engineering and constructing a better tomorrow

July 25, 2008

Mr. Kevin Legare
U.S. General Services Administration (1PR)
O'Neill Federal Building, Room 925
10 Causeway Street
Boston, MA 02222

Subject: **2008 Groundwater and Sediment Sampling Plans**
Former Stratford Army Engine Plant
Stratford, Connecticut
GSA Contract Number: GS-10F-0157K
Blanket Purchase Agreement No.: GS-00P-08-CY-A-0045
Delivery Order No.: GS-P-01-08-CH-0010

Dear Mr. Legare:

Please find enclosed the Groundwater and Sediment Sampling Plans for the Focused Feasibility Study (FFS) at the Former Stratford Army Engine Plant (SAEP). The attached plans have been prepared by Anderson Mulholland & Associates, Inc. of White Plains, New York, under subcontract to MACTEC Engineering and Consulting, Inc.

If you have any questions regarding the enclosed plans please contact Mr. Rod Pendleton at (207) 775-5401 or Mr. Wes LaParl at (914) 251-0400.

Sincerely,

MACTEC ENGINEERING AND CONSULTING, INC.

R. Roderick Pendleton

Rod Pendleton
Project Manager

Enclosures: Groundwater Sampling Plan
Sediment Sampling Plan

cc: Lee Anne Galanes (GSA)

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Anderson Mulholland & Associates
ENVIRONMENTAL CONSULTANTS

Groundwater Sampling Plan
Stratford Army Engine Plant
Stratford, Connecticut

Introduction

Anderson, Mulholland & Associates, Inc. (AMAI) is conducting groundwater monitoring at the Stratford Army Engine Plant (SAEP) located in Stratford, Connecticut. The objective is to determine the current concentrations of volatile organic compounds (VOCs), hexavalent chromium, and other metals. The data is required to evaluate groundwater concentration trends and the suitability of natural attenuation as a long-term remedial alternative. Groundwater samples will be collected and submitted for laboratory analysis.

Scope of Work

The scope of work consists of collected groundwater samples from 25 monitoring wells. Monitoring well locations are shown on the attached figure. A sample summary is attached. The groundwater samples will be collected using the low flow sampling method. A peristaltic pump will be used to collect groundwater samples. Tubing will be placed in the screened section of the well and pumped at a low flow rate (consistent with prior low flow sampling protocol).

Water levels will be monitored to ensure minimum drawdown. Water samples for laboratory analysis will then be collected once the well stabilizes. Two duplicate samples, one equipment blank, one set matrix spike/matrix spike duplicate, and one trip blank per sample shipment will also be collected. Refer to the attached table for a list of wells to be sampled and specified analysis and refer to the attached figure for well locations.

Groundwater samples will be preserved by immediately placing on ice and cooled to 4 degrees Celsius. Samples will be transported at the end of each day by courier to the analytical laboratory. Groundwater samples will be analyzed for constituents of concern: VOCs (25samples) and total chromium, hexavalent chromium, copper, cadmium, cyanide, nickel, and silver (10 samples).

All work will be documented in the field logbook. All work will be conducted in accordance with the SAEP Sampling and Analysis Plan (SAP) and Quality Assurance Project Plan (QAPP) and the project Health and Safety Plan.

Health and Safety

The Site Safety and Health Plan (SSHP), dated March 2004, will be used for groundwater sampling and other site activities. Addendum and significant items are as follows:

- Site specific training will be provided by the SAEP caretaker prior to commencement of field work.
- Prior to entry to SAEP, workers must complete a Medical Data Sheet (see Sec. 7.4 of SSHP)
- Workers will adhere to established safe work practices.
- The initial Personal Protective Equipment level is modified Level D (see Sec. 2.4 of SSHP)
- Emergency Telephone Numbers can be found in Section 7.5 of SSHP
- Written directions to Bridgeport Hospital can be found in Section 7.6 of SSHP
- Updated Emergency Contacts and Phone Numbers:

AMAI Office	914-251-0400
Wes LaParl	845-216-0046
Herb Mulholland	914-262-0497

References

MACTEC Engineering and Consulting, Inc. (MACTEC), 2003. Draft Sampling and Analysis Plan (SAP), Stratford Army Engine Plant, Stratford, CT. Prepared for the U.S. Army Assistant Chief of Staff for Installation Management, National Capital Region Field Office, Alexandria, Virginia, December 2003.

MACTEC, 2003. Draft Assurance Project Plan (QAPP), Stratford Army Engine Plant, Stratford, CT. Prepared for the U.S. Army Assistant Chief of Staff for Installation Management, National Capital Region Field Office, Alexandria, Virginia, December 2003.

MACTEC, 2004. Draft Site Safety and Health Plan (SSHP), Stratford Army Engine Plant, Stratford, CT. Prepared for the U.S. Army Assistant Chief of Staff for Installation Management, National Capital Region Field Office, Alexandria, Virginia, March 2004.

Stratford Army Engine Plant

550 South Main Street, Stratford Connecticut, 06497

Sample ID	Well Screen Interval (ft bgs)	Analysis	Turn Around Time
PZ-99-02B	30-35	VOC, Cr VI, metals	15 Day TAT
PZ-99-02C	45-50	VOC, Cr VI, metals	15 Day TAT
PZ-8D	23.5-33.5	VOC, Cr VI, metals	15 Day TAT
WC-8S	3-13	VOC, Cr VI, metals	15 Day TAT
WC2-3D	74.5-84.5	VOC, Cr VI, metals	15 Day TAT
PZ-99-01A	4-9	Cr VI, metals	15 Day TAT
PZ-99-01B	30-35	Cr VI, metals	15 Day TAT
PZ-99-04I	30-35	VOC, Cr VI, metals	15 Day TAT
PZ-4D	29-39	VOC, Cr VI, metals	15 Day TAT
WC-4S	3-13	VOC, Cr VI, metals	15 Day TAT
WC-3S	3-13	VOC, Cr VI, metals	15 Day TAT
ECD-4	8-18	VOC, Cr VI, metals	15 Day TAT
HESE-01-16I	23.9-33.9	VOC, Cr VI, metals	15 Day TAT
HESE-01-06I	19.8-29.8	VOC	15 Day TAT
HESE-01-17I	17.6-27.6	VOC, Cr VI, metals	15 Day TAT
HESE-01-07I	19.7-29.7	VOC	15 Day TAT
PZ-16D	19-29	VOC	15 Day TAT
WC-10S	3-13	VOC	15 Day TAT
WC-5S	3-13	VOC	15 Day TAT
MW-4	5-15	VOC, Cr VI, metals	15 Day TAT
PZ-1D	24-34	VOC	15 Day TAT
WC-1S	5-15	VOC	15 Day TAT
HESE-01-18D	38.9-48.9	VOC	15 Day TAT
WC-2D	24.5-34.5	VOC	15 Day TAT
Trip blanks	One set per cooler	VOC	15 Day TAT
Duplicates	3 total set duplicates	2 for VOC, one for CrVI, metals	15 Day TAT
Equipment Blanks	1 equipment blank	VOC, Cr VI, metals	15 Day TAT
Matrix Spike/MSD	2 sets for sampling round	VOC, Cr VI, metals	15 Day TAT

Notes: Metals include total chromium, copper, cadmium, cyanide, nickel, and silver. Cyanide has a different preservative

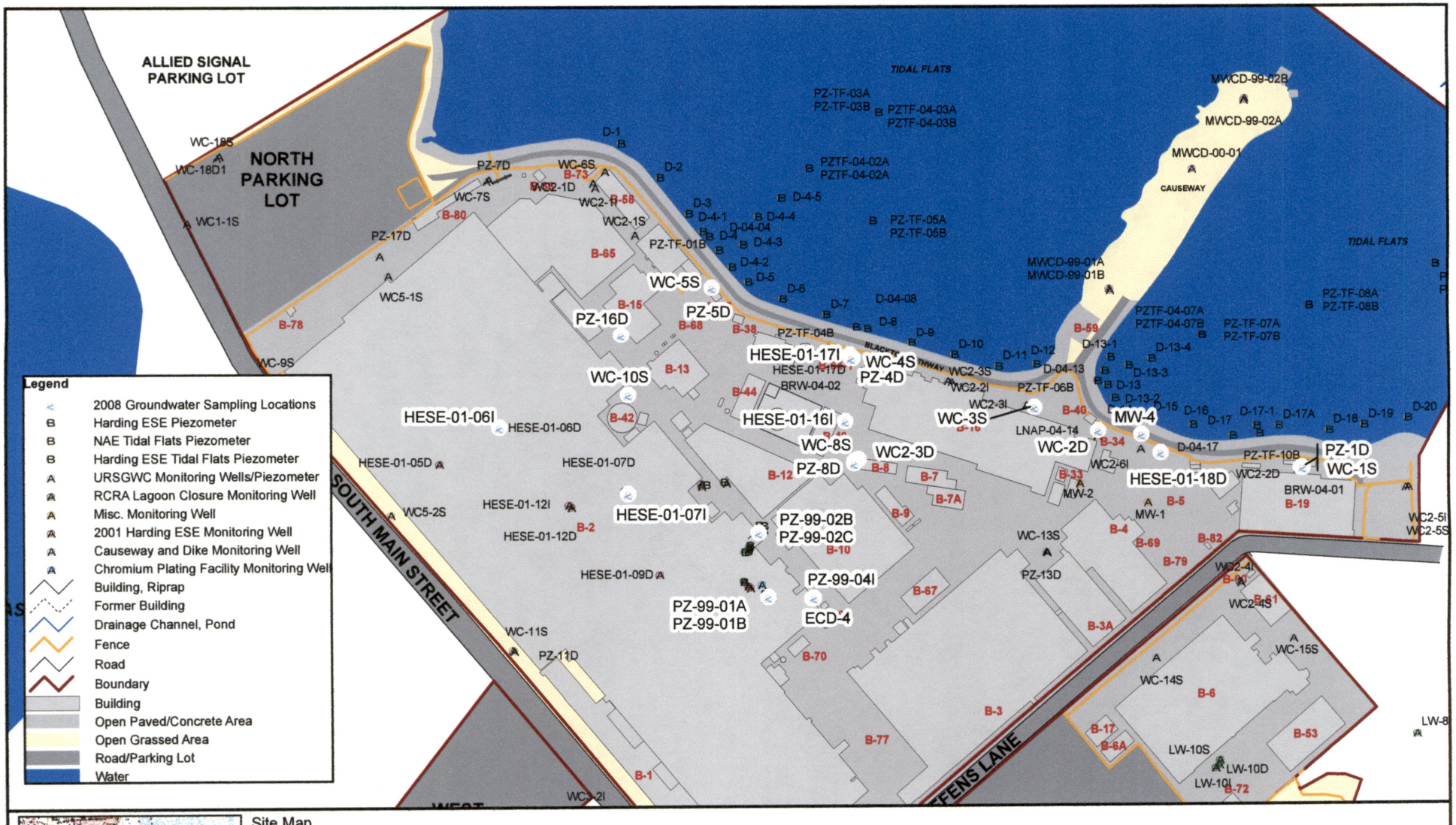

Figure 1
2008 MNA Groundwater Monitoring Locations

Stratford Army Engine Plant
Stratford, Connecticut

Anderson Mulholland & Associates

Document: C:\Documents and Settings\drpendleton\My Documents_Projects\SAEP\AMA\ Focused Feasibility Study\GIS\MapDocuments\SAEP_FFS_WorkPlans.mxd PDF: C:\Documents and Settings\drpendleton\My Documents_Projects\SAEP\AMA\ Focused Feasibility Study\GIS\Figures\FFS\Figure 1 2008 MNA GW Locations.pdf 07/25/2008 11:05 AM DRPendleton

Anderson Mulholland & Associates
ENVIRONMENTAL CONSULTANTS

Sediment Sampling Plan
Stratford Army Engine Plant
Stratford, Connecticut

Introduction

Anderson, Mulholland & Associates, Inc. (AMAI) is conducting sediment sampling at the Stratford Army Engine Plant (SAEP) located in Stratford, Connecticut. The objective is to collect sediment samples from the tidal flats to determine the current concentrations of polychlorinated byphenyls (PCBs). Samples will be collected from locations where high concentrations of PCBs were previously detected.

SAEP is in the process of preparing a Feasibility Study (FS) to address contaminated sediment in the Tidal Flats. The most current sediment data was collected during the mid-to- late 1990s. Since redistribution and/or attenuation of PCBs may have occurred since that time current conditions at the hot spot locations are required. The results of this sampling event will be used to determine if significant changes in concentrations of PCBs have occurred or if conditions have not changed and the existing sediment data set can be used for the FS.

Scope of Work

The scope of work consists of collecting sediment samples from 12 locations at the tidal flats. Sample locations are shown on the attached figure. A sample summary table is attached. The table provides the sample number, location and depth interval. The sediment samples will be collected from 0-6 inches which is the depth interval where contaminants were previously detected. One deeper sample will be collected from 12-18 inches at location TC-1.

Samples will be collected during low tide when the sediments in the tidal flat are fully exposed. Samples will be collected from eight previously sampled locations to evaluate current concentrations. Four samples will be collected between existing transects TC and TD to delineate the extent of PCBs. Previous sample locations will be identified in the field using compass bearings and distances in the attached table.

QA/QC samples will include a duplicate sample, a co-located duplicate and a matrix spike/matrix spike duplicate. The co-located duplicate samples will be taken in the same location as the primary sample but not blended. The intent of co-located sample is to measure

variability of the sediment matrix. Refer to the attached table for a list of sediment locations to be sampled and refer to the attached figure for sample locations. Pre-cleaned disposable sampling equipment will be used to collect sediment samples.

Sediment samples will be preserved by immediately placing on ice and cooled to 4 degrees Celsius. Samples will be transported at the end of each day by courier to the analytical laboratory. Sediment samples will be analyzed for PCBs by Method 8082. Sediment samples will be collected and submitted for laboratory analysis in accordance with the Quality Assurance Project Plan (QAPP).

Laboratory analysis will be performed by Accutest Laboratories, Inc. located in Marlboro, Massachusetts. Accutest is certified in the state of Connecticut. Samples will be analyzed on a standard 15-day turnaround time. Accutest will provide the reasonable confidence protocol (RCP) data package which is required by the CTDEP. Sediment analytical results will be validated in accordance with the data validation protocols in the QAPP.

Health and Safety

The Site Safety and Health Plan (SSHP), dated March 2004, will be used for sediment sampling activities. Addendum and significant items are as follows:

- Site specific training will be provided by the SAEP caretaker prior to commencement of field work.
- Prior to entry to SAEP, workers must complete a Medical Data Sheet (see Sec. 7.4 of SSHP)
- Workers will adhere to established safe work practices.
- The initial Personal Protective Equipment level is modified Level D (see Sec. 2.4 of SSHP)
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MACTEC, 2004. Draft Site Safety and Health Plan (SSHP), Stratford Army Engine Plant, Stratford, CT. Prepared for the U.S. Army Assistant Chief of Staff for Installation Management, National Capital Region Field Office, Alexandria, Virginia, March 2004.

Stratford Army Engine Plant

Sediment Sample Locations

Sample ID	Sample Depth Inches below surface	Bearing/Distance Degrees/feet	Analysis	Turn Around Time days	Notes
TB-1	0-6	N19°E/85	PCBs	14	Existing location
TB-2	0-6	N19°E/217	PCBs	14	Existing location
TC-1	0-6	N20°E/50	PCBs	14	Existing location
TC-1	12-18	N20°E/50	PCBs	14	deeper interval
TC-2	0-6	N20°E/241	PCBs	14	Existing location
TC-3	0-6	N20°E/286	PCBs	14	Existing location
TC-1A	0-6	N19°E/50	PCBs	14	New location
TC-2A	0-6	N19°E/50	PCBs	14	New location
TC-1B	0-6	N26°E/58	PCBs	14	New location
TC-2B	0-6	N26°E/245	PCBs	14	New location
TD-1	0-6	N36°E/62	PCBs	14	Existing location
TD-2	0-6	N36°E/240	PCBs	14	Existing location
Duplicates	1 duplicate sample		PCBs	14	Replicate duplicate
Co located duplicate	0-6		PCBs	14	co-located with TC-1(0-6)
Matrix Spike/MSD	1 set		PCBs	14	

Bearing and distance measured from base of dike at shoreline

Figure 1

Sediment Sample Location Map

Stratford Army Engine Plant
Stratford, Connecticut

Prepared by: Anderson-Mulholland & Assoc., Inc.