



SAGE
ENVIRONMENTAL

June 25, 2012

Mr. Joseph Martella
RI Dept. of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, Rhode Island 02903

**RE: *Revised Proposed Scope of Work
Queen Anne Square
Newport, Rhode Island
SAGE Project No. S2244***

Dear Mr. Martella:

Please consider this as a proposed scope of work to complete a Site Investigation of the referenced property consistent with the requirements of Section 7.0 of the Rhode Island Department of Environmental Management's (RIDEM's) *Remediation Regulations*. The proposed scope of work was developed with consideration to the comments received during the April 2, 2012 Public Meeting, and SAGE Environmental Inc.'s (SAGE's) May 3, 2012 Response to Public Comments Report and the RIDEM's June 20, 2012 comment letter.

As you know, the Queen Anne Square (QAS) improvement project is extremely time sensitive. Many public and private entities have an interest in seeing the QAS project and its associated site work be completed no later than the end of 2012. Timely Remedial Action Work Plan (RAWP) approval will be necessary to meet this project goal. We greatly appreciate your and the Department's sensitivity and prompt attention to this and all other future submittals that require your timely review.

The scope of work detailed below proposes advancement of additional soil borings and groundwater monitor well installations and subsequent laboratory analysis of soil and groundwater samples. Potential contaminants of concern previously identified at the site include heavy metals, total petroleum hydrocarbons (TPH) and volatile organic compounds (VOCs). After completing the All Appropriate Inquiries (AAI) process and upon review of Public Meeting comments, polychlorinated biphenyls (PCBs) have been added as a potential contaminant of concern at the property. Given the results of prior investigations, existing data gaps currently identified include an evaluation of the source of elevated concentrations of TPH in the vicinity of MW-2 as well as site-wide assessment of PCBs.

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SCOPE OF WORK

Soil Boring Advancement

Soil borings will be advanced at the Site using Geoprobe® direct-push technology. Proposed boring locations are depicted on the attached figure; actual locations may vary depending upon field conditions encountered. A total of 12 additional soil borings is proposed. Soil borings PB-1 through PB-4 are proposed to further evaluate the source of the elevated concentrations of TPH in the vicinity of MW-2 as well as other potential contaminants of concern. Soil samples will be collected in clear PVC liners and will be screened in the field for the presence of total photoionizable compounds using a photoionization detector (PID) and the jar headspace technique. Photoionizable compounds that might typically be detected include VOCs present in petroleum hydrocarbons and many common solvents. The remaining 8 borings (PB-5 through PB-11) are proposed to evaluate shallow soil (0 to 2 feet below grade level) site-wide for potential PCB impacts. A Site Plan depicting proposed boring locations is included as **Figure 1**.

Monitor Well Installations

A groundwater monitor well (PMW-6) is proposed to be installed at the location depicted on the attached figure. The monitor well will be constructed with 10 feet of two-inch-diameter PVC well screen. Flush threaded two-inch-diameter PVC riser pipe will then be installed to the ground surface and fitted with an expandable locking plug. Upon installation of well material, the borehole will be backfilled with silica sand to a depth above the screened interval where a bentonite seal will be installed. Remaining annular space above bentonite seals will be backfilled with silica sand. A protective steel roadbox will then be nested within a concrete surface seal to secure the well.

Assuming indications of water are present in one or more of proposed soil borings PB-1, PB-2, PB-3 or PB-4, an additional groundwater monitor well (PMW-7) will be installed in the boring that exhibits the highest PID headspace response and/or other evidence of contamination. The monitor well will be constructed as indicated above. Proposed monitor well locations are shown in **Figure 1**.

Laboratory Analysis of Soil Samples

PB-1 through PB-4 and PMW-6

One soil sample will be collected from each boring and transported utilizing chain-of-custody protocol to a State-certified laboratory for analysis of VOCs via EPA Method 8260B, TPH via EPA Method 8100M, and the 13 Priority Pollutant Metals (PP13) via EPA Method 6010B and PCBs (0 to 2 feet below grade level) via EPA Method 8082. Soil samples will be selected from the boring interval with the highest PID headspace response and/or other evidence of impact (i.e., staining, odors), excepting the 0 to 2 foot PCB samples which will be obtained from each boring. In the absence of positive PID

headspace responses or other evidence of obvious impact, samples will be collected from the apparent water table interface. Should petroleum impact or other evidence of contamination be identified in PB-1 through PB-4 at the apparent water table, then a second PCB sample will be obtained at the apparent water table interface.

PB-5 through PB-11

One soil sample will be collected from each boring from the 0 to 2 foot soil horizon and transported utilizing chain-of-custody protocol to a State-certified laboratory for analysis of PCBs via EPA Method 8082.

A table summarizing proposed laboratory analysis of soil samples is provided below.

Boring ID	Depth (ft)	Analytical Method			
		Metals	TPH	VOCs	PCBs
PB-1	0-2 (and possibly a deeper interval - see note below)	X	X	X	X (X)
PB-2	0-2 (and possibly a deeper interval - see note below)	X	X	X	X (X)
PB-3	0-2 (and possibly a deeper interval - see note below)	X	X	X	X (X)
PB-4	0-2 (and possibly a deeper interval - see note below)	X	X	X	X (X)
PMW-6	0-2 (and possibly a deeper interval - see note below)	X	X	X	X (X)
PB-5	0-2				X
PB-6	0-2				X
PB-7	0-2				X
PB-8	0-2				X
PB-9	0-2				X
PB-10	0-2				X
PB-11	0-2				X

Note: Soil samples will be collected from the boring interval with the highest PID headspace response and/or other evidence of impact (i.e., staining, odors). In the absence of positive PID headspace responses or other evidence of obvious impact, samples will be collected from the apparent water table interface.

Groundwater Gauging and Sampling

SAGE will measure the depth to groundwater in all Site monitor wells and evaluate the presence/absence of separate-phase petroleum (SPP) using an interface probe. One groundwater sample will be collected from each (both existing and newly installed) groundwater monitor well using dedicated, disposable bailers. Monitor wells will be purged of a minimum of three volumes of water prior to sample collection. Samples will be transported to a State-certified laboratory for analysis utilizing chain-of-custody protocol for analysis of VOCs via EPA Method 8260B.

Elevation Survey

SAGE will perform an elevation survey for the purposes of calculating top of casing (TOC) elevations and locations of the newly-installed wells. Survey activities will be performed using standard differential leveling methods and utilized TOC elevations from existing monitoring wells as the vertical baseline value for the survey. The horizontal location of each new well will be measured with a cloth tape relative to permanent site features. Using this information and gauging data obtained prior to sampling of groundwater monitor wells, a potentiometric surface contour map will be developed to determine the apparent groundwater flow direction.

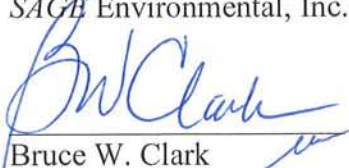
Data Evaluation/Recommendations


The data obtained from the above investigation will supplement existing data and all available site data will be summarized in a Site Investigation Report (SIR). The SIR will include a summary of all data obtained to date as well as the work elements outlined in Section 7.03 of the *Remediation Regulations*. The SIR will also include a Remedial Alternatives Analysis proposing a minimum of two remedial alternatives other than the no action/natural attenuation alternative. The SIR will be submitted in both hard copy and electronic format and be accompanied by a SIR checklist.

Thank you in advance for your prompt review and approval/comment of the above and the Department's continued assistance.

Should you have any questions or require any additional information, please do not hesitate to contact either of the undersigned.

Sincerely,
SAGE Environmental, Inc.


Bruce W. Clark
Principal


Rick Mandile
Principal

BWC/RM:car

Attachments

c: Kelly Owens, RIDEM
Pieter Roos, Newport Restoration Foundation
Jane Howington, Newport City Manager
William Riccio, Director, Newport Department of Public Services
Scott Wheeler, Newport Department of Public Services
Jim Farrar, Farrar Associates

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NEWPORT, RI

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CONTRACT NO.:

GENERAL NOTES:
- INFORMATION SHOWN BASED ON SURVEY BY NORTHEAST ENGINEERS, LAST DATED FEBRUARY 10, 2012.
- EXISTING AND PROPOSED FEATURES ARE SHOWN FOR SCHEMATIC PURPOSES ONLY. ALL ITEMS WILL NEED ON-SITE FIELD VERIFICATION.
- SOIL AND TEST HOLE DATA HAVE NOT BEEN OBTAINED. ALL PERTINENT DATA WILL BE REPEATED ONCE COMPLETED AT A FUTURE DATE.

REVISIONS:

NO.	DESCRIPTION

SITE KEY

- PROPERTY LINE
- - - EXISTING CONTOUR
- - - PROPOSED CONTOUR
- - - PROPOSED SWALE
- - - EXISTING FENCE
- - - EXISTING TELE LINE
- - - EXISTING GAS LINE
- - - EXISTING ELECTRIC LINE
- - - EXISTING SEWER LINE
- - - EXISTING DRAIN LINE
- - - EXISTING WATER LINE
- - - PROPOSED CHARLIE LINK PROTECTION FENCE
- - - PROPOSED SILT FENCE W/ HARBALS
- - - EXISTING SPOT ELEVATION
- - - PROPOSED SPOT ELEVATION
- EXISTING HOLE/ HOLE
- ☼ EXISTING GAS LIGHT
- EXISTING CATCH BASIN
- PROPOSED DRAIN INLET
- EXISTING SIGN
- EXISTING TREES
- EXISTING TREES TO BE REMOVED
- EXISTING TREES TO TRANSPLANT
- PROPOSED TREES (25) TO BE FIELD LOCATED BY EDMOND WONG & CO.
- - - EXISTING CURB TO BE REMOVED
- - - EXISTING WALKWAY TO BE REMOVED
- - - EXISTING WALKWAY TO BE RESET
- - - PROPOSED WALKWAY

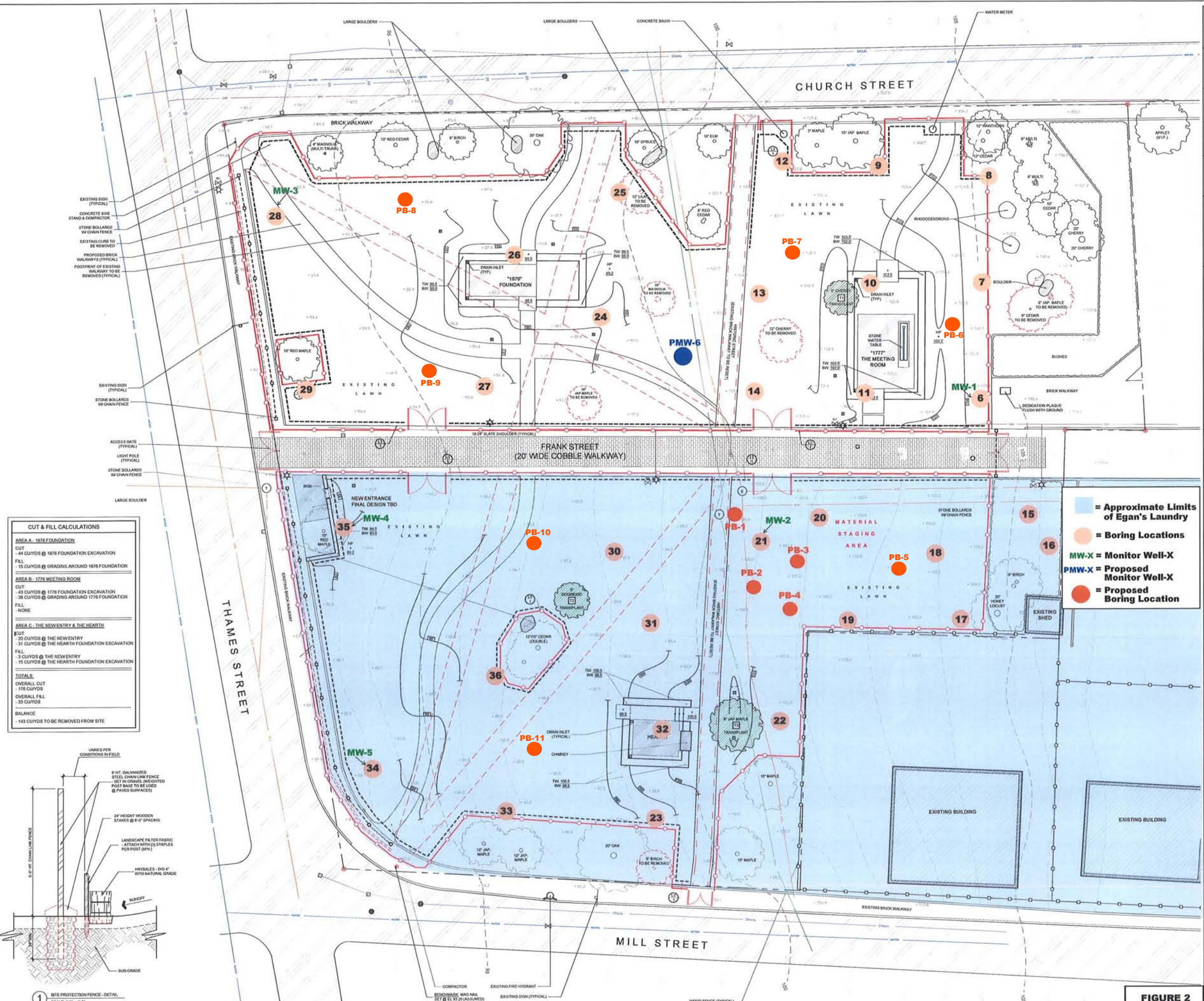
SCALE: 1/8" = 1'-0"



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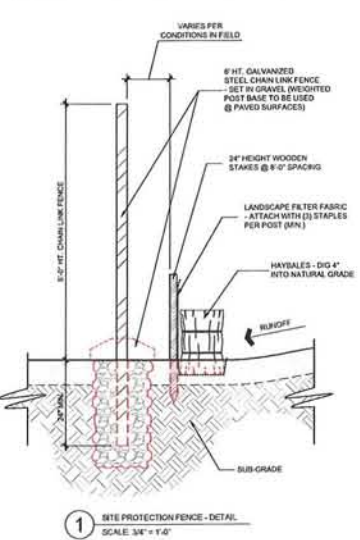
SITE PROTECTION PLAN

Date: FEBRUARY 11, 2012
Drawing Number: 13
Scale: 1/8" = 1'-0"



CUT & FILL CALCULATIONS

AREA	DESCRIPTION	CUT (CUYDS)	FILL (CUYDS)
AREA A - 1878 FOUNDATION	CUT	44	0
AREA A - 1878 FOUNDATION	FILL	0	15
AREA B - 1778 MEETING ROOM	CUT	43	0
AREA B - 1778 MEETING ROOM	FILL	0	38
AREA C - THE NEW ENTRY & THE HEARTH	CUT	20	0
AREA C - THE NEW ENTRY & THE HEARTH	FILL	0	31
TOTALS	OVERALL CUT	107	0
TOTALS	OVERALL FILL	0	84
TOTALS	BALANCE	-143	0



Blue shaded area = Approximate Limits of Egan's Laundry
 Orange circle = Boring Locations
 Green circle with 'X' = Monitor Well-X
 Blue circle with 'X' = Proposed Monitor Well-X
 Red circle = Proposed Boring Location

FIGURE 2