounding properties was not yet available. When data from surrounding properties is available it can be used to determine whether the data collected from the property in question is consistent with surrounding data and adequately representative of likely COC distribution such that there is no need to apply the 95% UCL. In most cases, the 95% UCL evaluation criteria is not applicable to the Final Risk Evaluations or Phase 2 properties.

Based on this evaluation, MassDEP has determined the following for Property P-049:

- A condition of No Significant Risk to human health, 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 for this property. Specifically, for the 0 – 3 foot below ground surface interval, the actual average and the boring specific concentrations of several PAHs and/or lead in both of the borings on the property 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 this layer of soil and replacing it with clean soil or covering it with an appropriate cap material. No activities should occur on this property that will disrupt the soil located from the ground surface to a depth of three feet until removal or cover measures are completed.

- Furthermore, a condition of No Significant Risk to human health, as defined in the MCP, for foreseeable future use of the property was determined not to exist for the soil located between 3 feet and 12 feet below the ground surface. Specifically, the average concentration of several PAHs were above the MCP Method 1 S-1 soil standard. Because this soil is at depth, it does not necessarily need to be removed to be protective of the current use of the property. If this soil is to remain in place, land use restrictions and/or controls defined as a Notice of Activity and Use Limitation (or AUL) in the MCP, may be necessary for the property to ensure that future activities or changes in use do not create the potential for humans to be exposed to the soil below 3 feet in depth in these areas. No activities should occur at the property that will disrupt soil located from a depth of 3 - 12 feet unless it is done under the supervision of a Licensed Site Professional and performed in accordance with the MCP.

- Please note that these findings are based on the data available from only two borings because the majority of the property is occupied by structures and/or covered by impervious surfaces. However, although the data set for this property is limited, it is consistent with SAP data gathered from surrounding properties.

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, Regional Director

J/lm
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 – Bureau of Waste Site Cleanup

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-049

Table P-049
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 / 2	All ND	NA	NC [a]	1 / 2	1.5 - 1.5	1.1	NC [b]	1 / 4	1.5 - 1.5	0.98	NC [b]	3 / 4	0.26 - 6.8	2.3	NC [b]
Acenaphthene	180,000	1,000	10,000	0 / 2	All ND	NA	NC [a]	1 / 2	3.7 - 3.7	2.2	NC [b]	1 / 4	3.7 - 3.7	1.7	NC [b]	3 / 4	0.27 - 12	3.6	NC [b]
Acenaphthylene	180,000	1,000	10,000	0 / 2	All ND	NA	NC [a]	1 / 2	13 - 13	6.8	NC [b]	1 / 4	13 - 13	4.8	NC [b]	3 / 4	0.41 - 16	6.0	NC [b]
Anthracene	920,000	1,000	10,000	0 / 2	All ND	NA	NC [a]	1 / 2	24 - 24	12.3	NC [b]	1 / 4	24 - 24	8.5	NC [b]	3 / 4	0.99 - 54	17.1	NC [b]
Benzo(a)anthracene	160	7	3,000	1 / 2	2.4 - 2.4	1.6	NC [b]	2 / 2	1.2 - **46**	**24**	NC [b]	3 / 4	1.2 - **46**	**16.3**	**58** NP [c]	4 / 4	0.52 - **73**	**23**	NC [b]
Benzo(a)pyrene	16	2	300	1 / 2	**2.2 - 2.2**	1.5	NC [b]	1 / 2	**20 - 20**	**10.3**	NC [b]	2 / 4	**2.2 - 20**	**7.4**	**20** NP [d]	3 / 4	0.9 - **25**	**9.0**	NC [b]
Benzo(b)fluoranthene	160	7	3,000	2 / 2	1.5 - 2.9	2.2	NC [b]	2 / 2	1.2 - **54**	**28**	NC [b]	4 / 4	1.2 - **54**	**19.1**	**129** NP [e]	4 / 4	0.58 - **80**	**32**	NC [b]
Benzo(g,h,i)perylene	120,000	1,000	10,000	0 / 2	All ND	NA	NC [a]	1 / 2	24 - 24	12.3	NC [b]	1 / 4	24 - 24	8.5	NC [b]	3 / 4	0.51 - 27	9.4	NC [b]
Benzo(k)fluoranthene	1,600	70	10,000	0 / 2	All ND	NA	NC [a]	1 / 2	11 - 11	5.8	NC [b]	1 / 4	11 - 11	4.1	NC [b]	3 / 4	0.45 - 28	8.9	NC [b]
Chrysene	16,000	70	10,000	1 / 2	2.1 - 2.1	1.4	NC [b]	1 / 2	34 - 34	17.3	NC [b]	2 / 4	2.1 - 34	12.0	**88** NP [f]	3 / 4	0.95 - 64	21	NC [b]
Dibenz(a,h)anthracene	16	0.7	300	0 / 2	All ND	NA	NC [a]	1 / 2	**6.7 - 6.7**	**3.5**	NC [b]	1 / 4	**6.7 - 6.7**	**2.5**	NC [b]	2 / 4	**3.3 - 10**	**3.4**	NC [b]
Fluoranthene	120,000	1,000	10,000	2 / 2	3.2 - 4.2	3.7	NC [b]	2 / 2	2.4 - 130	66	NC [b]	4 / 4	2.4 - 130	45	312 NP [e]	4 / 4	1.2 - 200	81	NC [b]
Fluorene	120,000	1,000	10,000	0 / 2	All ND	NA	NC [a]	1 / 2	9.4 - 9.4	5.0	NC [b]	1 / 4	9.4 - 9.4	3.6	NC [b]	3 / 4	0.52 - 17	5.9	NC [b]
Indeno(1,2,3-cd)pyrene	160	7	3,000	0 / 2	All ND	NA	NC [a]	1 / 2	**29 - 29**	**14.8**	NC [b]	1 / 4	**29 - 29**	**10.1**	NC [b]	3 / 4	0.63 - **43**	**14.5**	NC [b]
Naphthalene	61,000	100	10,000	0 / 2	All ND	NA	NC [a]	1 / 2	3.3 - 3.3	2.0	NC [b]	1 / 4	3.3 - 3.3	1.6	NC [b]	3 / 4	0.58 - 16	5.2	NC [b]
Phenanthrene	120,000	500	10,000	2 / 2	3.2 - 3.4	3.3	NC [b]	2 / 2	2.2 - 130	66	NC [b]	4 / 4	2.2 - 130	45	NC [b]	4 / 4	1 - 230	89	NC [b]
Pyrene	92,000	1,000	10,000	2 / 2	2.4 - 3.7	3.1	NC [b]	2 / 2	1.9 - 100	51	NC [b]	4 / 4	1.9 - 100	35	240 NP [e]	4 / 4	0.86 - 160	64	NC [b]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 2	All ND	NA	NC [a]	0 / 2	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 2	All ND	NA	NC [a]	0 / 2	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 2	All ND	NA	NC [a]	0 / 2	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 2	All ND	NA	NC [a]	0 / 2	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 2	All ND	NA	NC [a]	0 / 2	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Aroclor-1254	10	2	100	0 / 2	All ND	NA	NC [a]	0 / 2	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Aroclor-1260	10	2	100	1 / 2	0.087 - 0.087	0.047	NC [b]	1 / 2	0.032 - 0.032	0.020	NC [b]	2 / 4	0.032 - 0.087	0.029	0.087 NP [g]	0 / 4	All ND	NA	NC [a]
Aroclor-1262	10	2	100	0 / 2	All ND	NA	NC [a]	0 / 2	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 2	All ND	NA	NC [a]	0 / 2	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
PCBs (Total)	10	2	100	1 / 2	0.087 - 0.087	0.049	NC [b]	1 / 2	0.032 - 0.032	0.022	NC [b]	2 / 4	0.032 - 0.087	0.031	0.087 NP [g]	0 / 4	All ND	NA	NC [a]

Table P-049
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
Inorganics (mg/Kg)																			
Aluminum		NS	NS	2 / 2	6097 - 6237	6167	NC [b]	2 / 2	4725 - 7938	6332	NC [b]	4 / 4	4725 - 7938	6277	7461 N [h]	4 / 4	3755 - 5407	4577	NC [b]
Antimony		20	300	0 / 2	All ND	NA	NC [a]	0 / 2	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Arsenic	40	20	200	2 / 2	4 - 4.1	4.1	NC [b]	2 / 2	4.2 - 10.5	7.4	NC [b]	4 / 4	4 - 10.5	6.3	9.0 N [i]	3 / 4	8.5 - 10.3	7.4	NC [b]
Barium	200,000	1,000	10,000	2 / 2	83.9 - 191	137	NC [b]	2 / 2	129 - 303	216	NC [b]	4 / 4	83.9 - 303	190	267 N [h]	4 / 4	34.3 - 193	94	NC [b]
Beryllium		100	2,000	0 / 2	All ND	NA	NC [a]	0 / 2	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Cadmium	60	2	300	0 / 2	All ND	NA	NC [a]	0 / 2	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Calcium		NS	NS	2 / 2	2073 - 3027	2550	NC [b]	2 / 2	2398 - 7993	5196	NC [b]	4 / 4	2073 - 7993	4314	7981 G [j]	4 / 4	1709 - 3700	2672	NC [b]
Chromium	200	30	2,000	2 / 2	15 - 18.1	16.6	NC [b]	2 / 2	12.2 - 14.2	13.2	NC [b]	4 / 4	12.2 - 18.1	14.3	16.1 N [h]	4 / 4	8.2 - 11.4	9.8	NC [b]
Cobalt		NS	NS	0 / 2	All ND	NA	NC [a]	0 / 2	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Copper		NS	NS	0 / 2	All ND	NA	NC [a]	0 / 2	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Iron		NS	NS	2 / 2	10006 - 10368	10187	NC [b]	2 / 2	12373 - 13745	13059	NC [b]	4 / 4	10006 - 13745	12102	13425 N [h]	4 / 4	5489 - 22761	13256	NC [b]
Lead	1,000	300	3,000	2 / 2	259 - **1150**	**705**	NC [b]	2 / 2	**601** - **1630**	**1116**	NC [b]	4 / 4	259 - **1630**	**979**	**1455** N [h]	4 / 4	15.2 - **482**	248	NC [b]
Magnesium		NS	NS	2 / 2	1991 - 2064	2028	NC [b]	2 / 2	1456 - 2047	1752	NC [b]	4 / 4	1456 - 2064	1844	2091 N [h]	4 / 4	599 - 1518	1160	NC [b]
Manganese		NS	NS	0 / 2	All ND	NA	NC [a]	0 / 2	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Mercury		20	300	0 / 2	All ND	NA	NC [a]	0 / 2	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Nickel		20	7,000	0 / 2	All ND	NA	NC [a]	0 / 2	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Potassium		NS	NS	0 / 2	All ND	NA	NC [a]	0 / 2	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Selenium		400	8,000	0 / 2	All ND	NA	NC [a]	0 / 2	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Silver		100	2,000	0 / 2	All ND	NA	NC [a]	0 / 2	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Sodium		NS	NS	0 / 2	All ND	NA	NC [a]	0 / 2	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Thallium		8	800	0 / 2	All ND	NA	NC [a]	0 / 2	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 2	All ND	NA	NC [a]	0 / 2	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 2	All ND	NA	NC [a]	0 / 2	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 2	All ND	NA	NC [a]	0 / 2	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 4	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] Dataset too small to calculate UCL

N - Normal Distribution
[h] 95% Student's-t UCL
[i] 95% Modified-t UCL

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

G - Gamma Distribution
[j] 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 01/26/11
Checked by / Date: KJC 01/27/11

Department of Environmental Protection

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DEVAL L. PATRICK
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September 16, 2011

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

NEW BEDFORD
Release Tracking Number 4-0015685
Parker Street Waste Site
Property P-054
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 from data generated during the first phase of SAP implementation and was followed-up with property by property risk evaluations for the purpose of typology chart development and risk communication with property owners of Phase I properties.

MassDEP is in the process of providing USEPA with both a preliminary risk evaluation and a final risk evaluation for all Phase I properties. The preliminary evaluation was performed without consideration of data from surrounding properties that was not available until later during SAP implementation for inclusion in the final evaluation. Properties evaluated in all subsequent SAP implementation phases receive only one (final) risk evaluation because, as SAP implementation progressed, the data necessary to perform the final evaluation was available. Property P-054 was evaluated during the second implementation phase.

Property P-054 Risk Evaluation and Response Action Recommendations: Enclosed is a copy of the results from the risk evaluation conducted by MACTEC for the property identified as P-054. MassDEP uses these results along with information related to the boring logs, the nature of COCs observed, the property use and other pertinent information to complete its risk evaluation and make a response action recommendation.

MassDEP's evaluation compared the sample results from the soil samples collected from the four boring locations on this property to the MCP Method 1 category S-1 soil standards and to either potential Imminent Hazard values listed in the MCP or site-specific Imminent Hazard (IH) values to determine if an IH may exist and/or if a Condition of No Significant Risk did or did not exist. 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. The 95% UCL evaluation criteria was used for Preliminary Risk Evaluations of Phase 1 properties when data from surrounding properties was not yet available. When data from surrounding properties is available it can be used to determine whether the data collected from the property in question is consistent with surrounding data and adequately representative of likely COC distribution such that there is no need to apply the 95% UCL. In most cases, the 95% UCL evaluation criteria is not applicable to the Final Risk Evaluations or Phase 2 properties.

Based on this evaluation, MassDEP has determined the following for Property P-054:

- A condition of No Significant Risk to human health, 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 for this property. Specifically, for the 0 – 3 foot below ground surface interval, the actual average, and the boring specific concentrations, of lead in three of the borings on the property 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 this layer of soil and replacing it with clean soil or covering it with an appropriate cap material. No activities should occur on this property that will disrupt the soil located from the ground surface to a depth of three feet until removal or cover measures are completed.

- In addition, 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. Both the average concentrations and the 95% UCL calculated for all COCs are below the applicable MCP Method 1 S-1 soil standards and no further response actions are necessary for this soil.

- Based on the findings above, and after a careful review of all available data and information, MassDEP is of the opinion that the boundary of the fill layer associated with the PSWS has been determined to be across Property P-054. No further assessment is required to define the PSWS fill boundary either northerly or easterly of this property.

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, Regional Director

J/lm

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 – Bureau of Waste Site Cleanup

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-054

Table P-054
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
PAHs (mg/Kg)																			
2-Methylnaphthalene	61,000	300	5,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Acenaphthene	180,000	1,000	10,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Acenaphthylene	180,000	1,000	10,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	1 / 8	0.22 - 0.22	0.15	NC [c]
Anthracene	920,000	1,000	10,000	1 / 4	0.36 - 0.36	2.0	NC [b]	0 / 4	All ND	NA	NC [a]	1 / 8	0.36 - 0.36	0.73	NC [c]	1 / 8	0.28 - 0.28	0.16	NC [c]
Benzo(a)anthracene	160	7	3,000	1 / 4	1.1 - 1.1	2.1	NC [b]	4 / 4	0.26 - 0.93	0.59	NC [b]	5 / 8	0.26 - 1.1	1.1	0.80 NP [d]	2 / 8	0.53 - 1.2	0.31	1.2 NP [e]
Benzo(a)pyrene	16	2	300	1 / 4	1.2 - 1.2	**2.2**	NC [b]	4 / 4	0.27 - 1	0.65	NC [b]	5 / 8	0.27 - 1.2	1.2	0.87 NP [d]	2 / 8	0.55 - 1.3	0.33	0.88 NP [d]
Benzo(b)fluoranthene	160	7	3,000	1 / 4	1.6 - 1.6	2.3	NC [b]	4 / 4	0.32 - 1.3	0.82	NC [b]	5 / 8	0.32 - 1.6	1.3	1.1 NP [d]	2 / 8	0.74 - 1.7	0.40	1.7 NP [e]
Benzo(g,h,i)perylene	120,000	1,000	10,000	1 / 4	0.95 - 0.95	2.1	NC [b]	3 / 4	0.4 - 0.74	0.43	NC [b]	4 / 8	0.4 - 0.95	0.99	0.66 NP [d]	2 / 8	0.42 - 0.89	0.26	0.89 NP [e]
Benzo(k)fluoranthene	1,600	70	10,000	1 / 4	0.58 - 0.58	2.0	NC [b]	3 / 4	0.25 - 0.51	0.31	NC [b]	4 / 8	0.25 - 0.58	0.87	0.46 NP [e]	1 / 8	0.66 - 0.66	0.20	NC [c]
Chrysene	16,000	70	10,000	1 / 4	1.2 - 1.2	2.2	NC [b]	4 / 4	0.28 - 1	0.64	NC [b]	5 / 8	0.28 - 1.2	1.1	0.86 NP [d]	2 / 8	0.6 - 1.4	0.35	1.4 NP [e]
Dibenz(a,h)anthracene	16	0.7	300	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	1 / 8	0.22 - 0.22	0.099	NC [c]
Fluoranthene	120,000	1,000	10,000	2 / 4	0.86 - 2.3	2.6	NC [b]	4 / 4	0.46 - 1.6	1.2	NC [b]	6 / 8	0.46 - 2.3	1.6	1.6 NP [d]	4 / 8	0.42 - 2.6	0.66	1.6 NP [e]
Fluorene	120,000	1,000	10,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Indeno(1,2,3-cd)pyrene	160	7	3,000	1 / 4	1 - 1	2.1	NC [b]	4 / 4	0.2 - 0.88	0.53	NC [b]	5 / 8	0.2 - 1	1.1	0.73 NP [d]	2 / 8	0.47 - 1.1	0.29	0.75 NP [d]
Naphthalene	61,000	100	10,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Phenanthrene	120,000	500	10,000	1 / 4	1.1 - 1.1	2.1	NC [b]	3 / 4	0.56 - 0.73	0.52	NC [b]	4 / 8	0.56 - 1.1	1.1	0.77 NP [d]	2 / 8	0.75 - 1.4	0.37	1.4 NP [e]
Pyrene	92,000	1,000	10,000	2 / 4	0.84 - 2.1	2.5	NC [b]	4 / 4	0.4 - 1.5	1.0	NC [b]	6 / 8	0.4 - 2.1	1.5	1.4 NP [d]	3 / 8	0.47 - 2.2	0.54	1.2 NP [d]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Aroclor-1254	10	2	100	1 / 4	0.16 - 0.16	0.060	NC [b]	0 / 4	All ND	NA	NC [a]	1 / 8	0.16 - 0.16	0.028	NC [c]	0 / 8	All ND	NA	NC [a]
Aroclor-1260	10	2	100	1 / 4	0.19 - 0.19	0.061	NC [b]	1 / 4	0.094 - 0.094	0.029	NC [b]	2 / 8	0.094 - 0.19	0.040	0.19 NP [e]	1 / 8	0.035 - 0.035	0.011	NC [c]
Aroclor-1262	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
PCBs (Total)	10	2	100	1 / 4	0.35 - 0.35	0.11	NC [b]	1 / 4	0.094 - 0.094	0.032	NC [b]	2 / 8	0.094 - 0.35	0.057	0.35 NP [e]	1 / 8	0.035 - 0.035	0.014	NC [c]

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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	4 / 4	4570 - 5303	5011	NC [b]	4 / 4	3591 - 5504	4506	NC [b]	8 / 8	3591 - 5504	4674	5018 N [g]	8 / 8	2912 - 5587	4108	4703 N [g]
Antimony		20	300	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Arsenic	40	20	200	1 / 4	2.6 - 2.6	1.7	NC [b]	4 / 4	4.2 - 5.4	4.8	NC [b]	5 / 8	2.6 - 5.4	3.7	4.8 NP [e]	2 / 8	2.8 - 7.6	2.3	7.6 NP [e]
Barium	200,000	1,000	10,000	4 / 4	49.9 - 120	76	NC [b]	4 / 4	101 - 237	169	NC [b]	8 / 8	49.9 - 237	138	172 N [g]	8 / 8	17.6 - 196	60	111 G [h]
Beryllium		100	2,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Cadmium	60	2	300	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Calcium		NS	NS	4 / 4	1518 - 9375	4537	NC [b]	4 / 4	1122 - 5015	2610	NC [b]	8 / 8	1122 - 9375	3252	4864 G [h]	8 / 8	881 - 3489	1461	2105 G [h]
Chromium	200	30	2,000	4 / 4	10.1 - **38**	23	NC [b]	4 / 4	5.7 - 11.5	8.6	NC [b]	8 / 8	5.7 - **38**	13.3	18.8 G [h]	8 / 8	6.9 - 13.1	10.2	12.0 N [g]
Cobalt		NS	NS	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Copper		NS	NS	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Iron		NS	NS	4 / 4	7288 - 9637	8524	NC [b]	4 / 4	6095 - 9212	7591	NC [b]	8 / 8	6095 - 9637	7902	8533 N [g]	8 / 8	3927 - 17388	7568	10813 G [h]
Lead	1,000	300	3,000	4 / 4	118 - 244	164	NC [b]	4 / 4	**362** - **871**	**490**	NC [b]	8 / 8	118 - **871**	**381**	**604** LN [j]	8 / 8	2.1 - **665**	196	**1266** G [i]
Magnesium		NS	NS	4 / 4	1491 - 4994	3117	NC [b]	4 / 4	832 - 1258	979	NC [b]	8 / 8	832 - 4994	1691	3338 NP [f]	8 / 8	999 - 2565	1617	1992 N [g]
Manganese		NS	NS	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Mercury		20	300	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Nickel		20	7,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Potassium		NS	NS	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Selenium		400	8,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Silver		100	2,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Sodium		NS	NS	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Thallium		8	800	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	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] Dataset too small to calculate UCL
[c] Only one distinct data value was detected

NP - Non-Parametric Distribution
[d] 95% KM (t) UCL
[e] 95% KM (% Bootstrap) UCL
[f] 95% Chebyshev (Mean, Sd) UCL

N - Normal Distribution
[g] 95% Student's-t UCL

G - Gamma Distribution
[h] 95% Approximate Gamma UCL
[i] 95% Adjusted Gamma UCL

LN - Log Normal Distribution
[j] 95% H-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 01/26/11
Checked by / Date: KJC 01/27/11

MassDEP

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SAP Data Risk Evaluation - No USEPA Action Recommended

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MassDEP is in the process of providing USEPA with both a preliminary risk evaluation and a final risk evaluation for all Phase I properties. The preliminary evaluation was performed without consideration of data from surrounding properties that was not available until later during SAP implementation for inclusion in the final evaluation. Properties evaluated in all subsequent SAP implementation phases receive only one (final) risk evaluation because, as SAP implementation progressed, the data necessary to perform the final evaluation was available. Property P-057 was evaluated during the second implementation phase.

Property P-057 Risk Evaluation and Response Action Recommendations: Enclosed is a copy of the results from the risk evaluation conducted by MACTEC for the property identified as P-057. MassDEP uses these results along with information related to the boring logs, the nature of COCs observed, the property use and other pertinent information to complete its risk evaluation and make a response action recommendation.

MassDEP's evaluation compared the sample results from the soil samples collected from the fifteen boring locations on this property to the MCP Method 1 category S-1 soil standards and to either potential Imminent Hazard values listed in the MCP or site-specific Imminent Hazard (IH) values to determine if an IH may exist and/or if a Condition of No Significant Risk did not exist. 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. The 95% UCL evaluation criteria was used for Preliminary Risk Evaluations of Phase 1 properties when data from surrounding properties was not yet available. When data from surrounding properties is available it can be used to show whether the data collected from the property in question is consistent with surrounding data and adequately representative of likely COC distribution such that there is no need to apply the 95% UCL. In most cases, the 95% UCL evaluation criteria is not applicable to the Final Risk Evaluations or Phase 2 properties.

Based on this evaluation, MassDEP has determined the following for Property P-057:

- A condition of No Significant Risk to human health, as defined in the MCP, was determined to exist for current use of the property for the soil located between the ground surface and 3 feet in depth. Applying the 95% UCL for data evaluation of the soil located between 0 and 3 feet bgs is not necessary because the COC concentrations observed on Property P-057 are consistent with results from samples taken in the surrounding area. The actual average for COCs at this depth interval is below the applicable MCP Method 1 S-1 soil standard. No further response actions are necessary for this soil.

- Furthermore, a condition of No Significant Risk to human health, as defined in the MCP, for foreseeable future use of the property was determined not to exist for the soil located between 3 feet and 12 feet below the ground surface. Specifically, the average concentration of one PAH was slightly above the MCP Method 1 S-1 soil standard. Because this soil is at depth, it does not necessarily need to be removed to be protective of the current use of the property. If this soil is to remain in place, land use restrictions and/or controls defined as a Notice of Activity and Use Limitation (or AUL) in the MCP, may be necessary for the property to ensure that future activities or changes in use do not create the potential for humans to be exposed to the soil below 3 feet in depth in these areas. No activities should occur at the property that will disrupt soil located from a depth of 3 - 12 feet unless it is done under the supervision of a Licensed Site Professional and performed in accordance with the MCP.

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/lm

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 – Bureau of Waste Site Cleanup

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-057

Table P-057
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 / 15	All ND	NA	NC [a]	2 / 15	0.21 - 0.68	0.19	0.68 NP [d]	2 / 30	0.21 - 0.68	0.17	0.26 NP [c]	3 / 30	0.18 - 3.17	0.29	3.2 NP [d]
Acenaphthene	180,000	1,000	10,000	0 / 15	All ND	NA	NC [a]	7 / 15	0.18 - 1.41	0.30	0.48 NP [c]	7 / 30	0.18 - 1.41	0.25	0.36 NP [c]	7 / 30	0.17 - 4.69	0.35	0.78 NP [f]
Acenaphthylene	180,000	1,000	10,000	4 / 15	0.15 - 0.27	0.16	0.24 NP [c]	11 / 15	0.18 - 1.34	0.52	0.74 NP [c]	15 / 30	0.15 - 1.34	0.40	0.53 NP [c]	9 / 30	0.24 - 18.3	0.94	2.8 NP [f]
Anthracene	920,000	1,000	10,000	9 / 15	0.15 - 0.36	0.21	0.27 NP [c]	12 / 15	0.23 - 3.06	1.1	1.6 NP [c]	21 / 30	0.15 - 3.06	0.80	1.4 NP [e]	11 / 30	0.28 - 29.2	1.5	4.3 NP [f]
Benzo(a)anthracene	160	7	3,000	14 / 15	0.19 - 1.37	0.69	0.86 NP [c]	14 / 15	0.17 - **8.3**	2.9	4.0 NP [c]	28 / 30	0.17 - **8.3**	2.1	3.6 NP [e]	17 / 30	0.21 - **42.3**	2.8	5.3 NP [f]
Benzo(a)pyrene	16	2	300	14 / 15	0.19 - 1.22	0.64	0.80 NP [c]	13 / 15	0.4 - **5.11**	**2.3**	**3.1** NP [c]	27 / 30	0.19 - **5.11**	1.7	**2.8** NP [e]	16 / 30	0.18 - **37.9**	**2.4**	**5.1** NP [f]
Benzo(b)fluoranthene	160	7	3,000	15 / 15	0.19 - 1.68	0.90	1.1 N [k]	14 / 15	0.18 - 5.89	2.8	3.8 NP [c]	29 / 30	0.18 - 5.89	2.2	3.4 NP [e]	17 / 30	0.24 - **47.7**	3.0	6.4 NP [f]
Benzo(g,h,i)perylene	120,000	1,000	10,000	13 / 15	0.21 - 0.9	0.48	0.59 NP [c]	13 / 15	0.28 - 3.76	1.7	2.2 NP [d]	26 / 30	0.21 - 3.76	1.3	2.0 NP [e]	16 / 30	0.21 - 27.9	1.8	7.7 NP [h]
Benzo(k)fluoranthene	1,600	70	10,000	13 / 15	0.15 - 0.6	0.30	0.37 NP [c]	13 / 15	0.18 - 2.12	0.95	1.3 NP [c]	26 / 30	0.15 - 2.12	0.74	0.90 NP [f]	12 / 30	0.17 - 4.98	0.66	1.0 NP [c]
Chrysene	16,000	70	10,000	15 / 15	0.14 - 1.46	0.78	0.98 N [k]	14 / 15	0.18 - 8.37	3.1	4.3 NP [c]	29 / 30	0.14 - 8.37	2.4	3.9 NP [e]	17 / 30	0.27 - 39.2	2.8	11.3 NP [h]
Dibenz(a,h)anthracene	16	0.7	300	7 / 15	0.15 - 0.25	0.16	0.21 NP [c]	12 / 15	0.17 - **0.98**	0.46	0.62 NP [c]	19 / 30	0.15 - **0.98**	0.36	0.45 NP [f]	8 / 30	0.36 - **2.48**	0.38	0.66 NP [c]
Fluoranthene	120,000	1,000	10,000	15 / 15	0.25 - 2.41	1.3	1.6 N [k]	14 / 15	0.29 - 14.8	5.3	7.5 NP [c]	29 / 30	0.25 - 14.8	4.0	6.7 NP [e]	18 / 30	0.2 - 109.1	6.1	13.5 NP [f]
Fluorene	120,000	1,000	10,000	0 / 15	All ND	NA	NC [a]	7 / 15	0.37 - 1.48	0.44	0.75 NP [d]	7 / 30	0.37 - 1.48	0.34	0.57 NP [c]	8 / 30	0.17 - 14.8	0.79	1.9 NP [f]
Indeno(1,2,3-cd)pyrene	160	7	3,000	14 / 15	0.16 - 0.99	0.52	0.64 NP [c]	13 / 15	0.29 - 3.92	1.8	2.4 NP [c]	27 / 30	0.16 - 3.92	1.3	1.7 NP [f]	16 / 30	0.18 - **30.2**	1.9	3.9 NP [f]
Naphthalene	61,000	100	10,000	0 / 15	All ND	NA	NC [a]	2 / 15	0.18 - 1.36	0.23	NC [b]	2 / 30	0.18 - 1.36	0.20	0.30 NP [c]	4 / 30	0.16 - 4.31	0.31	1.3 NP [h]
Phenanthrene	120,000	500	10,000	14 / 15	0.18 - 1.77	0.86	1.1 NP [c]	14 / 15	0.33 - 16.6	5.3	11.6 NP [e]	28 / 30	0.18 - 16.6	3.8	7.1 NP [e]	17 / 30	0.25 - 126.5	6.6	50 NP [i]
Pyrene	92,000	1,000	10,000	15 / 15	0.23 - 2.55	1.3	1.6 N [k]	14 / 15	0.34 - 16.7	5.9	8.3 NP [c]	29 / 30	0.23 - 16.7	4.4	7.5 NP [e]	18 / 30	0.16 - 82.2	5.3	33 NP [i]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]
Aroclor-1254	10	2	100	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]
Aroclor-1260	10	2	100	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]
Aroclor-1262	10	2	100	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]
PCBs (Total)	10	2	100	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]

Table P-057
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
Inorganics (mg/Kg)																			
Aluminum		NS	NS	15 / 15	4839 - 6448	5382	5583 N [k]	15 / 15	4168 - 5961	4881	5088 N [k]	30 / 30	4168 - 6448	5048	5173 N [k]	30 / 30	1454 - 9487	4185	4657 G [m]
Antimony		20	300	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]
Arsenic	40	20	200	15 / 15	1.8 - 18	5.1	7.1 G [m]	15 / 15	3.8 - 9.6	6.1	6.8 N [k]	30 / 30	1.8 - 18	5.8	6.5 G [m]	30 / 30	0.98 - 11.7	4.8	6.0 G [m]
Barium	200,000	1,000	10,000	15 / 15	23.4 - 81.8	42	49 N [k]	15 / 15	79.2 - 176	123	135 N [k]	30 / 30	23.4 - 176	96	125 NP [g]	30 / 30	9.5 - 478	105	310 NP [j]
Beryllium		100	2,000	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]
Cadmium	60	2	300	1 / 15	0.83 - 0.83	0.23	NC [b]	1 / 15	1.9 - 1.9	0.34	NC [b]	2 / 30	0.83 - 1.9	0.30	1.9 NP [d]	5 / 30	0.53 - **2.1**	0.38	1.1 NP [d]
Calcium		NS	NS	15 / 15	501 - 1076	850	941 N [k]	15 / 15	1004 - 2900	1697	1916 N [k]	30 / 30	501 - 2900	1415	1557 N [k]	30 / 30	532 - 5253	2305	2679 N [k]
Chromium	200	30	2,000	15 / 15	4.9 - 12.7	7.3	8.2 N [k]	15 / 15	6.1 - 11.3	8.8	9.5 N [k]	30 / 30	4.9 - 12.7	8.3	8.8 N [k]	30 / 30	2.8 - 27.8	9.2	10.6 G [m]
Cobalt		NS	NS	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]
Copper		NS	NS	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]
Iron		NS	NS	15 / 15	4712 - 7815	6099	6455 N [k]	15 / 15	4868 - 21283	9855	11672 G [m]	30 / 30	4712 - 21283	8603	9522 N [l]	30 / 30	1820 - 54585	9487	12408 LN [n]
Lead	1,000	300	3,000	15 / 15	42.2 - 238	117	144 N [k]	15 / 15	95.1 - **637**	296	**364** N [k]	30 / 30	42.2 - **637**	237	**334** NP [g]	30 / 30	3.7 - **2020**	239	**382** G [m]
Magnesium		NS	NS	15 / 15	396 - 774	562	620 N [k]	15 / 15	419 - 1208	830	937 N [k]	30 / 30	396 - 1208	741	806 G [m]	30 / 30	333 - 2941	866	1011 G [m]
Manganese		NS	NS	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]
Mercury		20	300	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]
Nickel		20	7,000	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]
Potassium		NS	NS	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]
Selenium		400	8,000	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]
Silver		100	2,000	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]
Sodium		NS	NS	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]
Thallium		8	800	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 15	All ND	NA	NC [a]	0 / 15	All ND	NA	NC [a]	0 / 30	All ND	NA	NC [a]	0 / 30	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 or two distinct data values were detected

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

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

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

LN - Log Normal Distribution
[n] 95% H-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 02/01/11
Checked by / Date: KJC 02/02/11

September 16, 2011

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

NEW BEDFORD
Release Tracking Number 4-0015685
Parker Street Waste Site
Property P-067
SAP Data Risk Evaluation - No USEPA Action Recommended

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 from data generated during the first phase of SAP implementation and was followed-up with property by property risk evaluations for the purpose of typology chart development and risk communication with property owners of Phase I properties.

MassDEP is in the process of providing USEPA with both a preliminary risk evaluation and a final risk evaluation for all properties sampled during the first phase of SAP implementation. Preliminary evaluations were performed without consideration of data from surrounding properties that only became available later during SAP implementation, and was included in the final evaluation. Properties evaluated in all subsequent SAP implementation phases receive only one (final) risk evaluation because, as SAP implementation progressed, the data necessary to perform the final evaluation was available. Property P-067 was evaluated during the second implementation phase.

Property P-067 Risk Evaluation and Response Action Recommendations: Enclosed is a copy of the results from the risk evaluation conducted by MACTEC for the property identified as P-067. MassDEP uses these results along with information related to the boring logs, the nature of COCs observed, the property use and other pertinent information to complete its risk evaluation and make a response action recommendation.

MassDEP's evaluation compared the sample results from the soil samples collected from the five boring locations on this property to the MCP Method 1 category S-1 soil standards and to either potential Imminent Hazard values listed in the MCP or site-specific Imminent Hazard (IH) values to determine if an IH may exist and/or if a Condition of No Significant Risk did not exist. 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. The 95% UCL evaluation criteria was used for Preliminary Risk Evaluations of Phase 1 properties when data from surrounding properties was not yet available. When data from surrounding properties is available it can be used to show whether the data collected from the property in question is consistent with surrounding data and adequately representative of likely COC distribution such that there is no need to apply the 95% UCL. In most cases, the 95% UCL evaluation criteria is not applicable to the Final Risk Evaluations or Phase 2 properties.

Based on this evaluation, MassDEP has determined the following for Property P-067:

- A condition of No Significant Risk to human health, as defined in the MCP, was determined to exist for both the current use of the property for the soil located between the ground surface and 3 feet in depth and for future use of the property for the soil located between 3 feet and 12 feet below the ground surface. The actual average concentration and the 95% UCL calculated for the COCs detected in both soil intervals are below the applicable MCP Method 1 S-1 soil standards. Several COCs were not detected in either the 0-3 foot bgs interval or the 3 to 12 foot interval on this property. 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/lm

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-067

Table P-067
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 / 7	All ND	NA	NC [a]
Acenaphthene	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 / 7	All ND	NA	NC [a]
Acenaphthylene	180,000	1,000	10,000	4 / 5	0.09 - 0.25	0.15	0.22 NP [c]	1 / 5	0.49 - 0.49	0.24	NC [b]	5 / 10	0.09 - 0.49	0.21	0.27 NP [c]	0 / 7	All ND	NA	NC [a]
Anthracene	920,000	1,000	10,000	5 / 5	0.08 - 0.35	0.17	0.27 N [h]	2 / 5	0.1 - 0.61	0.25	0.61 NP [d]	7 / 10	0.08 - 0.61	0.22	0.30 NP [c]	0 / 7	All ND	NA	NC [a]
Benzo(a)anthracene	160	7	3,000	5 / 5	0.29 - 1.2	0.57	0.92 N [h]	3 / 5	0.1 - 2.4	0.63	2.4 NP [e]	8 / 10	0.1 - 2.4	0.61	1.5 NP [g]	0 / 7	All ND	NA	NC [a]
Benzo(a)pyrene	16	2	300	5 / 5	0.33 - 1.2	0.59	0.94 N [h]	3 / 5	0.11 - 2	0.55	2.0 NP [e]	8 / 10	0.11 - 2	0.56	1.3 NP [g]	0 / 7	All ND	NA	NC [a]
Benzo(b)fluoranthene	160	7	3,000	5 / 5	0.49 - 1.8	0.89	1.4 N [h]	3 / 5	0.14 - 2.4	0.66	2.4 NP [e]	8 / 10	0.14 - 2.4	0.74	1.1 NP [e]	0 / 7	All ND	NA	NC [a]
Benzo(g,h,i)perylene	120,000	1,000	10,000	5 / 5	0.26 - 0.81	0.42	0.64 N [h]	2 / 5	0.17 - 1.2	0.38	1.2 NP [d]	7 / 10	0.17 - 1.2	0.39	0.58 NP [c]	0 / 7	All ND	NA	NC [a]
Benzo(k)fluoranthene	1,600	70	10,000	5 / 5	0.21 - 0.62	0.33	0.49 N [h]	2 / 5	0.16 - 1.4	0.42	2.4 NP [f]	7 / 10	0.16 - 1.4	0.39	0.61 NP [c]	0 / 7	All ND	NA	NC [a]
Chrysene	16,000	70	10,000	5 / 5	0.38 - 1.4	0.69	1.1 N [h]	3 / 5	0.12 - 2.2	0.60	2.2 NP [e]	8 / 10	0.12 - 2.2	0.63	1.5 NP [g]	0 / 7	All ND	NA	NC [a]
Dibenz(a,h)anthracene	16	0.7	300	5 / 5	0.08 - 0.25	0.12	0.23 G [l]	1 / 5	0.42 - 0.42	0.23	NC [b]	6 / 10	0.08 - 0.42	0.19	0.23 NP [c]	0 / 7	All ND	NA	NC [a]
Fluoranthene	120,000	1,000	10,000	5 / 5	0.63 - 2.8	1.3	2.1 N [h]	4 / 5	0.1 - 4.4	1.1	4.8 NP [g]	9 / 10	0.1 - 4.4	1.2	2.8 NP [g]	0 / 7	All ND	NA	NC [a]
Fluorene	120,000	1,000	10,000	1 / 5	0.09 - 0.09	0.17	NC [b]	1 / 5	0.13 - 0.13	0.17	NC [b]	2 / 10	0.09 - 0.13	0.17	0.14 NP [c]	0 / 7	All ND	NA	NC [a]
Indeno(1,2,3-cd)pyrene	160	7	3,000	5 / 5	0.24 - 0.76	0.38	0.70 G [l]	2 / 5	0.15 - 1.2	0.38	1.2 NP [d]	7 / 10	0.15 - 1.2	0.38	0.56 NP [c]	0 / 7	All ND	NA	NC [a]
Naphthalene	61,000	100	10,000	1 / 5	0.21 - 0.21	0.20	NC [b]	0 / 5	All ND	NA	NC [a]	1 / 10	0.21 - 0.21	0.18	NC [b]	0 / 7	All ND	NA	NC [a]
Phenanthrene	120,000	500	10,000	5 / 5	0.3 - 1.5	0.66	1.1 N [h]	3 / 5	0.09 - 2.2	0.61	2.2 NP [e]	8 / 10	0.09 - 2.2	0.62	1.5 NP [g]	0 / 7	All ND	NA	NC [a]
Pyrene	92,000	1,000	10,000	5 / 5	0.6 - 2.3	1.1	1.8 N [h]	4 / 5	0.09 - 3.7	0.92	4.1 NP [g]	9 / 10	0.09 - 3.7	0.99	2.4 NP [g]	0 / 7	All ND	NA	NC [a]
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 / 7	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 / 7	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 / 7	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 / 7	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 / 7	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 / 7	All ND	NA	NC [a]
Aroclor-1260	10	2	100	5 / 5	0.072 - 0.13	0.10	0.12 N [h]	0 / 5	All ND	NA	NC [a]	5 / 10	0.072 - 0.13	0.046	0.11 NP [e]	0 / 7	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 / 7	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 / 7	All ND	NA	NC [a]
PCBs (Total)	10	2	100	5 / 5	0.072 - 0.13	0.10	0.12 N [h]	0 / 5	All ND	NA	NC [a]	5 / 10	0.072 - 0.13	0.046	0.11 NP [e]	0 / 7	All ND	NA	NC [a]

Table P-067
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
Inorganics (mg/Kg)																			
Aluminum		NS	NS	5 / 5	6133 - 7781	7035	7688 N [h]	5 / 5	4107 - 7813	5770	7158 N [h]	10 / 10	4107 - 7813	6191	6789 N [h]	7 / 7	3167 - 6645	4029	4973 G [i]
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 / 7	All ND	NA	NC [a]
Arsenic	40	20	200	5 / 5	2.8 - 5.9	4.1	5.2 N [h]	1 / 5	8.5 - 8.5	2.5	NC [b]	6 / 10	2.8 - 8.5	3.0	5.2 NP [e]	0 / 7	All ND	NA	NC [a]
Barium	200,000	1,000	10,000	5 / 5	33.4 - 136	77	114 N [h]	5 / 5	20 - 111	55	98 N [h]	10 / 10	20 - 136	62	88 G [i]	7 / 7	10.9 - 20.4	15.4	18.1 N [h]
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 / 7	All ND	NA	NC [a]
Cadmium	60	2	300	1 / 5	1.1 - 1.1	0.54	NC [b]	1 / 5	**2.2** - **2.2**	0.63	NC [b]	2 / 10	1.1 - **2.2**	0.60	**2.2** NP [e]	0 / 7	All ND	NA	NC [a]
Calcium		NS	NS	5 / 5	1040 - 4176	2223	3383 N [h]	5 / 5	336 - 8505	2488	11491 G [i]	10 / 10	336 - 8505	2400	3953 G [i]	7 / 7	333 - 931	685	853 N [h]
Chromium	200	30	2,000	5 / 5	8.8 - 14.4	12.3	14.5 N [h]	5 / 5	5.9 - 15.7	9.2	12.8 N [h]	10 / 10	5.9 - 15.7	10.2	12.0 G [i]	7 / 7	5.4 - 10.1	7.8	9.2 N [h]
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 / 7	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 / 7	All ND	NA	NC [a]
Iron		NS	NS	5 / 5	7209 - 11683	8755	10402 N [h]	5 / 5	4821 - 10075	7569	9859 N [h]	10 / 10	4821 - 11683	7964	8927 N [h]	7 / 7	3792 - 7237	5506	6335 N [h]
Lead	1,000	300	3,000	5 / 5	184 - **732**	**380**	**593** N [h]	3 / 5	66 - 211	78	211 NP [e]	8 / 10	66 - **732**	179	276 NP [e]	0 / 7	All ND	NA	NC [a]
Magnesium		NS	NS	5 / 5	1040 - 2055	1478	1837 N [h]	5 / 5	765 - 2576	1503	2172 N [h]	10 / 10	765 - 2576	1495	1752 N [h]	7 / 7	1006 - 2241	1495	1788 N [h]
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 / 7	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 / 7	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 / 7	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 / 7	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 / 7	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 / 7	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 / 7	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 / 7	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 / 7	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 / 7	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 / 7	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. 4.00.05).

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

N - Normal Distribution
[h] 95% Student's-t UCL

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

NP - Non-Parametric Distribution
[c] 95% KM (t) UCL
[d] 95% KM (BCA) UCL
[e] 95% KM (Percent Bootstrap) UCL
[f] 97.5% KM (Chebyshev) UCL
[g] 95% KM (Chebyshev) 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 2/16/11
Checked by / Date: KJC 2/18/11

Department of Environmental Protection

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

DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lieutenant Governor

RICHARD K. SULLIVAN JR.
Secretary

KENNETH L. KIMMELL
Commissioner

October 12, 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-022
SAP Data Risk Evaluation – No USEPA Action Recommended

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-022 Preliminary Risk Evaluation and Typology Chart Development Guidance: Enclosed is a copy of the results from the preliminary risk evaluation conducted by MACTEC for the property identified as P-022. 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 nineteen 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-022, 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 of one PAH, detected in samples collected from the top 3 feet is above the applicable MCP Method 1 S-1 soil standards, and the 95% UCL calculated for a few of the PAHs, cadmium and lead is above the applicable 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 not determined to exist for the soil located between 3 feet and 12 feet below the ground surface. This is because, although the average concentration of all COCs, including all of the PAHs and lead, 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, the 95% UCL calculated for one PAHs, cadmium and lead for this interval were above the applicable standard. Because this soil is at depth, it does not necessarily need to be removed to be protective of the current use of the property.

Property P-022 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. For Property P-022, in addition to the SAP data from the nineteen borings on the property, MassDEP also took into consideration the soil boring analytical data generated by the City of New Bedford as part of the City's assessment on this property. Data from a total of seventy-one samples were evaluated for the 0 – 3 foot interval and a total of 98 samples were evaluated for the 3 – 12 foot interval. A copy of the final risk evaluation prepared by MACTEC is also enclosed. Based on this evaluation, MassDEP has determined the following for Property P-022:

- A condition of No Significant Risk to human health, as defined in the MCP, was determined to exist for current use of the property for the soil located between the ground surface and 3 feet in depth. The actual average for COCs at this depth interval is below the applicable MCP Method 1 S-1 soil standard. Applying the 95% UCL for data evaluation of the soil located between 0 and 3 feet bgs does not result in a determination that the soil at this depth requires additional response actions. No further response actions are necessary for this soil.

- Furthermore, MassDEP has verified that a condition of No Significant Risk to human health, as defined in the MCP, for foreseeable future use of the property was determined not to exist for the soil located between 3 feet and 12 feet below the ground surface. The actual average and the 95% UCL calculated for some of the COCs at this depth interval are slightly above the applicable MCP Method 1 S-1 soil standards. If the soil in the greater than 3 foot interval is to remain in place, land use restrictions and/or controls may be necessary for the property to ensure that future activities or changes in use do not create the potential for humans to be exposed to the soil below 3 feet in depth. Soil from this depth interval should not be disrupted unless it is done under oversight of a Licensed Site Professional and in accordance with the MCP.

- Based on the findings above, and after a careful review of all available data and information, MassDEP is of the opinion that Property P-022 defines the boundary of the fill deposition associated with the PSWS in this vicinity. No further assessment is required to define the PSWS boundary westerly of P-022.

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, Regional Director

J/MC/lm

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

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

cc: Owner, Property P-022

Table P-022
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 / 19	All ND	NA	NC [a]	4 / 19	0.18 - 1.9	0.56	1.4 NP [d]	4 / 38	0.18 - 1.9	0.41	0.51 NP [d]	1 / 38	1.1 - 1.1	0.19	NC [b]
Acenaphthene	180,000	1,000	10,000	0 / 19	All ND	NA	NC [a]	9 / 19	0.2 - 21	1.6	3.6 NP [c]	9 / 38	0.2 - 21	1.1	2.2 NP [e]	1 / 38	2 - 2	0.22	NC [b]
Acenaphthylene	180,000	1,000	10,000	10 / 19	0.2 - 1.4	0.33	0.53 NP [c]	12 / 19	0.21 - 1.7	0.82	0.84 NP [d]	22 / 38	0.2 - 1.7	0.65	0.63 NP [c]	9 / 38	0.32 - 1.9	0.35	0.67 NP [d]
Anthracene	920,000	1,000	10,000	10 / 19	0.19 - 1.4	0.35	0.54 NP [c]	13 / 19	0.4 - 55	4.5	23 NP [g]	23 / 38	0.19 - 55	3.1	9.1 NP [f]	11 / 38	0.38 - 6	0.68	1.2 NP [c]
Benzo(a)anthracene	160	7	3,000	14 / 19	0.21 - 3	0.83	1.2 NP [d]	16 / 19	0.19 - **65**	6.2	**27** NP [g]	30 / 38	0.19 - **65**	4.4	**11.4** NP [f]	13 / 38	0.33 - **10**	1.4	2.3 NP [c]
Benzo(a)pyrene	16	2	300	15 / 19	0.18 - **2.7**	0.77	1.1 NP [e]	16 / 19	0.2 - **50**	**5.0**	**16.3** NP [f]	31 / 38	0.18 - **50**	**3.6**	**8.9** NP [f]	13 / 38	0.32 - **8.4**	1.3	**2.1** NP [c]
Benzo(b)fluoranthene	160	7	3,000	15 / 19	0.2 - 2.3	0.86	1.2 NP [c]	16 / 19	0.2 - **60**	6.0	**26** NP [g]	31 / 38	0.2 - **60**	4.3	**10.8** NP [f]	13 / 38	0.43 - **11**	1.5	2.5 NP [c]
Benzo(g,h,i)perylene	120,000	1,000	10,000	13 / 19	0.28 - 1.8	0.53	0.79 NP [d]	15 / 19	0.36 - 26	2.8	11.3 NP [g]	28 / 38	0.28 - 26	2.0	4.9 NP [f]	13 / 38	0.23 - 4.8	0.79	1.2 NP [c]
Benzo(k)fluoranthene	1,600	70	10,000	13 / 19	0.21 - 2.1	0.47	0.73 NP [e]	14 / 19	0.23 - 26	2.5	11.1 NP [g]	27 / 38	0.21 - 26	1.9	4.7 NP [f]	11 / 38	0.49 - 6.4	0.75	1.5 NP [d]
Chrysene	16,000	70	10,000	15 / 19	0.18 - 3.3	0.90	1.3 NP [e]	16 / 19	0.19 - 64	6.1	27 NP [g]	31 / 38	0.18 - 64	4.4	11.3 NP [f]	13 / 38	0.4 - 10	1.5	2.4 NP [c]
Dibenz(a,h)anthracene	16	0.7	300	4 / 19	0.2 - 0.48	0.15	0.27 NP [d]	11 / 19	0.2 - **3.1**	**0.77**	**0.92** NP [c]	15 / 38	0.2 - **3.1**	0.57	0.62 NP [d]	7 / 38	0.27 - **1.3**	0.26	0.53 NP [d]
Fluoranthene	120,000	1,000	10,000	16 / 19	0.18 - 5.7	1.4	2.1 NP [e]	16 / 19	0.36 - 170	14.8	103 NP [h]	32 / 38	0.18 - 170	10.3	37 NP [g]	15 / 38	0.21 - 26	2.8	4.5 NP [c]
Fluorene	120,000	1,000	10,000	0 / 19	All ND	NA	NC [a]	10 / 19	0.23 - 24	2.0	10.1 NP [g]	10 / 38	0.23 - 24	1.34	2.5 NP [e]	7 / 38	0.25 - 2.5	0.29	0.48 NP [c]
Indeno(1,2,3-cd)pyrene	160	7	3,000	13 / 19	0.22 - 1.4	0.48	0.68 NP [d]	15 / 19	0.29 - **31**	3.1	**13.2** NP [g]	28 / 38	0.22 - **31**	2.22	5.6 NP [f]	13 / 38	0.24 - 5	0.79	1.3 NP [c]
Naphthalene	61,000	100	10,000	0 / 19	All ND	NA	NC [a]	7 / 19	0.19 - 12	0.99	2.1 NP [c]	7 / 38	0.19 - 12	0.70	1.2 NP [c]	1 / 38	1.7 - 1.7	0.21	NC [b]
Phenanthrene	120,000	500	10,000	14 / 19	0.2 - 5.4	0.99	1.5 NP [d]	16 / 19	0.21 - 210	17.0	127 NP [h]	30 / 38	0.2 - 210	11.69	44 NP [g]	12 / 38	0.29 - 26	2.2	3.8 NP [c]
Pyrene	92,000	1,000	10,000	16 / 19	0.2 - 5	1.4	1.9 NP [e]	16 / 19	0.32 - 130	11.6	54 NP [g]	32 / 38	0.2 - 130	8.21	22 NP [f]	15 / 38	0.21 - 20	2.4	3.8 NP [c]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 19	All ND	NA	NC [a]	1 / 19	0.06 - 0.06	0.019	NC [b]	1 / 38	0.06 - 0.06	0.015	NC [b]	1 / 38	0.528 - 0.528	0.025	NC [b]
Aroclor-1254	10	2	100	12 / 19	0.025 - 0.256	0.063	0.096 NP [d]	12 / 19	0.0451 - **2.33**	0.21	0.47 NP [e]	24 / 38	0.025 - **2.33**	0.16	0.42 NP [f]	8 / 38	0.03 - **2.91**	0.13	0.28 NP [c]
Aroclor-1260	10	2	100	18 / 19	0.02 - 0.321	0.086	0.17 NP [f]	14 / 19	0.031 - 0.539	0.13	0.18 NP [d]	32 / 38	0.02 - 0.539	0.11	0.19 NP [f]	10 / 38	0.02 - 0.39	0.040	0.070 NP [c]
Aroclor-1262	10	2	100	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]
Aroclor-1268	10	2	100	3 / 19	0.046 - 0.097	0.013	0.097 NP [d]	1 / 19	0.231 - 0.231	0.020	NC [b]	4 / 38	0.046 - 0.231	0.018	0.11 NP [d]	0 / 38	All ND	NA	NC [a]
PCBs (Total)	10	2	100	18 / 19	0.02 - 0.674	0.16	0.33 NP [f]	15 / 19			0.91 NP [f]	33 / 38	0.02 - 0.674	0.28	0.55 NP [f]	13 / 38	0.042 - **2.91**	0.17	0.34 NP [c]

Table P-022
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	19 / 19	3120 - 7150	5116	5630 N [l]	19 / 19	3310 - 7240	5019	5469 N [l]	38 / 38	3120 - 7240	5051	5310 N [l]	38 / 38	1440 - 8720	4846	5341 N [l]
Antimony		20	300	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]
Arsenic	40	20	200	18 / 19	0.78 - **68.7**	8.5	**31** NP [g]	19 / 19	1 - **27.5**	6.1	8.9 G [n]	37 / 38	0.78 - **68.7**	6.9	12.8 NP [f]	34 / 38	0.28 - **24.7**	3.8	9.7 NP [g]
Barium	200,000	1,000	10,000	19 / 19	15.1 - 189	51	67 G [n]	19 / 19	8.4 - 302	83	176 LN [o]	38 / 38	8.4 - 302	73	118 NP [i]	38 / 38	5.2 - 415	72	256 NP [k]
Beryllium		100	2,000	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]
Cadmium	60	2	300	2 / 19	0.39 - 1.5	0.32	1.5 NP [d]	3 / 19	1.5 - **27.4**	1.9	**27** NP [d]	5 / 38	0.39 - **27.4**	1.3	**3.8** NP [e]	8 / 38	0.95 - **33.1**	1.8	**4.6** NP [e]
Calcium		NS	NS	19 / 19	574 - 3000	1309	1544 N [l]	19 / 19	259 - 5910	2110	3051 G [n]	38 / 38	259 - 5910	1843	2378 LN [p]	38 / 38	191 - 22800	3060	5145 LN [p]
Chromium	200	30	2,000	19 / 19	6.2 - 20	11.4	12.7 N [l]	19 / 19	4.3 - 20.8	10.4	12.2 G [n]	38 / 38	4.3 - 20.8	11	11.6 G [n]	38 / 38	2.3 - **34.2**	10	12.2 LN [p]
Cobalt		NS	NS	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]
Copper		NS	NS	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]
Iron		NS	NS	19 / 19	4640 - 28400	9102	10863 G [n]	19 / 19	4270 - 29100	10267	12936 N [m]	38 / 38	4270 - 29100	9879	11225 N [m]	38 / 38	2330 - 79000	13279	25619 NP [i]
Lead	1,000	300	3,000	19 / 19	5.2 - **517**	142	220 G [n]	19 / 19	3.6 - **713**	178	**497** LN [o]	38 / 38	3.6 - **713**	166	**323** NP [j]	32 / 38	1.6 - **3510**	261	**1349** NP [h]
Magnesium		NS	NS	19 / 19	686 - 3090	1408	1626 N [m]	19 / 19	906 - 1710	1301	1413 N [l]	38 / 38	686 - 3090	1336	1417 G [n]	38 / 38	487 - 2150	1244	1349 N [l]
Manganese		NS	NS	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]
Mercury		20	300	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]
Nickel		20	7,000	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]
Potassium		NS	NS	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]
Selenium		400	8,000	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]
Silver		100	2,000	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]
Sodium		NS	NS	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]
Thallium		8	800	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 38	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 (t) UCL
[d] 95% KM (Percentile Bootstrap) UCL
[e] 95% KM (BCA) UCL
[f] 95% KM (Chebyshev) UCL
[g] 97.5% KM (Chebyshev) UCL
[h] 99% KM (Chebyshev) UCL
[i] 95% Chebyshev (Mean, Sd) UCL
[j] 97.5% Chebyshev (Mean, Sd) UCL
[k] 99% Chebyshev (Mean, Sd) UCL

N - Normal Distribution
[l] 95% Student's-t UCL
[m] 95% Modified-t UCL

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

LN - Log Normal Distribution
[o] 95% Chebyshev (MVUE) UCL
[p] 95% H-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 07/20/10
Checked by / Date: KJC 07/20/10

Table P-022
Comparison of Exposure Point Concentrations to Imminent Hazard Levels - S-1
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 / 19	All ND	NA	NC [a]	7 / 52	0.18 - 2.42	0.33	0.52 NP [d]	7 / 71	0.18 - 2.42	0.28	0.35 NP [c]	6 / 88	0.42 - 9.59	0.37	0.88 NP [c]
Acenaphthene	180,000	1,000	10,000	0 / 19	All ND	NA	NC [a]	12 / 52	0.2 - 21	0.69	1.8 NP [e]	12 / 71	0.2 - 21	0.54	1.5 NP [e]	3 / 88	2 - 23.3	0.53	2.8 NP [c]
Acenaphthylene	180,000	1,000	10,000	10 / 19	0.2 - 1.4	0.33	0.53 NP [c]	12 / 52	0.21 - 1.7	0.37	0.64 NP [d]	22 / 71	0.2 - 1.7	0.36	0.48 NP [c]	13 / 88	0.32 - 4.75	0.32	0.56 NP [c]
Anthracene	920,000	1,000	10,000	10 / 19	0.19 - 1.4	0.35	0.54 NP [c]	23 / 52	0.25 - 55	2.0	4.4 NP [e]	33 / 71	0.19 - 55	1.5	6.0 NP [f]	19 / 88	0.38 - 63.4	1.3	3.2 NP [e]
Benzo(a)anthracene	160	7	3,000	14 / 19	0.21 - 3	0.83	1.2 NP [d]	41 / 52	0.19 - 65	3.0	**8.6** NP [f]	55 / 71	0.19 - 65	2.4	**7.7** NP [f]	27 / 88	0.23 - **106**	2.3	4.9 NP [e]
Benzo(a)pyrene	16	2	300	15 / 19	0.18 - 2.7	0.77	1.1 NP [e]	41 / 52	0.2 - 50	2.4	**6.7** NP [f]	56 / 71	0.18 - 50	2.0	**6.1** NP [f]	27 / 88	0.26 - **87.8**	2.0	**4.0** NP [e]
Benzo(b)fluoranthene	160	7	3,000	15 / 19	0.2 - 2.3	0.86	1.2 NP [c]	40 / 52	0.2 - 60	2.9	**8.1** NP [f]	55 / 71	0.2 - 60	2.4	**7.3** NP [f]	30 / 88	0.3 - **121**	2.5	5.5 NP [e]
Benzo(g,h,i)perylene	120,000	1,000	10,000	13 / 19	0.28 - 1.8	0.53	0.79 NP [d]	29 / 52	0.2 - 26	1.3	3.6 NP [f]	42 / 71	0.2 - 26	1.1	3.3 NP [f]	22 / 88	0.23 - 32.50	0.94	2.0 NP [e]
Benzo(k)fluoranthene	1,600	70	10,000	13 / 19	0.21 - 2.1	0.47	0.75 NP [e]	32 / 52	0.18 - 26	1.2	3.5 NP [f]	45 / 71	0.18 - 26	1.0	3.2 NP [f]	21 / 88	0.29 - 50.7	1.2	2.9 NP [e]
Chrysene	16,000	70	10,000	15 / 19	0.18 - 3.3	0.90	1.3 NP [e]	41 / 52	0.19 - 64	3.0	8.5 NP [f]	56 / 71	0.18 - 64	2.4	7.6 NP [f]	29 / 88	0.24 - **104**	2.3	4.9 NP [e]
Dibenz(a,h)anthracene	16	0.7	300	4 / 19	0.2 - 0.48	0.15	0.27 NP [d]	14 / 52	0.2 - 3.1	0.37	0.48 NP [d]	18 / 71	0.2 - 3.1	0.31	0.47 NP [d]	11 / 88	0.22 - **10.2**	0.35	0.60 NP [c]
Fluoranthene	120,000	1,000	10,000	16 / 19	0.18 - 5.7	1.4	2.1 NP [e]	42 / 52	0.24 - 170	7.0	21 NP [f]	58 / 71	0.18 - 170	5.5	19.2 NP [f]	33 / 88	0.2 - 310	5.7	21 NP [f]
Fluorene	120,000	1,000	10,000	0 / 19	All ND	NA	NC [a]	15 / 52	0.22 - 24	0.93	2.0 NP [e]	15 / 71	0.22 - 24	0.71	1.7 NP [e]	12 / 88	0.19 - 28	0.61	2.1 NP [f]
Indeno(1,2,3-cd)pyrene	160	7	3,000	13 / 19	0.22 - 1.4	0.48	0.69 NP [d]	32 / 52	0.2 - 31	1.4	4.1 NP [f]	45 / 71	0.2 - 31	1.2	3.8 NP [f]	22 / 88	0.24 - **39.5**	1.1	2.2 NP [e]
Naphthalene	61,000	100	10,000	0 / 19	All ND	0.12	NC [a]	9 / 52	0.19 - 12	0.45	0.90 NP [c]	9 / 71	0.19 - 12	0.36	0.92 NP [e]	7 / 88	0.23 - 15.2	0.46	0.89 NP [c]
Phenanthrene	120,000	500	10,000	14 / 19	0.2 - 5.4	0.99	1.6 NP [d]	39 / 52	0.21 - 210	7.8	34 NP [g]	53 / 71	0.2 - 210	6.0	29 NP [g]	28 / 88	0.24 - 269	5.0	18.7 NP [f]
Pyrene	92,000	1,000	10,000	16 / 19	0.2 - 5	1.4	2.0 NP [e]	41 / 52	0.26 - 130	5.5	16.7 NP [f]	57 / 71	0.2 - 130	4.4	14.9 NP [f]	31 / 88	0.21 - 177	3.8	12.9 NP [f]
PCBs (mg/kg)																			
Aroclor-1016	10	2	100	0 / 19	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]	0 / 71	All ND	NA	NC [a]	0 / 98	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 19	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]	0 / 71	All ND	NA	NC [a]	0 / 98	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 19	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]	0 / 71	All ND	NA	NC [a]	0 / 98	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 19	All ND	NA	NC [a]	1 / 52	0.343 - 0.343	0.038	NC [b]	1 / 71	0.343 - 0.343	0.031	NC [b]	0 / 98	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 19	All ND	NA	NC [a]	2 / 52	0.06 - 0.214	0.034	0.0705 NP [c]	2 / 71	0.06 - 0.214	0.027	0.21 NP [d]	1 / 98	0.528 - 0.53	0.027	NC [b]
Aroclor-1254	10	2	100	12 / 19	0.025 - 0.256	0.063	0.095 NP [d]	32 / 52	0.0451 - 7.24	0.41	1.2 NP [f]	44 / 71	0.025 - 7.24	0.31	0.74 NP [f]	22 / 98	0.03 - **2.91**	0.14	0.21 NP [c]
Aroclor-1260	10	2	100	18 / 19	0.02 - 0.321	0.086	0.17 NP [f]	27 / 52	0.031 - 1.75	0.19	0.27 NP [e]	45 / 71	0.02 - 1.75	0.16	0.27 NP [f]	23 / 98	0.02 - 0.79	0.065	0.0864 NP [c]
Aroclor-1262	10	2	100	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]
Aroclor-1268	10	2	100	3 / 19	0.046 - 0.097	0.013	0.097 NP [d]	1 / 19	0.231 - 0.231	0.020	NC [b]	4 / 38	0.046 - 0.231	0.017	0.11 NP [d]	0 / 38	All ND	NA	NC [a]
PCBs (Total)	10	2	100	18 / 19	0.02 - 0.674	0.16	0.33 NP [f]	37 / 52	0.031 - 8.149	0.59	1.4 NP [f]	55 / 71	0.02 - 8.149	0.47	0.94 NP [f]	28 / 98	0.042 - **2.91**	0.19	0.28 NP [c]

Table P-022
Comparison of Exposure Point Concentrations to Imminent Hazard Levels - S-1
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	19 / 19	3120 - 7150	5116	5630 N [j]	19 / 19	3310 - 7240	5019	5469 N [j]	38 / 38	3,120 - 7240	5,068	5310 N [j]	38 / 38	1440 - 8720	4846	5341 N [j]
Antimony		20	300	0 / 19	All ND	NA	NC [a]	2 / 52	11.5 - 14.4	2.9	14.4 NP [d]	2 / 71	11.5 - 14.4	2.9	11.6 NP [c]	2 / 88	9.3 - **77.1**	3.5	**77** NP [e]
Arsenic	40	20	200	18 / 19	0.78 - 68.7	8.5	**31** NP [g]	30 / 52	1 - 27.5	4.2	5.4 NP [c]	48 / 71	0.78 - 68.7	5.3	7.2 NP [e]	46 / 88	0.3 - **55.2**	3.9	7.1 NP [f]
Barium	200,000	1,000	10,000	19 / 19	15.1 - 189	51	67 G [i]	52 / 52	6.73 - 302	58	74 LN [l]	71 / 71	6.73 - 302	56	93 NP [h]	88 / 88	5.2 - 693	82	146 NP [h]
Beryllium		100	2,000	0 / 19	All ND	NA	NC [a]	2 / 52	0.33 - 0.39	0.19	0.39 NP [d]	2 / 71	0.33 - 0.39	0.20	0.34 NP [c]	7 / 88	0.34 - 1.22	0.23	0.61 NP [d]
Cadmium	60	2	300	2 / 19	0.39 - 1.5	0.32	0.59 NP [c]	12 / 52	0.31 - 27.4	0.89	**2.2** NP [e]	14 / 71	0.31 - 27.4	0.74	1.9 NP [e]	23 / 88	0.38 - **126**	**2.5**	**6.0** NP [e]
Calcium		NS	NS	19 / 19	574 - 3000	1309	1544 N [j]	19 / 19	259 - 5910	2110	3051 G [i]	38 / 38	259 - 5910	1,710	2378 LN [l]	38 / 38	191 - 22800	3060	5145 LN [l]
Chromium	200	30	2,000	19 / 19	6.2 - 20	11.4	12.7 N [j]	52 / 52	2.44 - 39.8	9.5	10.7 G [i]	71 / 71	2.44 - 39.8	10	11.0 N [k]	88 / 88	2.300 - **183**	13.2	23 NP [h]
Cobalt		NS	NS	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]
Copper		NS	NS	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]
Iron		NS	NS	19 / 19	4640 - 28400	9102	10863 G [i]	19 / 19	4270 - 29100	10267	12936 N [k]	38 / 38	4,270 - 29100	9,685	11225 N [k]	38 / 38	2330 - 79000	13279	25619 NP [h]
Lead	1,000	300	3,000	19 / 19	5.2 - 517	142	220 G [i]	52 / 52	2.14 - 713	143	244 NP [h]	71 / 71	2.14 - 713	143	230 NP [h]	82 / 88	0.9 - **3510**	237	**597** NP [g]
Magnesium		NS	NS	19 / 19	686 - 3090	1408	1626 N [k]	19 / 19	906 - 1710	1301	1413 N [k]	38 / 38	686 - 3090	1,354	1417 G [i]	38 / 38	487 - 2150	1244	1349 N [j]
Manganese		NS	NS	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]
Mercury		20	300	0 / 19	All ND	NA	NC [a]	30 / 52	0.009 - 0.508	0.11	0.14 NP [c]	30 / 71	0.01 - 0.508	0.095	0.0977 NP [c]	27 / 88	0.006 - 1.2	0.088	0.11 NP [c]
Nickel		20	7,000	0 / 19	All ND	NA	NC [a]	33 / 52	2.93 - 18.4	4.1	5.2 NP [e]	33 / 71	2.93 - 18.4	3.5	4.4 NP [d]	50 / 88	1.55 - **1490**	**22**	**96** NP [f]
Potassium		NS	NS	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]
Selenium		400	8,000	0 / 19	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]	0 / 71	All ND	NA	NC [a]	0 / 88	All ND	NA	NC [a]
Silver		100	2,000	0 / 19	All ND	NA	NC [a]	2 / 52	0.76 - 1.12	0.38	0.78 NP [c]	2 / 71	0.76 - 1.12	0.40	0.77 NP [c]	9 / 88	0.61 - 14.8	0.73	1.3 NP [c]
Sodium		NS	NS	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]
Thallium		8	800	0 / 19	All ND	NA	NC [a]	0 / 52	All ND	NA	NC [a]	0 / 71	All ND	NA	NC [a]	0 / 88	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 19	All ND	NA	NC [a]	30 / 52	5.77 - 23.1	8.4	11.3 NP [d]	30 / 71	5.77 - 23.1	6.7	9.9 NP [d]	45 / 88	6.24 - 33.9	8.2	11.1 NP [c]
Zinc		2,500	10,000	0 / 19	All ND	NA	NC [a]	33 / 52	10.4 - 422	51	72 NP [d]	33 / 71	10.4 - 422	38	47 NP [c]	50 / 88	7.56 - **264000**	**3105**	**21918** NP [g]
Cyanide		100	4,000	0 / 19	All ND	NA	NC [a]	0 / 19	All ND	NA	NC [a]	0 / 38	All ND	NA	NC [a]	0 / 38	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-detects
[b] Only one value detected

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

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

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

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

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

Prepared by / Date: EYM 9/28/11
Checked by / Date: BJR 10/5/11

MassDEP

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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Secretary

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Commissioner

October 26, 2011

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

NEW BEDFORD
Release Tracking Number 4-0015685
Parker Street Waste Site
Property P-050
SAP Data Risk Evaluation - No USEPA Action Recommended

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 from data generated during the first phase of SAP implementation and was followed-up with property by property risk evaluations for the purpose of typology chart development and risk communication with property owners of Phase I properties.

MassDEP is in the process of providing USEPA with both a preliminary risk evaluation and a final risk evaluation for all properties sampled during the first phase of SAP implementation. Preliminary evaluations were performed without consideration of data from surrounding properties that only became available later during SAP implementation, and was included in the final evaluation. Properties evaluated in all subsequent SAP implementation phases receive only one (final) risk evaluation because, as SAP implementation progressed, the data necessary to perform the final evaluation was available. Property P-050 was evaluated during the second implementation phase.

Property P-050 Risk Evaluation and Response Action Recommendations: Enclosed is a copy of the results from the risk evaluation conducted by MACTEC for the property identified as P-050. MassDEP uses these results along with information related to the boring logs, the nature of COCs observed, the property use and other pertinent information to complete its risk evaluation and make a response action recommendation.

MassDEP's evaluation compared the sample results from the soil samples collected from the thirteen boring locations on this property to the MCP Method 1 category S-1 soil standards and to either potential Imminent Hazard values listed in the MCP or site-specific Imminent Hazard (IH) values to determine if an IH may exist and/or if a Condition of No Significant Risk did not exist. 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. The 95% UCL evaluation criteria was used for Preliminary Risk Evaluations of Phase 1 properties when data from surrounding properties was not yet available. When data from surrounding properties is available it can be used to show whether the data collected from the property in question is consistent with surrounding data and adequately representative of likely COC distribution such that there is no need to apply the 95% UCL. In most cases, the 95% UCL evaluation criteria is not applicable to the Final Risk Evaluations or Phase 2 properties.

Based on this evaluation, MassDEP has determined the following for Property P-050:

- A condition of No Significant Risk to human health, as defined in the MCP, was determined to exist for both the current use of the property for the soil located between the ground surface and 3 feet in depth and for future use of the property for the soil located between 3 feet and 12 feet below the ground surface. Both the average concentration and the 95%UCL calculated for all COCs for both soil intervals are below the applicable MCP Method 1 S-1 soil standards. No further response actions are necessary for this soil.

- Based on the findings above, and after a careful review of all available data and information, MassDEP is of the opinion that the boundary of the fill layer associated with the PSWS has been determined in the vicinity of P-050. No further assessment is required to define the fill boundary southerly of P-050.

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, Regional Director

J/MC/lm

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-050

Table P-050
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 / 13	All ND	NA	NC [a]	0 / 13	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]
Acenaphthene	180,000	1,000	10,000	0 / 13	All ND	NA	NC [a]	2 / 13	0.26 - 0.46	0.17	0.46 NP [d]	2 / 26	0.26 - 0.46	0.17	0.28 NP [f]	0 / 26	All ND	NA	NC [a]
Acenaphthylene	180,000	1,000	10,000	2 / 13	0.5 - 4.2	0.49	3.2 NP [c]	2 / 13	0.34 - 0.69	0.20	0.69 NP [d]	4 / 26	0.34 - 4.2	0.30	0.76 NP [d]	0 / 26	All ND	NA	NC [a]
Anthracene	920,000	1,000	10,000	3 / 13	0.31 - 3.8	0.49	3.8 NP [d]	6 / 13	0.26 - 1	0.34	0.62 NP [d]	9 / 26	0.26 - 3.8	0.39	0.63 NP [d]	0 / 26	All ND	NA	NC [a]
Benzo(a)anthracene	160	7	3,000	9 / 13	0.37 - **11**	1.4	6.6 NP [c]	8 / 13	0.33 - 2.3	0.86	1.3 NP [d]	17 / 26	0.33 - **11**	1.0	1.7 NP [d]	4 / 26	0.22 - 1.3	0.16	0.39 NP [d]
Benzo(a)pyrene	16	2	300	10 / 13	0.38 - **16**	1.8	**9.3** NP [c]	8 / 13	0.32 - **2.3**	0.84	1.3 NP [d]	18 / 26	0.32 - **16**	1.2	**2.1** NP [e]	3 / 26	0.19 - 1.3	0.16	1.3 NP [d]
Benzo(b)fluoranthene	160	7	3,000	9 / 13	0.4 - **12**	1.4	**7.1** NP [c]	8 / 13	0.29 - 2.2	0.82	1.3 NP [d]	17 / 26	0.29 - **12**	1.0	1.7 NP [e]	4 / 26	0.2 - 1.3	0.16	0.37 NP [d]
Benzo(g,h,i)perylene	120,000	1,000	10,000	6 / 13	0.27 - 9.8	1.1	3.3 NP [e]	8 / 13	0.2 - 2	0.65	1.0 NP [d]	14 / 26	0.2 - 9.8	0.80	1.3 NP [e]	1 / 26	0.93 - 0.93	0.13	NC [b]
Benzo(k)fluoranthene	1,600	70	10,000	10 / 13	0.36 - 7.8	1.1	2.3 NP [e]	8 / 13	0.28 - 2	0.80	1.3 NP [d]	18 / 26	0.28 - 7.8	0.90	1.3 NP [d]	4 / 26	0.2 - 1.3	0.16	0.41 NP [d]
Chrysene	16,000	70	10,000	11 / 13	0.38 - 12	1.5	7.1 NP [c]	8 / 13	0.32 - 2.4	0.89	1.4 NP [d]	19 / 26	0.32 - 12	1.1	1.7 NP [d]	4 / 26	0.24 - 1.5	0.17	0.43 NP [d]
Dibenz(a,h)anthracene	16	0.7	300	4 / 13	0.16 - **2.7**	0.34	**0.77** NP [f]	5 / 13	0.14 - 0.55	0.18	0.40 NP [d]	9 / 26	0.14 - **2.7**	0.23	0.40 NP [d]	1 / 26	0.3 - 0.3	0.070	NC [b]
Fluoranthene	120,000	1,000	10,000	13 / 13	0.36 - 19	2.6	8.7 NP [g]	8 / 13	0.62 - 5.4	1.9	3.1 NP [d]	21 / 26	0.36 - 19	2.1	3.0 NP [d]	7 / 26	0.21 - 2.8	0.28	0.63 NP [d]
Fluorene	120,000	1,000	10,000	0 / 13	All ND	NA	NC [a]	1 / 13	0.29 - 0.29	0.15	NC [b]	1 / 26	0.29 - 0.29	0.16	NC [b]	0 / 26	All ND	NA	NC [a]
Indeno(1,2,3-cd)pyrene	160	7	3,000	5 / 13	0.25 - **9**	1.0	2.3 NP [f]	8 / 13	0.19 - 1.7	0.61	0.95 NP [d]	13 / 26	0.19 - **9**	0.74	1.2 NP [d]	1 / 26	0.9 - 0.9	0.13	NC [b]
Naphthalene	61,000	100	10,000	1 / 13	0.56 - 0.56	0.19	NC [b]	0 / 13	All ND	NA	NC [a]	1 / 26	0.56 - 0.56	0.15	NC [b]	0 / 26	All ND	NA	NC [a]
Phenanthrene	120,000	500	10,000	9 / 13	0.44 - 8.7	1.3	2.6 NP [e]	8 / 13	0.27 - 4.4	1.2	2.1 NP [d]	17 / 26	0.27 - 8.7	1.3	1.8 NP [d]	5 / 26	0.17 - 1.4	0.18	0.33 NP [f]
Pyrene	92,000	1,000	10,000	12 / 13	0.37 - 20	2.5	11.8 NP [c]	8 / 13	0.51 - 4.6	1.6	2.6 NP [d]	20 / 26	0.37 - 20	1.9	2.9 NP [d]	5 / 26	0.26 - 2.2	0.23	0.57 NP [d]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 13	All ND	NA	NC [a]	0 / 13	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 13	All ND	NA	NC [a]	0 / 13	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 13	All ND	NA	NC [a]	0 / 13	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 13	All ND	NA	NC [a]	0 / 13	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 13	All ND	NA	NC [a]	0 / 13	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]
Aroclor-1254	10	2	100	3 / 13	0.038 - 0.05	0.021	0.050 NP [d]	0 / 13	All ND	NA	NC [a]	3 / 26	0.038 - 0.05	0.014	0.050 NP [d]	0 / 26	All ND	NA	NC [a]
Aroclor-1260	10	2	100	11 / 13	0.016 - 0.078	0.030	0.040 NP [e]	0 / 13	All ND	NA	NC [a]	11 / 26	0.016 - 0.078	0.015	0.024 NP [f]	0 / 26	All ND	NA	NC [a]
Aroclor-1262	10	2	100	0 / 13	All ND	NA	NC [a]	0 / 13	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 13	All ND	NA	NC [a]	0 / 13	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]
PCBs (Total)	10	2	100	11 / 13	0.016 - 0.084	0.042	0.055 NP [f]	0 / 13	All ND	NA	NC [a]	11 / 26	0.016 - 0.084	0.021	0.032 NP [d]	0 / 26	All ND	NA	NC [a]

Table P-050
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
Inorganics (mg/Kg)																			
Aluminum		NS	NS	13 / 13	4116 - 8047	5314	6004 N [h]	13 / 13	2983 - 8546	5211	6138 N [i]	26 / 26	2983 - 8546	5245	5702 N [h]	26 / 26	1849 - 10371	5094	5736 N [i]
Antimony		20	300	0 / 13	All ND	NA	NC [a]	0 / 13	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]
Arsenic	40	20	200	13 / 13	2.1 - 4.3	3.2	3.5 N [i]	11 / 13	1.5 - 6.5	2.8	3.7 NP [f]	24 / 26	1.5 - 6.5	2.9	3.4 NP [e]	10 / 26	1.7 - 7.2	1.6	2.8 NP [d]
Barium	200,000	1,000	10,000	13 / 13	24.7 - 138	61	78 N [i]	13 / 13	13.2 - 145	52	72 G [j]	26 / 26	13.2 - 145	55	65 G [j]	26 / 26	4.2 - 378	39	53 LN [k]
Beryllium		100	2,000	0 / 13	All ND	NA	NC [a]	0 / 13	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]
Cadmium	60	2	300	0 / 13	All ND	NA	NC [a]	0 / 13	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	1 / 26	0.75 - 0.75	0.17	NC [b]
Calcium		NS	NS	13 / 13	467 - 2261	1100	1353 N [i]	13 / 13	274 - 1513	756	957 N [i]	26 / 26	274 - 2261	871	1009 G [j]	26 / 26	119 - 2384	635	783 G [j]
Chromium	200	30	2,000	13 / 13	5.4 - 10.8	8.4	9.2 N [i]	13 / 13	4 - 10.8	6.9	8.0 N [i]	26 / 26	4 - 10.8	7.4	7.9 N [i]	26 / 26	3.2 - 13	7.2	8.2 LN [k]
Cobalt		NS	NS	0 / 13	All ND	NA	NC [a]	0 / 13	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]
Copper		NS	NS	0 / 13	All ND	NA	NC [a]	0 / 13	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]
Iron		NS	NS	13 / 13	6273 - 13502	8170	9138 G [j]	13 / 13	5237 - 10459	7123	7903 N [i]	26 / 26	5237 - 13502	7472	7940 G [j]	26 / 26	2905 - 10259	5790	6295 N [i]
Lead	1,000	300	3,000	13 / 13	85 - **541**	231	292 N [i]	13 / 13	53.2 - **608**	166	241 G [j]	26 / 26	53.2 - **608**	188	225 G [j]	26 / 26	1.3 - **1050**	81	258 NP [g]
Magnesium		NS	NS	13 / 13	950 - 1687	1199	1322 G [j]	13 / 13	737 - 1645	1121	1239 N [i]	26 / 26	737 - 1687	1147	1213 LN [k]	26 / 26	666 - 1985	1170	1284 N [i]
Manganese		NS	NS	0 / 13	All ND	NA	NC [a]	0 / 13	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]
Mercury		20	300	0 / 13	All ND	NA	NC [a]	0 / 13	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]
Nickel		20	7,000	0 / 13	All ND	NA	NC [a]	0 / 13	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]
Potassium		NS	NS	0 / 13	All ND	NA	NC [a]	0 / 13	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]
Selenium		400	8,000	0 / 13	All ND	NA	NC [a]	0 / 13	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]
Silver		100	2,000	0 / 13	All ND	NA	NC [a]	0 / 13	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]
Sodium		NS	NS	0 / 13	All ND	NA	NC [a]	0 / 13	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]
Thallium		8	800	0 / 13	All ND	NA	NC [a]	0 / 13	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 13	All ND	NA	NC [a]	0 / 13	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 13	All ND	NA	NC [a]	0 / 13	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 13	All ND	NA	NC [a]	0 / 13	All ND	NA	NC [a]	0 / 26	All ND	NA	NC [a]	0 / 26	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. 4.00.05).

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

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

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

N - Normal Distribution
[h] 95% Modified-t UCL
[i] 95% Student's-t UCL

LN - Log Normal Distribution
[k] 95% H-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 2/10/11
Checked by / Date: KJC 2/11/11

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MassDEP

Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lieutenant Governor

RICHARD K. SULLIVAN JR.
Secretary

KENNETH L. KIMMELL
Commissioner

October 26, 2011

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

NEW BEDFORD
Release Tracking Number 4-0015685
Parker Street Waste Site
Property P-056
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 from data generated during the first phase of SAP implementation and was followed-up with property by property risk evaluations for the purpose of typology chart development and risk communication with property owners of Phase I properties.

MassDEP is in the process of providing USEPA with both a preliminary risk evaluation and a final risk evaluation for all Phase I properties. The preliminary evaluation was performed without consideration

of data from surrounding properties that was not available until later during SAP implementation for inclusion in the final evaluation. Properties evaluated in all subsequent SAP implementation phases receive only one (final) risk evaluation because, as SAP implementation progressed, the data necessary to perform the final evaluation was available. Property P-056 was evaluated during the second implementation phase.

Property P-056 Risk Evaluation and Response Action Recommendations: Enclosed is a copy of the results from the risk evaluation conducted by MACTEC for the property identified as P-056. MassDEP uses these results along with information related to the boring logs, the nature of COCs observed, the property use and other pertinent information to complete its risk evaluation and make a response action recommendation.

MassDEP's evaluation compared the sample results from the soil samples collected from the eleven boring locations on this property to the MCP Method 1 category S-1 soil standards and to either potential Imminent Hazard values listed in the MCP or site-specific Imminent Hazard (IH) values to determine if an IH may exist and/or if a Condition of No Significant Risk did or did not exist. 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. The 95% UCL evaluation criteria was used for Preliminary Risk Evaluations of Phase 1 properties when data from surrounding properties was not yet available. When data from surrounding properties is available it can be used to determine whether the data collected from the property in question is consistent with surrounding data and adequately representative of likely COC distribution such that there is no need to apply the 95% UCL. In most cases, the 95% UCL evaluation criteria is not applicable to the Final Risk Evaluations or Phase 2 properties.

Based on this evaluation, MassDEP has determined the following for Property P-056:

- A condition of No Significant Risk to human health, 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 for a portion of the property. Specifically, for the 0 – 3 foot bgs interval, the average concentration of lead and the boring-specific concentrations of lead in all of the borings on the property are above the applicable MCP Method 1 S-1 soil standard. The MCP requires actions to be taken to address this condition on this property in the 0 – 3 foot bgs interval. This may include removal of all or a portion of this layer of soil and replacing it with clean soil or covering it with an appropriate cap material. No activities should occur on this property that will disrupt the soil located from the ground surface to a depth of three feet until removal or cover measures are completed.

- Furthermore, a condition of No Significant Risk to human health, as defined in the MCP, for foreseeable future use of the property was determined not to exist for the soil located between 3 feet and 12 feet bgs. The average concentration calculated for lead from samples collected at this interval and the boring-specific concentration of lead in six of the borings, specifically in the "C" samples, are above the applicable MCP Method 1 S-1 soil standard. Based on a review of the soil boring logs for this property, the "C" samples were collected from the 3-5 foot bgs interval. If this soil is to remain in place, land use restrictions and/or controls, defined as a Notice of Activity & Use Limitation (or AUL) in the MCP, may be necessary for the property to ensure that future activities or changes in use do not create the potential for humans to be exposed to the soil below 3 feet in depth. The soil at this interval should not be disturbed unless it is under the direction of a Licensed Site Professional (LSP) and performed in accordance with the MCP.

- Based on the findings above, and after a careful review of all available data and information, MassDEP is of the opinion that the boundary of the fill layer associated with the PSWS has been determined in the vicinity of P-056. No further assessment is required to define the boundary easterly of P-056.

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, Regional Director

J/MC/lm
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

Ec: 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-056

Table P-056
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
PAHs (mg/Kg)																			
2-Methylnaphthalene	61,000	300	5,000	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	1 / 22	0.59 - 0.59	0.17	NC [b]
Acenaphthene	180,000	1,000	10,000	3 / 11	0.19 - 0.4	0.18	0.40 NP [c]	6 / 11	0.17 - 0.42	0.24	0.33 NP [c]	9 / 22	0.17 - 0.42	0.22	0.28 NP [c]	2 / 22	0.2 - 1.22	0.20	NC [b]
Acenaphthylene	180,000	1,000	10,000	2 / 11	0.18 - 0.21	0.16	0.22 NP [d]	7 / 11	0.18 - 0.56	0.27	0.37 NP [d]	9 / 22	0.18 - 0.56	0.23	0.30 NP [d]	3 / 22	0.23 - 3.28	0.30	1.4 NP [g]
Anthracene	920,000	1,000	10,000	10 / 11	0.16 - 0.9	0.36	0.47 NP [e]	9 / 11	0.4 - 1.47	0.68	0.93 NP [d]	19 / 22	0.16 - 1.47	0.58	0.70 NP [e]	5 / 22	0.23 - 6.49	0.50	1.1 NP [d]
Benzo(a)anthracene	160	7	3,000	11 / 11	0.53 - 2.82	1.2	1.6 G [j]	10 / 11	0.18 - 3.98	1.9	2.5 NP [d]	21 / 22	0.18 - 3.98	1.6	1.9 NP [e]	7 / 22	0.21 - **16.2**	1.2	2.6 NP [d]
Benzo(a)pyrene	16	2	300	11 / 11	0.54 - **2.48**	1.1	1.4 G [j]	10 / 11	0.18 - **3.71**	1.7	**2.4** NP [d]	21 / 22	0.18 - **3.71**	1.5	1.8 NP [e]	7 / 22	0.22 - **14.8**	1.1	**2.4** NP [d]
Benzo(b)fluoranthene	160	7	3,000	11 / 11	0.71 - 3.46	1.5	1.9 G [j]	10 / 11	0.25 - 4.92	2.2	3.1 NP [d]	21 / 22	0.25 - 4.92	2.0	2.4 NP [e]	9 / 22	0.15 - **18.7**	1.5	3.2 NP [d]
Benzo(g,h,i)perylene	120,000	1,000	10,000	11 / 11	0.32 - 1.57	0.71	0.91 N [k]	9 / 11	0.59 - 2.31	1.1	1.5 NP [d]	20 / 22	0.32 - 2.31	0.98	1.2 NP [e]	7 / 22	0.33 - 9.49	0.76	1.7 NP [d]
Benzo(k)fluoranthene	1,600	70	10,000	11 / 11	0.22 - 1.05	0.47	0.61 G [j]	9 / 11	0.42 - 1.48	0.72	0.97 NP [d]	20 / 22	0.22 - 1.48	0.64	0.76 NP [e]	6 / 22	0.31 - 3.91	0.47	0.94 NP [d]
Chrysene	16,000	70	10,000	11 / 11	0.56 - 2.87	1.2	1.6 G [j]	10 / 11	0.21 - 3.91	1.9	2.5 NP [d]	21 / 22	0.21 - 3.91	1.6	2.0 NP [c]	8 / 22	0.18 - 15.6	1.3	2.6 NP [d]
Dibenz(a,h)anthracene	16	0.7	300	8 / 11	0.16 - 0.45	0.21	0.27 NP [c]	9 / 11	0.17 - 0.66	0.33	0.43 NP [d]	17 / 22	0.16 - 0.66	0.29	0.34 NP [c]	4 / 22	0.16 - **1.95**	0.27	**0.97** NP [c]
Fluoranthene	120,000	1,000	10,000	11 / 11	1.13 - 5.7	2.4	3.2 G [j]	10 / 11	0.36 - 7.16	3.7	5.0 NP [d]	21 / 22	0.36 - 7.16	3.3	3.9 NP [e]	9 / 22	0.21 - 38.7	2.5	5.6 NP [d]
Fluorene	120,000	1,000	10,000	4 / 11	0.19 - 0.4	0.19	0.29 NP [c]	6 / 11	0.31 - 0.66	0.28	0.42 NP [d]	10 / 22	0.19 - 0.66	0.25	0.33 NP [d]	3 / 22	0.21 - 2.68	0.27	2.7 NP [e]
Indeno(1,2,3-cd)pyrene	160	7	3,000	11 / 11	0.38 - 1.78	0.80	1.1 G [j]	9 / 11	0.64 - 2.58	1.2	1.7 NP [c]	20 / 22	0.38 - 2.58	1.1	1.3 NP [e]	7 / 22	0.29 - **10.3**	0.83	1.8 NP [d]
Naphthalene	61,000	100	10,000	0 / 11	All ND	NA	NC [a]	5 / 11	0.17 - 0.23	0.17	0.21 NP [d]	5 / 22	0.17 - 0.23	0.16	0.20 NP [d]	1 / 22	0.86 - 0.86	0.18	NC [b]
Phenanthrene	120,000	500	10,000	11 / 11	0.54 - 4.16	1.6	2.2 N [k]	10 / 11	0.26 - 5.94	2.8	3.9 NP [d]	21 / 22	0.26 - 5.94	2.4	3.7 NP [f]	7 / 22	0.2 - 36.3	2.1	12.9 NP [g]
Pyrene	92,000	1,000	10,000	11 / 11	0.92 - 4.57	1.9	2.6 G [j]	10 / 11	0.3 - 5.87	3.0	4.1 NP [d]	21 / 22	0.3 - 5.87	2.7	3.1 NP [e]	9 / 22	0.17 - 29.4	2.0	4.4 NP [d]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Aroclor-1254	10	2	100	1 / 11	0.243 - 0.243	0.039	NC [b]	0 / 11	All ND	NA	NC [a]	1 / 22	0.243 - 0.243	0.025	NC [b]	0 / 22	All ND	NA	NC [a]
Aroclor-1260	10	2	100	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Aroclor-1262	10	2	100	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
PCBs (Total)	10	2	100	1 / 11	0.243 - 0.243	0.039	NC [b]	0 / 11	All ND	NA	NC [a]	1 / 22	0.243 - 0.243	0.025	NC [b]	0 / 22	All ND	NA	NC [a]

Table P-056
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	11 / 11	4513 - 6001	5097	5430 N [l]	11 / 11	3474 - 8241	5065	5805 N [k]	22 / 22	3474 - 8241	5076	5402 G [j]	22 / 22	2745 - 12761	5838	6711 G [j]
Antimony		20	300	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Arsenic	40	20	200	11 / 11	4.7 - 7.6	6.0	6.6 N [k]	11 / 11	4.8 - 12.7	7.9	9.2 N [k]	22 / 22	4.7 - 12.7	7.3	7.9 N [l]	19 / 22	1.3 - 19.2	5.3	10.5 NP [f]
Barium	200,000	1,000	10,000	11 / 11	77.8 - 200	116	135 G [j]	11 / 11	124 - 531	254	319 N [k]	22 / 22	77.8 - 531	208	243 G [j]	22 / 22	13 - 676	150	325 NP [h]
Beryllium		100	2,000	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Cadmium	60	2	300	1 / 11	0.66 - 0.66	0.25	NC [b]	7 / 11	0.56 - 1.3	0.67	0.95 NP [c]	8 / 22	0.56 - 1.3	0.53	0.81 NP [c]	9 / 22	0.61 - **2.2**	0.65	1.3 NP [c]
Calcium		NS	NS	11 / 11	1134 - 2566	1604	1867 N [k]	11 / 11	1303 - 4154	2339	2812 N [k]	22 / 22	1134 - 4154	2094	2339 G [j]	22 / 22	651 - 6066	1851	2371 G [j]
Chromium	200	30	2,000	11 / 11	10.2 - 17.8	13.1	14.6 N [k]	11 / 11	8 - 26.5	13.7	16.8 G [j]	22 / 22	8 - 26.5	13.5	14.8 N [l]	22 / 22	4.9 - 28.6	13.9	16.3 N [k]
Cobalt		NS	NS	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Copper		NS	NS	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Iron		NS	NS	11 / 11	9384 - 17503	13559	15595 G [j]	11 / 11	10478 - 34056	19694	24254 N [k]	22 / 22	9384 - 34056	17649	19887 N [l]	22 / 22	4081 - 91459	21889	34071 LN [m]
Lead	1,000	300	3,000	11 / 11	205 - **600**	**349**	**409** N [k]	11 / 11	222 - **2240**	**853**	**1165** N [k]	22 / 22	205 - **2240**	**685**	**840** G [j]	22 / 22	1.6 - **3480**	**408**	**2048** NP [i]
Magnesium		NS	NS	11 / 11	987 - 1810	1252	1386 G [j]	11 / 11	872 - 1745	1106	1243 G [j]	22 / 22	872 - 1810	1154	1228 N [l]	22 / 22	530 - 7991	1805	2306 G [j]
Manganese		NS	NS	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Mercury		20	300	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Nickel		20	7,000	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Potassium		NS	NS	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Selenium		400	8,000	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Silver		100	2,000	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Sodium		NS	NS	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Thallium		8	800	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 11	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]	0 / 22	All ND	NA	NC [a]	0 / 22	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. 4.00.05).

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] 97.5% KM (Chebyshev) UCL
[h] 95% Chebyshev (Mean, Sd) UCL
[i] 99% Chebyshev (Mean, Sd) UCL

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

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

LN - Log Normal Distribution
[m] 95% H-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 2/23/11
Checked by / Date: KJC 2/24/11

October 26, 2011

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

NEW BEDFORD
Release Tracking Number 4-0015685
Parker Street Waste Site
Property P-070
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 from data generated during the first phase of SAP implementation and was followed-up with property by property risk evaluations for the purpose of typology chart development and risk communication with property owners of Phase I properties.

MassDEP is in the process of providing USEPA with both a preliminary risk evaluation and a final risk evaluation for all Phase I properties. The preliminary evaluation was performed without consideration

of data from surrounding properties that was not available until later during SAP implementation for inclusion in the final evaluation. Properties evaluated in all subsequent SAP implementation phases receive only one (final) risk evaluation because, as SAP implementation progressed, the data necessary to perform the final evaluation was available. Property P-070 was evaluated during the second implementation phase.

Property P-070 Risk Evaluation and Response Action Recommendations: Enclosed is a copy of the results from the risk evaluation conducted by MACTEC for the property identified as P-070. MassDEP uses these results along with information related to the boring logs, the nature of COCs observed, the property use and other pertinent information to complete its risk evaluation and make a response action recommendation.

MassDEP's evaluation compared the sample results from the soil samples collected from the ten boring locations on this property to the MCP Method 1 category S-1 soil standards and to either potential Imminent Hazard values listed in the MCP or site-specific Imminent Hazard (IH) values to determine if an IH may exist and/or if a Condition of No Significant Risk did or did not exist. 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. The 95% UCL evaluation criteria was used for Preliminary Risk Evaluations of Phase 1 properties when data from surrounding properties was not yet available. When data from surrounding properties is available it can be used to determine whether the data collected from the property in question is consistent with surrounding data and adequately representative of likely COC distribution such that there is no need to apply the 95% UCL. In most cases, the 95% UCL evaluation criteria is not applicable to the Final Risk Evaluations or Phase 2 properties.

Based on this evaluation, MassDEP has determined the following for Property P-070:

- A condition of No Significant Risk to human health, 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 for a portion of the property. Specifically, for the 0 – 3 foot bgs interval, the average concentration of lead and the boring-specific concentrations of lead in seven of the borings on the property are above the applicable MCP Method 1 S-1 soil standard. The MCP requires actions to be taken to address this condition on this property in the 0 – 3 foot bgs interval. This may include removal of all or a portion of this layer of soil and replacing it with clean soil or covering it with an appropriate cap material. No activities should occur on this property that will disrupt the soil located from the ground surface to a depth of three feet until removal or cover measures are completed.

- Furthermore, 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 bgs. Applying the 95% UCL for data evaluation of soil located greater than 3 feet bgs is not necessary on Property P-070 for this soil interval. The actual average for COCs at this depth interval is below the applicable MCP Method 1 S-1 soil standard. As such, a Condition of No Significant Risk exists on this property for the soil located between 3 and 12 feet, and no further response actions are necessary for this soil.

- Based on the findings above, and after a careful review of all available data and information, MassDEP is of the opinion that the boundary of the fill layer associated with the PSWS has been determined to be across Property P-070. No further assessment is required to define the PSWS fill boundary to the northerly or easterly of P-070.

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, Regional Director

J/MC/lm

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-070

Table P-070

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 / 10	All ND	NA	NC [a]	1 / 10	0.06 - 0.06	0.29	NC [b]	1 / 20	0.06 - 0.06	0.25	NC [b]	3 / 20	0.09 - 0.17	0.17	0.16 NP [c]
Acenaphthene	180,000	1,000	10,000	4 / 10	0.09 - 0.25	0.17	0.24 NP [c]	4 / 10	0.07 - 0.11	0.27	0.12 NP [c]	8 / 20	0.07 - 0.25	0.24	0.15 NP [c]	7 / 20	0.11 - 0.26	0.16	0.20 NP [c]
Acenaphthylene	180,000	1,000	10,000	5 / 10	0.1 - 2.7	0.43	0.92 NP [c]	6 / 10	0.09 - 0.67	0.35	0.37 NP [c]	11 / 20	0.09 - 2.7	0.37	0.46 NP [e]	8 / 20	0.1 - 0.33	0.17	0.21 NP [c]
Anthracene	920,000	1,000	10,000	9 / 10	0.07 - 2.5	0.47	1.5 NP [d]	8 / 10	0.19 - 1	0.42	0.57 NP [f]	17 / 20	0.07 - 2.5	0.43	0.79 NP [d]	10 / 20	0.12 - 0.68	0.29	0.39 NP [e]
Benzo(a)anthracene	160	7	3,000	10 / 10	0.22 - **7.4**	1.3	2.8 G [h]	9 / 10	0.52 - 1.72	0.92	1.2 NP [c]	19 / 20	0.22 - **7.4**	1.0	2.1 NP [d]	10 / 20	0.37 - 1.94	0.58	0.91 NP [e]
Benzo(a)pyrene	16	2	300	10 / 10	0.23 - **5.6**	1.1	**2.2** G [h]	9 / 10	0.48 - 1.86	0.93	1.2 NP [c]	19 / 20	0.23 - **5.6**	0.99	1.8 NP [d]	10 / 20	0.37 - 1.92	0.56	0.88 NP [e]
Benzo(b)fluoranthene	160	7	3,000	10 / 10	0.33 - **7.2**	1.5	2.9 G [h]	10 / 10	0.12 - 2.95	1.3	1.7 N [j]	20 / 20	0.12 - **7.2**	1.4	1.8 G [h]	10 / 20	0.57 - 2.78	0.76	1.3 NP [e]
Benzo(g,h,i)perylene	120,000	1,000	10,000	10 / 10	0.15 - 3.4	0.67	1.4 G [h]	9 / 10	0.32 - 1.14	0.57	0.74 NP [c]	19 / 20	0.15 - 3.4	0.60	1.1 NP [d]	10 / 20	0.19 - 0.98	0.36	0.52 NP [e]
Benzo(k)fluoranthene	1,600	70	10,000	10 / 10	0.13 - 3.2	0.60	1.2 G [h]	9 / 10	0.28 - 0.78	0.48	0.60 NP [c]	19 / 20	0.13 - 3.2	0.52	0.96 NP [d]	10 / 20	0.17 - 1	0.32	0.45 NP [e]
Chrysene	16,000	70	10,000	10 / 10	0.27 - 6.1	1.2	2.4 G [h]	10 / 10	0.1 - 1.97	1.0	1.3 N [j]	20 / 20	0.1 - 6.1	1.1	1.4 G [h]	10 / 20	0.39 - 1.9	0.59	0.93 NP [e]
Dibenz(a,h)anthracene	16	0.7	300	9 / 10	0.09 - **1.2**	0.26	**0.72** NP [d]	9 / 10	0.1 - 0.5	0.24	0.31 NP [c]	18 / 20	0.09 - **1.2**	0.24	0.41 NP [d]	10 / 20	0.09 - 0.37	0.18	0.23 NP [c]
Fluoranthene	120,000	1,000	10,000	10 / 10	0.46 - 12	2.3	4.7 G [h]	10 / 10	0.14 - 3.85	1.8	2.4 N [j]	20 / 20	0.14 - 12	2.0	3.7 NP [g]	10 / 20	0.83 - 3.63	1.1	1.9 NP [e]
Fluorene	120,000	1,000	10,000	5 / 10	0.06 - 0.6	0.20	0.30 NP [c]	6 / 10	0.08 - 0.26	0.24	0.21 NP [c]	11 / 20	0.06 - 0.6	0.22	0.21 NP [c]	8 / 20	0.09 - 0.3	0.17	0.21 NP [c]
Indeno(1,2,3-cd)pyrene	160	7	3,000	10 / 10	0.14 - 3.2	0.63	1.3 G [h]	9 / 10	0.29 - 1.03	0.52	0.67 NP [c]	19 / 20	0.14 - 3.2	0.55	1.0 NP [d]	10 / 20	0.18 - 0.92	0.34	0.47 NP [e]
Naphthalene	61,000	100	10,000	4 / 10	0.08 - 0.15	0.15	0.15 NP [c]	1 / 10	0.09 - 0.09	0.29	NC [b]	5 / 20	0.08 - 0.15	0.24	0.13 NP [c]	4 / 20	0.11 - 0.52	0.19	0.24 NP [e]
Phenanthrene	120,000	500	10,000	10 / 10	0.22 - 6.4	1.4	2.8 G [h]	9 / 10	0.73 - 2.7	1.3	1.7 NP [f]	19 / 20	0.22 - 6.4	1.3	2.3 NP [d]	10 / 20	0.51 - 2.72	0.86	1.4 NP [e]
Pyrene	92,000	1,000	10,000	10 / 10	0.42 - 12	2.2	4.7 G [h]	10 / 10	0.13 - 3.2	1.7	2.2 N [j]	20 / 20	0.13 - 12	1.9	3.5 NP [g]	10 / 20	0.63 - 2.94	0.98	1.7 NP [e]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]
Aroclor-1254	10	2	100	4 / 10	0.02 - 0.041	0.025	0.038 NP [e]	5 / 10	0.024 - 0.057	0.029	0.049 NP [e]	9 / 20	0.02 - 0.057	0.028	0.035 NP [e]	2 / 20	0.042 - 0.12	0.024	0.12 NP [e]
Aroclor-1260	10	2	100	4 / 10	0.086 - 0.12	0.054	0.11 NP [e]	6 / 10	0.064 - 0.12	0.058	0.088 NP [e]	10 / 20	0.064 - 0.12	0.057	0.085 NP [e]	3 / 20	0.015 - 0.055	0.021	0.055 NP [e]
Aroclor-1262	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]
PCBs (Total)	10	2	100	8 / 10	0.02 - 0.12	0.059	0.085 NP [c]	10 / 10	0.024 - 0.12	0.071	0.090 N [j]	18 / 20	0.02 - 0.12	0.067	0.078 NP [f]	5 / 20	0.015 - 0.12	0.027	0.052 NP [e]

Table P-070
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
Inorganics (mg/Kg)																			
Aluminum		NS	NS	10 / 10	6685 - 9522	7936	8412 N [j]	10 / 10	4692 - 7540	5981	6501 N [j]	20 / 20	4692 - 9522	6633	7024 N [j]	20 / 20	2996 - 9318	5023	5710 G [h]
Antimony		20	300	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]
Arsenic	40	20	200	10 / 10	3.3 - 7	4.7	5.3 N [j]	10 / 10	4.1 - 11.9	6.3	7.6 N [k]	20 / 20	3.3 - 11.9	5.8	6.4 N [k]	20 / 20	0.99 - **22.2**	5.4	11.3 NP [g]
Barium	200,000	1,000	10,000	10 / 10	62 - 203	105	132 N [j]	10 / 10	94.6 - 335	202	249 N [j]	20 / 20	62 - 335	170	199 G [h]	20 / 20	15.2 - 527	140	289 NP [g]
Beryllium		100	2,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]
Cadmium	60	2	300	2 / 10	0.63 - 0.64	0.28	0.64 NP [e]	6 / 10	0.47 - 0.83	0.47	0.65 NP [e]	8 / 20	0.47 - 0.83	0.40	0.59 NP [e]	6 / 20	0.49 - 0.92	0.32	0.70 NP [e]
Calcium		NS	NS	10 / 10	1253 - 1929	1512	1646 N [j]	10 / 10	1346 - 2739	1947	2209 N [j]	20 / 20	1253 - 2739	1802	1943 G [h]	20 / 20	516 - 6247	1936	2520 G [h]
Chromium	200	30	2,000	10 / 10	12.1 - 22.6	16.3	18.0 N [j]	10 / 10	10.8 - 25.6	14.1	16.9 N [k]	20 / 20	10.8 - 25.6	14.9	16.1 N [k]	20 / 20	7.2 - 19.4	11.1	12.6 G [h]
Cobalt		NS	NS	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]
Copper		NS	NS	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]
Iron		NS	NS	10 / 10	9593 - 33640	15707	20696 G [h]	10 / 10	8961 - 29411	14892	18442 G [h]	20 / 20	8961 - 33640	15163	17169 N [k]	20 / 20	4583 - 58103	13894	26895 NP [g]
Lead	1,000	300	3,000	10 / 10	135 - **346**	230	270 N [j]	10 / 10	184 - **773**	**457**	**556** N [j]	20 / 20	135 - **773**	**382**	**443** G [h]	20 / 20	1.5 - **892**	227	**517** G [i]
Magnesium		NS	NS	10 / 10	1026 - 1493	1291	1370 N [j]	10 / 10	1052 - 1422	1207	1281 N [j]	20 / 20	1026 - 1493	1235	1276 N [j]	20 / 20	656 - 2408	1374	1557 N [j]
Manganese		NS	NS	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]
Mercury		20	300	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]
Nickel		20	7,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]
Potassium		NS	NS	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]
Selenium		400	8,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]
Silver		100	2,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]
Sodium		NS	NS	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]
Thallium		8	800	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 10	All ND	NA	NC [a]	0 / 10	All ND	NA	NC [a]	0 / 20	All ND	NA	NC [a]	0 / 20	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. 4.00.05).

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

G - Gamma Distribution
[h] 95% Approximate Gamma UCL
[i] 95% Adjusted Gamma UCL

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

N - Normal Distribution
[j] 95% Student's-t UCL
[k] 95% Modified-t 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 2/23/11
Checked by / Date: KJC 2/24/11

MassDEP
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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Secretary

KENNETH L. KIMMELL
Commissioner

January 20, 2012

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

NEW BEDFORD
Release Tracking Number 4-0015685
Parker Street Waste Site
Property P-063
SAP Data Risk Evaluation - No USEPA Action Recommended

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 from data generated during the first phase of SAP implementation and was followed-up with property by property risk evaluations for the purpose of typology chart development and risk communication with property owners of Phase I properties.

MassDEP is in the process of providing USEPA with both a preliminary risk evaluation and a final risk evaluation for all properties sampled during the first phase of SAP implementation. Preliminary evaluations were performed without consideration of data from surrounding properties that only became available later during SAP implementation, and was included in the final evaluation. Properties evaluated in all subsequent SAP implementation phases receive only one (final) risk evaluation because, as SAP implementation progressed, the data necessary to perform the final evaluation was available. Property P-063 was evaluated during the second implementation phase.

Property P-063 Risk Evaluation and Response Action Recommendations: Enclosed is a copy of the results from the risk evaluation conducted by MACTEC for the property identified as P-063. MassDEP uses these results along with information related to the boring logs, the nature of COCs observed, the property use and other pertinent information to complete its risk evaluation and make a response action recommendation.

MassDEP's evaluation compared the sample results from the soil samples collected from the four boring locations on this property to the MCP Method 1 category S-1 soil standards and to either potential Imminent Hazard values listed in the MCP or site-specific Imminent Hazard (IH) values to determine if an IH may exist and/or if a Condition of No Significant Risk did not exist. 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. The 95% UCL evaluation criteria was used for Preliminary Risk Evaluations of Phase 1 properties when data from surrounding properties was not yet available. When data from surrounding properties is available it can be used to show whether the data collected from the property in question is consistent with surrounding data and adequately representative of likely COC distribution such that there is no need to apply the 95% UCL. In most cases, the 95% UCL evaluation criteria is not applicable to the Final Risk Evaluations or Phase 2 properties.

Based on this evaluation, MassDEP has determined the following for Property P-063:

- A condition of No Significant Risk to human health, as defined in the MCP, was determined to exist for both the current use of the property for the soil located between the ground surface and 3 feet in depth and for future use of the property for the soil located between 3 feet and 12 feet below the ground surface. The actual average concentration and the 95% UCL calculated for the COCs detected in both soil intervals are below the applicable MCP Method 1 S-1 soil standards. Several COCs were not detected in either the 0-3 foot bgs interval or the 3 to 12 foot interval on this property. No further response actions are necessary for this soil.

- Based on the findings above, and after a careful review of all available data and information, MassDEP is of the opinion that the boundary of the fill layer associated with the PSWS has been determined to be northerly and easterly of P-063. No further assessment is required to define the fill boundary southerly or westerly of P-063.

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
Regional Director

J/lm

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 cheryl.henlin@newbedford-ma.gov

cc: Owner, Property P-063

Table P-063
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 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Acenaphthene	180,000	1,000	10,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Acenaphthylene	180,000	1,000	10,000	1 / 4	0.12 - 0.12	0.17	NC [b]	1 / 4	0.16 - 0.16	0.18	NC [b]	2 / 8	0.12 - 0.16	0.18	0.17 NP [d]	0 / 8	All ND	NA	NC [a]
Anthracene	920,000	1,000	10,000	1 / 4	0.16 - 0.16	0.18	NC [b]	1 / 4	0.14 - 0.14	0.18	NC [b]	2 / 8	0.14 - 0.16	0.18	0.16 NP [e]	0 / 8	All ND	NA	NC [a]
Benzo(a)anthracene	160	7	3,000	3 / 4	0.22 - 0.58	0.33	NC [b]	3 / 4	0.11 - 0.59	0.28	NC [b]	6 / 8	0.11 - 0.59	0.29	0.39 NP [e]	1 / 8	0.21 - 0.21	0.18	NC [c]
Benzo(a)pyrene	16	2	300	3 / 4	0.17 - 0.47	0.27	NC [b]	1 / 4	0.61 - 0.61	0.29	NC [b]	4 / 8	0.17 - 0.61	0.28	0.51 NP [e]	1 / 8	0.15 - 0.15	0.18	NC [c]
Benzo(b)fluoranthene	160	7	3,000	4 / 4	0.16 - 0.51	0.29	NC [b]	2 / 4	0.18 - 0.74	0.32	NC [b]	6 / 8	0.16 - 0.74	0.31	0.43 NP [e]	1 / 8	0.22 - 0.22	0.19	NC [c]
Benzo(g,h,i)perylene	120,000	1,000	10,000	1 / 4	0.33 - 0.33	0.22	NC [b]	1 / 4	0.46 - 0.46	0.26	NC [b]	2 / 8	0.33 - 0.46	0.24	0.46 NP [e]	0 / 8	All ND	NA	NC [a]
Benzo(k)fluoranthene	1,600	70	10,000	4 / 4	0.13 - 0.29	0.22	NC [b]	2 / 4	0.16 - 0.46	0.25	NC [b]	6 / 8	0.13 - 0.46	0.24	0.31 NP [d]	0 / 8	All ND	NA	NC [a]
Chrysene	16,000	70	10,000	3 / 4	0.22 - 0.68	0.37	NC [b]	2 / 4	0.21 - 0.88	0.37	NC [b]	5 / 8	0.21 - 0.88	0.37	0.52 NP [d]	1 / 8	0.22 - 0.22	0.19	NC [c]
Dibenz(a,h)anthracene	16	0.7	300	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Fluoranthene	120,000	1,000	10,000	4 / 4	0.19 - 1.1	0.51	NC [b]	3 / 4	0.11 - 1.1	0.42	NC [b]	7 / 8	0.11 - 1.1	0.45	0.63 NP [f]	1 / 8	0.26 - 0.26	0.19	NC [c]
Fluorene	120,000	1,000	10,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Indeno(1,2,3-cd)pyrene	160	7	3,000	1 / 4	0.26 - 0.26	0.21	NC [b]	1 / 4	0.37 - 0.37	0.23	NC [b]	2 / 8	0.26 - 0.37	0.22	0.37 NP [e]	0 / 8	All ND	NA	NC [a]
Naphthalene	61,000	100	10,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Phenanthrene	120,000	500	10,000	4 / 4	0.12 - 0.9	0.38	NC [b]	2 / 4	0.16 - 0.77	0.33	NC [b]	6 / 8	0.12 - 0.9	0.34	0.48 NP [e]	1 / 8	0.14 - 0.14	0.18	NC [c]
Pyrene	92,000	1,000	10,000	4 / 4	0.32 - 1.4	0.71	NC [b]	2 / 4	0.46 - 1.5	0.58	NC [b]	6 / 8	0.32 - 1.5	0.63	0.93 NP [e]	1 / 8	0.43 - 0.43	0.21	NC [c]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Aroclor-1254	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Aroclor-1260	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Aroclor-1262	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
PCBs (Total)	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]

Table P-063
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	4 / 4	6013 - 8179	6968	NC [b]	4 / 4	6172 - 7901	7281	NC [b]	8 / 8	6013 - 8179	7176	7573 N [h]	8 / 8	2762 - 8534	4350	5705 G [j]
Antimony		20	300	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Arsenic	40	20	200	4 / 4	2.5 - 4.3	3.6	NC [b]	4 / 4	2.4 - 6	3.6	NC [b]	8 / 8	2.4 - 6	3.6	4.3 G [j]	8 / 8	0.61 - 2	1.2	1.6 N [h]
Barium	200,000	1,000	10,000	4 / 4	40.4 - 69.5	54	NC [b]	4 / 4	29.1 - 102	56	NC [b]	8 / 8	29.1 - 102	55	70 G [j]	8 / 8	8.1 - 31.4	12.9	18.6 G [j]
Beryllium		100	2,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Cadmium	60	2	300	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Calcium		NS	NS	4 / 4	638 - 4224	1844	NC [b]	4 / 4	739 - 2219	1192	NC [b]	8 / 8	638 - 4224	1409	2077 LN [k]	8 / 8	177 - 10734	1724	14556 NP [g]
Chromium	200	30	2,000	4 / 4	7.9 - 10.7	9.5	NC [b]	4 / 4	8.2 - 12.4	9.8	NC [b]	8 / 8	7.9 - 12.4	9.7	10.5 N [h]	8 / 8	6 - 8.4	6.7	7.2 G [j]
Cobalt		NS	NS	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Copper		NS	NS	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Iron		NS	NS	4 / 4	6976 - 8334	7828	NC [b]	4 / 4	7031 - 8665	7896	NC [b]	8 / 8	6976 - 8665	7874	8187 N [h]	8 / 8	3768 - 7782	5607	6385 N [h]
Lead	1,000	300	3,000	4 / 4	116 - 244	187	NC [b]	4 / 4	65.4 - **315**	154	NC [b]	8 / 8	65.4 - **315**	165	211 N [h]	8 / 8	1.6 - 74.9	14.9	44 G [j]
Magnesium		NS	NS	4 / 4	1023 - 3130	1611	NC [b]	4 / 4	1012 - 1335	1168	NC [b]	8 / 8	1012 - 3130	1316	1645 N [i]	8 / 8	411 - 1540	1137	1374 N [h]
Manganese		NS	NS	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Mercury		20	300	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Nickel		20	7,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Potassium		NS	NS	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Selenium		400	8,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Silver		100	2,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Sodium		NS	NS	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Thallium		8	800	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 8	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] Dataset too small to calculate UCL
[c] Only one distinct data value was detected

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

N - Normal Distribution
[h] 95% Student's-t UCL
[i] 95% Modified-t UCL

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

LN - Log Normal Distribution
[k] 95% H-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 02/01/11
Checked by / Date: KJC 02/02/11

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

DEVAL L. PATRICK
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Secretary

KENNETH L. KIMMELL
Commissioner

January 20, 2012

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

NEW BEDFORD
Release Tracking Number 4-0015685
Parker Street Waste Site
Property P-065
SAP Data Risk Evaluation - No USEPA Action Recommended

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 from data generated during the first phase of SAP implementation and was followed-up with property by property risk evaluations for the purpose of typology chart development and risk communication with property owners of Phase I properties.

MassDEP is in the process of providing USEPA with both a preliminary risk evaluation and a final risk evaluation for all properties sampled during the first phase of SAP implementation. Preliminary evaluations were performed without consideration of data from surrounding properties that only became available later during SAP implementation, and was included in the final evaluation. Properties evaluated in all subsequent SAP implementation phases receive only one (final) risk evaluation because, as SAP implementation progressed, the data necessary to perform the final evaluation was available. Property P-065 was evaluated during the second implementation phase.

Property P-065 Risk Evaluation and Response Action Recommendations: Enclosed is a copy of the results from the risk evaluation conducted by MACTEC for the property identified as P-065. MassDEP uses these results along with information related to the boring logs, the nature of COCs observed, the property use and other pertinent information to complete its risk evaluation and make a response action recommendation.

MassDEP's evaluation compared the sample results from the soil samples collected from the four boring locations on this property to the MCP Method 1 category S-1 soil standards and to either potential Imminent Hazard values listed in the MCP or site-specific Imminent Hazard (IH) values to determine if an IH may exist and/or if a Condition of No Significant Risk did not exist. 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. The 95% UCL evaluation criteria was used for Preliminary Risk Evaluations of Phase 1 properties when data from surrounding properties was not yet available. When data from surrounding properties is available it can be used to show whether the data collected from the property in question is consistent with surrounding data and adequately representative of likely COC distribution such that there is no need to apply the 95% UCL. In most cases, the 95% UCL evaluation criteria is not applicable to the Final Risk Evaluations or Phase 2 properties.

Based on this evaluation, MassDEP has determined the following for Property P-065:

- A condition of No Significant Risk to human health, as defined in the MCP, was determined to exist for both the current use of the property for the soil located between the ground surface and 3 feet in depth and for future use of the property for the soil located between 3 feet and 12 feet below the ground surface. The actual average concentration and the 95% UCL calculated for the COCs detected in both soil intervals are below the applicable MCP Method 1 S-1 soil standards. Several COCs were not detected in either the 0-3 foot bgs interval or the 3 to 12 foot interval on this property. No further response actions are necessary for this soil.

- Based on the findings above, and after a careful review of all available data and information, MassDEP is of the opinion that the boundary of the fill layer associated with the PSWS has been determined in the vicinity of P-065. No further assessment is required to define the fill boundary southerly of P-065.

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
Regional Director

J/lm

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 cheryl.henlin@newbedford-ma.gov

cc: Owner, Property P-065

Table P-065
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 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Acenaphthene	180,000	1,000	10,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Acenaphthylene	180,000	1,000	10,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Anthracene	920,000	1,000	10,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Benzo(a)anthracene	160	7	3,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Benzo(a)pyrene	16	2	300	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Benzo(b)fluoranthene	160	7	3,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Benzo(g,h,i)perylene	120,000	1,000	10,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Benzo(k)fluoranthene	1,600	70	10,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Chrysene	16,000	70	10,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Dibenz(a,h)anthracene	16	0.7	300	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Fluoranthene	120,000	1,000	10,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Fluorene	120,000	1,000	10,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Indeno(1,2,3-cd)pyrene	160	7	3,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Naphthalene	61,000	100	10,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Phenanthrene	120,000	500	10,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Pyrene	92,000	1,000	10,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Aroclor-1254	10	2	100	1 / 4	0.03 - 0.03	0.015	NC [b]	0 / 4	All ND	NA	NC [a]	1 / 8	0.03 - 0.03	0.012	NC [c]	0 / 4	All ND	NA	NC [a]
Aroclor-1260	10	2	100	4 / 4	0.023 - 0.061	0.038	NC [b]	0 / 4	All ND	NA	NC [a]	4 / 8	0.023 - 0.061	0.017	0.040 NP [d]	0 / 4	All ND	NA	NC [a]
Aroclor-1262	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
PCBs (Total)	10	2	100	4 / 4	0.023 - 0.061	0.045	NC [b]	0 / 4	All ND	NA	NC [a]	4 / 8	0.023 - 0.061	0.022	0.061 NP [d]	0 / 4	All ND	NA	NC [a]

Table P-065
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	4 / 4	3096 - 6877	4918	NC [b]	4 / 4	2908 - 5707	4011	NC [b]	8 / 8	2908 - 6877	4313	4989 N [f]	4 / 4	2003 - 5015	3229	NC [b]
Antimony		20	300	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Arsenic	40	20	200	4 / 4	1.4 - 3.1	2.0	NC [b]	1 / 4	1.3 - 1.3	0.73	NC [b]	5 / 8	1.3 - 3.1	1.1	1.8 NP [e]	0 / 4	All ND	NA	NC [a]
Barium	200,000	1,000	10,000	4 / 4	12.1 - 25.7	19.3	NC [b]	4 / 4	6.9 - 18	11.3	NC [b]	8 / 8	6.9 - 25.7	14.0	17.4 N [f]	4 / 4	5.5 - 15.4	10.0	NC [b]
Beryllium		100	2,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Cadmium	60	2	300	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Calcium		NS	NS	4 / 4	482 - 878	692	NC [b]	4 / 4	401 - 568	485	NC [b]	8 / 8	401 - 878	554	628 N [f]	4 / 4	417 - 669	583	NC [b]
Chromium	200	30	2,000	4 / 4	7.3 - 17	12.3	NC [b]	4 / 4	5.5 - 13.7	7.8	NC [b]	8 / 8	5.5 - 17	9.3	11.6 N [g]	4 / 4	3.9 - 10.1	7.3	NC [b]
Cobalt		NS	NS	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Copper		NS	NS	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Iron		NS	NS	4 / 4	6639 - 13822	9693	NC [b]	4 / 4	4356 - 7064	5496	NC [b]	8 / 8	4356 - 13822	6895	8401 G [h]	4 / 4	3235 - 6458	4777	NC [b]
Lead	1,000	300	3,000	4 / 4	18.1 - 192	78	NC [b]	4 / 4	1.6 - 13.6	6.1	NC [b]	8 / 8	1.6 - 192	30	70 G [h]	4 / 4	1.2 - 2.1	1.7	NC [b]
Magnesium		NS	NS	4 / 4	1339 - 2675	1928	NC [b]	4 / 4	1052 - 1824	1315	NC [b]	8 / 8	1052 - 2675	1520	1806 G [h]	4 / 4	796 - 2000	1356	NC [b]
Manganese		NS	NS	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Mercury		20	300	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Nickel		20	7,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Potassium		NS	NS	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Selenium		400	8,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Silver		100	2,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Sodium		NS	NS	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Thallium		8	800	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	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. 4.00.05).

NC - Not Calculated
[a] All values non detect
[b] Dataset too small to calculate UCL
[c] Only one distinct data value was detected

NP - Non-Parametric Distribution
[d] 95% KM (Percentile Bootstrap) UCL
[e] 95% KM (t) UCL

N - Normal Distribution
[f] 95% Student's-t UCL
[g] 95% Modified-t UCL

G - Gamma Distribution
[h] 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 2/22/11
Checked by / Date: KJC 2/24/11

MassDEP

Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

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DEVAL L. PATRICK
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Commissioner

January 20, 2012

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

NEW BEDFORD
Release Tracking Number 4-0015685
Parker Street Waste Site
Property P-071
SAP Data Risk Evaluation - No USEPA Action Recommended

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 from data generated during the first phase of SAP implementation and was followed-up with property by property risk evaluations for the purpose of typology chart development and risk communication with property owners of Phase I properties.

MassDEP is in the process of providing USEPA with both a preliminary risk evaluation and a final risk evaluation for all properties sampled during the first phase of SAP implementation. Preliminary evaluations were performed without consideration of data from surrounding properties that only became available later during SAP implementation, and was included in the final evaluation. Properties evaluated in all subsequent SAP implementation phases receive only one (final) risk evaluation because, as SAP implementation progressed, the data necessary to perform the final evaluation was available. Property P-071 was evaluated during the second implementation phase.

Property P-071 Risk Evaluation and Response Action Recommendations: Enclosed is a copy of the results from the risk evaluation conducted by MACTEC for the property identified as P-071. MassDEP uses these results along with information related to the boring logs, the nature of COCs observed, the property use and other pertinent information to complete its risk evaluation and make a response action recommendation.

MassDEP's evaluation compared the sample results from the soil samples collected from the seven boring locations on this property to the MCP Method 1 category S-1 soil standards and to either potential Imminent Hazard values listed in the MCP or site-specific Imminent Hazard (IH) values to determine if an IH may exist and/or if a Condition of No Significant Risk did not exist. 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. The 95% UCL evaluation criteria was used for Preliminary Risk Evaluations of Phase 1 properties when data from surrounding properties was not yet available. When data from surrounding properties is available it can be used to show whether the data collected from the property in question is consistent with surrounding data and adequately representative of likely COC distribution such that there is no need to apply the 95% UCL. In most cases, the 95% UCL evaluation criteria is not applicable to the Final Risk Evaluations or Phase 2 properties.

Based on this evaluation, MassDEP has determined the following for Property P-071:

- A condition of No Significant Risk to human health, as defined in the MCP, was determined to exist for both the current use of the property for the soil located between the ground surface and 3 feet in depth and for future use of the property for the soil located between 3 feet and 12 feet below the ground surface. The actual average concentration and the 95% UCL calculated for the COCs detected in both soil intervals are below the applicable MCP Method 1 S-1 soil standards. Several COCs were not detected in either the 0-3 foot bgs interval or the 3 to 12 foot interval on this property. No further response actions are necessary for this soil.

- Based on the findings above, and after a careful review of all available data and information, MassDEP is of the opinion that the boundary of the fill layer associated with the PSWS has been determined in the vicinity of P-071. No further assessment is required to define the fill boundary in easterly of P-071.

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
Regional Director

J/lm

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 cheryl.henlin@newbedford-ma.gov

cc: Owner, Property P-071

Table P-071
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 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Acenaphthene	180,000	1,000	10,000	3 / 7	0.1 - 0.25	0.34	0.29 NP [c]	1 / 7	0.13 - 0.13	0.18	NC [b]	4 / 14	0.1 - 0.25	0.23	0.22 NP [d]	0 / 11	All ND	NA	NC [a]
Acenaphthylene	180,000	1,000	10,000	5 / 7	0.08 - 0.26	0.29	0.24 NP [c]	2 / 7	0.09 - 0.1	0.17	0.11 NP [c]	7 / 14	0.08 - 0.26	0.21	0.18 NP [c]	0 / 11	All ND	NA	NC [a]
Anthracene	920,000	1,000	10,000	7 / 7	0.12 - 0.77	0.41	0.58 N [g]	4 / 7	0.09 - 0.38	0.19	0.26 NP [c]	11 / 14	0.09 - 0.77	0.26	0.33 NP [e]	0 / 11	All ND	NA	NC [a]
Benzo(a)anthracene	160	7	3,000	7 / 7	0.4 - 2	1.1	1.6 N [g]	7 / 7	0.09 - 0.88	0.37	0.58 N [g]	14 / 14	0.09 - 2	0.63	0.90 G [h]	1 / 11	0.1 - 0.1	0.17	NC [b]
Benzo(a)pyrene	16	2	300	7 / 7	0.46 - 1.9	1.1	1.5 N [g]	7 / 7	0.09 - 0.86	0.38	0.59 N [g]	14 / 14	0.09 - 1.9	0.63	0.90 G [h]	0 / 11	All ND	NA	NC [a]
Benzo(b)fluoranthene	160	7	3,000	7 / 7	0.61 - 2.6	1.5	2.0 N [g]	7 / 7	0.13 - 1.1	0.52	0.79 N [g]	14 / 14	0.13 - 2.6	0.84	1.2 G [h]	0 / 11	All ND	NA	NC [a]
Benzo(g,h,i)perylene	120,000	1,000	10,000	6 / 7	0.32 - 1.4	0.74	1.0 NP [c]	5 / 7	0.14 - 0.58	0.32	0.48 NP [c]	11 / 14	0.14 - 1.4	0.46	0.59 NP [d]	0 / 11	All ND	NA	NC [a]
Benzo(k)fluoranthene	1,600	70	10,000	7 / 7	0.28 - 1.5	0.81	1.1 N [g]	5 / 7	0.14 - 0.49	0.28	0.39 NP [c]	12 / 14	0.14 - 1.5	0.45	0.61 NP [e]	0 / 11	All ND	NA	NC [a]
Chrysene	16,000	70	10,000	7 / 7	0.51 - 2.3	1.3	1.8 N [g]	7 / 7	0.09 - 0.89	0.42	0.64 N [g]	14 / 14	0.09 - 2.3	0.72	1.0 G [h]	1 / 11	0.11 - 0.11	0.17	NC [b]
Dibenz(a,h)anthracene	16	0.7	300	6 / 7	0.09 - 0.27	0.30	0.26 NP [c]	3 / 7	0.08 - 0.15	0.16	0.16 NP [c]	9 / 14	0.08 - 0.27	0.21	0.19 NP [c]	0 / 11	All ND	NA	NC [a]
Fluoranthene	120,000	1,000	10,000	7 / 7	1 - 5.4	2.9	4.0 N [g]	7 / 7	0.18 - 2.2	0.89	1.4 N [g]	14 / 14	0.18 - 5.4	1.5	2.2 G [h]	2 / 11	0.09 - 0.16	0.17	0.19 NP [c]
Fluorene	120,000	1,000	10,000	3 / 7	0.11 - 0.21	0.33	0.24 NP [c]	1 / 7	0.13 - 0.13	0.18	NC [b]	4 / 14	0.11 - 0.21	0.23	0.19 NP [c]	0 / 11	All ND	NA	NC [a]
Indeno(1,2,3-cd)pyrene	160	7	3,000	7 / 7	0.28 - 1.2	0.70	0.95 N [g]	5 / 7	0.13 - 0.5	0.29	0.42 NP [c]	12 / 14	0.13 - 1.2	0.43	0.55 NP [e]	0 / 11	All ND	NA	NC [a]
Naphthalene	61,000	100	10,000	1 / 7	0.18 - 0.18	0.33	NC [b]	0 / 7	All ND	NA	NC [a]	1 / 14	0.18 - 0.18	0.24	NC [b]	0 / 11	All ND	NA	NC [a]
Phenanthrene	120,000	500	10,000	7 / 7	0.57 - 3.7	2.0	2.8 N [g]	7 / 7	0.09 - 1.7	0.55	0.96 N [g]	14 / 14	0.09 - 3.7	1.0	1.5 G [h]	1 / 11	0.12 - 0.12	0.17	NC [b]
Pyrene	92,000	1,000	10,000	7 / 7	0.83 - 4.3	2.4	3.3 N [g]	7 / 7	0.15 - 1.9	0.76	1.2 N [g]	14 / 14	0.15 - 4.3	1.3	1.9 G [h]	2 / 11	0.08 - 0.2	0.17	0.25 NP [c]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Aroclor-1254	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Aroclor-1260	10	2	100	7 / 7	0.046 - 0.088	0.063	0.075 N [g]	0 / 7	All ND	NA	NC [a]	7 / 14	0.046 - 0.088	0.034	0.059 NP [d]	0 / 11	All ND	NA	NC [a]
Aroclor-1262	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
PCBs (Total)	10	2	100	7 / 7	0.046 - 0.088	0.063	0.075 N [g]	0 / 7	All ND	NA	NC [a]	7 / 14	0.046 - 0.088	0.034	0.059 NP [d]	0 / 11	All ND	NA	NC [a]

Table P-071
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
Inorganics (mg/Kg)																			
Aluminum		NS	NS	7 / 7	4134 - 5992	5223	5662 N [g]	7 / 7	4049 - 5884	4708	5231 N [g]	14 / 14	4049 - 5992	4879	5151 G [h]	11 / 11	3328 - 6961	5132	5805 N [g]
Antimony		20	300	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Arsenic	40	20	200	6 / 7	3 - 5.9	4.0	5.1 NP [c]	4 / 7	3.6 - 9.2	4.2	7.7 NP [d]	10 / 14	3 - 9.2	4.1	5.5 NP [d]	1 / 11	3 - 3	0.90	NC [b]
Barium	200,000	1,000	10,000	7 / 7	36.6 - 141	83	110 N [g]	7 / 7	34.1 - 164	84	120 N [g]	14 / 14	34.1 - 164	84	102 G [h]	11 / 11	12.1 - 40	21	26 G [h]
Beryllium		100	2,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Cadmium	60	2	300	1 / 7	0.92 - 0.92	0.41	NC [b]	0 / 7	All ND	NA	NC [a]	1 / 14	0.92 - 0.92	0.33	NC [b]	0 / 11	All ND	NA	NC [a]
Calcium		NS	NS	7 / 7	743 - 2010	1542	1890 N [g]	7 / 7	995 - 4454	2203	3246 N [g]	14 / 14	743 - 4454	1983	2453 G [h]	11 / 11	509 - 1330	931	1089 N [g]
Chromium	200	30	2,000	7 / 7	7.4 - 11.5	8.8	9.9 N [g]	7 / 7	5.5 - 8.9	7.0	7.8 N [g]	14 / 14	5.5 - 11.5	7.6	8.1 N [g]	11 / 11	2.9 - 15	8.3	10.0 N [g]
Cobalt		NS	NS	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Copper		NS	NS	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Iron		NS	NS	7 / 7	6615 - 8458	7486	7986 N [g]	7 / 7	6094 - 7157	6454	6752 N [g]	14 / 14	6094 - 8458	6798	7062 G [h]	11 / 11	4930 - 9866	6602	7368 N [g]
Lead	1,000	300	3,000	7 / 7	142 - **534**	**312**	**413** N [g]	7 / 7	53.7 - **391**	199	284 N [g]	14 / 14	53.7 - **534**	237	285 N [g]	11 / 11	2.1 - 76.7	12.8	42 NP [f]
Magnesium		NS	NS	7 / 7	951 - 1163	1079	1131 N [g]	7 / 7	669 - 1376	983	1191 N [g]	14 / 14	669 - 1376	1015	1100 N [g]	11 / 11	1139 - 3563	1787	2186 G [h]
Manganese		NS	NS	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Mercury		20	300	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Nickel		20	7,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Potassium		NS	NS	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Selenium		400	8,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Silver		100	2,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Sodium		NS	NS	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Thallium		8	800	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 7	All ND	NA	NC [a]	0 / 7	All ND	NA	NC [a]	0 / 14	All ND	NA	NC [a]	0 / 11	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. 4.00.05).

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

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

N - Normal Distribution
[g] 95% Student's-t UCL

G - Gamma Distribution
[h] 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 2/15/11
Checked by / Date: KJC 2/18/11

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

DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lieutenant Governor

RICHARD K. SULLIVAN JR.
Secretary

KENNETH L. KIMMELL
Commissioner

February 1, 2012

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

NEW BEDFORD
Release Tracking Number 4-0015685
Parker Street Waste Site
Property P-064
SAP Data Risk Evaluation - No USEPA Action Recommended

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 from data generated during the first phase of SAP implementation and was followed-up with property by property risk evaluations for the purpose of typology chart development and risk communication with property owners of Phase I properties.

MassDEP is in the process of providing USEPA with both a preliminary risk evaluation and a final risk evaluation for all properties sampled during the first phase of SAP implementation. Preliminary evaluations were performed without consideration of data from surrounding properties that only became available later during SAP implementation, and was included in the final evaluation. Properties evaluated in all subsequent SAP implementation phases receive only one (final) risk evaluation because, as SAP implementation progressed, the data necessary to perform the final evaluation was available. Property P-064 was evaluated during the second implementation phase.

Property P-064 Risk Evaluation and Response Action Recommendations: Enclosed is a copy of the results from the risk evaluation conducted by MACTEC for the property identified as P-064. MassDEP uses these results along with information related to the boring logs, the nature of COCs observed, the property use and other pertinent information to complete its risk evaluation and make a response action recommendation.

MassDEP's evaluation compared the sample results from the soil samples collected from the four boring locations on this property to the MCP Method 1 category S-1 soil standards and to either potential Imminent Hazard values listed in the MCP or site-specific Imminent Hazard (IH) values to determine if an IH may exist and/or if a Condition of No Significant Risk did not exist. 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. The 95% UCL evaluation criteria was used for Preliminary Risk Evaluations of Phase 1 properties when data from surrounding properties was not yet available. When data from surrounding properties is available it can be used to show whether the data collected from the property in question is consistent with surrounding data and adequately representative of likely COC distribution such that there is no need to apply the 95% UCL. In most cases, the 95% UCL evaluation criteria is not applicable to the Final Risk Evaluations or Phase 2 properties.

Based on this evaluation, MassDEP has determined the following for Property P-064:

- A condition of No Significant Risk to human health, as defined in the MCP, was determined to exist for both the current use of the property for the soil located between the ground surface and 3 feet in depth and for future use of the property for the soil located between 3 feet and 12 feet below the ground surface. The actual average concentration and the 95% UCL calculated for the COCs detected in both soil intervals are below the applicable MCP Method 1 S-1 soil standards. Several COCs were not detected in either the 0-3 foot bgs interval or the 3 to 12 foot interval on this property. No further response actions are necessary for this soil.

- Based on the findings above, and after a careful review of relevant data and information, MassDEP is of the opinion that property P-064 is located outside the boundary of the fill layer associated with the PSWS, which has been determined to be northerly and easterly of P-064. No further assessment is required to define the fill boundary in the vicinity of P-064.

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, Regional Director

J/lm

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

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City of New Bedford, Office of Environmental Stewardship cheryl.henlin@newbedford-ma.gov

cc: Owner, Property P-064

Table P-064
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 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Acenaphthene	180,000	1,000	10,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Acenaphthylene	180,000	1,000	10,000	1 / 4	0.23 - 0.23	1.4	NC [b]	0 / 4	All ND	NA	NC [a]	1 / 8	0.23 - 0.23	0.52	NC [c]	0 / 4	All ND	NA	NC [a]
Anthracene	920,000	1,000	10,000	1 / 4	0.26 - 0.26	1.4	NC [b]	0 / 4	All ND	NA	NC [a]	1 / 8	0.26 - 0.26	0.53	NC [c]	0 / 4	All ND	NA	NC [a]
Benzo(a)anthracene	160	7	3,000	1 / 4	0.52 - 0.52	1.5	NC [b]	0 / 4	All ND	NA	NC [a]	1 / 8	0.52 - 0.52	0.55	NC [c]	0 / 4	All ND	NA	NC [a]
Benzo(a)pyrene	16	2	300	1 / 4	0.4 - 0.4	1.4	NC [b]	0 / 4	All ND	NA	NC [a]	1 / 8	0.4 - 0.4	0.54	NC [c]	0 / 4	All ND	NA	NC [a]
Benzo(b)fluoranthene	160	7	3,000	1 / 4	0.72 - 0.72	1.5	NC [b]	0 / 4	All ND	NA	NC [a]	1 / 8	0.72 - 0.72	0.57	NC [c]	0 / 4	All ND	NA	NC [a]
Benzo(g,h,i)perylene	120,000	1,000	10,000	1 / 4	0.23 - 0.23	1.4	NC [b]	0 / 4	All ND	NA	NC [a]	1 / 8	0.23 - 0.23	0.52	NC [c]	0 / 4	All ND	NA	NC [a]
Benzo(k)fluoranthene	1,600	70	10,000	1 / 4	0.71 - 0.71	1.5	NC [b]	0 / 4	All ND	NA	NC [a]	1 / 8	0.71 - 0.71	0.56	NC [c]	0 / 4	All ND	NA	NC [a]
Chrysene	16,000	70	10,000	1 / 4	0.65 - 0.65	1.5	NC [b]	0 / 4	All ND	NA	NC [a]	1 / 8	0.65 - 0.65	0.56	NC [c]	0 / 4	All ND	NA	NC [a]
Dibenz(a,h)anthracene	16	0.7	300	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Fluoranthene	120,000	1,000	10,000	1 / 4	1 - 1	1.6	NC [b]	1 / 4	0.23 - 0.23	0.13	NC [b]	2 / 8	0.23 - 1	0.61	0.47 NP [d]	0 / 4	All ND	NA	NC [a]
Fluorene	120,000	1,000	10,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Indeno(1,2,3-cd)pyrene	160	7	3,000	1 / 4	0.26 - 0.26	1.4	NC [b]	0 / 4	All ND	NA	NC [a]	1 / 8	0.26 - 0.26	0.53	NC [c]	0 / 4	All ND	NA	NC [a]
Naphthalene	61,000	100	10,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Phenanthrene	120,000	500	10,000	1 / 4	0.85 - 0.85	1.5	NC [b]	0 / 4	All ND	NA	NC [a]	1 / 8	0.85 - 0.85	0.58	NC [c]	0 / 4	All ND	NA	NC [a]
Pyrene	92,000	1,000	10,000	1 / 4	1.3 - 1.3	1.7	NC [b]	0 / 4	All ND	NA	NC [a]	1 / 8	1.3 - 1.3	0.61	NC [c]	0 / 4	All ND	NA	NC [a]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Aroclor-1254	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Aroclor-1260	10	2	100	1 / 4	0.018 - 0.018	0.014	NC [b]	0 / 4	All ND	NA	NC [a]	1 / 8	0.018 - 0.018	0.0099	NC [c]	0 / 4	All ND	NA	NC [a]
Aroclor-1262	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
PCBs (Total)	10	2	100	1 / 4	0.018 - 0.018	0.019	NC [b]	0 / 4	All ND	NA	NC [a]	1 / 8	0.018 - 0.018	0.014	NC [c]	0 / 4	All ND	NA	NC [a]

Table P-064
Comparison of Exposure Point Concentrations to Imminent Hazard Levels
Parker Street
New Bedford, Massachusetts

Parameter	DRAFT Recommended Parker Street IH Value (mg/Kg)	MCP S-1 Direct Contact (mg/Kg)	MCP Upper Concentration Limit (mg/kg)	0-1 ft [1] Frequency of Detection	0-1 ft [1] Range of Detected Concentrations	0-1 ft [1] Average	0-1 ft [1] 95% UCL [3]	1-3 ft [1] Frequency of Detection	1-3 ft [1] Range of Detected Concentrations	1-3 ft [1] Average	1-3 ft [1] 95% UCL [3]	0-3 ft [1, 2] Frequency of Detection	0-3 ft [1, 2] Range of Detected Concentrations	0-3 ft [1, 2] Average	0-3 ft [1, 2] 95% UCL [3]	3+ ft [1] Frequency of Detection	3+ ft [1] Range of Detected Concentrations	3+ ft [1] Average	3+ ft [1] 95% UCL [3]
Inorganics (mg/Kg)																			
Aluminum		NS	NS	4 / 4	6003 - 7290	6609	NC [b]	4 / 4	7041 - 8727	7980	NC [b]	8 / 8	6003 - 8727	7523	7986 N [g]	4 / 4	5827 - 8293	7005	NC [b]
Antimony		20	300	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Arsenic	40	20	200	4 / 4	3.1 - 5.2	3.9	NC [b]	1 / 4	7.1 - 7.1	2.7	NC [b]	5 / 8	3.1 - 7.1	3.1	5.1 NP [e]	0 / 4	All ND	NA	NC [a]
Barium	200,000	1,000	10,000	4 / 4	28.9 - 558	166	NC [b]	4 / 4	14.6 - 29.4	23	NC [b]	8 / 8	14.6 - 558	71	264 NP [f]	4 / 4	11.6 - 27.2	18.0	NC [b]
Beryllium		100	2,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Cadmium	60	2	300	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Calcium		NS	NS	4 / 4	419 - 748	541	NC [b]	4 / 4	126 - 893	353	NC [b]	8 / 8	126 - 893	415	622 G [i]	4 / 4	96.7 - 133	111	NC [b]
Chromium	200	30	2,000	4 / 4	7.7 - 17.8	11.4	NC [b]	4 / 4	6.7 - 8.7	7.9	NC [b]	8 / 8	6.7 - 17.8	9.1	10.7 N [h]	4 / 4	6.3 - 9.1	7.5	NC [b]
Cobalt		NS	NS	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Copper		NS	NS	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Iron		NS	NS	4 / 4	8579 - 12113	10038	NC [b]	4 / 4	7355 - 9365	8304	NC [b]	8 / 8	7355 - 12113	8882	9564 N [g]	4 / 4	6211 - 8810	7504	NC [b]
Lead	1,000	300	3,000	4 / 4	141 - **1230**	**455**	NC [b]	4 / 4	7.7 - 65.3	38	NC [b]	8 / 8	7.7 - **1230**	177	**405** G [i]	4 / 4	3.8 - 10.2	6.4	NC [b]
Magnesium		NS	NS	4 / 4	804 - 1507	1121	NC [b]	4 / 4	672 - 871	745	NC [b]	8 / 8	672 - 1507	871	1005 G [i]	4 / 4	570 - 1270	937	NC [b]
Manganese		NS	NS	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Mercury		20	300	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Nickel		20	7,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Potassium		NS	NS	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Selenium		400	8,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Silver		100	2,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Sodium		NS	NS	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Thallium		8	800	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 4	All ND	NA	NC [a]	0 / 4	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 4	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. 4.00.05).

NC - Not Calculated
- [a] All values non detect
- [b] Dataset too small to calculate UCL
- [c] Only one distinct data value was detected

NP - Non-Parametric Distribution
- [d] 95% KM (t) UCL
- [e] 95% KM (Percentile Bootstrap) UCL
- [f] 95% Chebyshev (Mean, Sd) UCL

N - Normal Distribution
- [g] 95% Student's-t UCL
- [h] 95% Modified-t UCL

G - Gamma Distribution
- [i] 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 2/9/11
Checked by / Date: KJC 2/9/11

MassDEP

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

February 1, 2012

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

NEW BEDFORD
Release Tracking Number 4-0015685
Parker Street Waste Site
Property P-069
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 from data generated during the first phase of SAP implementation and was followed-up with property by property risk evaluations for the purpose of typology chart development and risk communication with property owners of Phase I properties.

MassDEP is in the process of providing USEPA with both a preliminary risk evaluation and a final risk evaluation for all Phase I properties. The preliminary evaluation was performed without consideration of data from surrounding properties that was not available until later during SAP implementation for inclusion in the final evaluation. Properties evaluated in all subsequent SAP implementation phases receive only one (final) risk evaluation because, as SAP implementation progressed, the data necessary to perform the final evaluation was available. Property P-069 was evaluated during the second implementation phase.

Property P-069 Risk Evaluation and Response Action Recommendations: Enclosed is a copy of the results from the risk evaluation conducted by MACTEC for the property identified as P-069. MassDEP uses these results along with information related to the boring logs, the nature of COCs observed, the property use and other pertinent information to complete its risk evaluation and make a response action recommendation.

MassDEP's evaluation compared the sample results from the soil samples collected from the eight boring locations on this property to the MCP Method 1 category S-1 soil standards and to either potential Imminent Hazard values listed in the MCP or site-specific Imminent Hazard (IH) values to determine if an IH may exist and/or if a Condition of No Significant Risk did or did not exist. 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. The 95% UCL evaluation criteria was used for Preliminary Risk Evaluations of Phase 1 properties when data from surrounding properties was not yet available. When data from surrounding properties is available it can be used to determine whether the data collected from the property in question is consistent with surrounding data and adequately representative of likely COC distribution such that there is no need to apply the 95% UCL. In most cases, the 95% UCL evaluation criteria is not applicable to the Final Risk Evaluations or Phase 2 properties.

Based on this evaluation, MassDEP has determined the following for Property P-069:

- A condition of No Significant Risk to human health, 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 for a portion of the property. Specifically, for the 0 – 3 foot below ground surface interval, four of the borings on the northern portion of the property contained contaminated fill that is consistent in description and contaminant concentrations with fill that has been observed at other properties evaluated as part of the SAP. These borings are identified as P-069-SB-02, P-069-SB-03, P-069-SB-06 and P-069-SB-08, and are described as containing ash, coal and/or slag, or exhibit elevated concentrations of lead that have also been observed at other properties evaluated as part of the SAP. The remainder of Property P-069 appears to be outside the boundary of the PSWS. The actual average for lead in the borings at this depth interval is above the applicable MCP Method 1 S-1 soil standard. Additional response actions are necessary for this soil, specifically in the vicinity of the four borings identified above.

- 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. Both the average concentrations and the 95% UCL calculated for all COCs are below the applicable MCP Method 1 S-1 soil standards and no further response actions are necessary for this soil.

- Based on the findings above, and after a careful review of all available data and information, MassDEP is of the opinion that the boundary of the fill layer associated with the PSWS has been determined to be across Property P-069. No further assessment is required to define the PSWS southerly of P-069.

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, Regional Director

J/lm

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 cheryl.henlin@newbedford-ma.gov

cc: Owner, Property P-069

Table P-069
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 / 8	All ND	NA	NC [a]	1 / 8	0.1 - 0.1	0.18	NC [b]	1 / 16	0.1 - 0.1	0.18	NC [b]	0 / 16	All ND	NA	NC [a]
Acenaphthene	180,000	1,000	10,000	1 / 8	0.09 - 0.09	0.18	NC [b]	4 / 8	0.12 - 0.34	0.19	0.29 NP [f]	5 / 16	0.09 - 0.34	0.19	0.24 NP [f]	1 / 16	0.1 - 0.1	0.17	NC [b]
Acenaphthylene	180,000	1,000	10,000	8 / 8	0.13 - 0.26	0.18	0.22 N [c]	8 / 8	0.1 - 0.44	0.25	0.32 N [c]	16 / 16	0.1 - 0.44	0.23	0.26 G [h]	2 / 16	0.11 - 0.12	0.17	0.12 NP [f]
Anthracene	920,000	1,000	10,000	8 / 8	0.13 - 0.35	0.23	0.29 N [c]	8 / 8	0.09 - 0.84	0.46	0.62 N [c]	16 / 16	0.09 - 0.84	0.38	0.46 N [c]	3 / 16	0.13 - 0.27	0.18	0.27 NP [e]
Benzo(a)anthracene	160	7	3,000	8 / 8	0.36 - 0.91	0.63	0.77 N [c]	8 / 8	0.31 - 1.9	1.2	1.6 N [c]	16 / 16	0.31 - 1.9	1.0	1.2 N [c]	6 / 16	0.1 - 0.61	0.22	0.29 NP [f]
Benzo(a)pyrene	16	2	300	8 / 8	0.39 - 0.91	0.67	0.79 N [c]	8 / 8	0.34 - 1.7	1.1	1.4 N [c]	16 / 16	0.34 - 1.7	0.98	1.1 N [c]	6 / 16	0.09 - 0.59	0.22	0.30 NP [e]
Benzo(b)fluoranthene	160	7	3,000	8 / 8	0.55 - 1.3	0.97	1.1 N [c]	8 / 8	0.53 - 2.3	1.6	2.0 N [c]	16 / 16	0.53 - 2.3	1.4	1.6 N [c]	6 / 16	0.13 - 0.79	0.26	0.40 NP [e]
Benzo(g,h,i)perylene	120,000	1,000	10,000	8 / 8	0.27 - 0.6	0.46	0.54 N [c]	8 / 8	0.24 - 1.1	0.74	0.94 N [c]	16 / 16	0.24 - 1.1	0.65	0.74 N [c]	5 / 16	0.09 - 0.39	0.19	0.27 NP [e]
Benzo(k)fluoranthene	1,600	70	10,000	8 / 8	0.3 - 0.63	0.45	0.53 N [c]	8 / 8	0.23 - 1	0.71	0.88 N [c]	16 / 16	0.23 - 1	0.62	0.71 N [c]	4 / 16	0.11 - 0.44	0.19	0.28 NP [e]
Chrysene	16,000	70	10,000	8 / 8	0.48 - 1	0.78	0.92 N [c]	8 / 8	0.39 - 1.8	1.2	1.6 N [c]	16 / 16	0.39 - 1.8	1.1	1.2 N [c]	6 / 16	0.1 - 0.65	0.23	0.33 NP [e]
Dibenz(a,h)anthracene	16	0.7	300	8 / 8	0.09 - 0.19	0.14	0.17 N [c]	8 / 8	0.08 - 0.35	0.23	0.29 N [c]	16 / 16	0.08 - 0.35	0.20	0.23 N [c]	2 / 16	0.1 - 0.12	0.17	0.13 NP [f]
Fluoranthene	120,000	1,000	10,000	8 / 8	0.8 - 2	1.4	1.8 N [c]	8 / 8	0.62 - 3.9	2.6	3.3 N [c]	16 / 16	0.62 - 3.9	2.2	2.6 N [c]	6 / 16	0.22 - 1.4	0.35	0.64 NP [e]
Fluorene	120,000	1,000	10,000	3 / 8	0.09 - 0.13	0.16	0.13 NP [e]	7 / 8	0.08 - 0.37	0.18	0.25 NP [f]	10 / 16	0.08 - 0.37	0.17	0.19 NP [e]	1 / 16	0.11 - 0.11	0.17	NC [b]
Indeno(1,2,3-cd)pyrene	160	7	3,000	8 / 8	0.25 - 0.57	0.43	0.50 N [c]	8 / 8	0.21 - 1	0.69	0.87 N [c]	16 / 16	0.21 - 1	0.60	0.69 N [c]	4 / 16	0.12 - 0.36	0.19	0.30 NP [e]
Naphthalene	61,000	100	10,000	1 / 8	0.12 - 0.12	0.18	NC [b]	2 / 8	0.16 - 0.18	0.18	0.19 NP [f]	3 / 16	0.12 - 0.18	0.18	0.18 NP [f]	0 / 16	All ND	NA	NC [a]
Phenanthrene	120,000	500	10,000	8 / 8	0.31 - 1.5	0.83	1.1 N [c]	8 / 8	0.31 - 3.3	1.8	2.4 N [c]	16 / 16	0.31 - 3.3	1.5	1.8 N [c]	6 / 16	0.13 - 1	0.27	0.41 NP [e]
Pyrene	92,000	1,000	10,000	8 / 8	0.67 - 1.7	1.3	1.5 N [c]	8 / 8	0.57 - 3.4	2.2	2.8 N [c]	16 / 16	0.57 - 3.4	1.9	2.2 N [c]	6 / 16	0.18 - 1.2	0.32	0.54 NP [e]
PCBs (mg/Kg)																			
Aroclor-1016	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Aroclor-1221	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Aroclor-1232	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Aroclor-1242	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Aroclor-1248	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Aroclor-1254	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Aroclor-1260	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Aroclor-1262	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Aroclor-1268	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
PCBs (Total)	10	2	100	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]

Table P-069
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	8 / 8	4647 - 6113	5511	5811 N [c]	8 / 8	5989 - 9029	7223	7960 N [c]	16 / 16	4647 - 9029	6652	7077 N [c]	16 / 16	2228 - 9305	5422	6499 N [c]
Antimony		20	300	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Arsenic	40	20	200	8 / 8	2.7 - 8.2	4.2	5.5 G [h]	8 / 8	3.7 - 6.5	5.1	5.8 N [c]	16 / 16	2.7 - 8.2	4.8	5.3 N [c]	6 / 16	3.1 - 7.3	2.0	4.0 NP [f]
Barium	200,000	1,000	10,000	8 / 8	43.2 - 94.6	60	72 N [c]	8 / 8	41.9 - 188	82	120 G [h]	16 / 16	41.9 - 188	75	89 N [d]	16 / 16	6 - 67.2	23	34 G [h]
Beryllium		100	2,000	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Cadmium	60	2	300	2 / 8	1.1 - 1.4	0.58	1.4 NP [e]	2 / 8	0.91 - 1.8	0.66	1.8 NP [e]	4 / 16	0.91 - 1.8	0.64	1.2 NP [e]	2 / 16	1.2 - 1.6	0.36	1.3 NP [f]
Calcium		NS	NS	8 / 8	486 - 1270	835	1001 N [c]	8 / 8	915 - 2552	1446	1781 N [c]	16 / 16	486 - 2552	1242	1431 G [h]	16 / 16	280 - 1136	637	732 N [c]
Chromium	200	30	2,000	8 / 8	12.8 - **55.5**	22	**33** G [h]	8 / 8	13 - **60.7**	22	**34** G [h]	16 / 16	12.8 - **60.7**	22	28 N [d]	16 / 16	3.7 - 22.4	9.7	11.9 N [c]
Cobalt		NS	NS	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Copper		NS	NS	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Iron		NS	NS	8 / 8	7145 - 21603	9485	13069 N [d]	8 / 8	8133 - 11653	9603	10282 N [c]	16 / 16	7145 - 21603	9564	10624 N [d]	16 / 16	3626 - 15070	7384	8744 N [c]
Lead	1,000	300	3,000	8 / 8	187 - **518**	**312**	**389** N [c]	8 / 8	172 - **820**	**399**	**531** N [c]	16 / 16	172 - **820**	**370**	**433** G [h]	13 / 16	1.8 - **383**	61	186 NP [g]
Magnesium		NS	NS	8 / 8	861 - 993	946	982 N [c]	8 / 8	919 - 2068	1315	1551 N [c]	16 / 16	861 - 2068	1192	1305 G [h]	16 / 16	792 - 4476	1492	1894 N [d]
Manganese		NS	NS	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Mercury		20	300	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Nickel		20	7,000	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Potassium		NS	NS	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Selenium		400	8,000	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Silver		100	2,000	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Sodium		NS	NS	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Thallium		8	800	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Vanadium		600	10,000	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Zinc		2,500	10,000	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]
Cyanide		100	4,000	0 / 8	All ND	NA	NC [a]	0 / 8	All ND	NA	NC [a]	0 / 16	All ND	NA	NC [a]	0 / 16	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. 4.00.05).

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

N - Normal Distribution
[c] 95% Student's-t UCL
[d] 95% Modified-t UCL

NP - Non-Parametric Distribution
[e] 95% KM (Percent Bootstrap) UCL
[f] 95% KM (t) UCL
[g] 95% KM (Chebyshev) UCL

G - Gamma Distribution
[h] 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 2/16/11
Checked by / Date: KJC 2/18/11

P:\Documents\SITES\PSWS NEW BEDFORD\Supplemental Assessment\Results & Communication\
Phase II MACTEC EVALS.xlsx, P-069

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 1

IN THE MATTER OF:
PARKER STREET WASTE SITE
NEW BEDFORD,
MASSACHUSETTS

C.P. PROPERTIES, LLC

Respondent

ADMINISTRATIVE SETTLEMENT AGREEMENT AND ORDER ON CONSENT FOR REMOVAL ACTION

U.S. EPA REGION 1
DOCKET NO. CERCLA-01-2011-0044

Proceeding Under Sections 104, 106(a), 107 and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, 42 U.S.C. §§ 9604, 9606(a), 9607 and 9622

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I. JURISDICTION AND GENERAL PROVISIONS

1. This Administrative Settlement Agreement and Order on Consent ("Settlement Agreement" is entered into voluntarily by the United States Environmental Protection Agency ("EPA") and C.P. Properties, LLC ("Respondent"). This Settlement Agreement provides for the performance of a removal action by Respondent and the reimbursement of certain costs incurred by the United States at or in connection with 169 Hunter Street, owned by Respondent C.P. Properties, LLC. This property is located within the Parker Street Waste Site, in New Bedford, Massachusetts.

2. This Settlement Agreement is issued under the authority vested in the President of the United States by Sections 104, 106(a), 107 and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9604, 9606(a), 9607 and 9622, as amended ("CERCLA").

3. EPA has notified the Commonwealth of Massachusetts (the "Commonwealth") of this action pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

4. EPA and Respondent recognize that this Settlement Agreement has been negotiated in good faith and that the actions undertaken by Respondent in accordance with this Settlement Agreement do not constitute an admission of any liability. Respondent does not admit, and retains the right to controvert in any subsequent proceedings other than proceedings to implement or enforce this Settlement Agreement, the validity of the findings of facts, conclusions of law, and determinations in Sections IV and V of this Settlement Agreement. Respondent agrees to comply with and be bound by the terms of this Settlement Agreement and further agrees that it will not contest the basis or validity of this Settlement Agreement or its terms.

II. PARTIES BOUND

5. This Settlement Agreement applies to and is binding upon EPA and upon Respondent and its heirs, successors and assigns. Any change in ownership or corporate status of Respondent including, but not limited to, any transfer of assets or real or personal property shall not alter such Respondent's responsibilities under this Settlement Agreement.

6. Respondent is jointly and severally liable for carrying out all activities required by this Settlement Agreement.

7. Respondent shall ensure that its contractors, subcontractors, and representatives receive a copy of this Settlement Agreement and comply with this Settlement Agreement. Respondent shall be responsible for any noncompliance with this Settlement Agreement.

III. DEFINITIONS

8. Unless otherwise expressly provided in this Settlement Agreement, terms used in this Settlement Agreement which are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in CERCLA or in such regulations. Whenever terms listed below are used in this Settlement Agreement or in the appendices attached hereto and incorporated hereunder, the following definitions shall apply:

a. "Action Memorandum" shall mean the EPA Action Memorandum relating to the Site signed on August 26, 2010, by the Regional Administrator, EPA Region 1, or his delegate, and all attachments thereto. The Action Memorandum is attached as Appendix A.

b. "CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601, et seq.

c. "Commonwealth" shall mean the Commonwealth of Massachusetts.

d. "Day" shall mean a calendar day. In computing any period of time under this Settlement Agreement, where the last day would fall on a Saturday, Sunday, or Federal holiday, the period shall run until the close of business of the next working day.

e. "Effective Date" shall be the effective date of this Settlement Agreement as provided in Section XXXI.

f. "EPA" shall mean the United States Environmental Protection Agency and any successor departments or agencies of the United States.

g. "Future Response Costs" shall mean all costs, including, but not limited to, direct and indirect costs, that the United States incurs in reviewing or developing plans, reports and other items pursuant to this Settlement Agreement, verifying the Work, or otherwise implementing, overseeing, or enforcing this Settlement Agreement, including but not limited to, payroll costs, contractor costs, travel costs, laboratory costs, the costs incurred pursuant to Paragraph 26 (costs and attorneys fees and any monies paid to secure access, including the amount of just compensation), Paragraph 35 (emergency response) or Paragraph 59 (work takeover).

h. "Interest" shall mean interest at the rate specified for interest on investments of the EPA Hazardous Substance Superfund established by 26 U.S.C. § 9507, compounded annually on October 1 of each year, in accordance with 42 U.S.C. § 9607(a). The applicable rate of interest shall be the rate in effect at the time the interest accrues. The rate of interest is subject to change on October 1 of each year.

i. "MassDEP" shall mean the Massachusetts Department of Environmental Protection and any successor departments or agencies of the Commonwealth.

j. "National Contingency Plan" or "NCP" shall mean the National Oil and Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, and any amendments thereto.

k. "Settlement Agreement" shall mean this Administrative Settlement Agreement and Order on Consent and all appendices attached hereto (listed in Section XXX). In the event of conflict between this Settlement Agreement and any appendix, this Settlement Agreement shall control.

l. "Paragraph" shall mean a portion of this Settlement Agreement identified by an Arabic numeral.

m. "Parties" shall mean EPA and Respondent.

n. "RCRA" shall mean the Solid Waste Disposal Act, as amended, 42 U.S.C. §§ 6901, et seq. (also known as the Resource Conservation and Recovery Act).

o. "Respondent" shall mean C.P. Properties, LLC and its successors and assigns.

p. "Section" shall mean a portion of this Settlement Agreement identified by a Roman numeral.

q. "Site" shall mean property located at 169 Hunter Street, identified as Map 63, Lot 19, in New Bedford, Massachusetts, which is a portion of the Parker Street Waste Site, depicted generally on the map attached as Appendix B.

r. "Statement of Work" or "SOW" shall mean the statement of work for implementation of the removal action at the Site, as set forth in Appendix C to this Settlement Agreement, and any modifications made thereto in accordance with this Settlement Agreement.

s. "Waste Material" shall mean 1) any "hazardous substance" under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); 2) any pollutant or contaminant under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); and 3) any "solid waste" under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27).

t. "Work" shall mean all activities Respondent is required to perform under this Settlement Agreement.

IV. FINDINGS OF FACT

9. Respondent.

a. Respondent C.P. Properties, LLC is a Massachusetts Limited Liability Company, managed by Antonio J. Pereira, with its usual place of business at 169 Hunter Street, New Bedford, Massachusetts.

b. By a letter dated September 29, 2010, EPA notified C.P. Properties, LLC of its status as potentially responsible party ("PRP"), as a current owner of the Site, and afforded it the opportunity to perform or finance necessary removal actions.

c. By a letter dated October 15, 2010, Respondent informed EPA that it may be willing to undertake removal activities at the Site.

10. Site Description.

a. The Site owned by Respondent C.P. Properties, LLC is a residential apartment complex located at 169 Hunter Street, identified in the Assessors Office for the City of New Bedford, Bristol County, Massachusetts as Map 63, Lot 19.

11. Site History.

a. The Parker Street Waste Site includes the property owned by C.P. Properties, LLC, as well as additional municipal, commercial, and residential properties. The estimated extent of the Parker Street Waste Site, based upon data generated to date, is believed to be bounded to the north by Durfee Street, to the east by Liberty Street and the Oak Grove Cemetery, to the south by Hillman Street, and to the west by Summit Street.

b. Since the early 1900s, the City of New Bedford owned and/or operated a dump at the Parker Street Waste Site where ash, refuse, and other waste materials from New Bedford and the surrounding areas were disposed.

c. EPA and MassDEP mobilized to the Parker Street Waste Site on April 19, 2010. Field sampling activities for the preliminary assessment/site investigation ("PA/SI") began on April 26, 2010 and concluded in early June 2010. The investigation of the property owned by the Respondent identified polycyclic aromatic hydrocarbons, barium, chromium, and lead, one or more of which hazardous substances was determined by EPA and MassDEP to pose an imminent and substantial endangerment to public health.

d. The PA/SI was concluded and a time-critical removal action was recommended in the Parker Street Waste Site Investigation Closure Memorandum dated August 19, 2010. Additional residential and commercial properties are scheduled to be sampled to determine whether there is an immediate threat present to human health and/or the environment, and to define the extent of the Parker Street Waste Site boundaries.

e. On August 26, 2010, EPA issued an Action Memorandum (Appendix A) which is incorporated herein.

f. By letter dated September 29, 2010, EPA notified C.P. Properties, LLC of its status as potentially responsible party ("PRP"), as a current owner of the Site, and afforded it the opportunity to perform or finance necessary removal actions.

g. Respondent, with the approval of EPA and MassDEP, previously performed initial response actions to mitigate an imminent and substantial endangerment determined to exist at the Site.

V. <u>CONCLUSIONS OF LAW AND DETERMINATIONS</u>

12. Based on the Findings of Fact set forth above, and the Administrative Record supporting this removal action, EPA has determined that:

a. The C.P. Properties, LLC apartment complex located at 169 Hunter Street in New Bedford, Massachusetts is a "facility" as defined by Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

b. The contamination found at the Site, as identified in the Findings of Fact above, includes "hazardous substances" as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

c. Respondent is a "person" as defined by Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

d. Respondent is a responsible party under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a), and is jointly and severally liable for performance of response action and for response costs incurred and to be incurred at the Site.

i. Respondent C.P. Properties, LLC is the "owner" and/or "operator of a facility, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and within the meaning of Section 107(a)(1) of CERCLA, 42 U.S.C. § 9607(a)(1).

e. The conditions described in the Action Memorandum constitute an actual or threatened "release" of a hazardous substance from the facility as defined by Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

f. The removal action required by this Settlement Agreement is necessary to protect the public health, welfare, or the environment and, if carried out in compliance with the terms of this Settlement Agreement, will be consistent with the NCP, as provided in Section 300.700(c)(3)(ii) of the NCP.

VI. <u>SETTLEMENT AGREEMENT AND ORDER</u>

Based upon the foregoing Findings of Fact, Conclusions of Law, Determinations, and the Administrative Record for this Site, it is hereby Ordered and Agreed that Respondent shall comply with all provisions of this Settlement Agreement, including, but not limited to, all attachments to this Settlement Agreement and all documents incorporated by reference into this Settlement Agreement.

VII. DESIGNATION OF CONTRACTOR, PROJECT COORDINATOR, AND ON-SCENE COORDINATOR

13. Respondent shall retain one or more contractors to perform the Work and shall notify EPA of the name(s) and qualifications of such contractor(s) within 10 days of the Effective Date. Respondent shall also notify EPA of the name(s) and qualification(s) of any other contractor(s) or subcontractor(s) retained to perform the Work at least 7 days prior to commencement of such Work. EPA retains the right to disapprove of any or all of the contractors and/or subcontractors retained by Respondent. If EPA disapproves of a selected contractor, Respondent shall retain a different contractor and shall notify EPA of that contractor's name and qualifications within 7 days of EPA's disapproval.

14. Within 10 days after the Effective Date, Respondent shall designate a Project Coordinator who shall be responsible for administration of all actions by Respondent required by this Settlement Agreement and shall submit to EPA the designated Project Coordinator's name, address, telephone number, and qualifications. To the greatest extent possible, the Project Coordinator shall be present on Site or readily available during Site work. EPA retains the right to disapprove of the designated Project Coordinator. If EPA disapproves of the designated Project Coordinator, Respondent shall retain a different Project Coordinator and shall notify EPA of that person's name, address, telephone number, and qualifications within 7 days following EPA's disapproval. Receipt by Respondent's Project Coordinator of any notice or communication from EPA relating to this Settlement Agreement shall constitute receipt by Respondent.

15. EPA has designated Mia Pasquerella of the Emergency Planning and Response Branch, Region 1, as its On-Scene Coordinator ("OSC"). Except as otherwise provided in this Settlement Agreement, Respondent shall direct all submissions required by this Settlement Agreement to the OSC at the following address:

Mia Pasquerella
U.S. Environmental Protection Agency, Region 1
Emergency Response and Removal Section II
5 Post Office Square, Suite 100
Mail Code OSRRR02-2
Boston, MA 02109-3912
TEL (617) 918-1120
FAX (617) 918-0120

Email: pasquerella.mia@epa.gov

16. EPA and Respondent shall have the right, subject to Paragraph 14, to change its respective designated OSC or Project Coordinator. Respondent shall notify EPA seven days before such a change is made. The initial notification may be made orally, but shall be promptly followed by a written notice.

VIII. WORK TO BE PERFORMED

17. Respondent shall perform, at a minimum, all actions necessary to implement the Statement of Work as it relates to the Site. The actions to be implemented generally include, but are not limited to, the following:

a. Site preparation;

b. Providing security measures to prevent unauthorized access onto areas of the Site that are subject to the removal action for the duration of the removal action;

c. Addressing contaminated soils, including, if deemed necessary, excavating and disposing of contaminated soils at an EPA-approved disposal facility;

d. Installing monitoring and/or engineering controls; and

e. Restoring the Site, including backfilling, grading, and re-vegetating.

All work performed by the Respondent shall be conducted in accordance with CERCLA, the NCP, applicable guidance documents provided by EPA, and the provisions of this Settlement Agreement including any standards, specifications, and time schedules contained in the Statement of Work or specified by the OSC.

18. Work Plan and Implementation.

a. Within 14 days after the Effective Date, Respondent shall submit to EPA for approval a draft Work Plan for performing the removal action generally described in Paragraph 17 above. The draft Work Plan shall provide a description of, and an expeditious schedule for, the actions required by this Settlement Agreement.

b. EPA may approve, disapprove, require revisions to, or modify the draft Work Plan in whole or in part. If EPA requires revisions, Respondent shall submit a revised draft Work Plan within 7 days of receipt of EPA's notification of the required revisions. Respondent shall implement the Work Plan as approved in writing by EPA in accordance with the schedule approved by EPA. Once approved, or approved with modifications, the Work Plan, the schedule, and any subsequent modifications shall be incorporated into and become fully enforceable under this Settlement Agreement.

c. Respondent shall not commence any Work except in conformance with the terms of this Settlement Agreement. Respondent shall not commence implementation of the Work Plan developed hereunder until receiving written EPA approval pursuant to Paragraph 18(b).

19. Health and Safety Plan. Within 30 days after the Effective Date, Respondent shall submit for EPA review and comment a plan that ensures the protection of the public health and safety during performance of on-Site work under this Settlement Agreement. This plan shall be prepared in accordance with EPA's Standard Operating Safety Guide (PUB 9285.1-03, PB 92-963414, June 1992). In addition, the plan shall comply with all currently applicable Occupational Safety and Health Administration ("OSHA") regulations found at 29 C.F.R. Part 1910. If EPA determines that it is appropriate, the plan shall also include contingency planning. Respondent shall incorporate all changes to the plan recommended by EPA and shall implement the plan during the pendency of the removal action.

20. Quality Assurance and Sampling.

a. All sampling and analyses performed pursuant to this Settlement Agreement shall conform to EPA direction, approval, and guidance regarding sampling, quality assurance/quality control ("QA/QC"), data validation, and chain of custody procedures. Respondent shall ensure that the laboratory used to perform the analyses participates in a QA/QC program that complies with the appropriate EPA guidance. Respondent shall follow, as appropriate, "Quality Assurance/Quality Control Guidance for Removal Activities: Sampling QA/QC Plan and Data Validation Procedures" (OSWER Directive No. 9360.4-01, April 1, 1990), as guidance for QA/QC and sampling. Respondent shall only use laboratories that have a documented Quality System that complies with ANSI/ASQC E-4 1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs" (American National Standard, January 5, 1995), and "EPA Requirements for Quality Management Plans (QA/R-2) (EPA/240/B-01/002, March 2001)," or equivalent documentation as determined by EPA. EPA may consider laboratories accredited under the National Environmental Laboratory Accreditation Program ("NELAP") as meeting the Quality System requirements.

b. Upon request by EPA, Respondent shall have such a laboratory analyze samples submitted by EPA for QA monitoring. Respondent shall provide to EPA the QA/QC procedures followed by all sampling teams and laboratories performing data collection and/or analysis.

c. Upon request by EPA, Respondent shall allow EPA or its authorized representatives to take split and/or duplicate samples. Respondent shall notify EPA not less than 7 days in advance of any sample collection activity, unless shorter notice is agreed to by EPA. EPA shall have the right to take any additional samples that EPA deems necessary. Upon request, EPA shall allow Respondent to take split or duplicate samples of any samples it takes as part of its oversight of Respondent's implementation of the Work.

21. Post-Removal Site Control. In accordance with the Work Plan schedule, or as otherwise directed by EPA, Respondent shall submit a proposal for post-removal site control consistent with Section 300.415(l) of the NCP and OSWER Directive No. 9360.2-02. Upon EPA approval, Respondent shall implement such controls and shall provide EPA with documentation of all post-removal site control arrangements.

22. Reporting.

a. Respondent shall submit a written progress report to EPA concerning actions undertaken pursuant to this Settlement Agreement every 30th day after the date of receipt of EPA's approval of the Work Plan until termination of this Settlement Agreement, unless otherwise directed in writing by the OSC. These reports shall describe all significant developments during the preceding period, including the actions performed and any problems encountered, analytical data received during the reporting period, and the developments anticipated during the next reporting period, including a schedule of actions to be performed, anticipated problems, and planned resolutions of past or anticipated problems.

b. Respondent shall submit 2 copies of all plans, reports or other submissions required by this Settlement Agreement, the Statement of Work, or any approved work plan. Respondent shall submit a copy of such documents in electronic form.

c. Any Respondent who owns or controls property at the Site shall, at least 30 days prior to the conveyance of any interest in real property at the Site, give written notice to the transferee that the property is subject to this Settlement Agreement and written notice to EPA and the State of the proposed conveyance, including the name and address of the transferee. Respondent who owns or controls property at the Site also agrees to require that its successors comply with the immediately preceding sentence and Sections IX (Site Access) and X (Access to Information).

23. Final Report. Within 60 days after completion of all Work required by this Settlement Agreement, Respondent shall submit for EPA review and approval a final report summarizing the actions taken to comply with this Settlement Agreement. The final report shall conform, at a minimum, with the requirements set forth in Section 300.165 of the NCP entitled "OSC Reports." The final report shall include a good faith estimate of total costs or a statement of actual costs incurred in complying with the Settlement Agreement, a listing of quantities and types of materials removed off-Site or handled on-Site, a discussion of removal and disposal options considered for those materials, a listing of the ultimate destination(s) of those materials, a presentation of the analytical results of all sampling and analyses performed, and accompanying appendices containing all relevant documentation generated during the removal action (*e.g.*, manifests, invoices, bills, contracts, and permits). The final report shall also include the

following certification signed by a person who supervised or directed the preparation of that report:

"Under penalty of law, I certify that to the best of my knowledge, after appropriate inquiries of all relevant persons involved in the preparation of the report, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

24. Off-Site Shipments.

a. Respondent shall, prior to any off-Site shipment of Waste Material from the Site to an out-of-state waste management facility, provide written notification of such shipment of Waste Material to the appropriate state environmental official in the receiving facility's state and to the On-Scene Coordinator. However, this notification requirement shall not apply to any off-Site shipments when the total volume of all such shipments will not exceed 10 cubic yards.

i. Respondent shall include in the written notification the following information: 1) the name and location of the facility to which the Waste Material is to be shipped; 2) the type and quantity of the Waste Material to be shipped; 3) the expected schedule for the shipment of the Waste Material; and 4) the method of transportation. Respondent shall notify the state in which the planned receiving facility is located of major changes in the shipment plan, such as a decision to ship the Waste Material to another facility within the same state, or to a facility in another state.

ii. The identity of the receiving facility and state will be determined by Respondent following the award of the contract for the removal action. Respondent shall provide the information required by Paragraph 24(a) and 24(b) as soon as practicable after the award of the contract and before the Waste Material is actually shipped.

b. Before shipping any hazardous substances, pollutants, or contaminants from the Site to an off-site location, Respondent shall obtain EPA's certification that the proposed receiving facility is operating in compliance with the requirements of CERCLA Section 121(d)(3), 42 U.S.C. § 9621(d)(3), and 40 C.F.R. § 300.440. Respondent shall only send hazardous substances, pollutants, or contaminants from the Site to an off-site facility that complies with the requirements of the statutory provision and regulation cited in the preceding sentence.

IX. SITE ACCESS

25. If the Site, or any other property where access is needed to implement this Settlement Agreement, is owned or controlled by Respondent, Respondent shall, commencing on the Effective Date, provide EPA, the Commonwealth of Massachusetts,

and their representatives, including contractors, with access at all reasonable times to the Site, or such other property, for the purpose of conducting any activity related to this Settlement Agreement.

26. Where any action under this Settlement Agreement is to be performed in areas owned by or in possession of someone other than Respondent, Respondent shall use its best efforts to obtain all necessary access agreements within 21 days after the Effective Date, or as otherwise specified in writing by the OSC. Respondent shall immediately notify EPA if after using its best efforts it is unable to obtain such agreements. For purposes of this Paragraph, "best efforts" includes the payment of reasonable sums of money in consideration of access. Respondent shall describe in writing its efforts to obtain access. EPA may then assist Respondent in gaining access, to the extent necessary to effectuate the response actions described in this Settlement Agreement, using such means as EPA deems appropriate. Respondent shall reimburse EPA for all costs and attorney's fees incurred by the United States in obtaining such access, in accordance with the procedures in Section XV (Payment of Response Costs).

27. Notwithstanding any provision of this Settlement Agreement, EPA and the Commonwealth retain all of their access authorities and rights, as well as all of their rights to require land/water use restrictions, including enforcement authorities related thereto, under CERCLA, RCRA, and any other applicable statutes or regulations.

X. ACCESS TO INFORMATION

28. Respondent shall provide to EPA and the Commonwealth, upon request, copies of all documents and information within its possession or control or that of its contractors or agents relating to activities at the Site or to the implementation of this Settlement Agreement, including, but not limited to, sampling, analysis, chain of custody records, manifests, trucking logs, receipts, reports, sample traffic routing, correspondence, or other documents or information related to the Work. Respondent shall also make available to EPA and the Commonwealth, for purposes of investigation, information gathering, or testimony, its employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Work.

29. Respondent may assert business confidentiality claims covering part or all of the documents or information submitted to EPA and the Commonwealth under this Settlement Agreement to the extent permitted by and in accordance with Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7), and 40 C.F.R. § 2.203(b). Documents or information determined to be confidential by EPA will be afforded the protection specified in 40 C.F.R. Part 2, Subpart B. If no claim of confidentiality accompanies documents or information when they are submitted to EPA and the Commonwealth, or if EPA has notified Respondent that the documents or information are not confidential under the standards of Section 104(e)(7) of CERCLA or 40 C.F.R. Part 2, Subpart B, the public may be given access to such documents or information without further notice to Respondent.

30. Respondent may assert that certain documents, records and other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If the Respondent asserts such a privilege in lieu of providing documents, it shall provide EPA and the Commonwealth with the following: 1) the title of the document, record, or information; 2) the date of the document, record, or information; 3) the name and title of the author of the document, record, or information; 4) the name and title of each addressee and recipient; 5) a description of the contents of the document, record, or information; and 6) the privilege asserted by Respondent. However, no documents, reports or other information created or generated pursuant to the requirements of this Settlement Agreement shall be withheld on the grounds that they are privileged.

31. No claim of confidentiality shall be made with respect to any data, including, but not limited to, all sampling, analytical, monitoring, hydrogeologic, scientific, chemical, or engineering data, or any other documents or information evidencing conditions at or around the Site.

XI. RECORD RETENTION

32. Until 10 years after Respondent's receipt of EPA's notification pursuant to Section XXIX (Notice of Completion of Work), Respondent shall preserve and retain all non-identical copies of records and documents (including records or documents in electronic form) now in its possession or control or which come into its possession or control that relate in any manner to the performance of the Work or the liability of any person under CERCLA with respect to the Site, regardless of any corporate retention policy to the contrary. Until 10 years after Respondent's receipt of EPA's notification pursuant to Section XXIX (Notice of Completion of Work), Respondent shall also instruct its contractors and agents to preserve all documents, records, and information of whatever kind, nature or description relating to performance of the Work.

33. At the conclusion of this document retention period, Respondent shall notify EPA and the Commonwealth at least 90 days prior to the destruction of any such records or documents, and, upon request by EPA or the Commonwealth, Respondent shall deliver any such records or documents to EPA or the Commonwealth. Respondent may assert that certain documents, records and other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If Respondent asserts such a privilege, it shall provide EPA or the Commonwealth with the following: 1) the title of the document, record, or information; 2) the date of the document, record, or information; 3) the name and title of the author of the document, record, or information; 4) the name and title of each addressee and recipient; 5) a description of the subject of the document, record, or information; and 6) the privilege asserted by Respondent. However, no documents, reports or other information created or generated pursuant to the requirements of this Settlement Agreement shall be withheld on the grounds that they are privileged.

34. Respondent hereby certifies individually that to the best of its knowledge and belief, after thorough inquiry, it has not altered, mutilated, discarded, destroyed or otherwise disposed of any records, documents or other information (other than identical copies) relating to its potential liability regarding the Site since notification of potential liability by EPA or the State or the filing of suit against it regarding the Site and that it has fully complied with any and all EPA requests for information pursuant to Sections 104(e) and 122(e) of CERCLA, 42 U.S.C. §§ 9604(e) and 9622(e), and Section 3007 of RCRA, 42 U.S.C. § 6927.

XII. COMPLIANCE WITH OTHER LAWS

Respondent shall perform all actions required pursuant to this Settlement Agreement in accordance with all applicable state and federal laws and regulations except as provided in Section 121(e) of CERCLA, 42 U.S.C. § 6921(e), and 40 C.F.R. §§ 300.400(e) and 300.415(j). In accordance with 40 C.F.R. § 300.415(j), all on-Site actions required pursuant to this Settlement Agreement shall, to the extent practicable, as determined by EPA, considering the exigencies of the situation, attain applicable or relevant and appropriate requirements ("ARARs") under federal environmental or state environmental or facility siting laws.

XIII. EMERGENCY RESPONSE AND NOTIFICATION OF RELEASE

35. In the event of any action or occurrence during performance of the Work which causes or threatens a release of Waste Material from the Site that constitutes an emergency situation or may present an immediate threat to public health or welfare or the environment, Respondent shall immediately take all appropriate action. Respondent shall take these actions in accordance with all applicable provisions of this Settlement Agreement, including, but not limited to, the Health and Safety Plan, in order to prevent, abate or minimize such release or endangerment caused or threatened by the release. Respondent shall also immediately notify the OSC or, in the event of his/her unavailability, shall notify the National Response Center, by telephone at (800) 424-8802 and/or call the 24-hour Emergency OSC telephone number (617) 723-8928 of the incident or Site conditions. In the event that Respondent fails to take appropriate response action as required by this Paragraph, and EPA takes such action instead, Respondent shall reimburse EPA all costs of the response action not inconsistent with the NCP pursuant to Section XV (Payment of Response Costs).

36. In addition, in the event of any release of a hazardous substance from the Site, Respondent shall immediately notify the OSC at 617-918-1120 and the National Response Center at (800) 424-8802. Respondent shall submit a written report to EPA within 7 days after each release, setting forth the events that occurred and the measures taken or to be taken to mitigate any release or endangerment caused or threatened by the release and to prevent the reoccurrence of such a release. This reporting requirement is in addition to, and not in lieu of, reporting under Section 103(c) of CERCLA, 42 U.S.C. §

9603(c), and Section 304 of the Emergency Planning and Community Right-To-Know Act of 1986, 42 U.S.C. § 11004, et seq.

XIV. AUTHORITY OF ON-SCENE COORDINATOR

37. The OSC shall be responsible for overseeing Respondent's implementation of this Settlement Agreement. The OSC shall have the authority vested in an OSC by the NCP, including the authority to halt, conduct, or direct any Work required by this Settlement Agreement, or to direct any other removal action undertaken at the Site. Absence of the OSC from the Site shall not be cause for stoppage of work unless specifically directed by the OSC.

XV. PAYMENT OF FUTURE RESPONSE COSTS

38. Respondent shall pay EPA for all Future Response Costs not inconsistent with the NCP. On a periodic basis, EPA will send Respondent a bill requiring payment that includes direct and indirect costs incurred by EPA and its contractors. Respondent shall make all payments within forty-five (45) days of receipt of each bill requiring payment, except as otherwise provided in Paragraph 39 of this Settlement Agreement.

a. Respondent shall make all payments required by this Paragraph by a certified cashier's check, electronic funds transfer, or checks payable to "EPA Hazardous Superfund," referencing the name and address of the party(ies) making payment and EPA Site/Spill ID number 01GB. Respondent shall send the check(s) to:

U.S. Environmental Protection Agency
Superfund Payments
Cincinnati Finance Center
P.O. Box 979076
St Louis, MO 63197-9000

Electronic funds transfers should be directed to the Federal Reserve Bank of New York at:

New York, NY 10045
ABA No.: 021030004
Account No.: 68010727
SWIFT address: FRNYUS33
Field Tag 4200 of the Fedwire message should read:
D 68010727 Environmental Protection Agency"

Any electronic funds transfers received at the EPA lockbox bank after 10:30 A.M. (Eastern Standard Time) will be credited to the next business day. Payment shall be accompanied by a statement identifying the names and addresses of the Settling

Parties, the Site Name, EPA Region 1 and Site/Spill ID Number 01GB, and the EPA docket number for this action.

b. At the time of payment, Respondent shall send notice that such payment has been made to:

Ann Gardner
U.S. Environmental Protection Agency
5 Post Office Square, Suite 100
Boston, MA 02109-3912

c. In the event that the payments for Future Response Costs are not made within 45 days of Respondent's receipt of a bill, Respondent shall pay Interest on the unpaid balance. The Interest on Future Response Costs shall begin to accrue on the date of the bill and shall continue to accrue until the date of payment. Payments of Interest made under this Paragraph shall be in addition to such other remedies or sanctions available to the United States by virtue of Respondent's failure to make timely payments under this Section, including but not limited to, payment of stipulated penalties pursuant to Section XVIII.

39. Respondent may dispute all or part of a bill for Future Response Costs submitted under this Settlement Agreement, if Respondent alleges that EPA has made an accounting error, or if Respondent alleges that a cost item is inconsistent with the NCP. If any dispute over costs is resolved before payment is due, the amount due will be adjusted as necessary. If the dispute is not resolved before payment is due, Respondent shall pay the full amount of the uncontested costs to EPA as specified in Paragraph 38 on or before the due date. Within the same time period, Respondent shall pay the full amount of the contested costs into an interest-bearing escrow account. Respondent shall simultaneously transmit a copy of both checks to the persons listed in Paragraph 38(b) above. Respondent shall ensure that the prevailing party or parties in the dispute shall receive the amount upon which they prevailed from the escrow funds plus interest within fourteen (14) days after the dispute is resolved.

XVI. <u>DISPUTE RESOLUTION</u>

40. Unless otherwise expressly provided for in this Settlement Agreement, the dispute resolution procedures of this Section shall be the exclusive mechanism for resolving disputes arising under this Settlement Agreement. The Parties shall attempt to resolve any disagreements concerning this Settlement Agreement expeditiously and informally.

41. If Respondent objects to any EPA action taken pursuant to this Settlement Agreement, including billings for Future Response Costs, it shall notify EPA in writing of its objection(s) within five (5) working days of such action, unless the objection(s) has/have been resolved informally. EPA and Respondent shall have five (5) working days from EPA's receipt of Respondent's written objection(s) to resolve the dispute

through formal negotiations (the "Negotiation Period"). The Negotiation Period may be extended at the sole discretion of EPA.

42. Any agreement reached by the parties pursuant to this Section shall be in writing and shall, upon signature by both parties, be incorporated into and become an enforceable part of this Settlement Agreement. If the Parties are unable to reach an agreement within the Negotiation Period, an EPA management official at the Branch Chief level or higher will issue a written decision on the dispute to Respondent. EPA's decision shall be incorporated into and become an enforceable part of this Settlement Agreement. Respondent's obligations under this Settlement Agreement shall not be tolled by submission of any objection for dispute resolution under this Section. Following resolution of the dispute, as provided by this Section, Respondent shall fulfill the requirement that was the subject of the dispute in accordance with the agreement reached or with EPA's decision, whichever occurs.

XVII. FORCE MAJEURE

43. Respondent agrees to perform all requirements of this Settlement Agreement within the time limits established under this Settlement Agreement, unless the performance is delayed by a *force majeure*. For purposes of this Settlement Agreement, a *force majeure* is defined as any event arising from causes beyond the control of Respondent, or of any entity controlled by Respondent, including but not limited to its contractors and subcontractors, which delays or prevents performance of any obligation under this Settlement Agreement despite Respondent's best efforts to fulfill the obligation. *Force majeure* does not include financial inability to complete the Work or increased cost of performance or a failure to attain performance standards/action levels set forth in the Action Memorandum.

44. If any event occurs or has occurred that may delay the performance of any obligation under this Settlement Agreement, whether or not caused by a *force majeure* event, Respondent shall notify EPA orally within 48 hours of when Respondent first knew that the event might cause a delay. Within two (2) days thereafter, Respondent shall provide to EPA in writing an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; Respondent's rationale for attributing such delay to a *force majeure* event if it intends to assert such a claim; and a statement as to whether, in the opinion of Respondent, such event may cause or contribute to an endangerment to public health, welfare or the environment. Failure to comply with the above requirements shall preclude Respondent from asserting any claim of *force majeure* for that event for the period of time of such failure to comply and for any additional delay caused by such failure.

45. If EPA agrees that the delay or anticipated delay is attributable to a *force majeure* event, the time for performance of the obligations under this Settlement Agreement that

are affected by the *force majeure* event will be extended by EPA for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the *force majeure* event shall not, of itself, extend the time for performance of any other obligation. If EPA does not agree that the delay or anticipated delay has been or will be caused by a *force majeure* event, EPA will notify Respondent in writing of its decision. If EPA agrees that the delay is attributable to a *force majeure* event, EPA will notify Respondent in writing of the length of the extension, if any, for performance of the obligations affected by the *force majeure* event.

XVIII. STIPULATED PENALTIES

46. Respondent shall be liable to EPA for stipulated penalties in the amounts set forth in Paragraphs 47 and 48 for failure to comply with the requirements of this Settlement Agreement specified below, unless excused under Section XVII (*Force Majeure*). "Compliance" by Respondent shall include completion of the activities under this Settlement Agreement or any work plan or other plan approved under this Settlement Agreement identified below in accordance with all applicable requirements of law, this Settlement Agreement, the SOW, and any plans or other documents approved by EPA pursuant to this Settlement Agreement and within the specified time schedules established by and approved under this Settlement Agreement.

47. Stipulated Penalty Amounts - Work.

a. The following stipulated penalties shall accrue per violation per day for any noncompliance identified in Paragraph 47(b):

Penalty Per Violation Per Day	Period of Noncompliance
\$100.00	1st through 14th day
\$175.00	15th through 30th day
\$250.00	31st day and beyond

48. Stipulated Penalty Amounts - Reports. The following stipulated penalties shall accrue per violation per day for failure to submit timely or adequate reports [or other written documents] pursuant to Paragraphs 22 and 23:

Penalty Per Violation Per Day	Period of Noncompliance
\$100.00	1st through 14th day
\$175.00	15th through 30th day
\$250.00	31st day and beyond

49. In the event that EPA assumes performance of a portion or all of the Work pursuant to Paragraph 59 (Work Takeover) of Section XX, Respondent shall be liable for a stipulated penalty in the amount of \$15,000.

50. All penalties shall begin to accrue on the day after the complete performance is due or the day a violation occurs, and shall continue to accrue through the final day of the correction of the noncompliance or completion of the activity. However, stipulated penalties shall not accrue: 1) with respect to a deficient submission under Section VIII (Work to be Performed), during the period, if any, beginning on the 31st day after EPA's receipt of such submission until the date that EPA notifies Respondent of any deficiency; and 2) with respect to a decision by the EPA Management Official at the branch level or higher, under Paragraph 42 of Section XVI (Dispute Resolution), during the period, if any, beginning on the 21st day after the Negotiation Period begins until the date that the EPA management official issues a final decision regarding such dispute. Nothing in this Settlement Agreement shall prevent the simultaneous accrual of separate penalties for separate violations of this Settlement Agreement.

51. Following EPA's determination that Respondent has failed to comply with a requirement of this Settlement Agreement, EPA may give Respondent written notification of the failure and describe the noncompliance. EPA may send Respondent a written demand for payment of the penalties. However, penalties shall accrue as provided in the preceding Paragraph regardless of whether EPA has notified Respondent of a violation.

52. All penalties accruing under this Section shall be due and payable to EPA within 30 days of Respondent's receipt from EPA of a demand for payment of the penalties, unless Respondent invokes the dispute resolution procedures under Section XVI (Dispute Resolution). All payments to EPA under this Section shall be paid by certified or cashier's check(s) made payable to "EPA Hazardous Substances Superfund," shall be mailed to the U.S. Environmental Protection Agency, Superfund Payments, Cincinnati Finance Center, P.O. Box 979076, St. Louis, Missouri 63197-9000, shall indicate that the payment is for stipulated penalties, and shall reference the EPA Region and Site/Spill ID Number 01GB, the EPA Docket Number CERCLA-01-2011-0044, and the name and address of the party(ies) making payment. Copies of check(s) paid pursuant to this Section, and any accompanying transmittal letter(s), shall be sent to EPA as provided in Paragraph 38.

53. The payment of penalties shall not alter in any way Respondent's obligation to complete performance of the Work required under this Settlement Agreement.

54. Penalties shall continue to accrue during any dispute resolution period, but need not be paid until 15 days after the dispute is resolved by agreement or by receipt of EPA's decision.

55. If Respondent fails to pay stipulated penalties when due, EPA may institute proceedings to collect the penalties, as well as Interest. Respondent shall pay Interest on the unpaid balance, which shall begin to accrue on the date of demand made pursuant to Paragraph 52. Nothing in this Settlement Agreement shall be construed as prohibiting, altering, or in any way limiting the ability of EPA to seek any other remedies or sanctions

available by virtue of Respondent's violation of this Settlement Agreement or of the statutes and regulations upon which it is based, including, but not limited to, penalties pursuant to Sections 106(b) and 122(l) of CERCLA, 42 U.S.C. §§ 9606(b) and 9622(l), and punitive damages pursuant to Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3). Provided, however, that EPA shall not seek civil penalties pursuant to Section 106(b) or 122(l) of CERCLA or punitive damages pursuant to Section 107(c)(3) of CERCLA for any violation for which a stipulated penalty is provided in this Section, except in the case of a willful violation of this Settlement Agreement or in the event that EPA assumes performance of a portion or all of the Work pursuant to Section XX, Paragraph 59 (Work Takeover). Notwithstanding any other provision of this Section, EPA may, in its unreviewable discretion, waive any portion of stipulated penalties that have accrued pursuant to this Settlement Agreement.

XIX. COVENANT NOT TO SUE BY EPA

56. In consideration of the actions that will be performed and the payments that will be made by Respondent under the terms of this Settlement Agreement, and except as otherwise specifically provided in this Settlement Agreement, EPA covenants not to sue or to take administrative action against Respondent pursuant to Sections 106 and 107(a) of CERCLA, 42 U.S.C. §§ 9606 and 9607(a), for the Work and Future Response Costs. This covenant not to sue shall take effect upon the Effective Date and is conditioned upon the complete and satisfactory performance by Respondent of all obligations under this Settlement Agreement, including, but not limited to, payment of Future Response Costs pursuant to Section XV. This covenant not to sue extends only to Respondent and does not extend to any other person.

XX. RESERVATIONS OF RIGHTS BY EPA

57. Except as specifically provided in this Settlement Agreement, nothing in this Settlement Agreement shall limit the power and authority of EPA or the United States to take, direct, or order all actions necessary to protect public health, welfare, or the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances, pollutants or contaminants, or hazardous or solid waste on, at, or from the Site. Further, nothing in this Settlement Agreement shall prevent EPA from seeking legal or equitable relief to enforce the terms of this Settlement Agreement, from taking other legal or equitable action as it deems appropriate and necessary, or from requiring Respondents in the future to perform additional activities pursuant to CERCLA or any other applicable law.

58. The covenant not to sue set forth in Section XIX above does not pertain to any matters other than those expressly identified therein. EPA reserves, and this Settlement Agreement is without prejudice to, all rights against Respondent with respect to all other matters, including, but not limited to:

a. claims based on a failure by Respondent to meet a requirement of this Settlement Agreement;

b. liability for costs not included within the definition Future Response Costs;

c. liability for performance of response action other than the Work;

d. criminal liability;

e. liability for damages for injury to, destruction of, or loss of natural resources, and for the costs of any natural resource damage assessments;

f. liability arising from the past, present, or future disposal, release or threat of release of Waste Materials outside of the Site; and

g. liability for costs incurred or to be incurred by the Agency for Toxic Substances and Disease Registry related to the Site.

59. Work Takeover. In the event EPA determines that Respondent has ceased implementation of any portion of the Work, are seriously or repeatedly deficient or late in its performance of the Work, or are implementing the Work in a manner which may cause an endangerment to human health or the environment, EPA may assume the performance of all or any portion of the Work as EPA determines necessary. Respondent may invoke the procedures set forth in Section XVI (Dispute Resolution) to dispute EPA's determination that takeover of the Work is warranted under this Paragraph. Costs incurred by the United States in performing the Work pursuant to this Paragraph shall be considered Future Response Costs that Respondents shall pay pursuant to Section XV (Payment of Future Response Costs). Notwithstanding any other provision of this Settlement Agreement, EPA retains all authority and reserves all rights to take any and all response actions authorized by law.

XXI. COVENANT NOT TO SUE BY RESPONDENT

60. Respondent covenants not to sue and agrees not to assert any claims or causes of action against the United States, or its contractors or employees, with respect to the Work, Response Costs, or this Settlement Agreement, including, but not limited to:

a. any direct or indirect claim for reimbursement from the Hazardous Substance Superfund established by 26 U.S.C. § 9507, based on Sections 106(b)(2), 107, 111, 112, or 113 of CERCLA, 42 U.S.C. §§ 9606(b)(2), 9607, 9611, 9612, or 9613, or any other provision of law;

b. any claim arising out of response actions at or in connection with the Site, including any claim under the United States Constitution, the Constitution of the

Commonwealth, the Tucker Act, 28 U.S.C. § 1491, the Equal Access to Justice Act, 28 U.S.C. § 2412, as amended, or at common law; or

c. any claim against the United States pursuant to Sections 107 and 113 of CERCLA, 42 U.S.C. §§ 9607 and 9613, relating to the Work, or Response Costs.

61. Nothing in this Agreement shall be deemed to constitute approval or preauthorization of a claim within the meaning of Section 111 of CERCLA, 42 U.S.C. § 9611, or 40 C.F.R. § 300.700(d).

62. Respondent agrees not to assert any claims and to waive all claims or causes of action that it may have for all matters relating to the Site, including for contribution, against any person where the person's liability to Respondent with respect to the Site is based solely on having arranged for disposal or treatment, or for transport for disposal or treatment, of hazardous substances at the Site, or having accepted for transport for disposal or treatment of hazardous substances at the Site, if all or part of the disposal, treatment, or transport occurred before April 1, 2001, and the total amount of material containing hazardous substances contributed by such person to the Site was less than 110 gallons of liquid materials or 200 pounds of solid materials.

63. The waiver in Paragraph 62 shall not apply with respect to any defense, claim, or cause of action that a Respondent may have against any person meeting the above criteria if such person asserts a claim or cause of action relating to the Site against such Respondent. This waiver also shall not apply to any claim or cause of action against any person meeting the above criteria if EPA determines:

a. that such person has failed to comply with any EPA requests for information or administrative subpoenas issued pursuant to Section 104(e) or 122(e) of CERCLA, 42 U.S.C. §§ 9604(e) or 9622(e), or Section 3007 of the Solid Waste Disposal Act (also known as the Resource Conservation and Recovery Act or "RCRA"), 42 U.S.C. § 6972, or has impeded or is impeding, through action or inaction, the performance of a response action or natural resource restoration with respect to the Site, or has been convicted of a criminal violation for the conduct to which this waiver would apply and that conviction has not been vitiated on appeal or otherwise; or

b. that the materials containing hazardous substances contributed to the Site by such person have contributed significantly, or could contribute significantly, either individually or in the aggregate, to the cost of response action or natural resource restoration at the Site.

XXII. OTHER CLAIMS

64. By issuance of this Settlement Agreement, the United States and EPA assume no liability for injuries or damages to persons or property resulting from any acts or omissions of Respondent. The United States or EPA shall not be deemed a party to any

contract entered into by Respondent or its directors, officers, employees, agents, successors, representatives, assigns, contractors, or consultants in carrying out actions pursuant to this Settlement Agreement.

65. Except as expressly provided in Section XIX (Covenant Not to Sue by EPA), nothing in this Settlement Agreement constitutes a satisfaction of or release from any claim or cause of action against Respondent or any person not a party to this Settlement Agreement, for any liability such person may have under CERCLA, other statutes, or common law, including but not limited to any claims of the United States for costs, damages and interest under Sections 106 and 107 of CERCLA, 42 U.S.C. §§ 9606 and 9607.

66. No action or decision by EPA pursuant to this Settlement Agreement shall give rise to any right to judicial review, except as set forth in Section 113(h) of CERCLA, 42 U.S.C. § 9613(h).

XXIII. CONTRIBUTION

67. Contribution.

a. The Parties agree that this Settlement Agreement constitutes an administrative settlement for purposes of Section 113(f)(2) of CERCLA, 42 U.S.C. § 9613(f)(2), and that Respondent is entitled, as of the Effective Date, to protection from contribution actions or claims as provided by Sections 113(f)(2) and 122(h)(4) of CERCLA, 42 U.S.C. §§ 9613(f)(2) and 9622(h)(4), for "matters addressed" in this Settlement Agreement. The "matters addressed" in this Settlement Agreement are the Work and Response Costs.

b. The Parties agree that this Settlement Agreement constitutes an administrative settlement for purposes of Section 113(f)(3)(B) of CERCLA, 42 U.S.C. § 9613(f)(3)(B), pursuant to which Respondent has, as of the Effective Date, resolved its liability to the United States for the Work and Future Response Costs.

XXIV. INDEMNIFICATION

68. Respondent shall indemnify, save and hold harmless the United States, its officials, agents, contractors, subcontractors, employees and representatives from any and all claims or causes of action arising from, or on account of, negligent or other wrongful acts or omissions of Respondent, its officers, directors, employees, agents, contractors, or subcontractors, in carrying out actions pursuant to this Settlement Agreement. In addition, Respondent agrees to pay the United States all costs incurred by the United States, including but not limited to attorneys fees and other expenses of litigation and settlement, arising from or on account of claims made against the United States based on negligent or other wrongful acts or omissions of Respondent, its officers, directors, employees, agents, contractors, subcontractors and any persons acting on its behalf or

under its control, in carrying out activities pursuant to this Settlement Agreement. The United States shall not be held out as a party to any contract entered into by or on behalf of Respondent in carrying out activities pursuant to this Settlement Agreement. Neither Respondent nor any such contractor shall be considered an agent of the United States.

69. The United States shall give Respondent notice of any claim for which the United States plans to seek indemnification pursuant to this Section and shall consult with Respondent prior to settling such claim.

70. Respondent waives all claims against the United States for damages or reimbursement or for set-off of any payments made or to be made to the United States, arising from or on account of any contract, agreement, or arrangement between Respondent and any person for performance of Work on or relating to the Site, including, but not limited to, claims on account of construction delays. In addition, Respondent shall indemnify and hold harmless the United States with respect to any and all claims for damages or reimbursement arising from or on account of any contract, agreement, or arrangement between Respondent and any person for performance of Work on or relating to the Site, including, but not limited to, claims on account of construction delays.

XXV. INSURANCE

71. At least 7 days prior to commencing any on-Site work under this Settlement Agreement, Respondent shall secure, and shall maintain for the duration of this Settlement Agreement, comprehensive general liability insurance and automobile insurance with limits of one million dollars, combined single limit, naming EPA as an additional insured. Within the same time period, Respondent shall provide EPA with certificates of such insurance and a copy of each insurance policy. Respondent shall submit such certificates and copies of policies each year on the anniversary of the Effective Date. In addition, for the duration of the Settlement Agreement, Respondent shall satisfy, or shall ensure that its contractors or subcontractors satisfy, all applicable laws and regulations regarding the provision of worker's compensation insurance for all persons performing the Work on behalf of Respondent in furtherance of this Settlement Agreement. If Respondent demonstrates by evidence satisfactory to EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering some or all of the same risks but in an equal or lesser amount, then Respondent needs to provide only that portion of the insurance described above which is not maintained by such contractor or subcontractor.

XXVI. FINANCIAL ASSURANCE

72. Within 90 days of the Effective Date, Respondent shall establish and maintain financial security for the benefit of EPA in the amount of $ 80,000 in one or more of the following forms, in order to secure the full and final completion of Work by Respondent:

a. a surety bond unconditionally guaranteeing payment and/or performance of the Work;

b. one or more irrevocable letters of credit, payable to or at the direction of EPA, issued by financial institution(s) acceptable in all respects to EPA;

c. a trust fund administered by a trustee acceptable in all respects to EPA;

d. a policy of insurance issued by an insurance carrier acceptable in all respects to EPA, which ensures the payment and/or performance of the Work;

e. a written guarantee to pay for or perform the Work provided by one or more parent companies of Respondent, or by one or more unrelated companies that have a substantial business relationship with Respondent; including a demonstration that any such guarantor company satisfies the financial test requirements of 40 C.F.R. Part 264.143(f); and/or

f. a demonstration of sufficient financial resources to pay for the Work made by Respondent, which shall consist of a demonstration that Respondent satisfies the requirements of 40 C.F.R. Part 264.143(f).

73. Any and all financial assurance instruments provided pursuant to this Section shall be in form and substance satisfactory to EPA, determined in EPA's sole discretion. In the event that EPA determines at any time that the financial assurances provided pursuant to this Section (including, without limitation, the instrument(s) evidencing such assurances) are inadequate, Respondent shall, within 30 days of receipt of notice of EPA's determination, obtain and present to EPA for approval one of the other forms of financial assurance listed in Paragraph 72, above. In addition, if at any time EPA notifies Respondent that the anticipated cost of completing the Work has increased, then, within 30 days of such notification, Respondent shall obtain and present to EPA for approval a revised form of financial assurance (otherwise acceptable under this Section) that reflects such cost increase. Respondent's inability to demonstrate financial ability to complete the Work shall in no way excuse performance of any activities required under this Settlement Agreement.

74. If Respondent seeks to ensure completion of the Work through a guarantee pursuant to Subparagraph 72.e) or 72.f) of this Settlement Agreement, Respondent shall (i) demonstrate to EPA's satisfaction that the guarantor satisfies the requirements of 40 C.F.R. Part 264.143(f); and (ii) resubmit sworn statements conveying the information required by 40 C.F.R. Part 264.143(f) annually, on the anniversary of the Effective Date or such other date as agreed by EPA, to EPA. For the purposes of this Settlement Agreement, wherever 40 C.F.R. Part 264.143(f) references "sum of current closure and post-closure costs estimates and the current plugging and abandonment costs estimates," the dollar amount to be used in the relevant financial test calculations shall be the current cost estimate of $80,000 for the Work at the Site plus any other RCRA, CERCLA,

TSCA, or other federal environmental obligations financially assured by Respondent or guarantor to EPA by means of passing a financial test.

75. If, after the Effective Date, Respondent can show that the estimated cost to complete the remaining Work has diminished below the amount set forth in Paragraph 72 of this Section, Respondent may, on any anniversary date of the Effective Date, or at any other time agreed to by the Parties, reduce the amount of the financial security provided under this Section to the estimated cost of the remaining Work to be performed. Respondent shall submit a proposal for such reduction to EPA, in accordance with the requirements of this Section, and may reduce the amount of the security after receiving written approval from EPA. In the event of a dispute, Respondent may seek dispute resolution pursuant to Section XVI (Dispute Resolution). Respondent may reduce the amount of security in accordance with EPA's written decision resolving the dispute.

76. Respondent may change the form of financial assurance provided under this Section at any time, upon notice to and prior written approval by EPA, provided that EPA determines that the new form of assurance meets the requirements of this Section. In the event of a dispute, Respondent may change the form of the financial assurance only in accordance with the written decision resolving the dispute.

XXVII. MODIFICATIONS

77. The OSC may make modifications to any plan or schedule or Statement of Work in writing or by oral direction. Any oral modification will be memorialized in writing by EPA promptly, but shall have as its effective date the date of the OSC's oral direction. Any other requirements of this Settlement Agreement may be modified in writing by mutual agreement of the parties.

78. If Respondent seeks permission to deviate from any approved work plan or schedule or Statement of Work, Respondent's Project Coordinator shall submit a written request to EPA for approval outlining the proposed modification and its basis. Respondent may not proceed with the requested deviation until receiving oral or written approval from the OSC pursuant to Paragraph 77.

79. No informal advice, guidance, suggestion, or comment by the OSC or other EPA representatives regarding reports, plans, specifications, schedules, or any other writing submitted by Respondent shall relieve Respondent of its obligation to obtain any formal approval required by this Settlement Agreement, or to comply with all requirements of this Settlement Agreement, unless it is formally modified.

XXVIII. ADDITIONAL REMOVAL ACTIONS

80. If EPA determines that additional removal actions not included in an approved plan are necessary to protect public health, welfare, or the environment, EPA will notify Respondent of that determination. Unless otherwise stated by EPA, within 30 days of

receipt of notice from EPA that additional removal actions are necessary to protect public health, welfare, or the environment, Respondent shall submit for approval by EPA a Work Plan for the additional removal actions. The plan shall conform to the applicable requirements of Section VIII (Work to Be Performed) of this Settlement Agreement. Upon EPA's approval of the plan pursuant to Section VIII, Respondent shall implement the plan for additional removal actions in accordance with the provisions and schedule contained therein. This Section does not alter or diminish the OSC's authority to make oral modifications to any plan or schedule pursuant to Section XXVII (Modifications).

XXIX. NOTICE OF COMPLETION OF WORK

81. When EPA determines, after EPA's review of the Final Report, that all Work has been fully performed in accordance with this Settlement Agreement, with the exception of any continuing obligations required by this Settlement Agreement, including post-removal site controls, retention of records, and payment of Future Response Costs, EPA will provide written notice to Respondent. If EPA determines that any such Work has not been completed in accordance with this Settlement Agreement, EPA will notify Respondent, provide a list of the deficiencies, and require that Respondent modifies the Work Plan if appropriate in order to correct such deficiencies. Respondent shall implement the modified and approved Work Plan and shall submit a modified Final Report in accordance with the EPA notice. Failure by Respondent to implement the approved modified Work Plan shall be a violation of this Settlement Agreement.

XXX. INTEGRATION/APPENDICES

82. This Settlement Agreement and its appendices constitute the final, complete and exclusive agreement and understanding among the Parties with respect to the settlement embodied in this Settlement Agreement. The parties acknowledge that there are no representations, agreements or understandings relating to the settlement other than those expressly contained in this Settlement Agreement. The following appendices are attached to and incorporated into this Settlement Agreement: Action Memorandum (Appendix A); Site Map (Appendix B); and Scope of Work (Appendix C).

XXXI. EFFECTIVE DATE

This Settlement Agreement shall become effective on July 11, 2011 or 3 days after the Settlement Agreement is signed by the Regional Administrator or his/her delegate, whichever is later.

The undersigned representative(s) of Respondent certify(ies) that it (they) is (are) fully authorized to enter into the terms and conditions of this Settlement Agreement and to bind the party(ies) it (they) represent(s) to this document.

Agreed this_______day of ______, 2011.

For Respondent C.P. Properties, LLC

By Craig H. Campbell

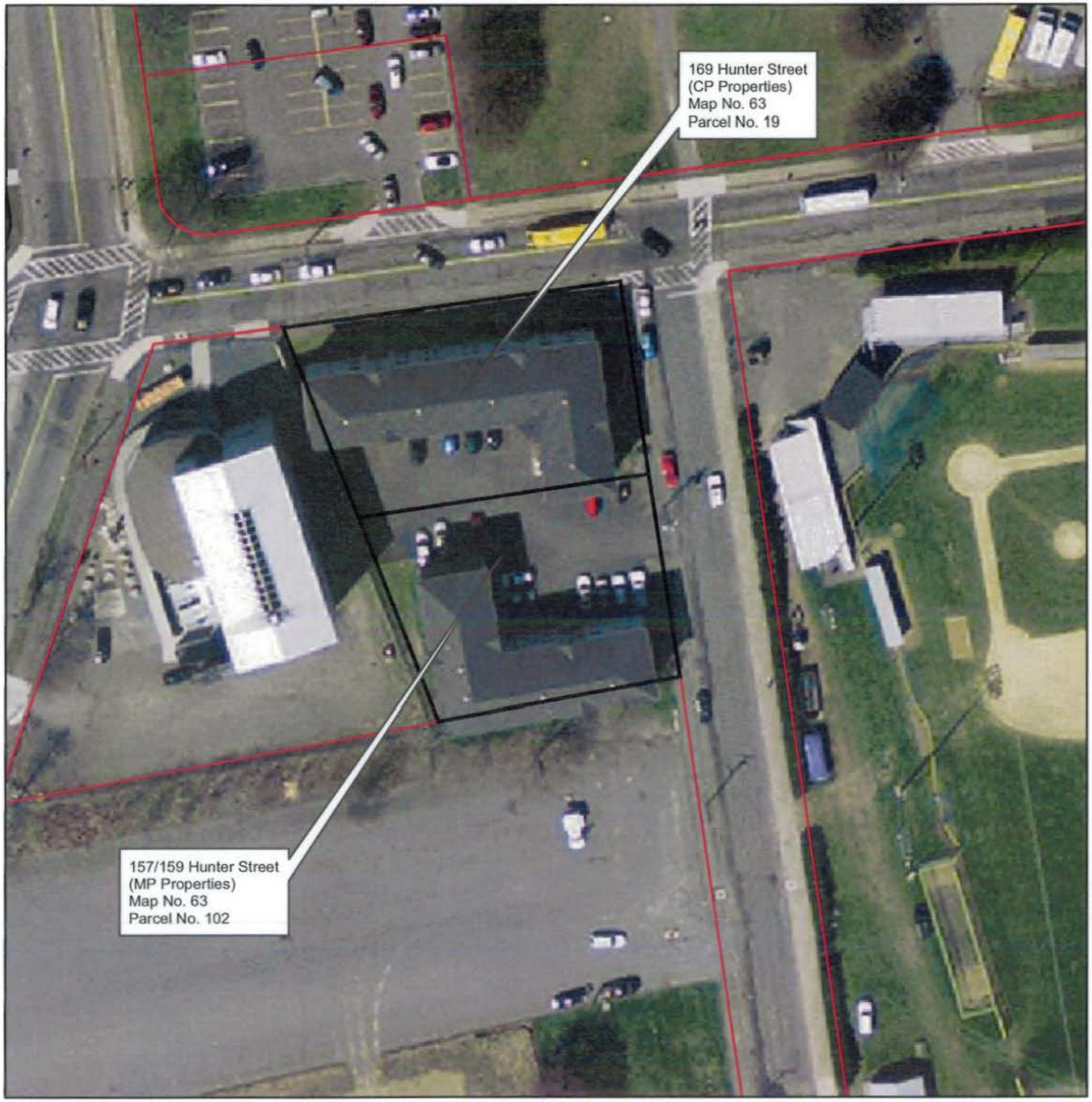
Title Counsel to C.P. Properties, LLC

It is so ORDERED and Agreed this 28th day of June, 2011.

By: James T. Owens III

James T. Owens, III, Director
Office of Site Remediation & Restoration
U.S. Environmental Protection Agency

EFFECTIVE DATE: July 11, 2011



P-013
CP/MP Properties

Parker Street Waste Site
New Bedford, Massachusetts

EPA Region I
Superfund Technical Assessment and Response Team (START) III
Contract No. EP-W-05-042

TDD Number: 10-10-0001
Created by: D. Willette
Created on: 11 August 2010
Modified by: D. Willette
Modified on: 1 June 2011

LEGEND

CP/MP Property Boundaries
Parcel Boundaries

0 50 100 Feet

Data Sources: MassDEP Risk Assessment
Imagery: MassGIS (2008 Aerial - 24628210)
All other data: START

WESTON SOLUTIONS
Restoring Resource Efficiency

APPENDIX C

STATEMENT OF WORK

C.P. Properties, LLC

Parker Street Waste Site

New Bedford, Massachusetts

Pursuant to the

Administrative Settlement Agreement and Order on Consent
to Perform a Removal Action

Docket No. CERCLA-01-2011-0044

INTRODUCTION

This Statement of Work ("SOW") identifies the components of work required of the Respondent pursuant to the Settlement Agreement and Administrative Order on Consent for Removal Action ("Agreement") (Docket No. CERCLA-01-2011-0044) to perform a removal action at 169 Hunter Street ("the Site") located in New Bedford, Massachusetts, which is a portion of the Parker Street Waste Site. Under this SOW, C.P. Properties, LLC ("Respondent") shall prepare and submit to the On-Scene Coordinator ("OSC") for approval the items identified below. The OSC will consult and coordinate with the MassDEP Site Manager prior to approving the items identified below. The removal action conducted pursuant to the Agreement and SOW shall abate the potential danger to public health or welfare or the environment, which may otherwise result from the actual or threatened release of hazardous substances at or from the Site.

I. GENERAL REQUIREMENTS

A. This SOW is designed to address the cleanup of the top three feet of soils at the Site, which are contaminated with polycyclic aromatic hydrocarbons ("PAHs"), barium, chromium, and lead. Available data indicate that the contaminated surface soils are located at grade, and therefore pose a threat of direct contact.

B. Respondent shall establish and maintain physical access to the area of the Site where contaminated soils are located. Such access shall be provided for all personnel, equipment, and supplies, including the United States Environmental Protection Agency ("EPA"), EPA's contractors and representatives, and the Massachusetts Department of Environmental Protection, Bureau of Waste Site Cleanup ("MassDEP").

C. Respondent shall communicate freely with the OSC prior to and during development of all work plans and deliverables required by the Agreement and the SOW, and shall continue to communicate freely with the OSC throughout implementation of all approved work plans. Open and routine communication will result in the most effective and efficient cleanup. Draft documents may be submitted by Respondent to EPA and MassDEP for consideration prior to submission of final documents required to be submitted by a specific date.

D. All actions taken by Respondent under the Agreement and the SOW shall be conducted in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended ("CERCLA"), the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP") promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, and any amendments thereto, applicable guidance documents provided by EPA, and the provisions of this Agreement, including any standards, specifications, and time schedules contained in the approved SOW or as specified by the OSC.

E. Each deliverable generated by Respondent pursuant to the specific requirements of the Agreement and the SOW must be approved by the OSC prior to implementation by Respondent.

F. The OSC may require Respondent to alter or expand upon work plans required by the Agreement and SOW after EPA approval, based on new information, changed Site conditions, or identified deficiencies.

G. By telephone or otherwise, Respondent shall inform the OSC of any field activity not less than five work days prior to the event.

In conducting all activities under this SOW, Respondent shall:

A. Comply with Section 300.150 of the NCP, which references the standards promulgated by the Occupational Safety and Health Administration, Hazardous Waste Operations and Emergency Response, 29 C.F.R. § 1910.120, including development and implementation of a health and safety program. This health and safety program shall include the steps that will be taken to protect on-site workers and the general public from hazards associated with any open excavations, hazardous substances brought to the surface during site activities, or any other hazards associated with on-site activities.

B. Provide the OSC, upon request, all quality assurance/quality control procedures followed by the supervising contractor and its laboratory(s) pertaining to all sampling and analytical work performed pursuant to the Agreement and the SOW.

II. WORK TASKS

EACH DUE THIRTY (30) DAYS AFTER NOTIFYING EPA OF THE NAME AND QUALIFICATIONS OF THE SUPERVISING CONTRACTOR

A. DESIGNATION OF THE CONTRACTOR AND PROJECT COORDINATOR

The Respondent shall propose an environmental consulting services contractor or an environmental services cleanup contractor for the purpose of performing and/or supervising the work required by this Agreement in accordance with the terms and conditions of the Agreement and shall notify EPA and MassDEP of the name(s) and qualifications of such contractor(s) within seven (7) days of the Effective Date. The supervising contractor must employ or retain by contract a Licensed Site Professional, holding a valid and current license to practice in Massachusetts who will provide oversight of the work to be performed. Respondent shall also notify EPA and MassDEP of the name(s) and qualification(s) of any other contractor(s) or subcontractor(s) retained to perform the Work under this Settlement Agreement at least seven (7) days prior to commencement of such Work. The supervising contractor shall provide a written Removal Work Plan that outlines the work to be performed under this Agreement and

SOW.

Within seven (7) days after the Effective Date, Respondent shall designate a Project Coordinator who shall be responsible for administration of all actions by Respondent required by this Settlement Agreement and shall submit to EPA and MassDEP the designated Project Coordinator's name, address, telephone number, and qualifications. To the greatest extent possible, the Project Coordinator shall be present on Site or readily available during Site work. EPA retains the right to disapprove of the designated Project Coordinator. If EPA disapproves of the designated Project Coordinator, Respondent shall retain a different Project Coordinator and shall notify EPA and MassDEP of that person's name, address, telephone number, and qualifications within 7 days following EPA's disapproval. Receipt by Respondent's Project Coordinator of any notice or communication from EPA relating to this Settlement Agreement shall constitute receipt by Respondent.

B. SITE SECURITY

The Respondent shall take necessary precautions to properly prevent unauthorized access onto the areas of the Site subject to the removal action for the duration of the removal action. This includes, but is not limited to, the following: fencing, geo-textile barriers, and signage. If, in the judgment of the OSC, these precautions are not preventing unauthorized access to these areas of the Site, the Respondent will institute additional security measures, which may include 24 hour security, until the removal actions are completed.

C. GENERATION OF WORK PLAN AND ASSOCIATED PLANS

Respondent shall submit to EPA for approval, a technically sound Removal Action Work Plan for addressing contaminated surface soils at the Site.

The Removal Action Work Plan submitted by Respondent for EPA approval must:

1. Address the following applicable criteria as found in **Section 300.415(b)(2)** of the NCP:

    - "(i) Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants";

    - "(iv) High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate".

2. Include a presentation and discussion of any additional planned soil sampling investigation.

3. Address specific cleanup actions necessary, in accordance with 40 C.F.R. Section 300.415(e)(1-9), to address the contaminated soils at the Site to eliminate the conditions that necessitate the removal under Section 300.415(b)(2) of the National Contingency Plan, as described in the Action Memorandum for this Site. The Work Plan shall identify all contractors involved in cleanup activities as well as details of excavation and removal of contaminated surface soils and capping of any contaminated soils remaining at depth.

4. Propose soil cleanup levels, based on applicable or relevant and appropriate requirements ("ARARs").

5. Specify how (through additional sampling or other action) it will be documented that cleanup levels have been attained. The Work Plan shall also include the names of laboratories to be used and the EPA standard methods to be used for analysis. The Work Plan shall describe how all waste streams involving hazardous substances will be packaged, staged, and prepared for disposal (with applicable name, address, and RCRA identification number of the proposed disposal facility).

6. Outline maintenance and post-removal site control (if applicable) and how it will be carried out;

7. Provide for any excavation and off-site disposal, if deemed necessary, to address the conditions that necessitate the removal action;

8. Specify the type of equipment to be used.

9. Include restoration plans that include backfilling, grading, and re-vegetating.

10. Include the name, address, and RCRA identification number of the proposed disposal facility(s).

11. Include a detailed project time line which provides time frames associated with each activity stated in the EPA-approved Removal Action Work Plan, including, but not limited to, the maximum amount of time that any hazardous substance shall remain on-site once it has been excavated.

12. Describe the monitoring, engineering controls and other actions to be employed, which will demonstrate that the persons at adjacent properties will not be exposed to contaminants present at the Site as a result of implementing required actions. Air monitoring to address the off-site migration of airborne contaminants must be specifically addressed in the Work Plan, the Health and Safety Plan (described below), or in a separate, stand-alone plan.

a. "Monitoring" means to collect and analyze air samples to identify the concentration of airborne contaminants. Monitoring data will provide the basis for determining if additional engineering controls or other actions are necessary to achieve the goal of protection of persons other than Site workers. On-site monitoring data used to assure worker protection in accordance with OSHA can be used to meet the requirement in the above paragraph, but must be augmented where such information alone does not demonstrate that off-site exposures are not occurring.

b. Examples of "engineering controls" include but are not limited to covering soil stockpiles, wetting, limiting the area of excavation, capturing and treating air emissions, and providing a temporary structure over the excavation area. "Other actions" include but are not limited to, posting warning signs, posting a security guard, installing additional permanent or temporary fencing, or any combination of these.

13. Include a Community Relations Plan ("CRP") that identifies how the Site management will interact with, and convey information to, residents and businesses abutting or adjacent to the Site, government officials, and general community.

Generate the plans associated with the Work Plan for EPA review:

DUE THIRTY (30) DAYS AFTER NOTIFYING EPA OF THE NAME AND QUALIFICATIONS OF THE SUPERVISING CONTRACTOR

1. A Health and Safety Plan ("HASP"). As required by NCP §300.150, an OSHA-compliant, site-specific HASP shall be developed and implemented for the duration of field activities. All private employers are responsible for the health and safety of their own employees. Nothing in the Agreement or the SOW or any approved work plans shall relieve Respondent of its liability in this regard.

2. Description of how soil remaining in place will be sampled and covered by a cap to assure that proposed cleanup standards are being met; A Quality Assurance Project Plan ("QAPP") shall be developed for the purpose of assuring that all analytical results generated during the removal activities are of known quality. The QAPP shall include the name of the laboratory Respondent proposes to use to analyze samples, and shall also include EPA's standard method for the analysis (maximum 2-week turnaround time on sample analysis).

3. Provide a comprehensive Sampling and Analysis Plan ("SAP") for the purpose of assuring that all analytical results generated during the removal activities are of known quality and consistent with EPA Region I's QAPP.

D. IMPLEMENTATION OF THE REMOVAL ACTION WORK PLAN:

Upon Respondent's receipt of EPA's approval of the Removal Action Work Plan, Respondent shall implement the plan in accordance with the schedule contained in the approved plan.

E. WITHIN 45 DAYS AFTER RESPONDENT BELIEVES IT HAS COMPLETED ALL OF THE WORK REQUIRED UNDER THE AGREEMENT AND THE SOW, RESPONDENT SHALL SUBMIT A COMPLETION OF WORK REPORT TO EPA FOR REVIEW AND APPROVAL, AS DESCRIBED BELOW:

The Completion of Work Report shall include, at a minimum, the following:

1. An estimate of the costs Respondent incurred in performing the removal action.

2. A list of all activities required by the Agreement and the SOW, and certification that each has been completed in accordance with the Agreement, the SOW and the approved work plans.

3. Photographic documentation of the pre-removal condition of the site as well as photographic documentation of pertinent site activities. This includes any and all media used to document the progression of the site cleanup.

4. Tabular summary of all analytical results of soil samples in a format that is consistent with the Work Plan.

5. Site sketches showing initial conditions, completion of work at interim milestones, and final site conditions.

6. A legible copy of shipping papers for all shipments of hazardous materials.

7. Tabular summary of all waste shipped or treated, noting at a minimum, for each calendar month, the Department of Transportation shipping name, waste codes (if any), the number of units shipped (i.e., drums, roll-offs), and the weight (where available).

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 1

IN THE MATTER OF: PARKER STREET WASTE SITE NEW BEDFORD, MASSACHUSETTS	ADMINISTRATIVE SETTLEMENT AGREEMENT AND ORDER ON CONSENT FOR REMOVAL ACTION
M.P. PROPERTIES, LLC Respondent	U.S. EPA REGION 1 DOCKET NO. CERCLA-01-2011-0045
	Proceeding Under Sections 104, 106(a), 107 and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, 42 U.S.C. §§ 9604, 9606(a), 9607 and 9622

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I. JURISDICTION AND GENERAL PROVISIONS

1. This Administrative Settlement Agreement and Order on Consent ("Settlement Agreement" is entered into voluntarily by the United States Environmental Protection Agency ("EPA") and M.P. Properties, LLC ("Respondent"). This Settlement Agreement provides for the performance of a removal action by Respondent and the reimbursement of certain costs incurred by the United States at or in connection with 157/159 Hunter Street, owned by Respondent M.P. Properties, LLC. This property is located within the Parker Street Waste Site, in New Bedford, Massachusetts.

2. This Settlement Agreement is issued under the authority vested in the President of the United States by Sections 104, 106(a), 107 and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9604, 9606(a), 9607 and 9622, as amended ("CERCLA").

3. EPA has notified the Commonwealth of Massachusetts (the "Commonwealth") of this action pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

4. EPA and Respondent recognize that this Settlement Agreement has been negotiated in good faith and that the actions undertaken by Respondent in accordance with this Settlement Agreement do not constitute an admission of any liability. Respondent does not admit, and retains the right to controvert in any subsequent proceedings other than proceedings to implement or enforce this Settlement Agreement, the validity of the findings of facts, conclusions of law, and determinations in Sections IV and V of this Settlement Agreement. Respondent agrees to comply with and be bound by the terms of this Settlement Agreement and further agrees that it will not contest the basis or validity of this Settlement Agreement or its terms.

II. PARTIES BOUND

5. This Settlement Agreement applies to and is binding upon EPA and upon Respondent and its heirs, successors and assigns. Any change in ownership or corporate status of Respondent including, but not limited to, any transfer of assets or real or personal property shall not alter such Respondent's responsibilities under this Settlement Agreement.

6. Respondent is jointly and severally liable for carrying out all activities required by this Settlement Agreement.

7. Respondent shall ensure that its contractors, subcontractors, and representatives receive a copy of this Settlement Agreement and comply with this Settlement Agreement. Respondent shall be responsible for any noncompliance with this Settlement Agreement.

III. DEFINITIONS

8. Unless otherwise expressly provided in this Settlement Agreement, terms used in this Settlement Agreement which are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in CERCLA or in such regulations. Whenever terms listed below are used in this Settlement Agreement or in the appendices attached hereto and incorporated hereunder, the following definitions shall apply:

a. "Action Memorandum" shall mean the EPA Action Memorandum relating to the Site signed on August 26, 2010, by the Regional Administrator, EPA Region 1, or his delegate, and all attachments thereto. The Action Memorandum is attached as Appendix A.

b. "CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601, et seq.

c. "Commonwealth" shall mean the Commonwealth of Massachusetts.

d. "Day" shall mean a calendar day. In computing any period of time under this Settlement Agreement, where the last day would fall on a Saturday, Sunday, or Federal holiday, the period shall run until the close of business of the next working day.

e. "Effective Date" shall be the effective date of this Settlement Agreement as provided in Section XXXI.

f. "EPA" shall mean the United States Environmental Protection Agency and any successor departments or agencies of the United States.

g. "Future Response Costs" shall mean all costs, including, but not limited to, direct and indirect costs, that the United States incurs in reviewing or developing plans, reports and other items pursuant to this Settlement Agreement, verifying the Work, or otherwise implementing, overseeing, or enforcing this Settlement Agreement, including but not limited to, payroll costs, contractor costs, travel costs, laboratory costs, the costs incurred pursuant to Paragraph 26 (costs and attorneys fees and any monies paid to secure access, including the amount of just compensation), Paragraph 35 (emergency response) or Paragraph 59 (work takeover).

h. "Interest" shall mean interest at the rate specified for interest on investments of the EPA Hazardous Substance Superfund established by 26 U.S.C. § 9507, compounded annually on October 1 of each year, in accordance with 42 U.S.C. § 9607(a). The applicable rate of interest shall be the rate in effect at the time the interest accrues. The rate of interest is subject to change on October 1 of each year.

i. "MassDEP" shall mean the Massachusetts Department of Environmental Protection and any successor departments or agencies of the Commonwealth.

j. "National Contingency Plan" or "NCP" shall mean the National Oil and Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, and any amendments thereto.

k. "Settlement Agreement" shall mean this Administrative Settlement Agreement and Order on Consent and all appendices attached hereto (listed in Section XXX). In the event of conflict between this Settlement Agreement and any appendix, this Settlement Agreement shall control.

l. "Paragraph" shall mean a portion of this Settlement Agreement identified by an Arabic numeral.

m. "Parties" shall mean EPA and Respondent.

n. "RCRA" shall mean the Solid Waste Disposal Act, as amended, 42 U.S.C. §§ 6901, et seq. (also known as the Resource Conservation and Recovery Act).

o. "Respondent" shall mean M.P. Properties, LLC and its successors and assigns.

p. "Section" shall mean a portion of this Settlement Agreement identified by a Roman numeral.

q. "Site" shall mean property located at 157/59 Hunter Street, identified as Map 63, Lot 102, in New Bedford, Massachusetts, which is a portion of the Parker Street Waste Site, depicted generally on the map attached as Appendix B.

r. "Statement of Work" or "SOW" shall mean the statement of work for implementation of the removal action at the Site, as set forth in Appendix C to this Settlement Agreement, and any modifications made thereto in accordance with this Settlement Agreement.

s. "Waste Material" shall mean 1) any "hazardous substance" under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); 2) any pollutant or contaminant under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); and 3) any "solid waste" under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27).

t. "Work" shall mean all activities Respondent is required to perform under this Settlement Agreement.

IV. FINDINGS OF FACT

9. Respondent.

a. Respondent M.P. Properties, LLC is a Massachusetts Limited Liability Company, managed by Antonio J. Pereira, with its usual place of business at 157/159 Hunter Street, New Bedford, Massachusetts.

b. By a letter dated September 29, 2010, EPA notified M.P. Properties, LLC of its status as potentially responsible party ("PRP"), as a current owner of the Site, and afforded it the opportunity to perform or finance necessary removal actions.

c. By a letter dated October 15, 2010, Respondent informed EPA that it may be willing to undertake removal activities at the Site.

10. Site Description.

a. The Site owned by Respondent M.P. Properties, LLC is a residential apartment complex located at 157/159 Hunter Street, identified in the Assessors Office for the City of New Bedford, Bristol County, Massachusetts as Map 63, Lot 102.

11. Site History.

a. The Parker Street Waste Site includes the property owned by M.P. Properties, LLC, as well as additional municipal, commercial, and residential properties. The estimated extent of the Parker Street Waste Site, based upon data generated to date, is believed to be bounded to the north by Durfee Street, to the east by Liberty Street and the Oak Grove Cemetery, to the south by Hillman Street, and to the west by Summit Street.

b. Since the early 1900s, the City of New Bedford owned and/or operated a dump at the Parker Street Waste Site where ash, refuse, and other waste materials from New Bedford and the surrounding areas were disposed.

c. EPA and MassDEP mobilized to the Parker Street Waste Site on April 19, 2010. Field sampling activities for the preliminary assessment/site investigation ("PA/SI") began on April 26, 2010 and concluded in early June 2010. The investigation of the property owned by the Respondent identified polycyclic aromatic hydrocarbons, barium, chromium, and lead, one or more of which hazardous substances was determined by EPA and MassDEP to pose an imminent and substantial endangerment to public health.

d. The PA/SI was concluded and a time-critical removal action was recommended in the Parker Street Waste Site Investigation Closure Memorandum dated August 19, 2010. Additional residential and commercial properties are scheduled to be sampled to determine whether there is an immediate threat present to human health and/or the environment, and to define the extent of the Parker Street Waste Site boundaries.

e. On August 26, 2010, EPA issued an Action Memorandum (Appendix A) which is incorporated herein.

f. By letter dated September 29, 2010, EPA notified M.P. Properties, LLC of its status as potentially responsible party ("PRP"), as a current owner of the Site, and afforded it the opportunity to perform or finance necessary removal actions.

g. Respondent, with the approval of EPA and MassDEP, previously performed initial response actions to mitigate an imminent and substantial endangerment determined to exist at the Site.

V. <u>CONCLUSIONS OF LAW AND DETERMINATIONS</u>

12. Based on the Findings of Fact set forth above, and the Administrative Record supporting this removal action, EPA has determined that:

a. The M.P. Properties, LLC apartment complex located at 157/159 Hunter Street in New Bedford, Massachusetts is a "facility" as defined by Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

b. The contamination found at the Site, as identified in the Findings of Fact above, includes "hazardous substances" as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

c. Respondent is a "person" as defined by Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

d. Respondent is a responsible party under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a), and is jointly and severally liable for performance of response action and for response costs incurred and to be incurred at the Site.

i. Respondent M.P. Properties, LLC is the "owner" and/or "operator of a facility, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and within the meaning of Section 107(a)(1) of CERCLA, 42 U.S.C. § 9607(a)(1).

e. The conditions described in the Action Memorandum constitute an actual or threatened "release" of a hazardous substance from the facility as defined by Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

f. The removal action required by this Settlement Agreement is necessary to protect the public health, welfare, or the environment and, if carried out in compliance with the terms of this Settlement Agreement, will be consistent with the NCP, as provided in Section 300.700(c)(3)(ii) of the NCP.

VI. <u>SETTLEMENT AGREEMENT AND ORDER</u>

Based upon the foregoing Findings of Fact, Conclusions of Law, Determinations, and the Administrative Record for this Site, it is hereby Ordered and Agreed that Respondent shall comply with all provisions of this Settlement Agreement, including, but not limited to, all attachments to this Settlement Agreement and all documents incorporated by reference into this Settlement Agreement.

VII. DESIGNATION OF CONTRACTOR, PROJECT COORDINATOR, AND ON-SCENE COORDINATOR

13. Respondent shall retain one or more contractors to perform the Work and shall notify EPA of the name(s) and qualifications of such contractor(s) within 10 days of the Effective Date. Respondent shall also notify EPA of the name(s) and qualification(s) of any other contractor(s) or subcontractor(s) retained to perform the Work at least 7 days prior to commencement of such Work. EPA retains the right to disapprove of any or all of the contractors and/or subcontractors retained by Respondent. If EPA disapproves of a selected contractor, Respondent shall retain a different contractor and shall notify EPA of that contractor's name and qualifications within 7 days of EPA's disapproval.

14. Within 10 days after the Effective Date, Respondent shall designate a Project Coordinator who shall be responsible for administration of all actions by Respondent required by this Settlement Agreement and shall submit to EPA the designated Project Coordinator's name, address, telephone number, and qualifications. To the greatest extent possible, the Project Coordinator shall be present on Site or readily available during Site work. EPA retains the right to disapprove of the designated Project Coordinator. If EPA disapproves of the designated Project Coordinator, Respondent shall retain a different Project Coordinator and shall notify EPA of that person's name, address, telephone number, and qualifications within 7 days following EPA's disapproval. Receipt by Respondent's Project Coordinator of any notice or communication from EPA relating to this Settlement Agreement shall constitute receipt by Respondent.

15. EPA has designated Mia Pasquerella of the Emergency Planning and Response Branch, Region 1, as its On-Scene Coordinator ("OSC"). Except as otherwise provided in this Settlement Agreement, Respondent shall direct all submissions required by this Settlement Agreement to the OSC at the following address:

Mia Pasquerella
U.S. Environmental Protection Agency, Region 1
Emergency Response and Removal Section II
5 Post Office Square, Suite 100
Mail Code OSRRR02-2
Boston, MA 02109-3912
TEL (617) 918-1120
FAX (617) 918-0120

Email: pasquerella.mia@epa.gov

16. EPA and Respondent shall have the right, subject to Paragraph 14, to change its respective designated OSC or Project Coordinator. Respondent shall notify EPA seven days before such a change is made. The initial notification may be made orally, but shall be promptly followed by a written notice.

VIII. WORK TO BE PERFORMED

17. Respondent shall perform, at a minimum, all actions necessary to implement the Statement of Work as it relates to the Site. The actions to be implemented generally include, but are not limited to, the following:

a. Site preparation;

b. Providing security measures to prevent unauthorized access onto areas of the Site that are subject to the removal action for the duration of the removal action;

c. Addressing contaminated soils, including, if deemed necessary, excavating and disposing of contaminated soils at an EPA-approved disposal facility;

d. Installing monitoring and/or engineering controls; and

e. Restoring the Site, including backfilling, grading, and re-vegetating.

All work performed by the Respondent shall be conducted in accordance with CERCLA, the NCP, applicable guidance documents provided by EPA, and the provisions of this Settlement Agreement including any standards, specifications, and time schedules contained in the Statement of Work or specified by the OSC.

18. Work Plan and Implementation.

a. Within 14 days after the Effective Date, Respondent shall submit to EPA for approval a draft Work Plan for performing the removal action generally described in Paragraph 17 above. The draft Work Plan shall provide a description of, and an expeditious schedule for, the actions required by this Settlement Agreement.

b. EPA may approve, disapprove, require revisions to, or modify the draft Work Plan in whole or in part. If EPA requires revisions, Respondent shall submit a revised draft Work Plan within 7 days of receipt of EPA's notification of the required revisions. Respondent shall implement the Work Plan as approved in writing by EPA in accordance with the schedule approved by EPA. Once approved, or approved with modifications, the Work Plan, the schedule, and any subsequent modifications shall be incorporated into and become fully enforceable under this Settlement Agreement.

c. Respondent shall not commence any Work except in conformance with the terms of this Settlement Agreement. Respondent shall not commence implementation of the Work Plan developed hereunder until receiving written EPA approval pursuant to Paragraph 18(b).

19. Health and Safety Plan. Within 30 days after the Effective Date, Respondent shall submit for EPA review and comment a plan that ensures the protection of the public health and safety during performance of on-Site work under this Settlement Agreement. This plan shall be prepared in accordance with EPA's Standard Operating Safety Guide (PUB 9285.1-03, PB 92-963414, June 1992). In addition, the plan shall comply with all currently applicable Occupational Safety and Health Administration ("OSHA") regulations found at 29 C.F.R. Part 1910. If EPA determines that it is appropriate, the plan shall also include contingency planning. Respondent shall incorporate all changes to the plan recommended by EPA and shall implement the plan during the pendency of the removal action.

20. Quality Assurance and Sampling.

a. All sampling and analyses performed pursuant to this Settlement Agreement shall conform to EPA direction, approval, and guidance regarding sampling, quality assurance/quality control ("QA/QC"), data validation, and chain of custody procedures. Respondent shall ensure that the laboratory used to perform the analyses participates in a QA/QC program that complies with the appropriate EPA guidance. Respondent shall follow, as appropriate, "Quality Assurance/Quality Control Guidance for Removal Activities: Sampling QA/QC Plan and Data Validation Procedures" (OSWER Directive No. 9360.4-01, April 1, 1990), as guidance for QA/QC and sampling. Respondent shall only use laboratories that have a documented Quality System that complies with ANSI/ASQC E-4 1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs" (American National Standard, January 5, 1995), and "EPA Requirements for Quality Management Plans (QA/R-2) (EPA/240/B-01/002, March 2001)," or equivalent documentation as determined by EPA. EPA may consider laboratories accredited under the National Environmental Laboratory Accreditation Program ("NELAP") as meeting the Quality System requirements.

b. Upon request by EPA, Respondent shall have such a laboratory analyze samples submitted by EPA for QA monitoring. Respondent shall provide to EPA the QA/QC procedures followed by all sampling teams and laboratories performing data collection and/or analysis.

c. Upon request by EPA, Respondent shall allow EPA or its authorized representatives to take split and/or duplicate samples. Respondent shall notify EPA not less than 7 days in advance of any sample collection activity, unless shorter notice is agreed to by EPA. EPA shall have the right to take any additional samples that EPA deems necessary. Upon request, EPA shall allow Respondent to take split or duplicate samples of any samples it takes as part of its oversight of Respondent's implementation of the Work.

21. Post-Removal Site Control. In accordance with the Work Plan schedule, or as otherwise directed by EPA, Respondent shall submit a proposal for post-removal site control consistent with Section 300.415(l) of the NCP and OSWER Directive No. 9360.2-02. Upon EPA approval, Respondent shall implement such controls and shall provide EPA with documentation of all post-removal site control arrangements.

22. Reporting.

a. Respondent shall submit a written progress report to EPA concerning actions undertaken pursuant to this Settlement Agreement every 30th day after the date of receipt of EPA's approval of the Work Plan until termination of this Settlement Agreement, unless otherwise directed in writing by the OSC. These reports shall describe all significant developments during the preceding period, including the actions performed and any problems encountered, analytical data received during the reporting period, and the developments anticipated during the next reporting period, including a schedule of actions to be performed, anticipated problems, and planned resolutions of past or anticipated problems.

b. Respondent shall submit 2 copies of all plans, reports or other submissions required by this Settlement Agreement, the Statement of Work, or any approved work plan. Respondent shall submit a copy of such documents in electronic form.

c. Any Respondent who owns or controls property at the Site shall, at least 30 days prior to the conveyance of any interest in real property at the Site, give written notice to the transferee that the property is subject to this Settlement Agreement and written notice to EPA and the State of the proposed conveyance, including the name and address of the transferee. Respondent who owns or controls property at the Site also agrees to require that its successors comply with the immediately preceding sentence and Sections IX (Site Access) and X (Access to Information).

23. Final Report. Within 60 days after completion of all Work required by this Settlement Agreement, Respondent shall submit for EPA review and approval a final report summarizing the actions taken to comply with this Settlement Agreement. The final report shall conform, at a minimum, with the requirements set forth in Section 300.165 of the NCP entitled "OSC Reports." The final report shall include a good faith estimate of total costs or a statement of actual costs incurred in complying with the Settlement Agreement, a listing of quantities and types of materials removed off-Site or handled on-Site, a discussion of removal and disposal options considered for those materials, a listing of the ultimate destination(s) of those materials, a presentation of the analytical results of all sampling and analyses performed, and accompanying appendices containing all relevant documentation generated during the removal action (*e.g.*, manifests, invoices, bills, contracts, and permits). The final report shall also include the

following certification signed by a person who supervised or directed the preparation of that report:

"Under penalty of law, I certify that to the best of my knowledge, after appropriate inquiries of all relevant persons involved in the preparation of the report, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

24. Off-Site Shipments.

a. Respondent shall, prior to any off-Site shipment of Waste Material from the Site to an out-of-state waste management facility, provide written notification of such shipment of Waste Material to the appropriate state environmental official in the receiving facility's state and to the On-Scene Coordinator. However, this notification requirement shall not apply to any off-Site shipments when the total volume of all such shipments will not exceed 10 cubic yards.

i. Respondent shall include in the written notification the following information: 1) the name and location of the facility to which the Waste Material is to be shipped; 2) the type and quantity of the Waste Material to be shipped; 3) the expected schedule for the shipment of the Waste Material; and 4) the method of transportation. Respondent shall notify the state in which the planned receiving facility is located of major changes in the shipment plan, such as a decision to ship the Waste Material to another facility within the same state, or to a facility in another state.

ii. The identity of the receiving facility and state will be determined by Respondent following the award of the contract for the removal action. Respondent shall provide the information required by Paragraph 24(a) and 24(b) as soon as practicable after the award of the contract and before the Waste Material is actually shipped.

b. Before shipping any hazardous substances, pollutants, or contaminants from the Site to an off-site location, Respondent shall obtain EPA's certification that the proposed receiving facility is operating in compliance with the requirements of CERCLA Section 121(d)(3), 42 U.S.C. § 9621(d)(3), and 40 C.F.R. § 300.440. Respondent shall only send hazardous substances, pollutants, or contaminants from the Site to an off-site facility that complies with the requirements of the statutory provision and regulation cited in the preceding sentence.

IX. SITE ACCESS

25. If the Site, or any other property where access is needed to implement this Settlement Agreement, is owned or controlled by Respondent, Respondent shall, commencing on the Effective Date, provide EPA, the Commonwealth of Massachusetts,

and their representatives, including contractors, with access at all reasonable times to the Site, or such other property, for the purpose of conducting any activity related to this Settlement Agreement.

26. Where any action under this Settlement Agreement is to be performed in areas owned by or in possession of someone other than Respondent, Respondent shall use its best efforts to obtain all necessary access agreements within 21 days after the Effective Date, or as otherwise specified in writing by the OSC. Respondent shall immediately notify EPA if after using its best efforts it is unable to obtain such agreements. For purposes of this Paragraph, "best efforts" includes the payment of reasonable sums of money in consideration of access. Respondent shall describe in writing its efforts to obtain access. EPA may then assist Respondent in gaining access, to the extent necessary to effectuate the response actions described in this Settlement Agreement, using such means as EPA deems appropriate. Respondent shall reimburse EPA for all costs and attorney's fees incurred by the United States in obtaining such access, in accordance with the procedures in Section XV (Payment of Response Costs).

27. Notwithstanding any provision of this Settlement Agreement, EPA and the Commonwealth retain all of their access authorities and rights, as well as all of their rights to require land/water use restrictions, including enforcement authorities related thereto, under CERCLA, RCRA, and any other applicable statutes or regulations.

X. ACCESS TO INFORMATION

28. Respondent shall provide to EPA and the Commonwealth, upon request, copies of all documents and information within its possession or control or that of its contractors or agents relating to activities at the Site or to the implementation of this Settlement Agreement, including, but not limited to, sampling, analysis, chain of custody records, manifests, trucking logs, receipts, reports, sample traffic routing, correspondence, or other documents or information related to the Work. Respondent shall also make available to EPA and the Commonwealth, for purposes of investigation, information gathering, or testimony, its employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Work.

29. Respondent may assert business confidentiality claims covering part or all of the documents or information submitted to EPA and the Commonwealth under this Settlement Agreement to the extent permitted by and in accordance with Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7), and 40 C.F.R. § 2.203(b). Documents or information determined to be confidential by EPA will be afforded the protection specified in 40 C.F.R. Part 2, Subpart B. If no claim of confidentiality accompanies documents or information when they are submitted to EPA and the Commonwealth, or if EPA has notified Respondent that the documents or information are not confidential under the standards of Section 104(e)(7) of CERCLA or 40 C.F.R. Part 2, Subpart B, the public may be given access to such documents or information without further notice to Respondent.

30. Respondent may assert that certain documents, records and other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If the Respondent asserts such a privilege in lieu of providing documents, it shall provide EPA and the Commonwealth with the following: 1) the title of the document, record, or information; 2) the date of the document, record, or information; 3) the name and title of the author of the document, record, or information; 4) the name and title of each addressee and recipient; 5) a description of the contents of the document, record, or information; and 6) the privilege asserted by Respondent. However, no documents, reports or other information created or generated pursuant to the requirements of this Settlement Agreement shall be withheld on the grounds that they are privileged.

31. No claim of confidentiality shall be made with respect to any data, including, but not limited to, all sampling, analytical, monitoring, hydrogeologic, scientific, chemical, or engineering data, or any other documents or information evidencing conditions at or around the Site.

XI. RECORD RETENTION

32. Until 10 years after Respondent's receipt of EPA's notification pursuant to Section XXIX (Notice of Completion of Work), Respondent shall preserve and retain all non-identical copies of records and documents (including records or documents in electronic form) now in its possession or control or which come into its possession or control that relate in any manner to the performance of the Work or the liability of any person under CERCLA with respect to the Site, regardless of any corporate retention policy to the contrary. Until 10 years after Respondent's receipt of EPA's notification pursuant to Section XXIX (Notice of Completion of Work), Respondent shall also instruct its contractors and agents to preserve all documents, records, and information of whatever kind, nature or description relating to performance of the Work.

33. At the conclusion of this document retention period, Respondent shall notify EPA and the Commonwealth at least 90 days prior to the destruction of any such records or documents, and, upon request by EPA or the Commonwealth, Respondent shall deliver any such records or documents to EPA or the Commonwealth. Respondent may assert that certain documents, records and other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If Respondent asserts such a privilege, it shall provide EPA or the Commonwealth with the following: 1) the title of the document, record, or information; 2) the date of the document, record, or information; 3) the name and title of the author of the document, record, or information; 4) the name and title of each addressee and recipient; 5) a description of the subject of the document, record, or information; and 6) the privilege asserted by Respondent. However, no documents, reports or other information created or generated pursuant to the requirements of this Settlement Agreement shall be withheld on the grounds that they are privileged.

34. Respondent hereby certifies individually that to the best of its knowledge and belief, after thorough inquiry, it has not altered, mutilated, discarded, destroyed or otherwise disposed of any records, documents or other information (other than identical copies) relating to its potential liability regarding the Site since notification of potential liability by EPA or the State or the filing of suit against it regarding the Site and that it has fully complied with any and all EPA requests for information pursuant to Sections 104(e) and 122(e) of CERCLA, 42 U.S.C. §§ 9604(e) and 9622(e), and Section 3007 of RCRA, 42 U.S.C. § 6927.

XII. COMPLIANCE WITH OTHER LAWS

Respondent shall perform all actions required pursuant to this Settlement Agreement in accordance with all applicable state and federal laws and regulations except as provided in Section 121(e) of CERCLA, 42 U.S.C. § 6921(e), and 40 C.F.R. §§ 300.400(e) and 300.415(j). In accordance with 40 C.F.R. § 300.415(j), all on-Site actions required pursuant to this Settlement Agreement shall, to the extent practicable, as determined by EPA, considering the exigencies of the situation, attain applicable or relevant and appropriate requirements ("ARARs") under federal environmental or state environmental or facility siting laws.

XIII. EMERGENCY RESPONSE AND NOTIFICATION OF RELEASE

35. In the event of any action or occurrence during performance of the Work which causes or threatens a release of Waste Material from the Site that constitutes an emergency situation or may present an immediate threat to public health or welfare or the environment, Respondent shall immediately take all appropriate action. Respondent shall take these actions in accordance with all applicable provisions of this Settlement Agreement, including, but not limited to, the Health and Safety Plan, in order to prevent, abate or minimize such release or endangerment caused or threatened by the release. Respondent shall also immediately notify the OSC or, in the event of his/her unavailability, shall notify the National Response Center, by telephone at (800) 424-8802 and/or call the 24-hour Emergency OSC telephone number (617) 723-8928 of the incident or Site conditions. In the event that Respondent fails to take appropriate response action as required by this Paragraph, and EPA takes such action instead, Respondent shall reimburse EPA all costs of the response action not inconsistent with the NCP pursuant to Section XV (Payment of Response Costs).

36. In addition, in the event of any release of a hazardous substance from the Site, Respondent shall immediately notify the OSC at 617-918-1120 and the National Response Center at (800) 424-8802. Respondent shall submit a written report to EPA within 7 days after each release, setting forth the events that occurred and the measures taken or to be taken to mitigate any release or endangerment caused or threatened by the release and to prevent the reoccurrence of such a release. This reporting requirement is in addition to, and not in lieu of, reporting under Section 103(c) of CERCLA, 42 U.S.C. §

9603(c), and Section 304 of the Emergency Planning and Community Right-To-Know Act of 1986, 42 U.S.C. § 11004, et seq.

XIV. AUTHORITY OF ON-SCENE COORDINATOR

37. The OSC shall be responsible for overseeing Respondent's implementation of this Settlement Agreement. The OSC shall have the authority vested in an OSC by the NCP, including the authority to halt, conduct, or direct any Work required by this Settlement Agreement, or to direct any other removal action undertaken at the Site. Absence of the OSC from the Site shall not be cause for stoppage of work unless specifically directed by the OSC.

XV. PAYMENT OF FUTURE RESPONSE COSTS

38. Respondent shall pay EPA for all Future Response Costs not inconsistent with the NCP. On a periodic basis, EPA will send Respondent a bill requiring payment that includes direct and indirect costs incurred by EPA and its contractors. Respondent shall make all payments within forty-five (45) days of receipt of each bill requiring payment, except as otherwise provided in Paragraph 39 of this Settlement Agreement.

a. Respondent shall make all payments required by this Paragraph by a certified cashier's check, electronic funds transfer, or checks payable to "EPA Hazardous Superfund," referencing the name and address of the party(ies) making payment and EPA Site/Spill ID number 01GB. Respondent shall send the check(s) to:

U.S. Environmental Protection Agency
Superfund Payments
Cincinnati Finance Center
P.O. Box 979076
St Louis, MO 63197-9000

Electronic funds transfers should be directed to the Federal Reserve Bank of New York at:

New York, NY 10045
ABA No.: 021030004
Account No.: 68010727
SWIFT address: FRNYUS33
Field Tag 4200 of the Fedwire message should read:
D 68010727 Environmental Protection Agency"

Any electronic funds transfers received at the EPA lockbox bank after 10:30 A.M. (Eastern Standard Time) will be credited to the next business day. Payment shall be accompanied by a statement identifying the names and addresses of the Settling

Parties, the Site Name, EPA Region 1 and Site/Spill ID Number 01GB, and the EPA docket number for this action.

b. At the time of payment, Respondent shall send notice that such payment has been made to:

Ann Gardner
U.S. Environmental Protection Agency
5 Post Office Square, Suite 100
Boston, MA 02109-3912

c. In the event that the payments for Future Response Costs are not made within 45 days of Respondent's receipt of a bill, Respondent shall pay Interest on the unpaid balance. The Interest on Future Response Costs shall begin to accrue on the date of the bill and shall continue to accrue until the date of payment. Payments of Interest made under this Paragraph shall be in addition to such other remedies or sanctions available to the United States by virtue of Respondent's failure to make timely payments under this Section, including but not limited to, payment of stipulated penalties pursuant to Section XVIII.

39. Respondent may dispute all or part of a bill for Future Response Costs submitted under this Settlement Agreement, if Respondent alleges that EPA has made an accounting error, or if Respondent alleges that a cost item is inconsistent with the NCP. If any dispute over costs is resolved before payment is due, the amount due will be adjusted as necessary. If the dispute is not resolved before payment is due, Respondent shall pay the full amount of the uncontested costs to EPA as specified in Paragraph 38 on or before the due date. Within the same time period, Respondent shall pay the full amount of the contested costs into an interest-bearing escrow account. Respondent shall simultaneously transmit a copy of both checks to the persons listed in Paragraph 38(b) above. Respondent shall ensure that the prevailing party or parties in the dispute shall receive the amount upon which they prevailed from the escrow funds plus interest within fourteen (14) days after the dispute is resolved.

XVI. DISPUTE RESOLUTION

40. Unless otherwise expressly provided for in this Settlement Agreement, the dispute resolution procedures of this Section shall be the exclusive mechanism for resolving disputes arising under this Settlement Agreement. The Parties shall attempt to resolve any disagreements concerning this Settlement Agreement expeditiously and informally.

41. If Respondent objects to any EPA action taken pursuant to this Settlement Agreement, including billings for Future Response Costs, it shall notify EPA in writing of its objection(s) within five (5) working days of such action, unless the objection(s) has/have been resolved informally. EPA and Respondent shall have five (5) working days from EPA's receipt of Respondent's written objection(s) to resolve the dispute

through formal negotiations (the "Negotiation Period"). The Negotiation Period may be extended at the sole discretion of EPA.

42. Any agreement reached by the parties pursuant to this Section shall be in writing and shall, upon signature by both parties, be incorporated into and become an enforceable part of this Settlement Agreement. If the Parties are unable to reach an agreement within the Negotiation Period, an EPA management official at the Branch Chief level or higher will issue a written decision on the dispute to Respondent. EPA's decision shall be incorporated into and become an enforceable part of this Settlement Agreement. Respondent's obligations under this Settlement Agreement shall not be tolled by submission of any objection for dispute resolution under this Section. Following resolution of the dispute, as provided by this Section, Respondent shall fulfill the requirement that was the subject of the dispute in accordance with the agreement reached or with EPA's decision, whichever occurs.

XVII. FORCE MAJEURE

43. Respondent agrees to perform all requirements of this Settlement Agreement within the time limits established under this Settlement Agreement, unless the performance is delayed by a *force majeure*. For purposes of this Settlement Agreement, a *force majeure* is defined as any event arising from causes beyond the control of Respondent, or of any entity controlled by Respondent, including but not limited to its contractors and subcontractors, which delays or prevents performance of any obligation under this Settlement Agreement despite Respondent's best efforts to fulfill the obligation. *Force majeure* does not include financial inability to complete the Work or increased cost of performance or a failure to attain performance standards/action levels set forth in the Action Memorandum.

44. If any event occurs or has occurred that may delay the performance of any obligation under this Settlement Agreement, whether or not caused by a *force majeure* event, Respondent shall notify EPA orally within 48 hours of when Respondent first knew that the event might cause a delay. Within two (2) days thereafter, Respondent shall provide to EPA in writing an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; Respondent's rationale for attributing such delay to a *force majeure* event if it intends to assert such a claim; and a statement as to whether, in the opinion of Respondent, such event may cause or contribute to an endangerment to public health, welfare or the environment. Failure to comply with the above requirements shall preclude Respondent from asserting any claim of *force majeure* for that event for the period of time of such failure to comply and for any additional delay caused by such failure.

45. If EPA agrees that the delay or anticipated delay is attributable to a *force majeure* event, the time for performance of the obligations under this Settlement Agreement that

are affected by the *force majeure* event will be extended by EPA for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the *force majeure* event shall not, of itself, extend the time for performance of any other obligation. If EPA does not agree that the delay or anticipated delay has been or will be caused by a *force majeure* event, EPA will notify Respondent in writing of its decision. If EPA agrees that the delay is attributable to a *force majeure* event, EPA will notify Respondent in writing of the length of the extension, if any, for performance of the obligations affected by the *force majeure* event.

XVIII. STIPULATED PENALTIES

46. Respondent shall be liable to EPA for stipulated penalties in the amounts set forth in Paragraphs 47 and 48 for failure to comply with the requirements of this Settlement Agreement specified below, unless excused under Section XVII (*Force Majeure*). "Compliance" by Respondent shall include completion of the activities under this Settlement Agreement or any work plan or other plan approved under this Settlement Agreement identified below in accordance with all applicable requirements of law, this Settlement Agreement, the SOW, and any plans or other documents approved by EPA pursuant to this Settlement Agreement and within the specified time schedules established by and approved under this Settlement Agreement.

47. Stipulated Penalty Amounts - Work.

a. The following stipulated penalties shall accrue per violation per day for any noncompliance identified in Paragraph 47(b):

Penalty Per Violation Per Day	Period of Noncompliance
$100.00	1st through 14th day
$175.00	15th through 30th day
$250.00	31st day and beyond

48. Stipulated Penalty Amounts - Reports. The following stipulated penalties shall accrue per violation per day for failure to submit timely or adequate reports [or other written documents] pursuant to Paragraphs 22 and 23:

Penalty Per Violation Per Day	Period of Noncompliance
$100.00	1st through 14th day
$175.00	15th through 30th day
$250.00	31st day and beyond

49. In the event that EPA assumes performance of a portion or all of the Work pursuant to Paragraph 59 (Work Takeover) of Section XX, Respondent shall be liable for a stipulated penalty in the amount of $15,000.

50. All penalties shall begin to accrue on the day after the complete performance is due or the day a violation occurs, and shall continue to accrue through the final day of the correction of the noncompliance or completion of the activity. However, stipulated penalties shall not accrue: 1) with respect to a deficient submission under Section VIII (Work to be Performed), during the period, if any, beginning on the 31st day after EPA's receipt of such submission until the date that EPA notifies Respondent of any deficiency; and 2) with respect to a decision by the EPA Management Official at the branch level or higher, under Paragraph 42 of Section XVI (Dispute Resolution), during the period, if any, beginning on the 21st day after the Negotiation Period begins until the date that the EPA management official issues a final decision regarding such dispute. Nothing in this Settlement Agreement shall prevent the simultaneous accrual of separate penalties for separate violations of this Settlement Agreement.

51. Following EPA's determination that Respondent has failed to comply with a requirement of this Settlement Agreement, EPA may give Respondent written notification of the failure and describe the noncompliance. EPA may send Respondent a written demand for payment of the penalties. However, penalties shall accrue as provided in the preceding Paragraph regardless of whether EPA has notified Respondent of a violation.

52. All penalties accruing under this Section shall be due and payable to EPA within 30 days of Respondent's receipt from EPA of a demand for payment of the penalties, unless Respondent invokes the dispute resolution procedures under Section XVI (Dispute Resolution). All payments to EPA under this Section shall be paid by certified or cashier's check(s) made payable to "EPA Hazardous Substances Superfund," shall be mailed to the U.S. Environmental Protection Agency, Superfund Payments, Cincinnati Finance Center, P.O. Box 979076, St. Louis, Missouri 63197-9000, shall indicate that the payment is for stipulated penalties, and shall reference the EPA Region and Site/Spill ID Number 01GB, the EPA Docket Number CERCLA-01-2011-0045, and the name and address of the party(ies) making payment. Copies of check(s) paid pursuant to this Section, and any accompanying transmittal letter(s), shall be sent to EPA as provided in Paragraph 38.

53. The payment of penalties shall not alter in any way Respondent's obligation to complete performance of the Work required under this Settlement Agreement.

54. Penalties shall continue to accrue during any dispute resolution period, but need not be paid until 15 days after the dispute is resolved by agreement or by receipt of EPA's decision.

55. If Respondent fails to pay stipulated penalties when due, EPA may institute proceedings to collect the penalties, as well as Interest. Respondent shall pay Interest on the unpaid balance, which shall begin to accrue on the date of demand made pursuant to Paragraph 52. Nothing in this Settlement Agreement shall be construed as prohibiting, altering, or in any way limiting the ability of EPA to seek any other remedies or sanctions

available by virtue of Respondent's violation of this Settlement Agreement or of the statutes and regulations upon which it is based, including, but not limited to, penalties pursuant to Sections 106(b) and 122(l) of CERCLA, 42 U.S.C. §§ 9606(b) and 9622(l), and punitive damages pursuant to Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3). Provided, however, that EPA shall not seek civil penalties pursuant to Section 106(b) or 122(l) of CERCLA or punitive damages pursuant to Section 107(c)(3) of CERCLA for any violation for which a stipulated penalty is provided in this Section, except in the case of a willful violation of this Settlement Agreement or in the event that EPA assumes performance of a portion or all of the Work pursuant to Section XX, Paragraph 59 (Work Takeover). Notwithstanding any other provision of this Section, EPA may, in its unreviewable discretion, waive any portion of stipulated penalties that have accrued pursuant to this Settlement Agreement.

XIX. COVENANT NOT TO SUE BY EPA

56. In consideration of the actions that will be performed and the payments that will be made by Respondent under the terms of this Settlement Agreement, and except as otherwise specifically provided in this Settlement Agreement, EPA covenants not to sue or to take administrative action against Respondent pursuant to Sections 106 and 107(a) of CERCLA, 42 U.S.C. §§ 9606 and 9607(a), for the Work and Future Response Costs. This covenant not to sue shall take effect upon the Effective Date and is conditioned upon the complete and satisfactory performance by Respondent of all obligations under this Settlement Agreement, including, but not limited to, payment of Future Response Costs pursuant to Section XV. This covenant not to sue extends only to Respondent and does not extend to any other person.

XX. RESERVATIONS OF RIGHTS BY EPA

57. Except as specifically provided in this Settlement Agreement, nothing in this Settlement Agreement shall limit the power and authority of EPA or the United States to take, direct, or order all actions necessary to protect public health, welfare, or the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances, pollutants or contaminants, or hazardous or solid waste on, at, or from the Site. Further, nothing in this Settlement Agreement shall prevent EPA from seeking legal or equitable relief to enforce the terms of this Settlement Agreement, from taking other legal or equitable action as it deems appropriate and necessary, or from requiring Respondents in the future to perform additional activities pursuant to CERCLA or any other applicable law.

58. The covenant not to sue set forth in Section XIX above does not pertain to any matters other than those expressly identified therein. EPA reserves, and this Settlement Agreement is without prejudice to, all rights against Respondent with respect to all other matters, including, but not limited to:

a. claims based on a failure by Respondent to meet a requirement of this Settlement Agreement;

b. liability for costs not included within the definition Future Response Costs;

c. liability for performance of response action other than the Work;

d. criminal liability;

e. liability for damages for injury to, destruction of, or loss of natural resources, and for the costs of any natural resource damage assessments;

f. liability arising from the past, present, or future disposal, release or threat of release of Waste Materials outside of the Site; and

g. liability for costs incurred or to be incurred by the Agency for Toxic Substances and Disease Registry related to the Site.

59. Work Takeover. In the event EPA determines that Respondent has ceased implementation of any portion of the Work, are seriously or repeatedly deficient or late in its performance of the Work, or are implementing the Work in a manner which may cause an endangerment to human health or the environment, EPA may assume the performance of all or any portion of the Work as EPA determines necessary. Respondent may invoke the procedures set forth in Section XVI (Dispute Resolution) to dispute EPA's determination that takeover of the Work is warranted under this Paragraph. Costs incurred by the United States in performing the Work pursuant to this Paragraph shall be considered Future Response Costs that Respondents shall pay pursuant to Section XV (Payment of Future Response Costs). Notwithstanding any other provision of this Settlement Agreement, EPA retains all authority and reserves all rights to take any and all response actions authorized by law.

XXI. COVENANT NOT TO SUE BY RESPONDENT

60. Respondent covenants not to sue and agrees not to assert any claims or causes of action against the United States, or its contractors or employees, with respect to the Work, Response Costs, or this Settlement Agreement, including, but not limited to:

a. any direct or indirect claim for reimbursement from the Hazardous Substance Superfund established by 26 U.S.C. § 9507, based on Sections 106(b)(2), 107, 111, 112, or 113 of CERCLA, 42 U.S.C. §§ 9606(b)(2), 9607, 9611, 9612, or 9613, or any other provision of law;

b. any claim arising out of response actions at or in connection with the Site, including any claim under the United States Constitution, the Constitution of the

Commonwealth, the Tucker Act, 28 U.S.C. § 1491, the Equal Access to Justice Act, 28 U.S.C. § 2412, as amended, or at common law; or

c. any claim against the United States pursuant to Sections 107 and 113 of CERCLA, 42 U.S.C. §§ 9607 and 9613, relating to the Work, or Response Costs.

61. Nothing in this Agreement shall be deemed to constitute approval or preauthorization of a claim within the meaning of Section 111 of CERCLA, 42 U.S.C. § 9611, or 40 C.F.R. § 300.700(d).

62. Respondent agrees not to assert any claims and to waive all claims or causes of action that it may have for all matters relating to the Site, including for contribution, against any person where the person's liability to Respondent with respect to the Site is based solely on having arranged for disposal or treatment, or for transport for disposal or treatment, of hazardous substances at the Site, or having accepted for transport for disposal or treatment of hazardous substances at the Site, if all or part of the disposal, treatment, or transport occurred before April 1, 2001, and the total amount of material containing hazardous substances contributed by such person to the Site was less than 110 gallons of liquid materials or 200 pounds of solid materials.

63. The waiver in Paragraph 62 shall not apply with respect to any defense, claim, or cause of action that a Respondent may have against any person meeting the above criteria if such person asserts a claim or cause of action relating to the Site against such Respondent. This waiver also shall not apply to any claim or cause of action against any person meeting the above criteria if EPA determines:

a. that such person has failed to comply with any EPA requests for information or administrative subpoenas issued pursuant to Section 104(e) or 122(e) of CERCLA, 42 U.S.C. §§ 9604(e) or 9622(e), or Section 3007 of the Solid Waste Disposal Act (also known as the Resource Conservation and Recovery Act or "RCRA"), 42 U.S.C. § 6972, or has impeded or is impeding, through action or inaction, the performance of a response action or natural resource restoration with respect to the Site, or has been convicted of a criminal violation for the conduct to which this waiver would apply and that conviction has not been vitiated on appeal or otherwise; or

b. that the materials containing hazardous substances contributed to the Site by such person have contributed significantly, or could contribute significantly, either individually or in the aggregate, to the cost of response action or natural resource restoration at the Site.

XXII. OTHER CLAIMS

64. By issuance of this Settlement Agreement, the United States and EPA assume no liability for injuries or damages to persons or property resulting from any acts or omissions of Respondent. The United States or EPA shall not be deemed a party to any

contract entered into by Respondent or its directors, officers, employees, agents, successors, representatives, assigns, contractors, or consultants in carrying out actions pursuant to this Settlement Agreement.

65. Except as expressly provided in Section XIX (Covenant Not to Sue by EPA), nothing in this Settlement Agreement constitutes a satisfaction of or release from any claim or cause of action against Respondent or any person not a party to this Settlement Agreement, for any liability such person may have under CERCLA, other statutes, or common law, including but not limited to any claims of the United States for costs, damages and interest under Sections 106 and 107 of CERCLA, 42 U.S.C. §§ 9606 and 9607.

66. No action or decision by EPA pursuant to this Settlement Agreement shall give rise to any right to judicial review, except as set forth in Section 113(h) of CERCLA, 42 U.S.C. § 9613(h).

XXIII. CONTRIBUTION

67. Contribution.

a. The Parties agree that this Settlement Agreement constitutes an administrative settlement for purposes of Section 113(f)(2) of CERCLA, 42 U.S.C. § 9613(f)(2), and that Respondent is entitled, as of the Effective Date, to protection from contribution actions or claims as provided by Sections 113(f)(2) and 122(h)(4) of CERCLA, 42 U.S.C. §§ 9613(f)(2) and 9622(h)(4), for "matters addressed" in this Settlement Agreement. The "matters addressed" in this Settlement Agreement are the Work and Response Costs.

b. The Parties agree that this Settlement Agreement constitutes an administrative settlement for purposes of Section 113(f)(3)(B) of CERCLA, 42 U.S.C. § 9613(f)(3)(B), pursuant to which Respondent has, as of the Effective Date, resolved its liability to the United States for the Work and Future Response Costs.

XXIV. INDEMNIFICATION

68. Respondent shall indemnify, save and hold harmless the United States, its officials, agents, contractors, subcontractors, employees and representatives from any and all claims or causes of action arising from, or on account of, negligent or other wrongful acts or omissions of Respondent, its officers, directors, employees, agents, contractors, or subcontractors, in carrying out actions pursuant to this Settlement Agreement. In addition, Respondent agrees to pay the United States all costs incurred by the United States, including but not limited to attorneys fees and other expenses of litigation and settlement, arising from or on account of claims made against the United States based on negligent or other wrongful acts or omissions of Respondent, its officers, directors, employees, agents, contractors, subcontractors and any persons acting on its behalf or

under its control, in carrying out activities pursuant to this Settlement Agreement. The United States shall not be held out as a party to any contract entered into by or on behalf of Respondent in carrying out activities pursuant to this Settlement Agreement. Neither Respondent nor any such contractor shall be considered an agent of the United States.

69. The United States shall give Respondent notice of any claim for which the United States plans to seek indemnification pursuant to this Section and shall consult with Respondent prior to settling such claim.

70. Respondent waives all claims against the United States for damages or reimbursement or for set-off of any payments made or to be made to the United States, arising from or on account of any contract, agreement, or arrangement between Respondent and any person for performance of Work on or relating to the Site, including, but not limited to, claims on account of construction delays. In addition, Respondent shall indemnify and hold harmless the United States with respect to any and all claims for damages or reimbursement arising from or on account of any contract, agreement, or arrangement between Respondent and any person for performance of Work on or relating to the Site, including, but not limited to, claims on account of construction delays.

XXV. INSURANCE

71. At least 7 days prior to commencing any on-Site work under this Settlement Agreement, Respondent shall secure, and shall maintain for the duration of this Settlement Agreement, comprehensive general liability insurance and automobile insurance with limits of one million dollars, combined single limit, naming EPA as an additional insured. Within the same time period, Respondent shall provide EPA with certificates of such insurance and a copy of each insurance policy. Respondent shall submit such certificates and copies of policies each year on the anniversary of the Effective Date. In addition, for the duration of the Settlement Agreement, Respondent shall satisfy, or shall ensure that its contractors or subcontractors satisfy, all applicable laws and regulations regarding the provision of worker's compensation insurance for all persons performing the Work on behalf of Respondent in furtherance of this Settlement Agreement. If Respondent demonstrates by evidence satisfactory to EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering some or all of the same risks but in an equal or lesser amount, then Respondent needs to provide only that portion of the insurance described above which is not maintained by such contractor or subcontractor.

XXVI. FINANCIAL ASSURANCE

72. Within 90 days of the Effective Date, Respondent shall establish and maintain financial security for the benefit of EPA in the amount of $ 80,000 in one or more of the following forms, in order to secure the full and final completion of Work by Respondent:

a. a surety bond unconditionally guaranteeing payment and/or performance of the Work;

b. one or more irrevocable letters of credit, payable to or at the direction of EPA, issued by financial institution(s) acceptable in all respects to EPA;

c. a trust fund administered by a trustee acceptable in all respects to EPA;

d. a policy of insurance issued by an insurance carrier acceptable in all respects to EPA, which ensures the payment and/or performance of the Work;

e. a written guarantee to pay for or perform the Work provided by one or more parent companies of Respondent, or by one or more unrelated companies that have a substantial business relationship with Respondent; including a demonstration that any such guarantor company satisfies the financial test requirements of 40 C.F.R. Part 264.143(f); and/or

f. a demonstration of sufficient financial resources to pay for the Work made by Respondent, which shall consist of a demonstration that Respondent satisfies the requirements of 40 C.F.R. Part 264.143(f).

73. Any and all financial assurance instruments provided pursuant to this Section shall be in form and substance satisfactory to EPA, determined in EPA's sole discretion. In the event that EPA determines at any time that the financial assurances provided pursuant to this Section (including, without limitation, the instrument(s) evidencing such assurances) are inadequate, Respondent shall, within 30 days of receipt of notice of EPA's determination, obtain and present to EPA for approval one of the other forms of financial assurance listed in Paragraph 72, above. In addition, if at any time EPA notifies Respondent that the anticipated cost of completing the Work has increased, then, within 30 days of such notification, Respondent shall obtain and present to EPA for approval a revised form of financial assurance (otherwise acceptable under this Section) that reflects such cost increase. Respondent's inability to demonstrate financial ability to complete the Work shall in no way excuse performance of any activities required under this Settlement Agreement.

74. If Respondent seeks to ensure completion of the Work through a guarantee pursuant to Subparagraph 72.e) or 72.f) of this Settlement Agreement, Respondent shall (i) demonstrate to EPA's satisfaction that the guarantor satisfies the requirements of 40 C.F.R. Part 264.143(f); and (ii) resubmit sworn statements conveying the information required by 40 C.F.R. Part 264.143(f) annually, on the anniversary of the Effective Date or such other date as agreed by EPA, to EPA. For the purposes of this Settlement Agreement, wherever 40 C.F.R. Part 264.143(f) references "sum of current closure and post-closure costs estimates and the current plugging and abandonment costs estimates," the dollar amount to be used in the relevant financial test calculations shall be the current cost estimate of $80,000 for the Work at the Site plus any other RCRA, CERCLA,

TSCA, or other federal environmental obligations financially assured by Respondent or guarantor to EPA by means of passing a financial test.

75. If, after the Effective Date, Respondent can show that the estimated cost to complete the remaining Work has diminished below the amount set forth in Paragraph 72 of this Section, Respondent may, on any anniversary date of the Effective Date, or at any other time agreed to by the Parties, reduce the amount of the financial security provided under this Section to the estimated cost of the remaining Work to be performed. Respondent shall submit a proposal for such reduction to EPA, in accordance with the requirements of this Section, and may reduce the amount of the security after receiving written approval from EPA. In the event of a dispute, Respondent may seek dispute resolution pursuant to Section XVI (Dispute Resolution). Respondent may reduce the amount of security in accordance with EPA's written decision resolving the dispute.

76. Respondent may change the form of financial assurance provided under this Section at any time, upon notice to and prior written approval by EPA, provided that EPA determines that the new form of assurance meets the requirements of this Section. In the event of a dispute, Respondent may change the form of the financial assurance only in accordance with the written decision resolving the dispute.

XXVII. MODIFICATIONS

77. The OSC may make modifications to any plan or schedule or Statement of Work in writing or by oral direction. Any oral modification will be memorialized in writing by EPA promptly, but shall have as its effective date the date of the OSC's oral direction. Any other requirements of this Settlement Agreement may be modified in writing by mutual agreement of the parties.

78. If Respondent seeks permission to deviate from any approved work plan or schedule or Statement of Work, Respondent's Project Coordinator shall submit a written request to EPA for approval outlining the proposed modification and its basis. Respondent may not proceed with the requested deviation until receiving oral or written approval from the OSC pursuant to Paragraph 77.

79. No informal advice, guidance, suggestion, or comment by the OSC or other EPA representatives regarding reports, plans, specifications, schedules, or any other writing submitted by Respondent shall relieve Respondent of its obligation to obtain any formal approval required by this Settlement Agreement, or to comply with all requirements of this Settlement Agreement, unless it is formally modified.

XXVIII. ADDITIONAL REMOVAL ACTIONS

80. If EPA determines that additional removal actions not included in an approved plan are necessary to protect public health, welfare, or the environment, EPA will notify Respondent of that determination. Unless otherwise stated by EPA, within 30 days of

receipt of notice from EPA that additional removal actions are necessary to protect public health, welfare, or the environment, Respondent shall submit for approval by EPA a Work Plan for the additional removal actions. The plan shall conform to the applicable requirements of Section VIII (Work to Be Performed) of this Settlement Agreement. Upon EPA's approval of the plan pursuant to Section VIII, Respondent shall implement the plan for additional removal actions in accordance with the provisions and schedule contained therein. This Section does not alter or diminish the OSC's authority to make oral modifications to any plan or schedule pursuant to Section XXVII (Modifications).

XXIX. NOTICE OF COMPLETION OF WORK

81. When EPA determines, after EPA's review of the Final Report, that all Work has been fully performed in accordance with this Settlement Agreement, with the exception of any continuing obligations required by this Settlement Agreement, including post-removal site controls, retention of records, and payment of Future Response Costs, EPA will provide written notice to Respondent. If EPA determines that any such Work has not been completed in accordance with this Settlement Agreement, EPA will notify Respondent, provide a list of the deficiencies, and require that Respondent modifies the Work Plan if appropriate in order to correct such deficiencies. Respondent shall implement the modified and approved Work Plan and shall submit a modified Final Report in accordance with the EPA notice. Failure by Respondent to implement the approved modified Work Plan shall be a violation of this Settlement Agreement.

XXX. INTEGRATION/APPENDICES

82. This Settlement Agreement and its appendices constitute the final, complete and exclusive agreement and understanding among the Parties with respect to the settlement embodied in this Settlement Agreement. The parties acknowledge that there are no representations, agreements or understandings relating to the settlement other than those expressly contained in this Settlement Agreement. The following appendices are attached to and incorporated into this Settlement Agreement: Action Memorandum (Appendix A); Site Map (Appendix B); and Scope of Work (Appendix C).

XXXI. EFFECTIVE DATE

This Settlement Agreement shall become effective on July 11, 2011 or 3 days after the Settlement Agreement is signed by the Regional Administrator or his/her delegate, whichever is later.

The undersigned representative(s) of Respondent certify(ies) that it (they) is (are) fully authorized to enter into the terms and conditions of this Settlement Agreement and to bind the party(ies) it (they) represent(s) to this document.

Agreed this_______day of_________, 2011.

For Respondent M.P. Properties, LLC

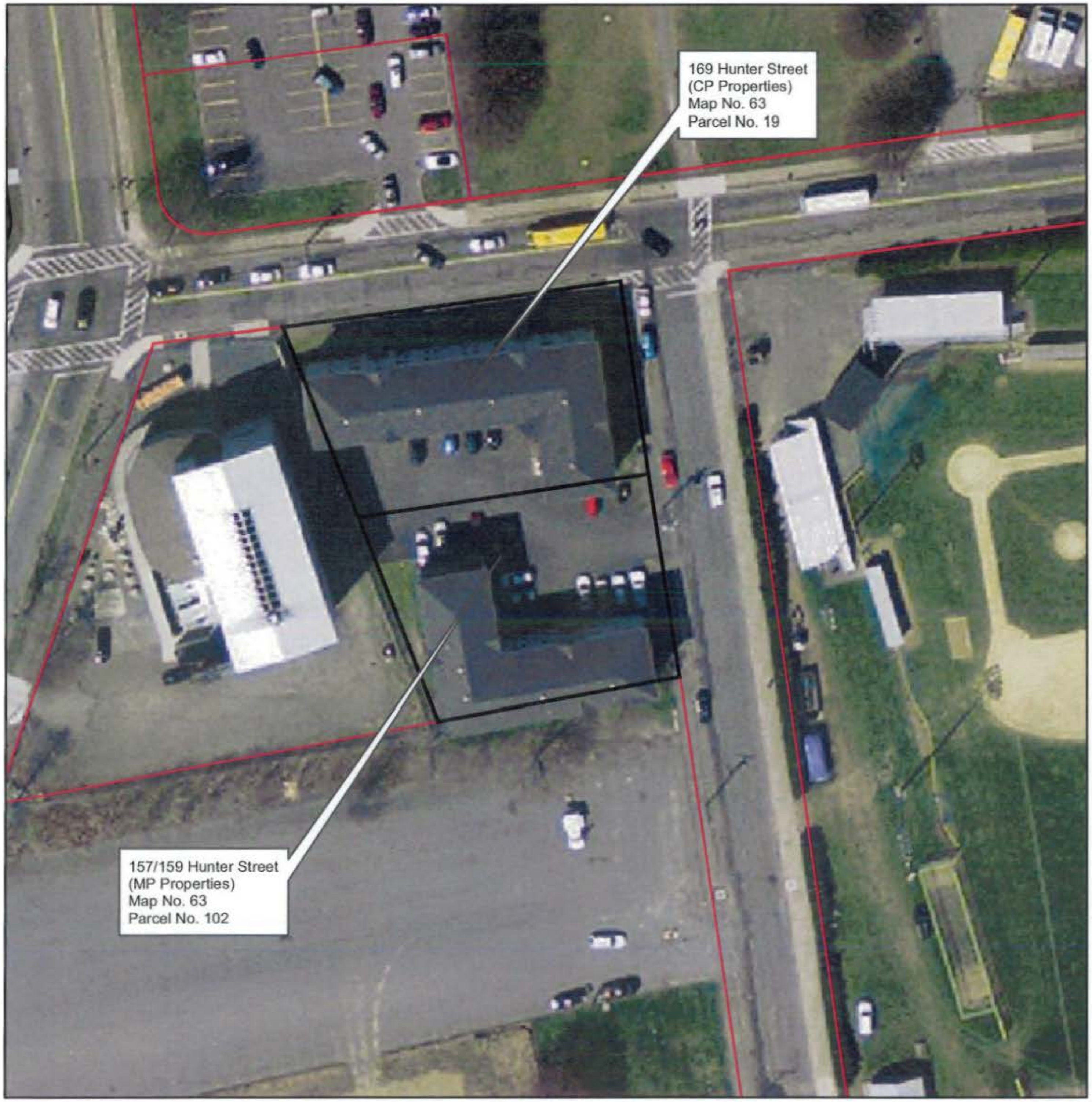
By Craig H. Campbell

Title Counsel to M.P. Properties, LLC

It is so ORDERED and Agreed this 28th day of June, 2011.

By: ______________________
James T. Owens, III, Director
Office of Site Remediation & Restoration
U.S. Environmental Protection Agency

EFFECTIVE DATE: July 11, 2011



P-013
CP/MP Properties

Parker Street Waste Site
New Bedford, Massachusetts

EPA Region I
Superfund Technical Assessment and Response Team (START) III
Contract No. EP-W-05-042

TDD Number:	10-10-0001
Created by:	D. Willette
Created on:	11 August 2010
Modified by:	D. Willette
Modified on:	1 June 2011

LEGEND

CP/MP Property Boundaries

Parcel Boundaries

0 50 100 Feet

Data Sources: MassDEP Risk Assessment
Imagery: MassGIS (2008 Aerial - 24628210)
All other data: START

WESTON SOLUTIONS
Restoring Resource Efficiency

APPENDIX C

STATEMENT OF WORK

M.P. Properties, LLC

Parker Street Waste Site

New Bedford, Massachusetts

Pursuant to the

Administrative Settlement Agreement and Order on Consent
to Perform a Removal Action

Docket No. CERCLA-01-2011-0045

INTRODUCTION

This Statement of Work ("SOW") identifies the components of work required of the Respondent pursuant to the Settlement Agreement and Administrative Order on Consent for Removal Action ("Agreement") (Docket No. CERCLA-01-2011-0045) to perform a removal action at 157/159 Hunter Street ("the Site") located in New Bedford, Massachusetts, which is a portion of the Parker Street Waste Site. Under this SOW, M.P. Properties, LLC ("Respondent") shall prepare and submit to the On-Scene Coordinator ("OSC") for approval the items identified below. The OSC will consult and coordinate with the MassDEP Site Manager prior to approving the items identified below. The removal action conducted pursuant to the Agreement and SOW shall abate the potential danger to public health or welfare or the environment, which may otherwise result from the actual or threatened release of hazardous substances at or from the Site.

I. GENERAL REQUIREMENTS

A. This SOW is designed to address the cleanup of the top three feet of soils at the Site, which are contaminated with polycyclic aromatic hydrocarbons ("PAHs"), barium, chromium, and lead. Available data indicate that the contaminated surface soils are located at grade, and therefore pose a threat of direct contact.

B. Respondent shall establish and maintain physical access to the area of the Site where contaminated soils are located. Such access shall be provided for all personnel, equipment, and supplies, including the United States Environmental Protection Agency ("EPA"), EPA's contractors and representatives, and the Massachusetts Department of Environmental Protection, Bureau of Waste Site Cleanup ("MassDEP").

C. Respondent shall communicate freely with the OSC prior to and during development of all work plans and deliverables required by the Agreement and the SOW, and shall continue to communicate freely with the OSC throughout implementation of all approved work plans. Open and routine communication will result in the most effective and efficient cleanup. Draft documents may be submitted by Respondent to EPA and MassDEP for consideration prior to submission of final documents required to be submitted by a specific date.

D. All actions taken by Respondent under the Agreement and the SOW shall be conducted in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended ("CERCLA"), the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP") promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, and any amendments thereto, applicable guidance documents provided by EPA, and the provisions of this Agreement, including any standards, specifications, and time schedules contained in the approved SOW or as specified by the OSC.

E. Each deliverable generated by Respondent pursuant to the specific requirements of the Agreement and the SOW must be approved by the OSC prior to implementation by Respondent.

F. The OSC may require Respondent to alter or expand upon work plans required by the Agreement and SOW after EPA approval, based on new information, changed Site conditions, or identified deficiencies.

G. By telephone or otherwise, Respondent shall inform the OSC of any field activity not less than five work days prior to the event.

In conducting all activities under this SOW, Respondent shall:

A. Comply with Section 300.150 of the NCP, which references the standards promulgated by the Occupational Safety and Health Administration, Hazardous Waste Operations and Emergency Response, 29 C.F.R. § 1910.120, including development and implementation of a health and safety program. This health and safety program shall include the steps that will be taken to protect on-site workers and the general public from hazards associated with any open excavations, hazardous substances brought to the surface during site activities, or any other hazards associated with on-site activities.

B. Provide the OSC, upon request, all quality assurance/quality control procedures followed by the supervising contractor and its laboratory(s) pertaining to all sampling and analytical work performed pursuant to the Agreement and the SOW.

II. WORK TASKS

EACH DUE THIRTY (30) DAYS AFTER NOTIFYING EPA OF THE NAME AND QUALIFICATIONS OF THE SUPERVISING CONTRACTOR

A. DESIGNATION OF THE CONTRACTOR AND PROJECT COORDINATOR

The Respondent shall propose an environmental consulting services contractor or an environmental services cleanup contractor for the purpose of performing and/or supervising the work required by this Agreement in accordance with the terms and conditions of the Agreement and shall notify EPA and MassDEP of the name(s) and qualifications of such contractor(s) within seven (7) days of the Effective Date. The supervising contractor must employ or retain by contract a Licensed Site Professional, holding a valid and current license to practice in Massachusetts who will provide oversight of the work to be performed. Respondent shall also notify EPA and MassDEP of the name(s) and qualification(s) of any other contractor(s) or subcontractor(s) retained to perform the Work under this Settlement Agreement at least seven (7) days prior to commencement of such Work. The supervising contractor shall provide a written Removal Work Plan that outlines the work to be performed under this Agreement and

SOW.

Within seven (7) days after the Effective Date, Respondent shall designate a Project Coordinator who shall be responsible for administration of all actions by Respondent required by this Settlement Agreement and shall submit to EPA and MassDEP the designated Project Coordinator's name, address, telephone number, and qualifications. To the greatest extent possible, the Project Coordinator shall be present on Site or readily available during Site work. EPA retains the right to disapprove of the designated Project Coordinator. If EPA disapproves of the designated Project Coordinator, Respondent shall retain a different Project Coordinator and shall notify EPA and MassDEP of that person's name, address, telephone number, and qualifications within 7 days following EPA's disapproval. Receipt by Respondent's Project Coordinator of any notice or communication from EPA relating to this Settlement Agreement shall constitute receipt by Respondent.

B. SITE SECURITY

The Respondent shall take necessary precautions to properly prevent unauthorized access onto the areas of the Site subject to the removal action for the duration of the removal action. This includes, but is not limited to, the following: fencing, geo-textile barriers, and signage. If, in the judgment of the OSC, these precautions are not preventing unauthorized access to these areas of the Site, the Respondent will institute additional security measures, which may include 24 hour security, until the removal actions are completed.

C. GENERATION OF WORK PLAN AND ASSOCIATED PLANS

Respondent shall submit to EPA for approval, a technically sound Removal Action Work Plan for addressing contaminated surface soils at the Site.

The Removal Action Work Plan submitted by Respondent for EPA approval must:

1. Address the following applicable criteria as found in **Section 300.415(b)(2)** of the NCP:
    - "(i) Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants";
    - "(iv) High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate".
2. Include a presentation and discussion of any additional planned soil sampling investigation.

3. Address specific cleanup actions necessary, in accordance with 40 C.F.R. Section 300.415(e)(1-9), to address the contaminated soils at the Site to eliminate the conditions that necessitate the removal under Section 300.415(b)(2) of the National Contingency Plan, as described in the Action Memorandum for this Site. The Work Plan shall identify all contractors involved in cleanup activities as well as details of excavation and removal of contaminated surface soils and capping of any contaminated soils remaining at depth.

4. Propose soil cleanup levels, based on applicable or relevant and appropriate requirements ("ARARs").

5. Specify how (through additional sampling or other action) it will be documented that cleanup levels have been attained. The Work Plan shall also include the names of laboratories to be used and the EPA standard methods to be used for analysis. The Work Plan shall describe how all waste streams involving hazardous substances will be packaged, staged, and prepared for disposal (with applicable name, address, and RCRA identification number of the proposed disposal facility).

6. Outline maintenance and post-removal site control (if applicable) and how it will be carried out;

7. Provide for any excavation and off-site disposal, if deemed necessary, to address the conditions that necessitate the removal action;

8. Specify the type of equipment to be used.

9. Include restoration plans that include backfilling, grading, and re-vegetating.

10. Include the name, address, and RCRA identification number of the proposed disposal facility(s).

11. Include a detailed project time line which provides time frames associated with each activity stated in the EPA-approved Removal Action Work Plan, including, but not limited to, the maximum amount of time that any hazardous substance shall remain on-site once it has been excavated.

12. Describe the monitoring, engineering controls and other actions to be employed, which will demonstrate that the persons at adjacent properties will not be exposed to contaminants present at the Site as a result of implementing required actions. Air monitoring to address the off-site migration of airborne contaminants must be specifically addressed in the Work Plan, the Health and Safety Plan (described below), or in a separate, stand-alone plan.

a. "Monitoring" means to collect and analyze air samples to identify the concentration of airborne contaminants. Monitoring data will provide the basis for determining if additional engineering controls or other actions are necessary to achieve the goal of protection of persons other than Site workers. On-site monitoring data used to assure worker protection in accordance with OSHA can be used to meet the requirement in the above paragraph, but must be augmented where such information alone does not demonstrate that off-site exposures are not occurring.

b. Examples of "engineering controls" include but are not limited to covering soil stockpiles, wetting, limiting the area of excavation, capturing and treating air emissions, and providing a temporary structure over the excavation area. "Other actions" include but are not limited to, posting warning signs, posting a security guard, installing additional permanent or temporary fencing, or any combination of these.

13. Include a Community Relations Plan ("CRP") that identifies how the Site management will interact with, and convey information to, residents and businesses abutting or adjacent to the Site, government officials, and general community.

Generate the plans associated with the Work Plan for EPA review:

DUE THIRTY (30) DAYS AFTER NOTIFYING EPA OF THE NAME AND QUALIFICATIONS OF THE SUPERVISING CONTRACTOR

1. A Health and Safety Plan ("HASP"). As required by NCP §300.150, an OSHA-compliant, site-specific HASP shall be developed and implemented for the duration of field activities. All private employers are responsible for the health and safety of their own employees. Nothing in the Agreement or the SOW or any approved work plans shall relieve Respondent of its liability in this regard.

2. Description of how soil remaining in place will be sampled and covered by a cap to assure that proposed cleanup standards are being met; A Quality Assurance Project Plan ("QAPP") shall be developed for the purpose of assuring that all analytical results generated during the removal activities are of known quality. The QAPP shall include the name of the laboratory Respondent proposes to use to analyze samples, and shall also include EPA's standard method for the analysis (maximum 2-week turnaround time on sample analysis).

3. Provide a comprehensive Sampling and Analysis Plan ("SAP") for the purpose of assuring that all analytical results generated during the removal activities are of known quality and consistent with EPA Region I's QAPP.

D. IMPLEMENTATION OF THE REMOVAL ACTION WORK PLAN:

Upon Respondent's receipt of EPA's approval of the Removal Action Work Plan, Respondent shall implement the plan in accordance with the schedule contained in the approved plan.

E. WITHIN 45 DAYS AFTER RESPONDENT BELIEVES IT HAS COMPLETED ALL OF THE WORK REQUIRED UNDER THE AGREEMENT AND THE SOW, RESPONDENT SHALL SUBMIT A COMPLETION OF WORK REPORT TO EPA FOR REVIEW AND APPROVAL, AS DESCRIBED BELOW:

The Completion of Work Report shall include, at a minimum, the following:

1. An estimate of the costs Respondent incurred in performing the removal action.

2. A list of all activities required by the Agreement and the SOW, and certification that each has been completed in accordance with the Agreement, the SOW and the approved work plans.

3. Photographic documentation of the pre-removal condition of the site as well as photographic documentation of pertinent site activities. This includes any and all media used to document the progression of the site cleanup.

4. Tabular summary of all analytical results of soil samples in a format that is consistent with the Work Plan.

5. Site sketches showing initial conditions, completion of work at interim milestones, and final site conditions.

6. A legible copy of shipping papers for all shipments of hazardous materials.

7. Tabular summary of all waste shipped or treated, noting at a minimum, for each calendar month, the Department of Transportation shipping name, waste codes (if any), the number of units shipped (i.e., drums, roll-offs), and the weight (where available).

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MA 02109-3912

VIA CERTIFIED MAIL—RETURN RECEIPT REQUESTED
AND VIA EMAIL

January 30, 2012

Antonio J. Pereira, Manager
C.P. Properties, LLC
M.P. Properties, LLC
P.O. Box 2062
New Bedford, MA 02741

Re: C.P. Properties, LLC, 169 Hunter Street, New Bedford, Massachusetts
Parker Street Waste Site
Administrative Order on Consent for Removal Action
Docket Number: CERCLA-01-2011-0044

M.P. Properties, LLC, 157/159 Hunter Street, New Bedford, Massachusetts
Parker Street Waste Site
Administrative Order on Consent for Removal Action
Docket Number: CERCLA-01-2011-0045

Dear Mr. Pereira:

I have received a report entitled, "Removal Action Completion Report," dated November 16, 2011, prepared by SITEC Environmental on behalf of C.P. Properties, LLC and M.P. Properties, LLC ("Respondents") pursuant to the above-referenced Administrative Settlement Agreements and Orders on Consent ("Settlement Agreements"). I have found the report to be an adequate documentation of site activities performed under the Settlement Agreements, and I find that no further revisions are necessary. The removal provisions within the Settlement Agreements have been met, and the Respondents have no further removal obligations under the Settlement Agreements, with the exception of any post-removal site controls (*e.g.,* activity and use limitations) which must be coordinated with the Massachusetts Department of Environmental Protection.

Please be advised that this determination does not constitute a release from liability, covenant not to sue, or waiver of any claims, which EPA may have against the Respondents. In addition, be advised that this determination does not limit EPA's authority under CERCLA or any other law to take future response actions at the sites.

EPA reserves all rights with respect to the sites, including, but not limited to, the right to initiate judicial or administrative enforcement actions, the right to undertake further response actions and recover the costs of such actions from the Respondents or any other responsible parties, and the right to recover costs incurred by the United States in connection with the sites as described in the Settlement Agreements.

Please note that pursuant to Section XV of the Settlement Agreements, entitled Payment of Future Response Costs, EPA will be sending Respondents a bill requiring payment that includes direct and indirect costs incurred by EPA and its contractors. The bill will include an itemized summary relating to those costs incurred by EPA pursuant to the terms of the Settlement Agreements.

If you have any questions please contact me at (617) 918-1120. Thank you for your cooperation.

Sincerely,

Mia C Pasquerella

Mia Pasquerella, EPA On-Scene Coordinator

Sent by Electronic Mail

cc: Maximilian Boal, EPA Enforcement Counsel
Rebecca Tobin, Massachusetts Department of Environmental Protection
Molly Cote, Massachusetts Department of Environmental Protection
Stephen Gioiosa, President of SITEC Environmental, Inc.
Craig Campbell, Esq.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MA 02109-3912

URGENT LEGAL MATTER – PROMPT REPLY NECESSARY
OVERNIGHT DELIVERY

September 29, 2010

City of New Bedford
Attn: Irene Schall, Esq.
City Solicitor
100 8th Street
New Bedford, MA 02740

Re: Notice of Potential Liability and Invitation to Perform or Finance Proposed Cleanup Activities for the Parker Street Waste Site, New Bedford, MA

Dear Ms. Schall:

This letter serves to notify the City of New Bedford (the City) of potential liability regarding the Parker Street Waste Site, ("Site"), as defined by Section 107(a) of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), commonly known as the federal "Superfund" law. This letter also notifies the City of planned removal activities at the Site which the City is invited to perform or finance and which the City may be ordered to perform at a later date.

Under CERCLA, EPA is responsible for responding to the release or threat of release of hazardous substances, pollutants or contaminants into the environment - that is, for stopping further contamination from occurring and for cleaning up or otherwise addressing any contamination that has already occurred. EPA has documented that such a release has occurred at the Site located in New Bedford, MA. Based on information presently available to EPA, EPA has determined that the City is potentially liable under CERCLA for the cleanup of the Site or costs EPA has incurred in cleaning up the Site, which the City is invited to perform or finance and which the City may be ordered to perform at a later date.

EPA has documented the release or threatened release of hazardous substances or pollutants or contaminants at the Site, which is located on a previously estimated 104-acre area, intersected by Parker Street, in New Bedford, Bristol County, Massachusetts. The estimated extent of the Site is believed to be bounded to the north by Durfee Street, to the east by Liberty Street and the Oak Grove Cemetery, to the south by Hillman Street, and to the west by Summit Street. Located within the bounds of the Site is the New Bedford High School campus, the Keith Middle School, the Hetland Memorial Skating Rink property, Walsh Field, the new Andre McCoy Field, residential properties, New Bedford Housing Authority properties, Carabiner's Indoor Climbing Facility, and two privately-owned apartment complexes. Hazardous substances involved in the release or threat of release at the Site include, but are not limited to: polychlorinated biphenyls ("PCBs"), arsenic, barium, cadmium, chromium, lead, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, indeno(1,2,3-cd)pyrene, dibenzo(a,h)anthracene, phenanthrene and pyrene.

EPA has spent public funds and is considering spending additional public funds to investigate and address the releases and/or threatened release(s) at the Site. Unless a potentially responsible party ("PRP") or parties commit to properly performing or financing such actions, EPA will perform these actions pursuant to Section 104 of CERCLA, 42 U.S.C. §9604.

EXPLANATION OF POTENTIAL LIABILITY

Under CERCLA, specifically Sections 106(a) and 107(a), 42 U.S.C. §§9606(a) and 9607(a), Section 7003 of the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. § 6973, and other laws, PRPs may be required to implement cleanup actions deemed necessary by EPA to protect public health, welfare, or the environment. PRPs may also be responsible for all costs incurred by the Government in responding to any release or threatened release at the Site, unless the PRP can show divisibility or any of the other statutory defenses. Such actions and costs may include, but are not limited to: expenditures for investigations, planning, response, oversight, and enforcement activities.

PRPs include current and former owners and operators of a Site, as well as persons who arranged for treatment and/or disposal of any hazardous substances found at the Site, and persons who accepted hazardous substances for transport and selected the Site to which the hazardous substances were delivered.

Based on information gathered during investigations of the Site, EPA believes that the City is a PRP under Section 107(a) of CERCLA with respect to the Site. Specifically, EPA has reason to believe that the City either owned or operated all or portions of the Site during the time of disposal.

OUTLINE OF SITE RESPONSE ACTIVITIES

To date, EPA has taken the following response actions at the Site under the authority of the Superfund Program:

- A Preliminary Assessment ("PA") and Site Investigation ("SI") at additional properties in order to gain a basic understanding of any risks posed to human health and/or the environment by releases or threatened releases from the Site.

Due to the presence of hazardous substances at the Site, and in light of other conditions, EPA has determined that there is an imminent and substantial endangerment to public health, welfare, or the environment at certain parcels located on this Site. In response, EPA plans to conduct the following immediate removal activities at certain properties located on the Site where an imminent hazard or a substantial risk has been identified:

1) Document existing property conditions for subsequent restoration.
2) Remove, to the extent practicable, interference for excavation such as shrubbery, trees, outbuildings, playground equipment, or other items as required.
3) Remove and dispose of contaminated soil as necessary.
4) Take other actions related to the investigation and removal of contaminated soils.
5) Install a visual marker to delineate contaminated soils (if any) which may remain at depth (beyond 3 feet below surface grade) or which cannot otherwise be excavated.
6) Implement erosion control measures as determined necessary.
7) Conduct air monitoring and implement dust control measures as appropriate.
8) Conduct extent of contamination sampling to determine the extent of landfill material to be removed; and conduct confirmation sampling as determined necessary by the EPA OSC.
9) Perform response actions or oversee the response actions.
10) Take or evaluate the need to take other response actions.
11) Repair response related damages, including backfilling with clean fill material, grading, and re-establishing vegetation in areas affected by response related activities.

INVITATION TO PERFORM SITE RESPONSE ACTIVITIES

Before EPA spends public funds to undertake the removal action at the Site, EPA urges the City to participate in removal activities or finance all the removal activities outlined above. Any such work performed by the City in its capacity as a PRP may be conducted pursuant to administrative order and an EPA-approved workplan, in consultation with the Massachusetts Department of Environmental Protection, as authorized by Section 106(a) of CERCLA, 42 U.S.C. § 9606(a). Prior to final issuance of such an order, a draft order would be sent to the City and its representative for review and comment. Enclosed is a copy of a summary of a generic Scope of Work. This document should provide an understanding of the types of plans and activities typically required by such an Order.

Be advised that even if the City does not indicate a willingness to perform or finance necessary response actions, EPA explicitly reserves any rights it may have to order the City to undertake such actions under Section 106 of CERCLA, 42 U.S.C. § 9606. Failure to comply with a Section 106(a) administrative order may result in a fine of up to $37,500 per day under Section 106(b) or imposition of treble damages under Section 107(c)(3) of CERCLA. Further, the City may be held liable under Section 107(a) for the cost of the response activities EPA performs at the Site and for any damages to natural resources. In addition, by virtue of Section 113 of CERCLA, 42 U.S.C. § 9613, other PRPs who agree to perform the necessary response action may seek contribution protection.

FINANCIAL CONCERNS/ABILITY TO PAY SETTLEMENTS

EPA is aware that the financial ability of some PRPs to contribute toward the payment of response costs at a Site may be substantially limited. If the City believes, and can document, that it falls within that category, please contact Senior Enforcement Counsel Michelle Lauterback listed below for information on "Ability to Pay Settlements." In response, the City will receive a package of information about the potential for such settlements. The City will be asked to fill out forms about its finances and to submit financial records.

PRP RESPONSE AND EPA CONTACT

You should contact EPA within **ten (10) business days** after receipt of this letter to indicate the City's willingness to perform or finance the response activities outlined above. If EPA does not receive a response within that time, EPA will assume that the City does not wish to negotiate a resolution of its liabilities in connection with the response and that the City has declined any involvement in performing response activities. Be advised, however, that liability under CERCLA is joint and several; therefore, each PRP is potentially liable for undertaking all response actions or reimbursing the Government for the entire amount of its response costs.

Please provide the name, address, and telephone number of a designated contact for future communications. Your written response, including any technical comments or questions concerning the proposed response activities, should be directed to the EPA On-Scene Coordinator ("OSC") or the Enforcement Coordinator ("EC") for the Site:

OSC Wing Chau
U.S. Environmental Protection Agency
Emergency Response and Removal Section II
5 Post Office Square, Suite 100, Mail Code OSRR02-2
Boston, Massachusetts 02109-3912
(617) 918-1254

EC Sharon Fennelly
U.S. Environmental Protection Agency
Emergency Response and Removal Section II
5 Post Office Square, Suite 100, Mail Code OSRR02-2
Boston, Massachusetts 02109-3912
(617) 918-1263

Legal questions and all communications from counsel should be directed to:

Michelle Lauterback, Senior Enforcement Counsel
U.S. Environmental Protection Agency
Office of Environmental Stewardship (SES)
5 Post Office Square, Suite 100, Mail Code OSRR02-2
Boston, Massachusetts 02109-3912
(617) 918-1774

DECISION NOT TO USE SPECIAL NOTICE

Under Section 122(e) of CERCLA, 42 U.S.C. § 9622(e), EPA has the discretionary authority to invoke special notice procedures to formally negotiate the terms of an agreement between EPA and the PRPs to conduct or finance response activities. The use of special notice procedures triggers a moratorium on certain EPA activities at the Site while formal negotiations between EPA and the PRPs are conducted.

Due to the exigencies posed by conditions present at the Site, removal activities must be conducted as expeditiously as possible. EPA has therefore decided not to invoke the Section 122(e) special notice procedures with respect to CERCLA removal actions at this Site. Nonetheless, EPA is willing to discuss settlement opportunities without invoking a moratorium, but EPA will continue the response action as planned unless such discussions lead expeditiously to a settlement.

ADMINISTRATIVE RECORD

Pursuant to Section 113(k) of CERCLA, 42 U.S.C. § 9613(k), EPA will establish an administrative record containing documents that serve as the basis of EPA's decision on the selection of a cleanup action for the Site. The Administrative Record files may be inspected and comments may be submitted by contacting the OSC for the Site, Wing Chau, at the above address.

The Administrative Record Files with corresponding index should be available for inspection at a repository near the Site within sixty (60) days of initiation of on-site removal activities, as well as the Superfund Records Center, U.S.E.P.A. 5 Post Office Square, Suite 100, (617) 918-1414.

SITE ACTIVITY OUTSIDE EPA ACTIONS

If the City is already involved in discussions with state or other local authorities or involved in a lawsuit regarding this Site, the City should continue such activities as it sees fit. This letter is not intended to advise or direct the City to restrict or discontinue any such activities. However, the City is advised to report the status of any such discussions or actions in its response to this letter and to provide a copy of its response to any other parties involved in those discussions or actions.

RESOURCES AND INFORMATION FOR SMALL BUSINESSES

As you may be aware, on January 11, 2002, President Bush signed into law the Superfund Small Business Liability Relief and Brownfields Revitalization Act. This Act contains several exemptions and defenses to CERCLA liability, which we suggest that all parties evaluate. You may obtain a copy of the law via the Internet at http://www.epa.gov/swerosps/bf/sblrbra.htm and review EPA guidance documents regarding these exemptions at http://www.epa.gov/compliance/ resources/policies/cleanup/superfund.

EPA has created a number of helpful resources for small businesses. EPA has established the National Compliance Assistance Clearinghouse as well as Compliance Assistance Centers which offer various forms of resources to small businesses. You may inquire about these resources at www.epa.gov. In addition, the EPA Small Business Ombudsman may be contacted at www.epa.gov/sbo. Finally, EPA developed a fact sheet about the Small Business Regulatory

Enforcement Fairness Act ("SBREFA"), which is enclosed with this letter.

PURPOSE AND USE OF THIS NOTICE

The factual and legal discussions contained in this letter are intended solely to provide notice and information. Such discussions are not intended to be, and cannot be, relied upon as EPA's final position on any matter set forth herein.

Please give these matters your immediate attention. If you have any questions regarding this letter, please contact Senior Enforcement Counsel Michelle Lauterback at (617) 918-1774. Thank you for your prompt attention to this matter.

By copy of this letter, EPA is notifying the Commonwealth of Massachusetts and the Natural Resources Trustees of EPA's intent to perform, or to enter into negotiations for the performance or financing of, response actions at the Site.

Thank you for your attention to this matter.

Sincerely,

Arthur V. Johnson, III, Chief
Emergency Planning and Response Branch

Enclosures

cc: Wing Chau, EPA On-Scene Coordinator - OSRR
Sharon Fennelly, EPA Enforcement Coordinator - OSRR
Michelle Lauterback, EPA Senior Enforcement Counsel
Rebecca Tobin, Counsel, MassDEP
David Johnston, MassDEP
Andrew Raddant, Regional Environmental Officer - U.S. DOI
Ken Finkelstein, National Oceanic & Atmospheric Administration - NOAA
Patti Ludwig, CERCLIS Coordinator – OSRR
John Carlson, Contracts Management - HBS

SUMMARY OF GENERIC SCOPE OF WORK

This summary of the Generic Scope of Work is provided for informational purposes only. More detailed provisions will be set forth in the site-specific Scope of Work. Provisions may vary from site to site.

When EPA determines that a Potentially Responsible Party (PRP) has the ability to promptly and properly prevent, mitigate, or eliminate the threats posed by hazardous substances at the Site, EPA may issue an Administrative Order (Order) to such party (the Respondent) with an attached Scope of Work (SOW). The Order and SOW, among other things, compel the Respondent to develop a plan to clean up the Site. The components of the plan (also called a "deliverable") must be submitted to EPA for approval before implementation. Detailed instructions for generating each component shall be provided in the SOW. The plan shall consist of the components listed below.

1) **Site Security** - The Respondent shall provide on-site security service. Site security shall be maintained until EPA determines the threats posed by conditions at the Site are eliminated or substantially mitigated.

2) **Notification of Contractor Selection** - The Respondent shall notify EPA of the proposed cleanup contractor selected to perform work required under the Order.

3) **Site-Specific Health and Safety Plan (HASP)** - The Respondent shall develop and implement a HASP for all activities to be conducted at the Site. The HASP shall be developed to protect all on-site personnel and must comply with all applicable health and safety regulations.

4) **Quality Assurance Plan (QAP)** - The Respondent shall develop a QAP to be utilized in conducting all field and laboratory analysis. The QAP shall ensure that analytical results generated are of known quality.

5) **Site Assessment Plan (SAP)** - The Respondent shall develop a SAP specifying the overall strategy of the field investigative work necessary to characterize site contamination.

6) **Site Assessment** - A Site Assessment shall be conducted following EPA approval of the SAP.

7) **Site Assessment Report and Cleanup Plan (SAR/CP)** - Following completion of the Site Assessment, the Respondent shall develop a SAR/CP that summarizes the Site Assessment and proposes cleanup methods necessary to substantially mitigate and/or eliminate the threats posed by hazardous substances present at the Site.

8) **Site Cleanup** - The Site Cleanup shall be conducted according to the EPA approved Cleanup Plan.

9) **Completion of Work Report (CWR)** - Upon completion of the Site Cleanup, the Respondent shall submit a CWR summarizing the work performed under the Order and SOW and outlining any remaining contamination.

At any time prior to or after the completion of the work specified in this SOW, EPA may determine that additional tasks are necessary in order to achieve the objectives of the Order, the SOW and CERCLA.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MA 02109-3912

URGENT LEGAL MATTER – PROMPT REPLY NECESSARY
OVERNIGHT DELIVERY

September 29, 2010

New Bedford Housing Authority
ATTN: Steven A. Beauregard, Acting Executive Director
P. O. Box 2081
New Bedford, MA 02741

Re: Notice of Potential Liability and Invitation to Perform or Finance Proposed Cleanup Activities for the Parker Street Waste Site, New Bedford, MA

Dear Mr. Beauregard:

This letter serves to notify the New Bedford Housing Authority's Westlawn properties ("NBHA") located at Map 64, Lot 101; Map 57, Lot 1; Map 56, Lot 28; Map 63, Lot 63 of potential liability regarding a portion of the Parker Street Waste Site ("Site"), as defined by Section 107(a) of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), commonly known as the federal "Superfund" law. This letter also notifies the NBHA of planned removal activities at the Site which the NBHA is invited to perform or finance at Westlawn and which the NBHA may be ordered to perform at a later date.

Under CERCLA, EPA is responsible for responding to the release or threat of release of hazardous substances, pollutants or contaminants into the environment - that is, for stopping further contamination from occurring and for cleaning up or otherwise addressing any contamination that has already occurred. EPA has documented that such a release has occurred at the Site located in New Bedford, MA. Based on information presently available to EPA, EPA has determined that the NBHA is potentially liable under CERCLA for the cleanup of a portion of the Site located at Westlawn or costs EPA has incurred in cleaning up the Site, which the NBHA is invited to perform or finance and which the NBHA may be ordered to perform at a later date.

EPA has documented the release or threatened release of hazardous substances or pollutants or contaminants at the Site, which is located on a previously estimated 104-acre area, intersected by Parker Street, in New Bedford, Bristol County, Massachusetts. The estimated extent of the Site is believed to be bounded to the north by Durfee Street, to the east by Liberty Street and the Oak Grove Cemetery, to the south by Hillman Street, and to the west by Summit Street. Located within the bounds of the Site is the New Bedford High School campus, the Keith Middle School, the Hetland Memorial Skating Rink property, Walsh Field, the new Andre McCoy Field, residential properties, New Bedford Housing Authority properties, Carabiner's Indoor Climbing

Facility, and two privately-owned apartment complexes. Hazardous substances involved in the release or threat of release at the Site include, but are not limited to: chromium, lead, and polycyclic aromatic hydrocarbons ("PAHs").

EPA has spent public funds and is considering spending additional public funds to investigate and address the releases and/or threatened release(s) at the Site. Unless a potentially responsible party ("PRP") or parties commit to properly performing or financing such actions, EPA will perform these actions pursuant to Section 104 of CERCLA, 42 U.S.C. §9604.

EXPLANATION OF POTENTIAL LIABILITY

Under CERCLA, specifically Sections 106(a) and 107(a), 42 U.S.C. §§9606(a) and 9607(a), Section 7003 of the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. § 6973, and other laws, PRPs may be required to implement cleanup actions deemed necessary by EPA to protect public health, welfare, or the environment. PRPs may also be responsible for all costs incurred by the Government in responding to any release or threatened release at the Site, unless the PRP can show divisibility or any of the other statutory defenses. Such actions and costs may include, but are not limited to: expenditures for investigations, planning, response, oversight and enforcement activities.

PRPs include current and former owners and operators of a Site, as well as persons who arranged for treatment and/or disposal of any hazardous substances found at the Site, and persons who accepted hazardous substances for transport and selected the Site to which the hazardous substances were delivered.

Based on information gathered during investigations of the Site, EPA believes that the NBHA is a PRP under Section 107(a) of CERCLA with respect to the Site. Specifically, EPA has reason to believe that the NBHA is the current owner of a portion of the Site.

OUTLINE OF SITE RESPONSE ACTIVITIES

To date, EPA has taken the following response actions at the Site under the authority of the Superfund Program including:

- A Preliminary Assessment ("PA") and Site Investigation ("SI") at additional properties in order to gain a basic understanding of any risks posed to human health and/or the environment by releases or threatened releases from the Site.

Due to the presence of hazardous substances at the Site, and in light of other conditions, EPA has determined that there is an imminent and substantial endangerment to public health, welfare, or the environment. In response, EPA plans to conduct the following removal activities at Westlawn:

1) Meet with the property owner and tenants to discuss the scope of this proposed removal action.

2) Document existing property conditions for subsequent restoration.
3) Remove, to the extent practicable, interference for excavation such as shrubbery, trees, outbuildings, playground equipment, or other items as required.
4) Remove and dispose of contaminated soil as necessary.
5) Take other actions related to the investigation and removal of contaminated soils.
6) Install a visual marker to delineate contaminated soils (if any) which may remain at depth (beyond 3 feet below surface grade) or which cannot otherwise be excavated.
7) Implement erosion control measures as determined necessary.
8) Conduct air monitoring and implement dust control measures as appropriate.
9) Conduct extent of contamination sampling to determine the extent of landfill material to be removed; and conduct confirmation sampling as determined necessary by the EPA OSC.
10) Perform response actions or oversee the response actions.
11) Take or evaluate the need to take other response actions.
12) Repair response related damages, including backfilling with clean fill material, grading, and re-establishing vegetation in areas affected by response related activities.

INVITATION TO PERFORM SITE RESPONSE ACTIVITIES

Before EPA spends public funds to undertake the removal action at the Site, EPA urges the NBHA to participate in removal activities or finance all the removal activities outlined above. Any such work performed by the NBHA in its capacity as a PRP may be conducted pursuant to administrative order and an EPA-approved workplan, in consultation with the Massachusetts Department of Environmental Protection, as authorized by Section 106(a) of CERCLA, 42 U.S.C. § 9606(a). Prior to final issuance of such an order, a draft order would be sent to the NBHA and its representative for review and comment. Enclosed is a copy of a summary of a generic Scope of Work. This document should provide an understanding of the types of plans and activities typically required by such an Order.

Be advised that if the NBHA does not indicate a willingness to perform or finance necessary response actions, EPA explicitly reserves any rights it may have to order the NBHA to undertake such actions under Section 106 of CERCLA, 42 U.S.C. § 9606. Failure to comply with a Section 106(a) administrative order may result in a fine of up to $37,500 per day under Section 106(b) or imposition of treble damages under Section 107(c) (3) of CERCLA. Further, the NBHA may be held liable under Section 107(a) for the cost of the response activities EPA performs at the Site and for any damages to natural resources. In addition, by virtue of Section 113 of CERCLA, 42 U.S.C. § 9613, other PRPs who agree to perform the necessary response action may seek contribution protection.

FINANCIAL CONCERNS/ABILITY TO PAY SETTLEMENTS

EPA is aware that the financial ability of some PRPs to contribute toward the payment of response costs at a Site may be substantially limited. If the NBHA believes, and can document, that it falls within that category, please contact Senior Enforcement Counsel Michelle Lauterback listed below for information on "Ability to Pay Settlements." In response, the NBHA will receive a package of information about the potential for such settlements. The NBHA will be asked to fill out forms about its finances and to submit financial records.

PRP RESPONSE AND EPA CONTACT

You should contact EPA within **thirty (30) business days** after receipt of this letter to indicate NBHA's willingness to perform or finance the response activities outlined above. If EPA does not receive a response within that time, EPA will assume that the NBHA does not wish to negotiate a resolution of its liabilities in connection with the response and that the NBHA has declined any involvement in performing response activities. Be advised, however, that liability under CERCLA is joint and several; therefore, each PRP is potentially liable for undertaking all response actions or reimbursing the Government for the entire amount of its response costs.

Please provide the name, address, and telephone number of a designated contact for future communications. Your written response, including any technical comments or questions concerning the proposed response activities, should be directed to the EPA On-Scene Coordinator ("OSC") or the Enforcement Coordinator ("EC") for the Site:

OSC Wing Chau
U.S. Environmental Protection Agency
Emergency Response and Removal Section II
5 Post Office Square, Suite 100, Mail Code OSRR02-2
Boston, Massachusetts 02109-3912
(617) 918-1254

EC Sharon Fennelly
U.S. Environmental Protection Agency
Emergency Response and Removal Section II
5 Post Office Square, Suite 100, Mail Code OSRR02-2
Boston, Massachusetts 02109-3912
(617) 918-1263

Legal questions and all communications from counsel should be directed to:

Michelle Lauterback, Senior Enforcement Counsel
U.S. Environmental Protection Agency
Office of Environmental Stewardship (SES)
5 Post Office Square, Suite 100, Mail Code OSRR02-2
Boston, Massachusetts 02109-3912
(617) 918-1774

DECISION NOT TO USE SPECIAL NOTICE

Under Section 122(e) of CERCLA, 42 U.S.C. § 9622(e), EPA has the discretionary authority to invoke special notice procedures to formally negotiate the terms of an agreement between EPA and the PRPs to conduct or finance response activities. The use of special notice procedures triggers a moratorium on certain EPA activities at the Site while formal negotiations between EPA and the PRPs are conducted.

Due to the exigencies posed by conditions present at the Site, removal activities must be conducted as expeditiously as possible. EPA has, therefore decided not to invoke the Section 122(e) special notice procedures with respect to CERCLA removal actions at this Site. Nonetheless, EPA is willing to discuss settlement opportunities without invoking a moratorium, but will continue the response action as planned unless such discussions lead expeditiously to a settlement.

ADMINISTRATIVE RECORD

Pursuant to Section 113(k) of CERCLA, 42 U.S.C. § 9613(k), EPA will establish an administrative record containing documents that serve as the basis of EPA's decision on the selection of a cleanup action for the Site. The Administrative Record files may be inspected and comments may be submitted by contacting the OSC for the Site, Wing Chau, at the above address.

The Administrative Record Files with corresponding index should be available for inspection at a repository near the Site within sixty (60) days of initiation of on-site removal activities, as well as the Superfund Records Center, U.S.E.P.A. 5 Post Office Square, Suite 100, (617) 918-1414.

SITE ACTIVITY OUTSIDE EPA ACTIONS

If the NBHA is already involved in discussions with state or other local authorities or involved in a lawsuit regarding this Site, the NBHA should continue such activities as it sees fit. This letter is not intended to advise or direct the NBHA to restrict or discontinue any such activities. However, the NBHA is advised to report the status of any such discussions or actions in its response to this letter and to provide a copy of its response to any other parties involved in those discussions or actions.

CONSENT TO ACCESS

EPA requests written access to the Site, to perform or oversee the response actions discussed above. This request is enclosed.

RESOURCES AND INFORMATION FOR SMALL BUSINESSES

As you may be aware, on January 11, 2002, President Bush signed into law the Superfund Small Business Liability Relief and Brownfields Revitalization Act. This Act contains several exemptions and defenses to CERCLA liability, which we suggest that all parties evaluate. You may obtain a copy of the law via the Internet at http://www.epa.gov/swerosps/bf/sblrbra.htm and review EPA guidance documents regarding these exemptions at http://www.epa.gov/compliance/ resources/policies/cleanup/superfund.

EPA has created a number of helpful resources for small businesses. EPA has established the National Compliance Assistance Clearinghouse as well as Compliance Assistance Centers which offer various forms of resources to small businesses. You may inquire about these resources at www.epa.gov. In addition, the EPA Small Business Ombudsman may be contacted at www.epa.gov/sbo. Finally, EPA developed a fact sheet about the Small Business Regulatory Enforcement Fairness Act ("SBREFA"), which is enclosed with this letter.

PURPOSE AND USE OF THIS NOTICE

The factual and legal discussions contained in this letter are intended solely to provide notice and information. Such discussions are not intended to be, and cannot be, relied upon as EPA's final position on any matter set forth herein.

Please give these matters your immediate attention. If you have any questions regarding this letter, please contact Senior Enforcement Counsel Michelle Lauterback at (617) 918-1774. Thank you for your prompt attention to this matter.

By copy of this letter, EPA is notifying the Commonwealth of Massachusetts and the Natural Resources Trustees of EPA's intent to perform, or to enter into negotiations for the performance or financing of, response actions at the Site.

Thank you for your attention to this matter.

Sincerely,

Arthur V. Johnson, III, Chief
Emergency Planning and Response Branch

Enclosures

cc: Wing Chau, EPA On-Scene Coordinator - OSRR
Sharon Fennelly, EPA Enforcement Coordinator - OSRR
Michelle Lauterback, EPA Senior Enforcement Counsel, OES
Rebecca Tobin, Counsel, MassDEP
David Johnston, MassDEP
Andrew Raddant, Regional Environmental Officer - U.S. DOI
Ken Finkelstein, National Oceanic & Atmospheric Administration - NOAA
Patti Ludwig, CERCLIS Coordinator – OSRR
John Carlson, Contracts Management – OSRR

SUMMARY OF GENERIC SCOPE OF WORK

This summary of the Generic Scope of Work is provided for informational purposes only. More detailed provisions will be set forth in the site-specific Scope of Work. Provisions may vary from site to site.

When EPA determines that a Potentially Responsible Party (PRP) has the ability to promptly and properly prevent, mitigate, or eliminate the threats posed by hazardous substances at the Site, EPA may issue an Administrative Order (Order) to such party (the Respondent) with an attached Scope of Work (SOW). The Order and SOW, among other things, compel the Respondent to develop a plan to clean up the Site. The components of the plan (also called a "deliverable") must be submitted to EPA for approval before implementation. Detailed instructions for generating each component shall be provided in the SOW. The plan shall consist of the components listed below.

1) **Site Security** - The Respondent shall provide on-site security service. Site security shall be maintained until EPA determines the threats posed by conditions at the Site are eliminated or substantially mitigated.

2) **Notification of Contractor Selection** - The Respondent shall notify EPA of the proposed cleanup contractor selected to perform work required under the Order.

3) **Site-Specific Health and Safety Plan (HASP)** - The Respondent shall develop and implement a HASP for all activities to be conducted at the Site. The HASP shall be developed to protect all on-site personnel and must comply with all applicable health and safety regulations.

4) **Quality Assurance Plan (QAP)** - The Respondent shall develop a QAP to be utilized in conducting all field and laboratory analysis. The QAP shall ensure that analytical results generated are of known quality.

5) **Site Assessment Plan (SAP)** - The Respondent shall develop a SAP specifying the overall strategy of the field investigative work necessary to characterize site contamination.

6) **Site Assessment** - A Site Assessment shall be conducted following EPA approval of the SAP.

7) **Site Assessment Report and Cleanup Plan (SAR/CP)** - Following completion of the Site Assessment, the Respondent shall develop a SAR/CP that summarizes the Site Assessment and proposes cleanup methods necessary to substantially mitigate and/or eliminate the threats posed by hazardous substances present at the Site.

8) **Site Cleanup** - The Site Cleanup shall be conducted according to the EPA approved Cleanup Plan.

9) **Completion of Work Report (CWR)** - Upon completion of the Site Cleanup, the Respondent shall submit a CWR summarizing the work performed under the Order and SOW and outlining any remaining contamination.

At any time prior to or after the completion of the work specified in this SOW, EPA may determine that additional tasks are necessary in order to achieve the objectives of the Order, the SOW and CERCLA.

Request for Access: Parker Street Waste Site
NBHA – Westlawn

CONSENT FOR ACCESS TO PROPERTY

Site Name: Parker Street Waste Site
New Bedford Housing Authority – Westlawn

Site Address:
191 -195 Liberty Street; 197 Liberty Street; 199 – 205 Liberty Street; 207 – 213 Liberty Street; and 217 - 223 Liberty Street, 447 – 447C Maxfield Street, 439 – 445 Maxfield Street; 451 – 451C Maxfield Street, 455 – 455C Maxfield Street, 463 – 463C Maxfield Street, 461 – 461C Maxfield Street; 471 – 471C Maxfield Street; and 473 – 473C Maxfield Street; 318 – 318C Smith Street; 316 – 316C Smith Street; 320 – 320C Smith Street; 322 – 322C Smith Street; 302 – 306 Smith Street; 308 – 308C Smith Street; 330 – 330C Smith Street; and 332 - 332C Smith Street, New Bedford, Massachusetts, Map 64, Lot 101

283 – 289 Hillman Street; 293 - 299 Hillman Street; 305 – 311 Hillman Street; 157 – 163 Liberty Street; 165 – 169 Liberty Street; 440 – 446 Maxfield Street; 448 – 448C Maxfield Street, 450 – 450C Maxfield Street; 452 – 452B Maxfield Street; 456 – 456C Maxfield Street; 458 – 458C Maxfield Street; 462 – 462C Maxfield Street; and 464 - 464B Maxfield Street, New Bedford, Massachusetts, Map 57, Lot 1

317 – 323 Hillman Street; 470 – 470C Maxfield Street; 472 – 472B Maxfield Street; 480 – 480C Maxfield Street; 482 – 482C Maxfield Street; 490 – 490C Maxfield Street; and 492 – 492B Maxfield Street, New Bedford, Massachusetts, Map 56, Lot 28

220 – 226 Lindsey Street; 228 – 232 Lindsey Street; 481 – 481C Maxfield Street; 483 – 483C Maxfield Street; 491 – 491C Maxfield Street; 493 – 493C Maxfield Street; 501 Maxfield Street; 340 – 340C Smith Street; 342 – 342C Smith Street; 350 – 350C Smith Street; and 352 – 352C Smith Street, New Bedford, Massachusetts, Map 63, Lot 63

I consent to the officers, employees, agents, contractors, subcontractors, consultants, and other authorized representatives of the United States Environmental Protection Agency ("EPA") entering and having continued access to the above-referenced property for the following purposes:

- Meet with the property owner and tenants to discuss the scope of this proposed removal action.
- Document existing property conditions for subsequent restoration.
- Remove, to the extent practicable, interference for excavation such as shrubbery, trees, outbuildings, playground equipment, or other items as required.
- Remove and dispose of contaminated soil as necessary.
- Take other actions related to the investigation and removal of contaminated soils.

- Install a visual marker to delineate contaminated soils (if any) which may remain at depth (beyond 3 feet below surface grade) or which cannot otherwise be excavated.
- Implement erosion control measures as determined necessary.
- Conduct air monitoring and implement dust control measures as appropriate.
- Conduct extent of contamination sampling to determine the extent of landfill material to be removed; and conduct confirmation sampling as determined necessary by the EPA OSC.
- Perform response actions or oversee the response actions.
- Take or evaluate the need to take other response actions.
- Repair response related damages, including backfilling with clean fill material,
- grading, and re-establishing vegetation in areas affected by response related activities.

I realize that these actions by EPA are undertaken pursuant to EPA's response and enforcement authorities under the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, 42 U.S.C. §9601 et seq. and the Resource Conservation and Recovery Act, 42 U.S.C. §6901 et seq.

I give this written permission voluntarily with knowledge of my right to refuse without threats or promise of any kind.

______________________ Date		______________________________ Signature of Property Owner or Owner's Authorized Representative
	Name:	______________________________
	Title:	______________________________
	Address:	______________________________
		______________________________
	Phone:	______________________________

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MA 02109-3912

URGENT LEGAL MATTER – PROMPT REPLY NECESSARY
OVERNIGHT DELIVERY

September 29, 2010

C.P. Properties, LLC
M.P. Properties, LLC
c/o Craig H. Campbell, Attorney-at-Law
60 State Street
Suite 700
Boston, MA 02109

Re: Notice of Potential Liability and Invitation to Perform or Finance Proposed Cleanup Activities for the Parker Street Waste Site, New Bedford, MA

Dear Mr. Campbell:

This letter serves to notify C.P. Properties, LLC ("CP") located at 316- -324 Parker Street and M.P. Properties, LLC ("MP") located at 157 – 159 Hunter Street of potential liability regarding a portion of the Parker Street Waste Site, ("Site"), as defined by Section 107(a) of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), commonly known as the federal "Superfund" law. This letter also notifies CP and MP of planned removal activities at the Site which CP and MP are invited to perform or finance and which CP and MP may be ordered to perform at a later date.

Under CERCLA, EPA is responsible for responding to the release or threat of release of hazardous substances, pollutants or contaminants into the environment - that is, for stopping further contamination from occurring and for cleaning up or otherwise addressing any contamination that has already occurred. EPA has documented that such a release has occurred at the Parker Street Waste Site ("the Site") located in New Bedford, MA. Based on information presently available to EPA, EPA has determined that CP and MP are potentially liable under CERCLA for the cleanup of a portion of the Site or costs EPA has incurred in cleaning up the Site, which CP and MP are invited to perform or finance and which CP and MP may be ordered to perform at a later date.

EPA has documented the release or threatened release of hazardous substances or pollutants or contaminants at the Site, which is located on a previously estimated 104-acre area, intersected by Parker Street, in New Bedford, Bristol County, Massachusetts. The estimated extent of the Site is believed to be bounded to the north by Durfee Street, to the east by Liberty Street and the Oak Grove Cemetery, to the south by Hillman Street, and to the west by Summit Street. Located within the bounds of the Site is the New Bedford High School campus, the Keith Middle School, the Hetland Memorial Skating Rink property, Walsh Field, the new Andre McCoy Field, residential properties, New Bedford Housing Authority properties, Carabiner's Indoor Climbing

Facility, and two privately-owned apartment complexes. Hazardous substances involved in the release or threat of release at the Site include, but are not limited to: barium, chromium, lead, and polycyclic aromatic hydrocarbons ("PAHs").

EPA has spent public funds and is considering spending additional public funds to investigate and address the releases and/or threatened release(s) at the Site. Unless a potentially responsible party ("PRP") or parties commit to properly performing or financing such actions, EPA will perform these actions pursuant to Section 104 of CERCLA, 42 U.S.C. §9604.

EXPLANATION OF POTENTIAL LIABILITY

Under CERCLA, specifically Sections 106(a) and 107(a), 42 U.S.C. §§9606(a) and 9607(a), Section 7003 of the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. § 6973, and other laws, PRPs may be required to implement cleanup actions deemed necessary by EPA to protect public health, welfare, or the environment. PRPs may also be responsible for all costs incurred by the Government in responding to any release or threatened release at the Site, unless the PRP can show divisibility or any of the other statutory defenses. Such actions and costs may include, but are not limited to: expenditures for investigations, planning, response, oversight and enforcement activities.

PRPs include current and former owners and operators of a Site, as well as persons who arranged for treatment and/or disposal of any hazardous substances found at the Site, and persons who accepted hazardous substances for transport and selected the Site to which the hazardous substances were delivered.

Based on information gathered during investigations of the Site, EPA believes that CP and MP are PRPs under Section 107(a) of CERCLA with respect to the Site. Specifically, EPA has reason to believe that CP and MP are the current owners of a portion of the Site.

OUTLINE OF SITE RESPONSE ACTIVITIES

To date, EPA has taken the following response actions at the Site under the authority of the Superfund Program including:

- A Preliminary Assessment ("PA") and Site Investigation ("SI") at additional properties in order to gain a basic understanding of any risks posed to human health and/or the environment by releases or threatened releases from the Site.

Due to the presence of hazardous substances at the Site, and in light of other conditions, EPA has determined that there is an imminent and substantial endangerment to public health, welfare, or the environment. In response, EPA plans to conduct the following immediate removal activities at CP and MP:

1) Meet with the property owner and tenants to discuss the scope of this proposed removal action.

2) Document existing property conditions for subsequent restoration.
3) Remove, to the extent practicable, interference for excavation such as shrubbery, trees, outbuildings, playground equipment, or other items as required.
4) Remove and dispose of contaminated soil as necessary.
5) Take other actions related to the investigation and removal of contaminated soils.
6) Install a visual marker to delineate contaminated soils (if any) which may remain at depth (beyond 3 feet below surface grade) or which cannot otherwise be excavated.
7) Implement erosion control measures as determined necessary.
8) Conduct air monitoring and implement dust control measures as appropriate.
9) Conduct extent of contamination sampling to determine the extent of landfill material to be removed; and conduct confirmation sampling as determined necessary by the EPA OSC.
10) Perform response actions or oversee the response actions.
11) Take or evaluate the need to take other response actions.
12) Repair response related damages, including backfilling with clean fill material, grading, and re-establishing vegetation in areas affected by response related activities.

INVITATION TO PERFORM SITE RESPONSE ACTIVITIES

Before EPA spends public funds to undertake the removal action at the Site, EPA urges CP and MP to participate in removal activities or finance all the removal activities outlined above. Any such work performed by CP and MP in their capacities as PRPs may be conducted pursuant to administrative order and an EPA-approved workplan, in consultation with the Massachusetts Department of Environmental Protection, as authorized by Section 106(a) of CERCLA, 42 U.S.C. § 9606(a). Prior to final issuance of such an order, a draft order would be sent to CP and MP and their representative for review and comment. Enclosed is a copy of a summary of a generic Scope of Work. This document should provide an understanding of the types of plans and activities typically required by such an Order.

Be advised that if CP and/or MP do not indicate a willingness to perform or finance necessary response actions, EPA explicitly reserves any rights it may have to order CP and/or MP to undertake such actions under Section 106 of CERCLA, 42 U.S.C. § 9606. Failure to comply with a Section 106(a) administrative order may result in a fine of up to $37,500 per day under Section 106(b) or imposition of treble damages under Section 107(c) (3) of CERCLA. Further, CP and MP may be held liable under Section 107(a) for the cost of the response activities EPA performs at the Site and for any damages to natural resources. In addition, by virtue of Section 113 of CERCLA, 42 U.S.C. § 9613, other PRPs who agree to perform the necessary response action may seek contribution protection.

FINANCIAL CONCERNS/ABILITY TO PAY SETTLEMENTS

EPA is aware that the financial ability of some PRPs to contribute toward the payment of response costs at a Site may be substantially limited. If CP and MP believe, and can document, that they fall within that category, please contact Senior Enforcement Counsel Michelle Lauterback listed below for information on "Ability to Pay Settlements." In response, CP and

MP will receive a package of information about the potential for such settlements. CP and MP will be asked to fill out forms about their finances and to submit financial records.

PRP RESPONSE AND EPA CONTACT

You should contact EPA within **ten (10) business days** after receipt of this letter to indicate CP's and MP's willingness to perform or finance the response activities outlined above. If EPA does not receive a response within that time, EPA will assume that the CP and/or MP do not wish to negotiate a resolution of its liabilities in connection with the response and that CP and/or MP have declined any involvement in performing response activities. Be advised, however, that liability under CERCLA is joint and several; therefore, each PRP is potentially liable for undertaking all response actions or reimbursing the Government for the entire amount of its response costs.

Please provide the name, address, and telephone number of a designated contact for future communications. Your written response, including any technical comments or questions concerning the proposed response activities, should be directed to the EPA On-Scene Coordinator ("OSC") or the Enforcement Coordinator ("EC") for the Site:

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Emergency Response and Removal Section II
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Boston, Massachusetts 02109-3912
(617) 918-1254

EC Sharon Fennelly
U.S. Environmental Protection Agency
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U.S. Environmental Protection Agency
Office of Environmental Stewardship (SES)
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DECISION NOT TO USE SPECIAL NOTICE

Under Section 122(e) of CERCLA, 42 U.S.C. § 9622(e), EPA has the discretionary authority to invoke special notice procedures to formally negotiate the terms of an agreement between EPA and the PRPs to conduct or finance response activities. The use of special notice procedures triggers a moratorium on certain EPA activities at the Site while formal negotiations between EPA and the PRPs are conducted.

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The Administrative Record Files with corresponding index should be available for inspection at a repository near the Site within sixty (60) days of initiation of on-site removal activities, as well as the Superfund Records Center, U.S.E.P.A. 5 Post Office Square, Suite 100, (617) 918-1414.

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If CP and/or MP are already involved in discussions with state or other local authorities or involved in a lawsuit regarding this Site, CP and/or MP should continue such activities as they see fit. This letter is not intended to advise or direct CP and MP to restrict or discontinue any such activities. However, CP and MP are advised to report the status of any such discussions or actions in its response to this letter and to provide a copy of their responses to any other parties involved in those discussions or actions.

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Thank you for your attention to this matter.

Sincerely,

Arthur V. Johnson, III, Chief
Emergency Planning and Response Branch

Enclosures

cc: Wing Chau, EPA On-Scene Coordinator - OSRR
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Ken Finkelstein, National Oceanic & Atmospheric Administration - NOAA
Patti Ludwig, CERCLIS Coordinator – OSRR
John Carlson, Contracts Management – OSRR
Antonio J. Pereira, C.P. Properties, LLC and M.P. Properties, LLC

SUMMARY OF GENERIC SCOPE OF WORK

This summary of the Generic Scope of Work is provided for informational purposes only. More detailed provisions will be set forth in the site-specific Scope of Work. Provisions may vary from site to site.

When EPA determines that a Potentially Responsible Party (PRP) has the ability to promptly and properly prevent, mitigate, or eliminate the threats posed by hazardous substances at the Site, EPA may issue an Administrative Order (Order) to such party (the Respondent) with an attached Scope of Work (SOW). The Order and SOW, among other things, compel the Respondent to develop a plan to clean up the Site. The components of the plan (also called a "deliverable") must be submitted to EPA for approval before implementation. Detailed instructions for generating each component shall be provided in the SOW. The plan shall consist of the components listed below.

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9) **Completion of Work Report (CWR)** - Upon completion of the Site Cleanup, the Respondent shall submit a CWR summarizing the work performed under the Order and SOW and outlining any remaining contamination.

At any time prior to or after the completion of the work specified in this SOW, EPA may determine that additional tasks are necessary in order to achieve the objectives of the Order, the SOW and CERCLA.

Request for Access: Parker Street Waste Site
CP Properties, LLC

<u>CONSENT FOR ACCESS TO PROPERTY</u>

<u>Site Name:</u>	Parker Street Waste Site C.P. Properties, LLC
<u>Site Address:</u>	316 – 324 Parker Street 169 Hunter Street Map 63, Lot 19 Map 63 – Lot 102

I consent to the officers, employees, agents, contractors, subcontractors, consultants, and other authorized representatives of the United States Environmental Protection Agency ("EPA") entering and having continued access to the above-referenced property for the following purposes:

- Meet with the property owner and tenants to discuss the scope of this proposed removal action.
- Document existing property conditions for subsequent restoration.
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- Perform response actions or oversee the response actions.
- Take or evaluate the need to take other response actions.
- Repair response related damages, including backfilling with clean fill material, grading, and re-establishing vegetation in areas affected by response related activities.

I realize that these actions by EPA are undertaken pursuant to EPA's response and enforcement authorities under the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, 42 U.S.C. §9601 <u>et seq.</u> and the Resource Conservation and Recovery Act, 42 U.S.C. §6901 <u>et seq.</u>

I give this written permission voluntarily with knowledge of my right to refuse without threats or promise of any kind.

____________________ Date

____
Signature of Property Owner or
Owner's Authorized Representative

Name: ____

Title: ____

Address: ____

____

Phone: ____

Request for Access: Parker Street Waste Site
MP Properties, LLC

<u>CONSENT FOR ACCESS TO PROPERTY</u>

<u>**Site Name:**</u>	Parker Street Waste Site M.P. Properties, LLC
<u>**Site Address:**</u>	157 – 159 Hunter Street Map 63, Lot 19

I consent to the officers, employees, agents, contractors, subcontractors, consultants, and other authorized representatives of the United States Environmental Protection Agency ("EPA") entering and having continued access to the above-referenced property for the following purposes:

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- Repair response related damages, including backfilling with clean fill material, grading, and re-establishing vegetation in areas affected by response related activities.

I realize that these actions by EPA are undertaken pursuant to EPA's response and enforcement authorities under the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, 42 U.S.C. §9601 <u>et seq.</u> and the Resource Conservation and Recovery Act, 42 U.S.C. §6901 <u>et seq.</u>

I give this written permission voluntarily with knowledge of my right to refuse without threats or promise of any kind.

Request for Access: Parker Street Waste Site
MP Properties, LLC

____
Date

____
Signature of Property Owner or
Owner's Authorized Representative

Name: ______________________________

Title: ______________________________

Address: ______________________________

____

Phone: ______________________________

EPA Begins Clean Up at the Parker Street Waste Site in New Bedford, Mass.

Release date: 11/17/2010

Contact Information: Jim Murphy, (617) 918-1028

(Boston, Mass. – Nov. 17, 2010) – Last week, EPA began site mobilization for a soil removal action at the Parker Street Waste Site in New Bedford. The work to remove contaminated soil from several residential properties is expected to continue through December.

Work began at the site last week to prepare EPA's command post and equipment staging areas and to meet with homeowners to discuss property specific plans. Preliminary tree and brush clearing activities have begun as well.

General work hours for clearing areas for soil removal, removing contaminated soil, and replacing it with clean soil will occur on Monday through Friday from 8:00 a.m. - 5:00 p.m.

During the excavation activities, work crews handling the contaminated soil will be dressed in protective clothing as a routine precautionary measure, including white tyvek coveralls and hard hats. Throughout the clean up, EPA staff and contractors will take measures to ensure that conditions are not harmful for people in the surrounding area, such as conducting area air monitoring and taking precautions to limit dust. Furthermore, to minimize its impacts to local traffic during the peak periods in which school buses are transporting students, EPA will reduce its response related traffic during those time periods.

Late last year, in response to concerns from the community over the scope and pace of environmental assessment and cleanup activities, EPA and the Massachusetts Department of Environmental Protection (MassDEP) developed a sampling and analysis plan to confirm the perimeter of the site boundaries and evaluate potential soil contamination. In developing this plan, EPA and MassDEP sought input from the community and the City of New Bedford.

EPA and MassDEP completed the initial phase of the site assessment on 47 properties this past summer. Five properties were identified with higher levels of contamination at or near the surface which exceed Massachusetts environmental standards for residential properties. These properties are being addressed during this construction season. EPA will plan and implement clean up activities next spring on additional properties with contamination identified in the top three feet of soil.

A team of representatives from EPA, MassDEP, the U.S. Agency for Toxic Substances and Disease Registry (ATSDR) and the Massachusetts Department of Public Health, Bureau of Environmental Health (MDPH/BEH) presented the sampling results to individual property owners and residents in home visits and availability sessions in September and October. The government representatives attended each meeting to explain the analytical results, discuss any health concerns of the residents, and talk with property owners about the next steps necessary to address contamination at individual parcels.

EPA and MassDEP completed a second round of soil samples in October. The second phase of sampling included 24 additional properties along the southern and southeastern perimeters of the Parker Street Waste Site.

A Parker Street Waste Site Community Update regarding site activities was recently distributed to owners and tenants at all properties within the Parker Street area as well as to the Keith Middle School, New Bedford High School, Boys and Girls Club, and the town library. EPA and MassDEP plan to hold a public meeting in mid-December to review the soil sampling results and EPA's ongoing cleanup actions and to answer any questions or concerns of community members.

More information on EPA's Emergency Response program in New England (http://www.epa.gov/region1/superfund/er/index.html)

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Recent additions

11/23/2010	Town of West Warwick, Rhode Island Industrial Pretreatment Program Recognized for Excellence
11/23/2010	Town of Mansfield, Massachusetts Industrial Pretreatment Program Recognized for Excellence
11/23/2010	Town of Merrimack, New Hampshire Industrial Pretreatment Program Recognized for Excellence
11/22/2010	With Cooler Weather, Advice to New Englanders for Safer, Cleaner Wood-Burning
11/19/2010	Unilateral Administrative Order Issued Regarding Mottolo Superfund Site in Raymond, N.H.

Administrative Record File Available for the Parker Street Waste Site Removal Action

The U.S. Environmental Protection Agency (EPA) announces that the Administrative Record File for the removal action at the Parker Street Waste Site, New Bedford, MA, is available for review. EPA seeks to inform the public of the availability of the Administrative Record File and to encourage the public to review and comment on it. Removal activities include, but are not limited to, the following: documenting existing property conditions for subsequent restoration; excavating polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and/or metals-contaminated surface soils, and removing and disposing of contaminated surface soil as determined necessary by EPA; installing a geotextile fabric as a visual marker to delineate contaminated soils (if any) which may remain at depth (beyond 3 feet below surface grade) or which cannot otherwise be excavated; conducting extent-of-contamination sampling to determine the extent of landfill material to be removed, and confirmation sampling as determined necessary by the EPA On-Scene Coordinator (OSC); packaging, documenting, and shipping cleanup-generated wastestreams off site for disposal at EPA/Massachusetts Department of Environmental Protection (MassDEP)-approved facilities; and repairing response-related damages, including backfilling with clean fill material, grading, and re-establishing vegetation in areas affected by response-related activities. The extent of the removal action will achieve cleanup standards to eliminate Imminent Hazard conditions and attain a level of No Significant Risk within the 0- to 3-foot depth, as defined in the Massachusetts Contingency Plan (MCP). The site will be referred to MassDEP for any long-term remedial measures (including institutional controls and long-term operation and maintenance of any cap that is constructed) which may be required to address remaining site risks.

The Administrative Record File is the collection of documents that formed the basis for the selection of a removal action at the site. Documents in the Administrative Record File include the Action Memorandum and the Site Investigation Closure Memorandum.

The Administrative Record File is available for review at the:

- U.S. EPA Records Center, 5 Post Office Square, Suite 100, Boston, Massachusetts, 02109-3912, (617) 918-1440, by appointment.

- New Bedford Free Public Library, 613 Pleasant Street, New Bedford, MA, 02740, (508) 991-6275.

Written comments on the Administrative Record File should be sent to: On-Scene Coordinator Wing Chau, Mail Code OSRR02-2, U.S. EPA Region I, 5 Post Office Square, Suite 100, Boston, MA, 02109-3912. Comments should be sent to the On-Scene Coordinator within 30 days of this announcement.

Amended Administrative Record File Available
for the Parker Street Waste Site Removal Action

The U.S. Environmental Protection Agency (EPA) announces that the amended Administrative Record File for the removal action at the Parker Street Waste Site, New Bedford, MA, is available for review. EPA seeks to inform the public of the availability of the Administrative Record File and to encourage the public to review and comment on it. Under an Action Memorandum Addendum, signed on 23 September 2011, the goals of the removal action remain the same as those described in the original Action Memorandum, signed on 26 August 2010: to conduct sampling to define the full extent of the boundaries of the Site and to remove contaminated surface soils from properties at the Site. However, objectives specific to this Addendum include the following: addressing surface soils contaminated with hazardous substances within the top foot of soil at the New Bedford Housing Authority's (NBHA)'s Westlawn property, which has activity and use limitations imposed it by NBHA, through response actions consistent with the National Contingency Plan (NCP); conducting additional sampling, as necessary, to define the boundaries of the Site; removing surface soils contaminated with elevated levels of hazardous substances from additional properties; restoring properties to pre-excavation conditions to the extent practicable; and transporting and disposing of all contaminated material.

The Administrative Record File is the collection of documents that formed the basis for the selection of a removal action at the site. Documents in the Administrative Record File include the Action Memorandum and Addendum, signed 26 August 2010 and 23 September 2011, respectively.

The Administrative Record File is available for review at the:

- U.S. EPA Records Center, 5 Post Office Square, Suite 100, Boston, Massachusetts, 02109-3912, (617) 918-1440, by appointment.

- New Bedford Free Public Library, 613 Pleasant Street, New Bedford, MA, 02740, (508) 991-6275.

Written comments on the Administrative Record File should be sent to: On-Scene Coordinator Wing Chau, Mail Code OSRR02-2, U.S. EPA Region I, 5 Post Office Square, Suite 100, Boston, MA, 02109-3912. Comments should be sent to the On-Scene Coordinator within 30 days of this announcement.