February 24, 2012

SAGE
ENVIRONMENTAL

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

RE: Meeting Summary
Queen Anne Square
Newport, Rhode Island
SAGE Project No. S2244

Dear Mr. Martella and Ms. Owens:

Please consider this a summary of our February 22, 2012 meeting. In attendance at the meeting were Kelly Owens and Joseph Martella of the Rhode Island Department of Environmental Management's (RIDEM's) Office of Waste Management, Bruce Clark and Rick Mandile of *SAGE* Environmental, Inc. (*SAGE*), Jeff Moniz of Farrar Associates, Scott Wheeler of the City of Newport and Pieter Roos of the Newport Restoration Foundation. Information in furtherance of the meeting discussion is also provided.

On behalf of its client, the Doris Duke Monument Foundation (DDMF), *SAGE* requested the meeting to review preliminary data obtained during recent environmental investigation of the referenced property. That data included a review of former property uses and the results of laboratory analysis of soil and groundwater sampling recently conducted. Additional information including a more detailed analysis of Site soil and groundwater data is provided herein.

A summary of former property usage, based on a review of Sanborn Fire Insurance Maps, is included in **Attachment 1**. Background information and a brief narrative relative to former site usage is provided below.

The site is owned by the City of Newport and is currently utilized as a public park and is approximately 1.75 acres in area. The location is proposed for improvements, with both land and hard scapes, along with various architectural and artistic elements. It is *SAGE*'s understanding that the proposed improvements are being funded by the DDMF as a gift to the city. An aerial photograph depicting the site is included as **Figure 1**.

Historic site uses giving rise to potential environmental concern include the former "Egan's Laundry and Cleaners" facility which formerly occupied the southern half of the site. (Egan's Laundry and Cleaning appears to have been a significant facility with approximately half of the former operations

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located on the off-site property due East of the Southern half of the site.) In addition, several residential structures once occupied the property. Off-site properties of potential environmental concern include that portion of Egan's Laundry and Cleaners formerly located East of the Site, a former service station located Southeast of the Site at the corner of Spring and Mill Streets and the Trinity Church property East of the Northern portion of the Site where a former underground storage tank was removed and limited soil excavation performed.

Potential contaminants of concern, based on former site usage, include volatile organic compounds (VOCs) and total petroleum hydrocarbons (TPH) related to possible dry cleaning chemicals and petroleum products as well as the 13 Priority Pollutant Metals (PP13) possibly present from a variety of urban soil sources including lead-based paints, former pesticides and herbicides as well as potential residues from the combustion of coal. In addition, polynuclear aromatic hydrocarbons (PAHs) often related to residues from various petroleum products and/or combustion of coal and/or wood were also identified as potential site contaminants.

During the limited subsurface investigation performed, 31 borings were advanced. Five of the borings were completed as groundwater monitor wells. Soil boring and monitor well locations, as well as other pertinent features, are shown in **Figure 2**. Monitor well construction details are indicated on the soil boring/ monitor well construction logs included as **Attachment 3**.

Soil samples were collected from each boring and were screened in the field for the presence of total photoionizable compounds using an OVM 580B photoionization detector (PID) and the jar headspace technique. The PID was equipped with a 10.2eV lamp and calibrated to an isobutylene standard. This screening method detects compounds associated with petroleum constituents and common solvents. A total of 159 samples were field screened using the PID. Maximum Field Screening Results for each boring location are summarized in **Table 1**.

Soil samples from two of the borings (B-6 S4A and B-21 S2B) exhibited a fuel-like odor and yielded significant PID headspace responses and were submitted for laboratory analysis for TPH via EPA Method 8100M and VOCs via EPA Method 8260. None of the remaining 29 borings exhibited detectable PID headspace responses. The sample obtained from boring B-34 exhibited an unrecognizable odor and was also submitted for VOC analysis.

As shown in **Table 1**, soil samples were collected from 40 locations and submitted for laboratory analysis. Samples were submitted for TPH analysis via EPA Method 8100M (2 samples), VOCs via EPA Method 8260B (4 samples), SVOCs via EPA Method 8270D (22 Samples), PP13 Metals (22 samples) and Lead (1 sample). The results of soil sample analyses are included as **Attachment 2**. RIDEM advised during our meeting that it considered use of the property as a park as a "residential" use. Accordingly, soil data obtained has been compared to the RIDEM Method 1 Residential Direct Exposure Criteria. Groundwater beneath the site has been classified as GB, and therefore soil analytical data has also been compared to the RIDEM Method 1 GB Leachability criteria, where established. As indicated in the table, several exceedances of the RIDEM Method 1 Residential Direct Exposure Criteria were identified in the samples.

Table 1
Soil Analytical Results
Queen Anne Square
Newport, Rhode Island

Sample ID	Date Sampled	Maximum PID Headspace Screening Result	Analysis Performed				Result
			Total Petroleum Hydrocarbon (TPH)	Volatile Organic Compound (VOC)	Semi-Volatile Organic Compounds (SVOC)	Priority Pollutant 13 Metals (PP13)	
B-6 S1	1/16/12	ND			X	X	Exceedances of RIDEM M1 RDEC* identified: Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(a)pyrene and Lead
B-6 S4A	1/16/12	1050	X	X		X (lead only)	All results compliant with RIDEM M1 RDEC*
B-7 S1	1/16/12	ND			X	X	Exceedances of RIDEM M1 RDEC* identified: Chrysene, Beryllium and Lead
B-8 S1	1/16/12	ND			X	X	All results compliant with RIDEM M1 RDEC*
B-9 S1	1/16/12	ND			X	X	Exceedances of RIDEM M1 RDEC* identified: Chrysene, Benzo(a)pyrene and Lead
B-10 S1	1/23/12	ND			X	X	All results compliant with RIDEM M1 RDEC* except: Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene and Benzo(a)pyrene
B-11 S2	1/23/12	ND			X	X	All results compliant with RIDEM M1 RDEC* except: Beryllium
B-12 S1	1/23/12	ND			X	X	Exceedances of RIDEM M1 RDEC* identified: Chrysene, Benzo(b)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene and Lead
B-14 S1	1/23/12	ND			X	X	All results compliant with RIDEM M1 RDEC*
B-17 S1	1/23/12	ND				X	Metal results compliant with RIDEM M1 RDEC*
B-17 S1B	1/23/12	ND			X		Exceedances of RIDEM M1 RDEC* identified: Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene and Benzo(g,h,i)perylene
B-19 S1	1/23/12	ND				X	Metal results compliant with RIDEM M1 RDEC*
B-19 S1B	1/23/12	ND			X		Exceedances of RIDEM M1 RDEC* identified: Chrysene, Benzo(b)fluoranthene and Benzo(a)pyrene
B-21 S1	1/23/12	ND				X	Metal results compliant with RIDEM M1 RDEC*
B-21 S1B	1/23/12	ND			X		Exceedances of RIDEM M1 RDEC* identified: Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene and Benzo(g,h,i)perylene
B-21 S2B	1/23/12	635	X	X			All results compliant with RIDEM M1 RDEC* except: TPH
B-21 S3B	1/23/12	ND		X			VOC results compliant with RIDEM M1 RDEC*
B-24 S1	1/24/12	ND				X	Exceedances of RIDEM M1 RDEC* identified: Lead
B-24 S1B	1/24/12	ND			X		Exceedances of RIDEM M1 RDEC* identified: Chrysene and Benzo(a)pyrene
B-25 S1	1/24/12	ND				X	Exceedances of RIDEM M1 RDEC* identified: Lead
B-25 S2A	1/24/12	ND			X		SVOC results compliant with RIDEM M1 RDEC*
B-26 S1	1/24/12	ND				X	Exceedances of RIDEM M1 RDEC* identified: Lead
B-26 S1B	1/24/12	ND			X		Exceedances of RIDEM M1 RDEC* identified: Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene and Benzo(g,h,i)perylene
B-27 S1	1/24/12	ND				X	Metal results compliant with RIDEM M1 RDEC*
B-27 S1C	1/24/12	ND			X		SVOC results compliant with RIDEM M1 RDEC*
B-28 S1	1/24/12	ND				X	Metal results compliant with RIDEM M1 RDEC*
B-28 S1B	1/24/12	ND			X		SVOC results compliant with RIDEM M1 RDEC*
B-31 S1	1/24/12	ND				X	Exceedances of RIDEM M1 RDEC* identified: Lead
B-31 S1B	1/24/12	ND			X		Exceedances of RIDEM M1 RDEC* identified: Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene and Benzo(g,h,i)perylene

* RIDEM Method 1 Residential Direct Exposure Criteria

Table 1 (cont.)
Soil Analytical Results
Queen Anne Square
Newport, Rhode Island

Sample ID	Date Sampled	Maximum PID Headspace Screening Result	Analysis Performed				Result
			Total Petroleum Hydrocarbon (TPH)	Volatile Organic Compound (VOC)	Semi-Volatile Organic Compounds (SVOC)	Priority Pollutant 13 Metals (PP13)	
B-32 S1	1/24/12	ND				X	Exceedances of RIDEM M1 RDEC* identified: Lead
B-32 S1B	1/24/12	ND			X		Exceedances of RIDEM M1 RDEC* identified: Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene and Benzo(g,h,i)perylene
B-33 S1	1/24/12	ND				X	Exceedances of RIDEM M1 RDEC* identified: Lead
B-33 S1B	1/24/12	ND			X		Exceedances of RIDEM M1 RDEC* identified: Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene and Benzo(g,h,i)perylene
B-34 S1	1/24/12	ND				X	Metal results compliant with RIDEM M1 RDEC*
B-34 S1B	1/24/12	ND			X		SVOC results compliant with RIDEM M1 RDEC*
B-34 S2	1/24/12	ND		X			VOC results compliant with RIDEM M1 RDEC*
B-35 S1	1/24/12	ND				X	Metal results compliant with RIDEM M1 RDEC*
B-35 S1B	1/24/12	ND			X		Exceedances of RIDEM M1 RDEC* identified: Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene and Benzo(g,h,i)perylene
B-36 S1	1/24/12	ND				X	Exceedances of RIDEM M1 RDEC* identified: Arsenic and Lead
B-36 S1C	1/24/12	ND			X		Exceedances of RIDEM M1 RDEC* identified: Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene and Benzo(g,h,i)perylene

* RIDEM Method 1 Residential Direct Exposure Criteria

Results of VOC analysis identified several target analytes in the sample obtained from B-21; however, none exceeded applicable RIDEM Method 1 Direct Exposure Criteria. Several petroleum-related compounds were identified in the sample. The sample also contained a low concentration of Trichloroethylene. Anecdotal historical information indicates that Egan Cleaners utilized Petroleum Naphtha (possibly Stoddard solvent or other petroleum distillates) in its operations. Given the flammability of these compounds, it is possible that one or more underground storage tanks were utilized historically at the property. In addition, pressing operations required the use of steam which was often times generated by oil fired boilers which utilized underground tanks for fuel oil storage. Boring B-21 is located in a portion of the Site previously improved by Egan Laundry & Cleaners.

Results of laboratory analysis of remaining samples identified exceedances of RIDEM Method 1 Residential Direct Exposure Criteria (M1 RES DEC) as follows:

- TPH: A concentration of 13,200 mg/kg, which exceeds the RIDEM MI RES DEC of 500 mg/kg in Boring B-21 S2B (It should also be noted that this concentration exceeds the GB Leachability criterion for TPH.)
- Polynuclear Aromatic Hydrocarbon (PAH): PAH compounds exceeded RIDEM M1 RES DEC in fifteen of the 22 samples submitted for SVOC analysis.
- PP 13 Metals: Of the samples submitted for PP13 laboratory analysis only lead was identified site wide. Lead concentrations exceeded RIDEM M1 DEC in eleven (11) of the 23 samples submitted. Beryllium was identified at two locations (B-7 S1 and B-11 S2) in exceedance of the RIDEM M1 Residential DEC. Remaining PP13 metals were compliant with RIDEM M1 Residential DEC in all of the 22 samples analyzed with the exception of arsenic which was identified above the RIDEM M1 Residential DEC in a single sample (B-36 S1).

Results of analysis did not identify exceedances of the RIDEM Method 1 GB Leachability Criteria except as indicated above. It should be noted that Method 1 GB Leachability Criteria for the priority pollutant metals have not been established nor have leachability standards been developed for some of the target analytes included in the VOC (EPA Method 8260B) and SVOC (EPA Method 8270C) analyses.

Laboratory VOC analysis of the soil sample obtained from B-6; although it exhibited a significant PID headspace, did not yield elevated concentrations of VOCs nor did TPH results exceed applicable standards. The sample did however exhibit a fuel-like odor.

On January 31, 2011, *SAGE* conducted groundwater monitoring at the Site. Four of the five wells produced water sufficient for sampling. Groundwater samples were obtained for laboratory analysis, stored in analyte-specific containers, and transported under chain-of-custody protocol to a Rhode Island-certified laboratory for analysis for VOCs via EPA Method 8260B and total metals. The results of groundwater analysis are included as **Attachment 2**. Groundwater analytical results are summarized in **Table 2** below. Results of analysis are compared to the RIDEM Method 1 GB Groundwater Quality Objectives.

Table 2
Groundwater Analytical Results
Queen Anne Square
Newport, Rhode Island

Sample ID	Date Sampled	Analysis Performed		Result
		Volatile Organic Compound (VOC)	Priority Pollutant 13 Metals (PP13)	
MW-1	1/31/12	X		All results compliant with RIDEM M1 GB GWQO* where established
MW-3	1/31/12	X	X	All results compliant with RIDEM M1 GB GWQO * where established
MW-4	1/31/12	X	X	All results compliant with RIDEM M1 GB GWQO * where established
MW-5	1/31/12	X		All results compliant with RIDEM M1 GB GWQO * where established

* RIDEM Method 1 GB Groundwater Quality Objectives

Results of groundwater laboratory analysis for VOCs were non-detect with the exception of MW-1 where very low levels of naphthalene and acetone were detected. It should be noted that GB Groundwater Quality Objectives for many VOCs and for the 13 priority pollutant metals have not been established by RIDEM.

No exceedances of Upper Concentration Limits (UCLs) were identified in any of the soil and/or groundwater samples collected for laboratory analysis. RIDEM considers UCLs as concentrations of hazardous substances or petroleum which, if exceeded, may demarcate a transition between contaminated environmental media and waste in the environment.

Based on current data, groundwater at the site does not appear to have been objectionably impacted, and soil impacts appear consistent with that of many urban settings given similar site usage. Based on the above preliminary information and assuming additional investigation of the property yields similar data, possible remedies were discussed.

Given this preliminary data and under the above assumption, it appears that a cap of two feet of clean soil (or its equivalent) will be the likely remedy. Limited excavation may also be conducted should further site characterization identify localized soil impacts. The site will also require that an Environmental Land Use Restriction (ELUR) be developed for the property, approved by RIDEM and recorded in the City of Newport Land Evidence Records. The ELUR will limit site use and specify management procedures for soil should future site disturbance, if any, be required. In addition, an inspection of the capped areas will also need to be performed annually to ensure that the integrity of the cap is maintained into the future.

Based on our discussion, it is our understanding that any of the three cap types described below would be acceptable.

1. Encapsulation of existing soils with two feet (2′) of clean soil, preventing erosion with adequate vegetation and/or mulch, and recording of an appropriate ELUR to maintain said engineering controls.

2. Encapsulation of existing soils with six inches (6″) of clean soil (as sub-base) with a minimum of four inches (4″) of asphalt or concrete, and recording of an appropriate ELUR to maintain said engineering controls.

3. Encapsulation of existing soils with one foot (1′) of clean soil over a geo-fabric material with minimum puncture strength of 120 lbs., and burst strength of 400 psi, and recording of an appropriate ELUR to maintain said engineering controls.

In addition, we discussed concerns relative to capping soil within the root zone of mature trees at the property that are proposed to remain. It is our understanding that RIDEM will evaluate future proposed cap designs for these areas with an understanding that cap thickness could be detrimental to these mature trees and may possibly approve an alternative design, if proposed.

A preliminary data summary, which included the RIDEM Release Notification Form (RNF), was also provided to the Department. The RNF included in the summary has yet to be executed by the City of Newport, and an executed copy will be provided to RIDEM under separate cover.

Upon receipt of the executed RNF, it is *SAGE*'s understanding that RIDEM will issue a Notice of Responsibility (NOR) to the City of Newport requiring that a Site Investigation be performed in accordance with Section 7 of the "Remediation Regulations".

Based on our meeting discussion and results of environmental investigation performed to date, a scope of work will be proposed for RIDEM's review and approval to initiate the Site Investigation process. Prior to initiating field work, public notice will be required. Accordingly, the scope of work will include a DRAFT Public Notice document for RIDEM review. It is our understanding that the site will proceed through the Site Investigation process as follows.

Once public comment (if any) is addressed and after RIDEM approval of a final work scope is received, site investigation field work will be commenced. Upon completion of field work, sufficient in scope to characterize the nature and extent of contamination at the property, a Site Investigation Report (SIR), inclusive of three proposed Remedial Alternatives, will be prepared and submitted to RIDEM.

Upon RIDEM's preliminary approval of the SIR and preferred Remedial Alternative proposed, RIDEM will issue a Program Letter for the property. Upon receipt of the Program Letter, a Public Notice document will be prepared for distribution to site abutters and interested parties indicating that site activities have been completed and a remedy proposed. Upon completion of the public comment

period and resolution of public comments (if any) a revised SIR or an SIR addendum will be developed (as appropriate) and submitted to RIDEM.

Once RIDEM deems the Site Investigation process complete it will issue a Remedial Decision Letter (RDL). After receipt of the RDL, a Remedial Action Work Plan (RAWP) will be prepared in accordance with Section 10 of the "Remediation Regulations" for submittal to RIDEM for review and comment. The RAWP will include a draft ELUR and draft Construction Soil Management Plan (SMP).

Upon resolution of any RIDEM comments relative to the RAWP and Draft ELUR, RIDEM will give its formal approval of the RAWP in the form of a Remedial Approval Letter (RAL). Once the RAL is received, implementation of the remedy can be initiated and advanced through completion. The RAWP process also requires status/closure report submittals summarizing implementation of the remedy and that they be furnished to RIDEM at a frequency typically stipulated in the RAL.

As indicated above, on behalf of its client DDMF, *SAGE* will submit a scope of work for a proposed Site Investigation upon receipt of the Notice of Responsibility. It is our understanding that RIDEM will make efforts to review and respond to submittals in a timely fashion, if feasible, to allow this project to proceed as scheduled to the extent possible. RIDEM has further indicated that it will also post information regarding the site on its website if requested to do so and if electronic documents are submitted in .pdf file format.

Should you have any questions, comment, or should your understanding of the meeting discussion be inconsistent with ours, or should the above summary of the RIDEM Site Investigation process be inaccurate in any substantive way, please promptly contact either of the undersigned.

Thank you both for taking the time out of your busy schedules to meet with us and availing the RIDEM website for use to communicate investigation details to interested parties.

Sincerely,
SAGE Environmental, Inc.

Rick Mandile
Principal

Bruce W. Clark
Principal

RJM/BWC:car

Attachments

Figures
1 Historic site use summary
2 Soil and Groundwater Laboratory Analytical Data
3 Soil Boring/Monitor Well Logs

FIGURES

SAGE Environmental, Inc

Figure 1

N
W E
S

& Site Location

Orthophotography - 2006

Queen Anne Square
Newport, Rhode Island

DATE:	02/24/12	JOB#:	S2244
CREATED BY:	DAK	FILENAME:	ortho06.mxd

QUEEN ANNE SQUARE
NEWPORT, R1

CLIENTS:

NEWPORT RESTORATION FOUNDATION
51 Touro St.
Newport, RI 02840
Phone:401-849-7300
Fax:631-726-1478

EDWINA VON GAL + CO.
962 SPRINGS FIREPLACE RD
EASTHAMPTON, NY 11937
tel 631.907.9040
fax 631.907.9050
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PRINCIPAL DESIGNER:
Maya Lin Studio
112 Prince Street, 4th Floor
New York, NY 10012
Phone:212-941-6463
Fax:212-941-6464

CONSULTANTS:

GENERAL NOTES:

- INFORMATION SHOWN BASED ON SURVEY BY NORTHEAST ENGINEERS, LAST DATED FEBRUARY 12, 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 OVERLOOKED. ALL PERTINENT DATA WILL BE REPRESENTED ONCE COMPLETED AT A FUTURE DATE.

REVISIONS:

N/A
-

CHURCH STREET

FRANK STREET
(20' WIDE COBBLE WALKWAY)

THAMES STREET

MILL STREET

BRICK WALKWAY

EXISTING BRICK WALKWAY

18-24" SLATE SHOULDER (TYPICAL)

(EXISTING BRICK WALKWAY TO BE RESET)

HISTORIC STREET

EXISTING LAWN

MATERIAL STAGING AREA

EXISTING BUILDING

EXISTING SHED

BUSHES

"1876" FOUNDATION

"1777" THE MEETING ROOM

"1776" HEARTH

DRAIN INLET (TYP)

STONE WATER TABLE

TRANSPLANT

BOULDER

DEDICATION PLAQUE FLUSH WITH GROUND

MW-1

MW-2

MW-3

MW-4

MW-5

NEW ENTRANCE FINAL DESIGN TBD

EXISTING SIGN (TYPICAL)

CONCRETE BIKE STAND & COMPACTOR

STONE BOLLARDS W/ CHAIN FENCE

EXISTING CURB TO BE REMOVED

PROPOSED BRICK WALKWAYS (TYPICAL)

FOOTPRINT OF EXISTING WALKWAY TO BE REMOVED (TYPICAL)

ACCESS GATE (TYPICAL)

LIGHT POLE (TYPICAL)

LARGE BOULDER

COMPACTOR

EXISTING FIRE HYDRANT

EXISTING SIGN (TYPICAL)

WOOD FENCE (TYPICAL)

CHIMNEY

DRAIN INLET (TYPICAL)

LARGE BOULDERS

CONCRETE BASIN

WATER METER

4" MAGNOLIA (MULTI TRUNK)

10" RED CEDAR

6" BIRCH

20" OAK

10" SPRUCE

10" ELM

12" LILAC TO BE REMOVED

8" RED CEDAR

3" MAPLE

15" JAP. MAPLE

12" HAWTHORN

12" CEDAR

6" MULTI

10" CEDAR

20" CHERRY

APPLE? (V.I.F.)

RHODODENDRONS

5" CHERRY

12" CHERRY TO BE REMOVED

18" MAGNOLIA TO BE REMOVED

8" JAP. MAPLE TO BE REMOVED

6" CEDAR TO BE REMOVED

10" JAP.MAPLE TO BE REMOVED

10" RED MAPLE

5" DOGWOOD TRANSPLANT

12"/15" CEDAR (DOUBLE)

6" JAP.MAPLE TRANSPLANT

12" JAP. MAPLE

5" BIRCH TO BE REMOVED

15" MAPLE

20" HONEY LOCUST

STONE BOLLARDS W/ CHAIN FENCE

SIGN

TW: 103.5' BW: 102.0'

TW: 99.5 BW: 98.0

TW: 100.5 BW: 98.5

TW: 94.5 BW: 93.0

HP + 99.2

HP + 103.2

HP + 93.2

+ 98.5

+ 102.5

+ 100.0

1 SITE PROTECTION FENCE - DETAIL
SCALE: 3/4" = 1'-0"

VARIES PER CONDITIONS IN FIELD

6' HT. GALVANIZED STEEL CHAIN LINK FENCE - SET IN GRAVEL (WEIGHTED POST BASE TO BE USED @ PAVED SURFACES)

24" HEIGHT WOODEN STAKES @ 8'-0" SPACING

LANDSCAPE FILTER FABRIC - ATTACH WITH (3) STAPLES PER POST (MIN.)

HAYBALES - DIG 4" INTO NATURAL GRADE

RUNOFF

6'-0" HT. CHAIN LINK FENCE

24" MIN.

SUB-GRADE

CUT & FILL CALCULATIONS

AREA A - 1876 FOUNDATION

CUT:
- 44 CU/YDS @ 1876 FOUNDATION EXCAVATION

FILL:
- 15 CU/YDS @ GRADING AROUND 1876 FOUNDATION

AREA B - 1776 MEETING ROOM

CUT:
- 43 CU/YDS @ 1776 FOUNDATION EXCAVATION
- 38 CU/YDS @ GRADING AROUND 1776 FOUNDATION

FILL:
- NONE

AREA C - THE NEW ENTRY & THE HEARTH

CUT:
- 20 CU/YDS @ THE NEW ENTRY
- 31 CU/YDS @ THE HEARTH FOUNDATION EXCAVATION

FILL:
- 3 CU/YDS @ THE NEW ENTRY
- 15 CU/YDS @ THE HEARTH FOUNDATION EXCAVATION

TOTALS:

OVERALL CUT:
- 176 CU/YDS

OVERALL FILL:
- 33 CU/YDS

BALANCE:
- 143 CU/YDS TO BE REMOVED FROM SITE

= Approximate Limits of Egan's Laundry

= Boring Locations

MW-X = Monitor Well-X

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 CHAIN LINK PROTECTION FENCE
- PROPOSED SILT FENCE W/ HAYBALES
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- DRILL HOLE/ NAIL
- 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 EDWINA VON GAL
- EXISTING CURB TO BE REMOVED
- EXISTING WALKWAY TO BE REMOVED
- EXISTING WALKWAY TO BE RESET
- PROPOSED WALKWAY

0 2 4 8 16

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

N

PROGRESS PRINT
PRELIMINARY
NOT FOR CONSTRUCTION
DATA SHOWN FOR
DESIGN DEVELOPMENT ONLY.

Drawing Title
SITE PROTECTION PLAN

Date: FEBRUARY 17, 2012

Drawing Number L3

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

FIGURE 2

ATTACHMENT 1

ATTACHMENT 1

Historic Property Use Summary

Date	Description
1844	The site, which is divided east to west by Frank Street, is developed with several structures. The southern portion of the site is developed with what appears to be a restaurant, shoemaker, dwellings, drugstore, ice cream and candy shops, grocery store, and plumber. The northern portion of the site appears to consist of dwellings, a stove repair and tin shop, hat and clothing company, and a stoves and crockery shop. Abutting properties to the north appear to be occupied by dwellings and small commercial businesses. Abutting properties to the east appear to be occupied by a church, dwellings, stables, a public school, plumber, locksmith and fire engine house. Areas to the south and west were not depicted on this map.
1891	The site, which is divided east to west by Frank Street, is developed with several structures. The southern portion of the site is developed with what appears to be a shoemaker, dwellings, drugstore, ice cream and candy shops, grocery store, plumber and a structure identified as "paints". The northern portion of the site appears to consist of dwellings, a stove repair and tin shop, hat and clothing company, and a stoves and crockery shop. Abutting properties to the north appear to be occupied by dwellings and small commercial businesses. Abutting properties to the east appear to be occupied by a church, dwellings, a public school, plumber, locksmith and repair shop. Areas to the south and west were not depicted on this map.
1896	The site, which is divided east to west by Frank Street, is developed with several structures. The southern portion of the site is developed with what appears to be dwellings, drugstore, florist, grocery store, bake house, plumber and structures that appear to be related to City Steam Laundry. The northern portion of the site appears to be occupied by dwellings, a stove repair and tin shop, and small commercial stores. Abutting properties to the north appear to consist mainly of dwellings and small commercial businesses. Areas to the east appear to be occupied by a church, dwellings, a public school, plumber, paint shop, furniture store and barns. Areas to the south and west were not depicted on this map.
1903	The site, which is divided east to west by Frank Street, is developed with several structures. The southern portion of the site is developed with what appears to be several small commercial stores, structures identified as club rooms, a portion of Mill Street Steam Laundry, a plumber and drug store. It appears that steam boilers are present on this portion of the site. The northern portion of the site appears to be occupied by dwellings, a tin shop and small commercial stores. Areas to the north appear to be occupied by dwellings and small commercial businesses. Abutting properties to the east appear to be occupied by the remainder of Mill Street Steam Laundry, a church, dwellings, a public school, plumber, paint shop, and barns. Abutting properties to the south and west appear to be occupied by small commercial business.
1921	The site, which is divided east to west by Frank Street, is developed with several structures; however, only owners of the lots are identified on this map, not the use of the property. The easterly abutting property is identified as a church. Abutting properties to the south, north and west are developed; however, their use is not identified.
1950	The site, which is divided east to west by Frank Street, is developed with several structures. The southern portion of the site is occupied by what appears to be several small commercial stores and a portion of Egan's Laundry and Cleaners, Inc. A rectangular-shaped structure is identified as "vault". The northern portion of the site appears to be occupied by dwellings, and small commercial stores. Abutting properties to the north appear to consist mainly of dwellings and small commercial businesses. The easterly abutting property is occupied by the remainder of Egan's Laundry and Cleaners, Inc., a church, dwellings, a storage building, and plumber. A large gasoline filling station with five underground storage tanks is located approximately 300 feet from the property at the corner of Spring and Mill Streets. Abutting properties to the south and west appear to be developed with small commercial businesses.
1953	The site, which is divided east to west by Frank Street, is developed with several structures. The southern portion of the site is occupied by what appears to be several small commercial stores, a portion of Egan's Laundry and Cleaners, Inc., and a rectangular-shaped structure identified as "vault". The northern portion of the site appears to be occupied by dwellings, and small commercial stores. Abutting properties to the north appear to consist mainly of dwellings and small commercial businesses. The easterly abutter is occupied by the remainder of Egan's Laundry and Cleaners, Inc., a church, dwellings, a storage building, and plumber. A large gasoline filling station with five underground storage tanks is located is located approximately 300 feet from the property at the corner of Spring and Mill Streets. Abutting properties to the south and west appear to be developed with small commercial businesses.
1963	The site, which is divided east to west by Frank Street, is developed with several structures. The southern portion of the site is occupied by what appears to be several small commercial stores, a portion of Egan's Laundry and Cleaners, Inc., and a rectangular-shaped structure identified as "vault". The northern portion of the site appears to be occupied by dwellings, and small commercial stores. Abutting properties to the north appear to consist mainly of dwellings and small commercial businesses. The easterly abutter is occupied by the remainder of Egan's Laundry and Cleaners, Inc., a church, dwellings, a storage building, and plumber. A large gasoline filling station with five underground storage tanks is located is located approximately 300 feet from the property at the corner of Spring and Mill Streets. Abutting properties to the south and west appear to be developed with small commercial businesses.
1968	The site, which is divided east to west by Frank Street, is developed with several structures. The southern portion of the site is occupied by what appears to be several small commercial stores, a portion of Egan's Laundry and Cleaners, Inc., and a rectangular-shaped structure identified as "vault". The northern portion of the site appears to be occupied by dwellings, and small commercial stores. Abutting properties to the north appear to consist mainly of dwellings and small commercial businesses. The easterly abutter is occupied by the remainder of Egan's Laundry and Cleaners, Inc., a church, dwellings, a storage building, and plumber. A large gasoline filling station with five underground storage tanks is located on the corner of Spring and Mill Streets. Abutting properties to the south and west appear to be developed with small commercial businesses. Areas to the south and west appear to be developed with small commercial business.
1972	The site, which is divided east to west by Frank Street, is developed with several structures. The southern portion of the site is occupied by what appears to be several small commercial stores, a portion of Egan's Laundry and Cleaners, Inc., and a rectangular-shaped structure identified as "vault". The northern portion of the site appears to be occupied by dwellings, and small commercial stores. Abutting properties to the north appear to consist mainly of dwellings and small commercial businesses. The easterly abutter is occupied by the remainder of Egan's Laundry and Cleaners, Inc., a church, dwellings, a storage building, and plumber. A large gasoline filling station with five underground storage tanks is located on the corner of Spring and Mill Streets. Abutting properties to the south and west appear to be developed with small commercial businesses.
1990	All structures have been razed from the site, and the site is now developed as a park. Abutting properties to the east are developed with structures identified as R and C, a parish house and a church/cemetery. The large filling station on the corner of Mill and Spring Streets has also been razed and replaced by a parking lot.

ATTACHMENT 2

ATTACHMENT 2

Soil Laboratory Analytical Data
January 16 & 23, 2012

Sample / (Depth) / Date	Concentration																	RIDEM Method 1 Objective	
Analyte	B-6 S1 1/16/2012	B-6 S4A 1/16/2012	B-7 S1 1/16/2012	B-8 S1 1/16/2012	B-9 S1 1/16/2012	B-10 S1 1/23/2012	B-11 S2 1/23/2012	B-12 S1 1/23/2012	B-14 S1 1/23/2012	B-17 S1 1/23/2012	B-17 S1B 1/23/2012	B-19 S1 1/23/2012	B-19 S1B 1/23/2012	B-21 S1 1/23/2012	B-21 S1B 1/23/2012	B-21 S2B 1/23/2012	B-21 S3B 1/23/2012	Direct Exposure (Residential)	GB Leachability
TPH by 8100M (mg/Kg):																			
Total Petroleum Hydrocarbons	NA	110	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**13200**[abd]	NA	500	2500
Volatile Organic Compounds by 8260B (ug/Kg):	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
Vinyl Chloride		<*54*[e]														<*220*[e]	<*68*[e]	20	NE
Bromomethane		<54														<220	<68	800	NE
Chloroethane		<54														<220	<68	NE	NE
Acetone		<270														<1100	<340	7800000	NE
1,1-Dichloroethene		<54														<*220*[e]	<68	200	700
Carbon Disulfide		<54														<220	<68	NE	NE
Methylene Chloride		<54														<220	<68	45000	NE
tert-Butyl methyl ether		<54														<220	<68	390000	100000
trans-1,2 Dichloroethene		<54														<220	<68	1100000	92000
1,1-Dichloroethane		<54														<220	<68	920000	NE
2-Butanone		<270														<1100	<340	10000000	NE
2,2-Dichloropropane		<54														<220	<68	NE	NE
cis-1,2-Dichloroethene		<54														<220	<68	630000	60000
Chloroform		<54														<220	<68	1200	NE
Bromochloromethane		<54														<220	<68	NE	NE
1,1,1-Trichloroethane		<54														<220	<68	540000	160000
1,1-Dichloropropene		<54														<220	<68	NE	NE
Carbon Tetrachloride		<54														<220	<68	1500	5000
Benzene		<54														<220	<68	2500	4300
1,2-Dichloroethane		<54														<220	<68	900	2300
Trichloroethene		<54														<220	<68	13000	20000
1,2-Dichloropropane		<54														<220	<68	1900	70000
Bromodichloromethane		<54														<220	<68	10000	NE
Dibromomethane		<54														<220	<68	NE	NE
4-Methyl-2-pentanone		<270														<1100	<340	1200000	NE
Ethylene Dibromide		<*54*[e]														<*220*[ef]	<*68*[e]	10	NE
cis-1,3-Dichloropropene		<54														<220	<68	NE	NE
Toluene		<54														<220	<68	190000	54000
Trans-1,3-Dichloropropene		<54														<220	<68	NE	NE
1,1,2-Trichloroethane		<54														<220	<68	3600	NE
2-Hexanone		<270														<1100	<340	NE	NE
Tetrachloroethene		<54														1700	<68	12000	4200
Chlorodibromomethane		<54														<220	<68	7600	NE
Chlorobenzene		<54														<220	<68	210000	100000
1,1,1,2-Tetrachloroethane		<54														<220	<68	2200	NE
Ethylbenzene		<54														<220	<68	71000	62000
Total Xylenes		<110														5000	<140	110000	NE
Styrene		<54														<220	<68	13000	64000
Bromoform		<54														<220	<68	81000	NE
Isopropylbenzene		<54														3200	<68	27000	NE
1,1,2,2-Tetrachloroethane		<54														<220	<68	1300	NE
Bromobenzene		<54														<220	<68	NE	NE
1,2,3-Trichloropropane		<54														<220	<68	NE	NE

Soil Laboratory Analytical Data
January 16 & 23, 2012 (Continued)

Sample / (Depth) / Date	Concentration																RIDEM Method 1 Objective	
Analyte	B-6 S1 1/16/2012	B-6 S4A 1/16/2012	B-7 S1 1/16/2012	B-8 S1 1/16/2012	B-9 S1 1/16/2012	B-10 S1 1/23/2012	B-11 S2 1/23/2012	B-12 S1 1/23/2012	B-14 S1 1/23/2012	B-17 S1 1/23/2012	B-17 S1B 1/23/2012	B-19 S1 1/23/2012	B-19 S1B 1/23/2012	B-21 S1 1/23/2012	B-21 S1B 1/23/2012	B-21 S2B 1/23/2012	B-21 S3B 1/23/2012	Direct Exposure (Residential)	GB Leachability
2-Chlorotoluene		<54														<220	<68	NE	NE
n-Propylbenzene		220														10000	<68	NE	NE
1,3,5-Trimethylbenzene		<54														120000	<68	NE	NE
4-Chlorotoluene		<54														<220	<68	NE	NE
tert-Butylbenzene		<54														2600	<68	NE	NE
1,2,4-Trimethylbenzene		<54														170000	100	NE	NE
sec-Butylbenzene		<54														12000	<68	NE	NE
p-Isopropyltoluene		<54														62000	<68	NE	NE
Chloromethane		<54														<220	<68	NE	NE
tert butyl alcohol		<54														<220	<68	NE	NE
1,3-Dichlorobenzene		<54														<220	<68	430000	NE
Tetrahydrofuran		<54														<220	<68	NE	NE
1,4-Dichlorobenzene		<54														<220	<68	27000	NE
Diethyl Ether		<54														<220	<68	NE	NE
n-Butylbenzene		760														25000	<68	NE	NE
1,2-Dichlorobenzene		<54														<220	<68	510000	NE
1,2-Dibromo-3-chloropropane		<54														<220	<68	500	NE
1,2,4-Trichlorobenzene		<54														<220	<68	96000	NE
Hexachlorobutadiene		<54														<220	<68	8200	NE
Naphthalene		<54														41000	75	54000	NE
1,2,3-Trichlorobenzene		<54														<220	<68	NE	NE
Tert-amyl Methyl Ether		<54														<220	<68	NE	NE
Dichlorodifluoromethane		<54														<220	<68	NE	NE
1,3-Dichloropropane		<54														<220	<68	NE	NE
Trichlorofluoromethane		<54														<220	<68	NE	NE
Ethyl Tert-butyl ether		<54														<220	<68	NE	NE
Diisopropyl Ether		<54														<220	<68	NE	NE
Total Trihalomethanes		<54														<220	<68	NE	NE
Semivolatile Organic Compoundsby 8270D (ug/Kg):		NA								NA		NA		NA		NA	NA		
Naphthalene	68		<56	<63	<60	63	<55	<57	<61		2600		<57		750			54000	NE
2-Methylnaphthalene	<56		<56	<63	<60	<61	<55	<57	<61		920		<57		270			123000	NE
Acenaphthylene	<56		<56	<63	<60	100	<55	130	<61		<280		<57		110			23000	NE
Acenaphthene	160		<56	<63	<60	170	<55	<57	<61		3400		79		940			43000	NE
Dibenzofuran	<56		<56	<63	<60	140	<55	<57	<61		2200		<57		520			NE	NE
Fluorene	120		<56	<63	<60	180	<55	<57	<61		3400		80		950			28000	NE
Phenanthrene	1200		500	73	630	2200	<55	560	<61		22000		1100		6100			40000	NE
Anthracene	290		66	<63	85	450	<55	110	<61		6700		310		2700			35000	NE
Fluoranthene	1700		640	180	910	2100	<55	990	<61		20000		1600		7500			20000	NE
Pyrene	1500		800	200	940	2200	<55	1200	<61		**17000**[a]		1500		6800			13000	NE
Benzo(a)anthracene	**940**[a]		360	84	490	**1100**[a]	<55	660	<61		**11000**[ab]		890		**4800**[a]			900	NE
Chrysene	**1000**[a]		**490**[a]	100	**610**[a]	**1300**[a]	<55	**730**[a]	<61		**12000**[a]		**1000**[a]		**5000**[a]			400	NE
Benzo(b)fluoranthene	**1100**[a]		510	130	690	**1500**[a]	<55	**1100**[a]	<61		**11000**[ab]		**1300**[a]		**5100**[a]			900	NE
Benzo(k)fluoranthene	470		190	<63	220	400	<55	430	<61		**3500**[a]		440		**2000**[a]			900	NE
Benzo(a)pyrene	**860**[ab]		380	80	**530**[a]	**1100**[ab]	<55	**950**[ab]	<61		**8900**[ab]		**990**[ab]		**4300**[ab]			400	NE
Indeno(1,2,3-cd)pyrene	680		320	76	440	760	<55	**950**[a]	<61		**5900**[a]		880		**3400**[a]			900	NE
Dibenz(a,h)anthracites	150		78	<63	95	210	<55	220	<61		**1800**[ab]		240		**910**[ab]			400	NE
Benzo(g,h,i)perylene	610		320	<63	390	670	<55	**920**[a]	<61		**4800**[a]		780		**3000**[a]			800	NE

Soil Laboratory Analytical Data
January 16 & 23, 2012 (Continued)

Sample / (Depth) / Date	Concentration																RIDEM Method 1 Objective	
Analyte	B-6 S1 1/16/2012	B-6 S4A 1/16/2012	B-7 S1 1/16/2012	B-8 S1 1/16/2012	B-9 S1 1/16/2012	B-10 S1 1/23/2012	B-11 S2 1/23/2012	B-12 S1 1/23/2012	B-14 S1 1/23/2012	B-17 S1 1/23/2012	B-17 S1B 1/23/2012	B-19 S1 1/23/2012	B-19 S1B 1/23/2012	B-21 S1 1/23/2012	B-21 S1B 1/23/2012	B-21 S2B 1/23/2012	B-21 S3B 1/23/2012	Direct Exposure (Residential)	GB Leachability
Total Metals by 6010C (mg/Kg):											NA		NA		NA	NA	NA		
Antimony	1.16		2.26	1.58	1.63	<0.95	1.22	0.89	<0.73	1.21		<1.51		0.87				10	NE
Arsenic	2.92		5.84	3.9	5.96	1.04	1.79	3.05	1.35	3.89		4.94		2.67				7	NE
Beryllium	0.38		**0.53**[a]	*<0.46*[e]	0.38	*<0.47*[e]	**0.46**[a]	<0.37	<0.37	*<0.43*[e]		*<0.76*[e]		<0.37				0.4	NE
Cadmium	0.76		1.03	0.67	1.09	<0.47	<0.35	<0.37	<0.37	<0.43		<0.76		<0.37				39	NE
Chromium	8.92		11.4	10.2	9.43	9.46	9.06	8.34	6.27	9.19		10		8.25				390	NE
Copper	20.7		49	12.3	53.2	11.5	20.9	29.5	26.7	28.4		13.2		19				3100	NE
Lead	**230**[a]	44.8	**528**[ab]	38.3	**799**[ab]	58.3	7.3	**347**[a]	103	71.4		14.3		105				150	NE
Nickel	12.2		14.3	11.6	10.9	10.2	16	10.6	8.58	14.4		13		10.2				1000	NE
Selenium	5.67		7.03	5.74	8.42	2.58	6.55	6.79	7.79	5.81		5.77		4.79				390	NE
Silver	<0.34		<0.44	<0.46	<0.38	<0.47	0.44	<0.37	<0.37	<0.43		<0.76		<0.37				200	NE
Zinc	102		227	43.7	225	64.6	39.3	56.5	50.1	57.2		39.4		85.5				6000	NE
Total Metals by 7471B (mg/Kg):											NA		NA		NA	NA	NA		
Mercury	0.583		0.444	0.876	0.111	0.434	<0.069	0.396	0.215	0.129		0.134		0.364				23	NE
Total Metals by 7010 (mg/kg):											NA		NA		NA	NA	NA		
Thallium	<0.13		<0.18	<0.18	<0.15	<0.19	<0.14	<0.15	<0.15	<0.17		<0.3		<0.15				5.5	NE

Where necessary, the RIDEM objectives, in ppm, have been converted to ppb to match the laboratory reporting method.

NE: No allowable limit is established for the substance

<x: Indicates analyte concentration not detected at or above specified laboratory quantitation limit (x)

Sample Results:

a-d: Analyte concentration in this sample exceeds the RIDEM objectives for:

a: Direct Exposure in a residential area

d: GB Leachability

e-f: Although the analyte was not detected, the laboratory quantitation limit for this sample exceeds the RIDEM objectives for:

e: Direct Exposure in a residential area

Soil Laboratory Analytical Data
January 24, 2012

Sample / (Depth) / Date	Concentration												RIDEM Method 1 Objective	
Analyte	B-24 S1 1/24/2012	B-24 S1B 1/24/2012	B-25 S1 1/24/2012	B-25 S2A 1/24/2012	B-26 S1 1/24/2012	B-26 S1B 1/24/2012	B-27 S1 1/24/2012	B-27 S1-C 1/24/2012	B-28 S1 1/24/2012	B-28 S1B 1/24/2012	B-31 S1 1/24/2012	B-31 S1B 1/24/2012	Direct Exposure (Residential)	GB Leachability
TPH by 8100M (mg/Kg):														
Total Petroleum Hydrocarbons	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	500	2500
Volatile Organic Compounds by 8260B (ug/Kg):	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Vinyl Chloride													20	NE
Bromomethane													800	NE
Chloroethane													NE	NE
Acetone													7800000	NE
1,1-Dichloroethene													200	700
Carbon Disulfide													NE	NE
Methylene Chloride													45000	NE
tert-Butyl methyl ether													390000	100000
trans-1,2 Dichloroethene													1100000	92000
1,1-Dichloroethane													920000	NE
2-Butanone													10000000	NE
2,2-Dichloropropane													NE	NE
cis-1,2-Dichloroethene													630000	60000
Chloroform													1200	NE
Bromochloromethane													NE	NE
1,1,1-Trichloroethane													540000	160000
1,1-Dichloropropene													NE	NE
Carbon Tetrachloride													1500	5000
Benzene													2500	4300
1,2-Dichloroethane													900	2300
Trichloroethene													13000	20000
1,2-Dichloropropane													1900	70000
Bromodichloromethane													10000	NE
Dibromomethane													NE	NE
4-Methyl-2-pentanone													1200000	NE
Ethylene Dibromide													10	NE
cis-1,3-Dichloropropene													NE	NE
Toluene													190000	54000
Trans-1,3-Dichloropropene													NE	NE
1,1,2-Trichloroethane													3600	NE
2-Hexanone													NE	NE
Tetrachloroethene													12000	4200
Chlorodibromomethane													7600	NE
Chlorobenzene													210000	100000
1,1,1,2-Tetrachloroethane													2200	NE
Ethylbenzene													71000	62000
Total Xylenes													110000	NE
Styrene													13000	64000
Bromoform													81000	NE
Isopropylbenzene													27000	NE
1,1,2,2-Tetrachloroethane													1300	NE
Bromobenzene													NE	NE
1,2,3-Trichloropropane													NE	NE

Soil Laboratory Analytical Data
January 24, 2012 (Continued)

Sample / (Depth) / Date	Concentration												RIDEM Method 1 Objective	
Analyte	B-24 S1 1/24/2012	B-24 S1B 1/24/2012	B-25 S1 1/24/2012	B-25 S2A 1/24/2012	B-26 S1 1/24/2012	B-26 S1B 1/24/2012	B-27 S1 1/24/2012	B-27 S1-C 1/24/2012	B-28 S1 1/24/2012	B-28 S1B 1/24/2012	B-31 S1 1/24/2012	B-31 S1B 1/24/2012	Direct Exposure (Residential)	GB Leachability
2-Chlorotoluene													NE	NE
n-Propylbenzene													NE	NE
1,3,5-Trimethylbenzene													NE	NE
4-Chlorotoluene													NE	NE
tert-Butylbenzene													NE	NE
1,2,4-Trimethylbenzene													NE	NE
sec-Butylbenzene													NE	NE
p-Isopropyltoluene													NE	NE
Chloromethane													NE	NE
tert butyl alcohol													NE	NE
1,3-Dichlorobenzene													430000	NE
Tetrahydrofuran													NE	NE
1,4-Dichlorobenzene													27000	NE
Diethyl Ether													NE	NE
n-Butylbenzene													NE	NE
1,2-Dichlorobenzene													510000	NE
1,2-Dibromo-3-chloropropane													500	NE
1,2,4-Trichlorobenzene													96000	NE
Hexachlorobutadiene													8200	NE
Naphthalene													54000	NE
1,2,3-Trichlorobenzene													NE	NE
Tert-amyl Methyl Ether													NE	NE
Dichlorodifluoromethane													NE	NE
1,3-Dichloropropane													NE	NE
Trichlorofluoromethane													NE	NE
Ethyl Tert-butyl ether													NE	NE
Diisopropyl Ether													NE	NE
Total Trihalomethanes													NE	NE
Semivolatile Organic Compounds by 8270D (ug/Kg):	NA		NA		NA		NA		NA		NA			
Naphthalene		<290		<59		<82		<55		<56		120	54000	NE
2-Methylnaphthalene		<290		<59		<82		<55		<56		61	123000	NE
Acenaphthylene		<290		<59		340		<55		<56		64	23000	NE
Acenaphthene		<290		<59		<82		<55		<56		430	43000	NE
Dibenzofuran		<290		<59		<82		<55		<56		180	NE	NE
Fluorene		<290		<59		190		<55		<56		340	28000	NE
Phenanthrene		800		87		2100		<55		160		3200	40000	NE
Anthracene		<290		<59		250		<55		<56		940	35000	NE
Fluoranthene		1200		160		2500		94		<56		4200	20000	NE
Pyrene		860		140		2700		88		290		4300	13000	NE
Benzo(a)anthracene		570		70		**1200**[a]		70		160		**2500**[a]	900	NE
Chrysene		**630**[a]		100		**1500**[a]		60		190		**2700**[a]	400	NE
Benzo(b)fluoranthene		740		120		**1700**[a]		80		200		**2900**[a]	900	NE
Benzo(k)fluoranthene		<290		<59		530		<55		73		**1000**[a]	900	NE
Benzo(a)pyrene		**630**[a]		89		**1300**[ab]		71		160		**2400**[ab]	400	NE
Indeno(1,2,3-cd)pyrene		470		78		**1000**[a]		<55		120		**1900**[a]	900	NE
Dibenz(a,h)anthracene		<290		<59		250		<55		<56		**560**[a]	400	NE
Benzo(g,h,i)perylene		660		94		**1200**[a]		<55		130		**1800**[a]	800	NE

Soil Laboratory Analytical Data
January 24, 2012 (Continued)

Sample / (Depth) / Date	Concentration												RIDEM Method 1 Objective	
Analyte	B-24 S1 1/24/2012	B-24 S1B 1/24/2012	B-25 S1 1/24/2012	B-25 S2A 1/24/2012	B-26 S1 1/24/2012	B-26 S1B 1/24/2012	B-27 S1 1/24/2012	B-27 S1-C 1/24/2012	B-28 S1 1/24/2012	B-28 S1B 1/24/2012	B-31 S1 1/24/2012	B-31 S1B 1/24/2012	Direct Exposure (Residential)	GB Leachability
Total Metals by 6010C (mg/Kg):		NA		NA		NA		NA		NA		NA		
Antimony	1.49		1.13		0.85		<0.79		1.07		1.35		10	NE
Arsenic	4.12		5.55		4.38		1.33		5.54		4.9		7	NE
Beryllium	<0.36		*<0.46*[e]		<0.32		<0.39		*<0.45*[e]		*<0.43*[e]		0.4	NE
Cadmium	1.45		0.6		0.41		<0.39		<0.45		0.97		39	NE
Chromium	11.3		10.1		7.8		3.35		12.3		10.1		390	NE
Copper	721		32.6		20.6		7.07		13.1		53.4		3100	NE
Lead	**427**[a]		**249**[a]		**185**[a]		26.7		58.3		**683**[ab]		150	NE
Nickel	18.5		13.5		11.5		5.15		10.4		11.9		1000	NE
Selenium	6.16		8.32		4.64		3.54		7.02		7.26		390	NE
Silver	<0.36		<0.46		<0.32		<0.39		<0.45		<0.43		200	NE
Zinc	363		242		99.6		22.1		45.3		482		6000	NE
Total Metals by 7471B (mg/Kg):		NA		NA		NA		NA		NA		NA		
Mercury	0.287		0.452		0.196		<0.079		0.105		1.57		23	NE
Total Metals by 7010 (mg/kg):		NA		NA		NA		NA		NA		NA		
Thallium	<0.14		<0.18		<0.13		<0.16		<0.18		<0.17		5.5	NE

Where necessary, the RIDEM objectives, in ppm, have been converted to ppb to match the laboratory reporting method.

NE: No allowable limit is established for the substance

<x: Indicates analyte concentration not detected at or above specified laboratory quantitation limit (x)

Sample Results:

a-d: Analyte concentration in this sample exceeds the RIDEM objectives for:

e-f: Although the analyte was not detected, the laboratory quantitation limit for this sample exceeds the RIDEM objectives for:

Soil Laboratory Analytical Data
January 24, 2012 (Continued)

Sample / (Depth) / Date	Concentration											RIDEM Method 1 Objective	
Analyte	B-32 S1 1/24/2012	B-32 S1B 1/24/2012	B-33 S1 1/24/2012	B-33 S1B 1/24/2012	B-34 S1 1/24/2012	B-34 S1B 1/24/2012	B-34 S2 1/24/2012	B-35 S1 1/24/2012	B-35 S1B 1/24/2012	B-36 S1 1/24/2012	B-36 S1C 1/24/2012	Direct Exposure (Residential)	GB Leachability
TPH by 8100M (mg/Kg):													
Total Petroleum Hydrocarbons	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	500	2500
Volatile Organic Compounds by 8260B (ug/Kg):	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA		
Vinyl Chloride							<72[e]					20	NE
Bromomethane							<72					800	NE
Chloroethane							<72					NE	NE
Acetone							<360					7800000	NE
1,1-Dichloroethene							<72					200	700
Carbon Disulfide							<72					NE	NE
Methylene Chloride							<72					45000	NE
tert-Butyl methyl ether							<72					390000	100000
trans-1,2 Dichloroethene							<72					1100000	92000
1,1-Dichloroethane							<72					920000	NE
2-Butanone							<360					10000000	NE
2,2-Dichloropropane							<72					NE	NE
cis-1,2-Dichloroethene							<72					630000	60000
Chloroform							<72					1200	NE
Bromochloromethane							<72					NE	NE
1,1,1-Trichloroethane							<72					540000	160000
1,1-Dichloropropene							<72					NE	NE
Carbon Tetrachloride							<72					1500	5000
Benzene							<72					2500	4300
1,2-Dichloroethane							<72					900	2300
Trichloroethene							<72					13000	20000
1,2-Dichloropropane							<72					1900	70000
Bromodichloromethane							<72					10000	NE
Dibromomethane							<72					NE	NE
4-Methyl-2-pentanone							<360					1200000	NE
Ethylene Dibromide							<72[ef]					10	NE
cis-1,3-Dichloropropene							<72					NE	NE
Toluene							<72					190000	54000
Trans-1,3-Dichloropropene							<72					NE	NE
1,1,2-Trichloroethane							<72					3600	NE
2-Hexanone							<360					NE	NE
Tetrachloroethene							<72					12000	4200
Chlorodibromomethane							<72					7600	NE
Chlorobenzene							<72					210000	100000
1,1,1,2-Tetrachloroethane							<72					2200	NE
Ethylbenzene							<72					71000	62000
Total Xylenes							<140					110000	NE
Styrene							<72					13000	64000
Bromoform							<72					81000	NE
Isopropylbenzene							<72					27000	NE
1,1,2,2-Tetrachloroethane							<72					1300	NE
Bromobenzene							<72					NE	NE
1,2,3-Trichloropropane							<72					NE	NE

Soil Laboratory Analytical Data
January 24, 2012 (Continued)

Sample / (Depth) / Date	Concentration										RIDEM Method 1 Objective	
Analyte	B-32 S1 1/24/2012	B-32 S1B 1/24/2012	B-33 S1 1/24/2012	B-33 S1B 1/24/2012	B-34 S1 1/24/2012	B-34 S1B 1/24/2012	B-34 S2 1/24/2012	B-35 S1 1/24/2012	B-35 S1B 1/24/2012	B-36 S1 1/24/2012	B-36 S1C 1/24/2012	Direct Exposure (Residential)	GB Leachability
2-Chlorotoluene							<72					NE	NE
n-Propylbenzene							<72					NE	NE
1,3,5-Trimethylbenzene							<72					NE	NE
4-Chlorotoluene							<72					NE	NE
tert-Butylbenzene							<72					NE	NE
1,2,4-Trimethylbenzene							<72					NE	NE
sec-Butylbenzene							<72					NE	NE
p-Isopropyltoluene							<72					NE	NE
Chloromethane							<72					NE	NE
tert butyl alcohol							<72					NE	NE
1,3-Dichlorobenzene							<72					430000	NE
Tetrahydrofuran							<72					NE	NE
1,4-Dichlorobenzene							<72					27000	NE
Diethyl Ether							<72					NE	NE
n-Butylbenzene							<72					NE	NE
1,2-Dichlorobenzene							<72					510000	NE
1,2-Dibromo-3-chloropropane							<72					500	NE
1,2,4-Trichlorobenzene							<72					96000	NE
Hexachlorobutadiene							<72					8200	NE
Naphthalene							<72					54000	NE
1,2,3-Trichlorobenzene							<72					NE	NE
Tert-amyl Methyl Ether							<72					NE	NE
Dichlorodifluoromethane							<72					NE	NE
1,3-Dichloropropane							<72					NE	NE
Trichlorofluoromethane							<72					NE	NE
Ethyl Tert-butyl ether							<72					NE	NE
Diisopropyl Ether							<72					NE	NE
Total Trihalomethanes							<72					NE	NE
Semivolatile Organic Compounds by 8270D (ug/Kg):	NA		NA		NA		NA	NA		NA			
Naphthalene		990		370		<54			200		130	54000	NE
2-Methylnaphthalene		440		130		<54			120		67	123000	NE
Acenaphthylene		620		60		94			380		70	23000	NE
Acenaphthene		1400		970		<54			210		600	43000	NE
Dibenzofuran		930		380		<54			200		170	NE	NE
Fluorene		1700		720		<54			250		500	28000	NE
Phenanthrene		13000		5700		83			2300		4100	40000	NE
Anthracene		14000		1800		<54			630		1700	35000	NE
Fluoranthene		18000		10000		180			2000		7900	20000	NE
Pyrene		**15000**[a]		6800		190			2200		7400	13000	NE
Benzo(a)anthracene		**9700**[ab]		**4100**[a]		150			**1100**[a]		**4400**[a]	900	NE
Chrysene		**10000**[a]		**4400**[a]		190			**1300**[a]		**4500**[a]	400	NE
Benzo(b)fluoranthene		**10000**[ab]		**4900**[a]		320			**1400**[a]		**4600**[a]	900	NE
Benzo(k)fluoranthene		**3000**[a]		**1900**[a]		150			430		**1500**[a]	900	NE
Benzo(a)pyrene		**8100**[ab]		**3900**[ab]		200			**1300**[ab]		**3900**[ab]	400	NE
Indeno(1,2,3-cd)pyrene		**5600**[a]		**3000**[a]		300			**1000**[a]		**3000**[a]	900	NE
Dibenz(a,h)anthracene		**1700**[ab]		**760**[a]		110			270		**770**[a]	400	NE
Benzo(g,h,i)perylene		**5300**[a]		**2700**[a]		360			**1100**[a]		**2600**[a]	800	NE

Soil Laboratory Analytical Data
January 24, 2012 (Continued)

Sample / (Depth) / Date	Concentration										RIDEM Method 1 Objective	
Analyte	B-32 S1 1/24/2012	B-32 S1B 1/24/2012	B-33 S1 1/24/2012	B-33 S1B 1/24/2012	B-34 S1 1/24/2012	B-34 S1B 1/24/2012	B-34 S2 1/24/2012	B-35 S1 1/24/2012	B-35 S1B 1/24/2012	B-36 S1 1/24/2012	B-36 S1C 1/24/2012	Direct Exposure (Residential)	GB Leachability
Total Metals by 6010C (mg/Kg):		NA		NA		NA	NA		NA		NA		
Antimony	<0.68		0.97		<0.67			<0.91		1.58		10	NE
Arsenic	1.05		5.26		2.09			3.06		**19.8**[ab]		7	NE
Beryllium	<0.34		*<0.42*[e]		<0.34			*<0.45*[e]		0.38		0.4	NE
Cadmium	0.73		<0.42		<0.34			<0.45		<0.37		39	NE
Chromium	3.67		8.93		4.89			5.8		11.6		390	NE
Copper	44.9		15.1		7.51			6.61		44.1		3100	NE
Lead	**596**[ab]		**201**[a]		38.2			30.2		**328**[a]		150	NE
Nickel	11.9		8.96		3.67			5.04		11		1000	NE
Selenium	2.67		4.8		2.48			1.47		6.14		390	NE
Silver	0.5		<0.42		<0.34			<0.45		1.83		200	NE
Zinc	611		56.3		32.5			43.2		128		6000	NE
Total Metals by 7471B (mg/Kg):		NA		NA		NA	NA		NA		NA		
Mercury	0.729		0.085		<0.076			0.18		3.42		23	NE
Total Metals by 7010 (mg/kg):		NA		NA		NA	NA		NA		NA		
Thallium	<0.14		<0.17		<0.13			<0.18		<0.15		5.5	NE

Where necessary, the RIDEM objectives, in ppm, have been converted to ppb to match the laboratory reporting method.

NE: No allowable limit is established for the substance

<x: Indicates analyte concentration not detected at or above specified laboratory quantitation limit (x)

a-d: Analyte concentration in this sample exceeds the RIDEM objectives for:

a: Direct Exposure in a residential area

d: GB Leachability

e-f: Although the analyte was not detected, the laboratory quantitation limit for this sample exceeds the RIDEM objectives for:

e: Direct Exposure in a residential area

Groundwater Laboratory Analytical Data
January 31, 2012

Sample / Date	Concentration				RIDEM Method 1 Objective	RIDEM GB Groundwater UCL
	MW-1	MW-3	MW-4	MW-5	GB Groundwater	
Analyte	1/31/2012	1/31/2012	1/31/2012	1/31/2012		
VOCs by 8260B (ug/L):						
Vinyl Chloride	<1	<1	<1	<1	2	NE
Bromomethane	<1	<1	<1	<1	NE	NE
Chloroethane	<1	<1	<1	<1	NE	NE
Acetone	9.7	<5	<5	<5	NE	NE
1,1-Dichloroethene	<1	<1	<1	<1	7	23000
Carbon Disulfide	<1	<1	<1	<1	NE	NE
Methylene Chloride	<1	<1	<1	<1	NE	NE
tert-Butyl methyl ether	<1	<1	<1	<1	5000	NE
trans-1,2 Dichloroethene	<1	<1	<1	<1	2800	79000
1,1-Dichloroethane	<1	<1	<1	<1	NE	NE
2-Butanone	<5	<5	<5	<5	NE	NE
2,2-Dichloropropane	<1	<1	<1	<1	NE	NE
cis-1,2-Dichloroethene	<1	<1	<1	<1	2400	69000
Chloroform	<1	<1	<1	<1	NE	NE
Bromochloromethane	<1	<1	<1	<1	NE	NE
1,1,1-Trichloroethane	<1	<1	<1	<1	3100	68000
1,1-Dichloropropene	<1	<1	<1	<1	NE	NE
Carbon Tetrachloride	<1	<1	<1	<1	70	NE
Benzene	<1	<1	<1	<1	140	18000
1,2-Dichloroethane	<1	<1	<1	<1	110	670000
Trichloroethene	<1	<1	<1	<1	540	87000
1,2-Dichloropropane	<1	<1	<1	<1	3000	140000
Bromodichloromethane	<1	<1	<1	<1	NE	NE
Dibromomethane	<1	<1	<1	<1	NE	NE
4-Methyl-2-pentanone	<5	<5	<5	<5	NE	NE
Ethylene Dibromide	<1	<1	<1	<1	NE	NE
cis-1,3-Dichloropropene	<1	<1	<1	<1	NE	NE
Toluene	<1	<1	<1	<1	1700	21000
Trans-1,3-Dichloropropene	<1	<1	<1	<1	NE	NE
1,1,2-Trichloroethane	<1	<1	<1	<1	NE	NE
2-Hexanone	<5	<5	<5	<5	NE	NE
Tetrachloroethene	<1	<1	<1	<1	150	NE
Chlorodibromomethane	<1	<1	<1	<1	NE	NE
Chlorobenzene	<1	<1	<1	<1	3200	56000
1,1,1,2-Tetrachloroethane	<1	<1	<1	<1	NE	NE
Ethylbenzene	<1	<1	<1	<1	1600	16000
Total Xylenes	<2	<2	<2	<2	NE	NE
Styrene	<1	<1	<1	<1	2200	50000
Bromoform	<1	<1	<1	<1	NE	NE
Isopropylbenzene	<1	<1	<1	<1	NE	NE
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1	NE	NE
Bromobenzene	<1	<1	<1	<1	NE	NE
1,2,3-Trichloropropane	<1	<1	<1	<1	NE	NE
2-Chlorotoluene	<1	<1	<1	<1	NE	NE
n-Propylbenzene	<1	<1	<1	<1	NE	NE
1,3,5-Trimethylbenzene	<1	<1	<1	<1	NE	NE
4-Chlorotoluene	<1	<1	<1	<1	NE	NE
tert-Butylbenzene	<1	<1	<1	<1	NE	NE
1,2,4-Trimethylbenzene	<1	<1	<1	<1	NE	NE
sec-Butylbenzene	<1	<1	<1	<1	NE	NE
p-Isopropyltoluene	<1	<1	<1	<1	NE	NE
Chloromethane	<1	<1	<1	<1	NE	NE
tert butyl alcohol	<1	<1	<1	<1	NE	NE
1,3-Dichlorobenzene	<1	<1	<1	<1	NE	NE
Tetrahydrofuran	<1	<1	<1	<1	NE	NE
1,4-Dichlorobenzene	<1	<1	<1	<1	NE	NE

Groundwater Laboratory Analytical Data
January 31, 2012 (Continued)

Sample / Date	Concentration				RIDEM Method 1 Objective	RIDEM GB Groundwater UCL
	MW-1	MW-3	MW-4	MW-5	GB Groundwater	
Analyte	1/31/2012	1/31/2012	1/31/2012	1/31/2012		
Diethyl Ether	<1	<1	<1	<1	NE	NE
n-Butylbenzene	<1	<1	<1	<1	NE	NE
1,2-Dichlorobenzene	<1	<1	<1	<1	NE	NE
1,2-Dibromo-3-chloropropane	<1	<1	<1	<1	2	NE
1,2,4-Trichlorobenzene	<1	<1	<1	<1	NE	NE
Hexachlorobutadiene	<1	<1	<1	<1	NE	NE
Naphthalene	1.9	<1	<1	<1	NE	NE
1,2,3-Trichlorobenzene	<1	<1	<1	<1	NE	NE
Tert-amyl Methyl Ether	<1	<1	<1	<1	NE	NE
Dichlorodifluoromethane	<1	<1	<1	<1	NE	NE
1,3-Dichloropropane	<1	<1	<1	<1	NE	NE
Trichlorofluoromethane	<1	<1	<1	<1	NE	NE
Ethyl Tert-butyl ether	<1	<1	<1	<1	NE	NE
Diisopropyl Ether	<1	<1	<1	<1	NE	NE
1,4-Dioxane	<50	<50	<50	<50	NE	NE
Total Trihalomethanes	<1	<1	<1	<1	NE	NE
Total Metals by 6010C (mg/L):	NA			NA		
Antimony		0.01	0.01		NE	NE
Arsenic		0.01	0.01		NE	NE
Beryllium		0.005	<0.005		NE	NE
Cadmium		0.005	<0.005		NE	NE
Chromium		0.09	0.065		NE	NE
Copper		0.22	0.24		NE	NE
Lead		0.425	2.64		NE	NE
Nickel		0.147	0.095		NE	NE
Selenium		0.1	0.07		NE	NE
Silver		<0.005	<0.005		NE	NE
Zinc		0.46	1.39		NE	NE
Total Metals by 7471B (mg/L):						
Mercury		<0.0002	<0.0002		NE	NE
Total Metals by 7010 (mg/L):						
Thallium		<0.002	<0.002		NE	NE

Where necessary, the RIDEM objectives, in ppm, have been converted to ppb to match the laboratory reporting method.

NE: No allowable limit is established for the substance

<x: Indicates analyte concentration not detected at or above specified laboratory quantitation limit (x)

ATTACHMENT 3

SAGE ENVIRONMENTAL, INC.

SOIL BORING / MONITOR WELL CONSTRUCTION LOG

DRILLED BY:	Martin GeoEnvironmental	**WELL NUMBER:**	B-1
DRILLING METHOD:	6610DT Geoprobe	**PROJECT NUMBER:**	S2244
SAMPLING METHOD:	4' Macrocore	**LOCATION:**	Queen Anne Sq., Newport
SCREENING INSTRUMENT:	OVM 580B	**DATE:**	1/19/12
DEPTH TO WATER:	Not encountered	**LOGGED BY:**	JD

RISER:	**TYPE**		**DIAMETER**	**LENGTH**	**WELL SEAL:**	**HOLE DIA.:** 2″
SCREEN:	**TYPE**	**SLOT**	**DIAMETER**	**LENGTH**	**SAND PACK:**	**TOTAL DEPTH:** ≈12′

SAMPLE NO.	DEPTH	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
S-1*	0–2	2′		Dry	ND	NO WELL INSTALLED	24″ Dark brown, mostly fine SAND with some fine silt and organic material, moderately loose
S-2A	4–6	2′		Dry	ND		4″ Dark brown, mostly fine SAND with some fine silt and organic material, moderately loose
S-2B**	6–8			Dry	ND		20″ Dark brown, fine and medium SAND mixed with some fine silt and evidence of weathered bedrock and crushed rock and brick, moderately loose
S-3A	8–10	2′		Dry	ND		9″ Dark grey, fine SILT and sand mixed with layers of weathered rock
S-3B	10–12			Dry	ND		36″ Grey, layers of weathered rock and slate-like material, dense
	12						Refusal @ 12′

13 14 15 16 17 18 19 20

* Sample submitted for metals analysis;
** sample submitted for TPH & VOC analysis

SAGE ENVIRONMENTAL, INC.

SOIL BORING / MONITOR WELL CONSTRUCTION LOG

DRILLED BY:	Martin GeoEnvironmental	***WELL NUMBER:***	B-2
DRILLING METHOD:	6610DT Geoprobe	***PROJECT NUMBER:***	S2244
SAMPLING METHOD:	4' Macrocore	***LOCATION:***	Queen Anne Sq., Newport
SCREENING INSTRUMENT:	OVM 580B	***DATE:***	1/19/12
DEPTH TO WATER:	Not encountered	***LOGGED BY:***	JD

RISER:	***TYPE***		***DIAMETER***	***LENGTH***	***WELL SEAL:***	***HOLE DIA.:*** 2″
SCREEN:	***TYPE***	***SLOT***	***DIAMETER***	***LENGTH***	***SAND PACK:***	***TOTAL DEPTH:*** ≈12′

SAMPLE NO.	DEPTH	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
	0						
S-1*	1	4′		Dry	ND	NO WELL INSTALLED	36″ Dark brown, mostly fine SAND and some fine silt and organic material, moderately loose
S-2*	2			Dry	ND		2″ Pulverized rock with some coal-like material and crushed boiler clinkers
S-3*	3			Moist	ND		10″ Light brown, fine SAND and silt, moderately dense
	4						
S-2A	5	4′		Dry	ND		40″ Light brownish grey, fine SAND and silt mixed with crushed cobbles and layers of weathered rock, moderately loose
S-2B	6			Dry	ND		8″ Dark grey with brown tinge, fine SAND and silt with weathered rock layers, moderately loose
	7						
	8						
S-3A**	9	4′		Dry	ND		12″ Dark grey with brown tinge, fine SILT and sand with weathered rock layers, moderately loose
S-3B	10			Dry	ND		36″ Grey, layers of weathered rock material, soft and dense
	11						
	12						Refusal @ 12′
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						

* Sample composited and submitted for metals analysis;
** sample submitted for TPH & VOC analysis

SAGE ENVIRONMENTAL, INC.

SOIL BORING / MONITOR WELL CONSTRUCTION LOG

DRILLED BY:	Martin GeoEnvironmental	***WELL NUMBER:***	B-3
DRILLING METHOD:	6610DT Geoprobe	***PROJECT NUMBER:***	S2244
SAMPLING METHOD:	4' Macrocore	***LOCATION:***	Queen Anne Sq., Newport
SCREENING INSTRUMENT:	OVM 580B	***DATE:***	1/19/12
DEPTH TO WATER:	Not encountered	***LOGGED BY:***	JD

RISER:	***TYPE***		***DIAMETER***	***LENGTH***	***WELL SEAL:***	***HOLE DIA.:*** 2″
SCREEN:	***TYPE***	***SLOT***	***DIAMETER***	***LENGTH***	***SAND PACK:***	***TOTAL DEPTH:*** ≈12′

SAMPLE NO.	DEPTH	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
	0						
S-1*	1–2	3.75′		Moist	ND	NO WELL INSTALLED	45″ Dark brown, fine SAND and silt, some organic material in first 4″, smooth, moderately loose
S-2A	4–5	3.75′		Moist	ND		9″ Dark brown, fine SAND and silt, some organic materials in first 4″, smooth, moderately loose
S-2B	5–6			Dry	ND		4″ Dark brown, coarse SAND with crushed rock and coal-like material
S-2C	6–7			Dry	ND		32″ Dark grey and light brown, fine SAND and silt mixed with crushed cobbles and layers of weather rock and a small amount of coarse sand, moderately dense
S-3A**	8–9	3.75′		Dry	ND		4″ Dark grey and light brown, fine SAND and silt mixed with crushed cobbles and layers of weather rock and a small amount of coarse sand, moderately dense
S-3B	10–11			Dry	ND		41″ Dark grey, layers of weathered rock, smooth, very dense
	12–20						Refusal @ 12′

* Sample submitted for metals analysis;
** sample submitted for TPH & VOC analysis

SAGE ENVIRONMENTAL, INC.

SOIL BORING / MONITOR WELL CONSTRUCTION LOG

DRILLED BY:	Martin GeoEnvironmental	***WELL NUMBER:***	B-4
DRILLING METHOD:	6610DT Geoprobe	***PROJECT NUMBER:***	S2244
SAMPLING METHOD:	4' Macrocore	***LOCATION:***	Queen Anne Sq., Newport
SCREENING INSTRUMENT:	OVM 580B	***DATE:***	1/19/12
DEPTH TO WATER:	Not encountered	***LOGGED BY:***	JD

RISER:	***TYPE***		***DIAMETER***	***LENGTH***	***WELL SEAL:***	***HOLE DIA.:*** 2″
SCREEN:	***TYPE***	***SLOT***	***DIAMETER***	***LENGTH***	***SAND PACK:***	***TOTAL DEPTH:*** ≈15′

SAMPLE NO.	DEPTH	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
S-1*	0–4	3.75′		Dry	ND	NO WELL INSTALLED	24″ Dark brown, fine SAND and silt, with organic material in first 4″, moderately dense
S-2	4–8	3.75′		Dry	ND		No recovery
S-3A	8–12	3.75′		Dry	ND		1″ Crushed cobble 5″ Dark brown with some dark grey, fine SAND mixed with layers of soft weather rock 22″ Dark grey and black, fine SAND and silt, with mostly crushed weathered rock (i.e., graphite), smooth/smears, dense 8″ Dark brown, fine SAND and silt, dense, mixed with layers of dark grey, weathered rock
S-3B				Dry	ND		
S-3C**				Dry	ND		
S-4	12–15			Dry	ND		45″ Dark grey, weathered rock material, smooth, dense
	15–20						Refusal @ 15′ * Sample submitted for metals analysis; ** sample submitted for TPH & VOC analysis

SAGE ENVIRONMENTAL, INC.

SOIL BORING / MONITOR WELL CONSTRUCTION LOG

DRILLED BY:	Martin GeoEnvironmental	**WELL NUMBER:**	B-5
DRILLING METHOD:	6610DT Geoprobe	**PROJECT NUMBER:**	S2244
SAMPLING METHOD:	4' Macrocore	**LOCATION:**	Queen Anne Sq., Newport
SCREENING INSTRUMENT:	OVM 580B	**DATE:**	1/19/12
DEPTH TO WATER:	Not encountered	**LOGGED BY:**	JD

RISER:	**TYPE**		**DIAMETER**	**LENGTH**	**WELL SEAL:**	**HOLE DIA.:** 2″
SCREEN:	**TYPE**	**SLOT**	**DIAMETER**	**LENGTH**	**SAND PACK:**	**TOTAL DEPTH:** ≈12′

SAMPLE NO.	DEPTH	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
S-1*	0–4	3.75′		Dry	ND	NO WELL INSTALLED	45″ Dark brown, fine SAND and silt, with organic material in first 4″, moderately loose
S-2A**	5–6	4′		Dry	ND		36″ Light brown, fine SAND and silt, some small crushed cobbles and layers of weathered rock material, moderately dense
S-2B	7–8			Dry	ND		12″ Dark grey, layers of weathered rock, smooth/smears, graphite-like
S-3	9–11	3′		Dry	ND		36″ Dark grey layers of weathered rock, material, smooth, dense
	12–20						Refusal @ 12′

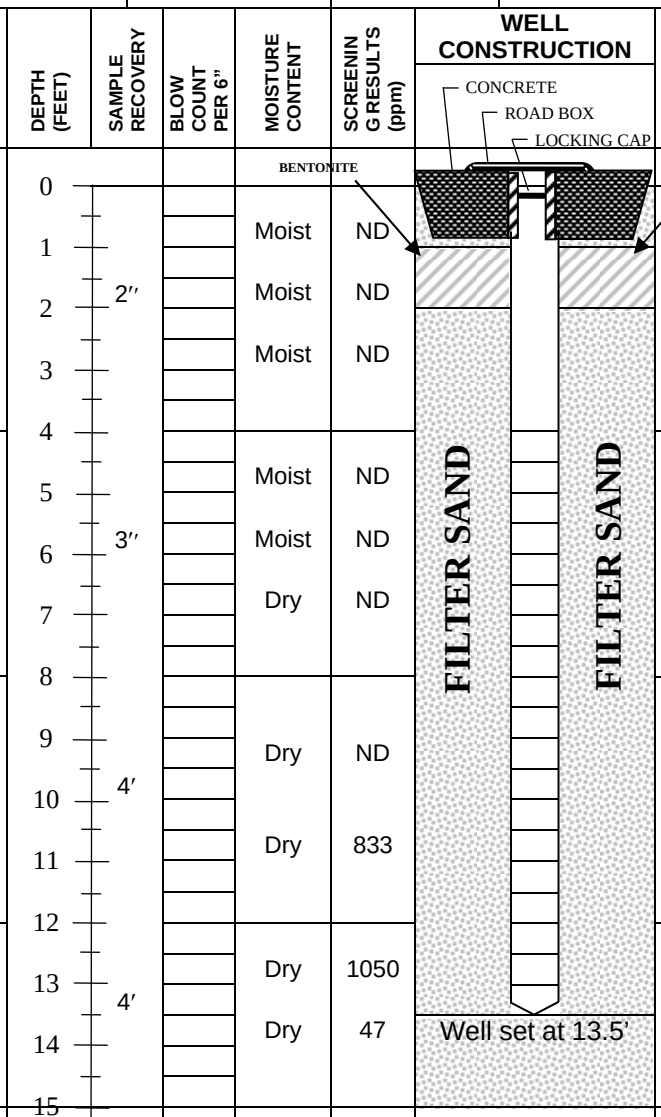
* Sample submitted for metals analysis;
** sample submitted for TPH & VOC analysis

SAGE ENVIRONMENTAL, INC.

SOIL BORING / MONITOR WELL CONSTRUCTION LOG

DRILLED BY:	Martin GeoEnvironmental	***WELL NUMBER:***	MW-1 (B-6)
DRILLING METHOD:	6610DT Geoprobe	***PROJECT NUMBER:***	S2244
SAMPLING METHOD:	4' Macrocore	***LOCATION:***	Queen Anne Sq., Newport
SCREENING INSTRUMENT:	OVM 580B	***DATE:***	1/19/12
DEPTH TO WATER:	Not encountered	***LOGGED BY:***	JD

RISER:	PVC	***TYPE***	SCH 40			***DIAMETER***	2"	***LENGTH***	3.5'	***WELL SEAL:*** BENTONITE	***HOLE DIA.:*** 2"
SCREEN:	PVC	***TYPE***	SCH 40	***SLOT***	0.010"	***DIAMETER***	2"	***LENGTH***	10'	***SAND PACK:*** FILTER SAND	***TOTAL DEPTH:*** 15'



SAGE ENVIRONMENTAL, INC.

SOIL BORING / MONITOR WELL CONSTRUCTION LOG

DRILLED BY:	Martin GeoEnvironmental	***WELL NUMBER:***	B-7
DRILLING METHOD:	6610DT Geoprobe	***PROJECT NUMBER:***	S2244
SAMPLING METHOD:	4' Macrocore	***LOCATION:***	Queen Anne Sq., Newport
SCREENING INSTRUMENT:	OVM 580B	***DATE:***	1/19/12
DEPTH TO WATER:	Not encountered	***LOGGED BY:***	JD

RISER:	***TYPE***		***DIAMETER***	***LENGTH***	***WELL SEAL:***	***HOLE DIA.:*** 2″
SCREEN:	***TYPE***	***SLOT***	***DIAMETER***	***LENGTH***	***SAND PACK:***	***TOTAL DEPTH:*** ≈12′

SAMPLE NO.	DEPTH	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
S-1*	0–2	3′		Dry	ND	NO WELL INSTALLED	36″ Dark brown, fine SAND and silt, with organic material in first 4″, traces of crushed stone and some brick-like material throughout
S-2A	4–6	3.5′		Moist	ND		6″ Dark brown, fine SAND and silt, with organic material in first 4″, traces of crushed stone and some brick-like material throughout
S-2B**				Moist	ND		16″ Light brown, fine SAND and silt, dense
S-2C	6–8			Moist	ND		16″ Light tan, pulverized rock, (hard), and coarse SAND, loose
S-3A	8–10	4′		Dry	ND		12″ Light tan, pulverized rock, (hard), and coarse SAND, loose
S-3B	10–12			Dry	ND		36″ Light grayish white, pulverized rock (hard), with coarse SAND mixed throughout
	12						Refusal @ 12′
	13–20						

* Sample submitted for metals analysis;
** sample submitted for TPH & VOC analysis

SAGE ENVIRONMENTAL, INC.

SOIL BORING / MONITOR WELL CONSTRUCTION LOG

DRILLED BY:	Martin GeoEnvironmental	***WELL NUMBER:***	B-8
DRILLING METHOD:	6610DT Geoprobe	***PROJECT NUMBER:***	S2244
SAMPLING METHOD:	4' Macrocore	***LOCATION:***	Queen Anne Sq., Newport
SCREENING INSTRUMENT:	OVM 580B	***DATE:***	1/19/12
DEPTH TO WATER:	Not encountered	***LOGGED BY:***	JD

RISER:	***TYPE***		***DIAMETER***	***LENGTH***	***WELL SEAL:***	***HOLE DIA.:***	2″
SCREEN:	***TYPE***	***SLOT***	***DIAMETER***	***LENGTH***	***SAND PACK:***	***TOTAL DEPTH:***	≈4-6′

SAMPLE NO.	DEPTH	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
S-1*	0–4	2′		Dry	ND	NO WELL INSTALLED	20″ Dark brown, fine SAND and silt, with organic material in first 4″, some small pieces of brick and crushed rock 4″ Dark grey, slate-like, weathered rock, hard
	4–20						No recovery Refusal @ 4-6′

* Sample submitted for metals analysis and disposal characterization

SAGE ENVIRONMENTAL, INC.

SOIL BORING / MONITOR WELL CONSTRUCTION LOG

DRILLED BY:	Martin GeoEnvironmental	**WELL NUMBER:**	B-9
DRILLING METHOD:	6610DT Geoprobe	**PROJECT NUMBER:**	S2244
SAMPLING METHOD:	4' Macrocore	**LOCATION:**	Queen Anne Sq., Newport
SCREENING INSTRUMENT:	OVM 580B	**DATE:**	1/19/12
DEPTH TO WATER:	Not encountered	**LOGGED BY:**	JD

RISER:	**TYPE**		**DIAMETER**	**LENGTH**	**WELL SEAL:**	**HOLE DIA.:** 2″
SCREEN:	**TYPE**	**SLOT**	**DIAMETER**	**LENGTH**	**SAND PACK:**	**TOTAL DEPTH:** ≈12′

SAMPLE NO.	DEPTH	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
S-1*	0–2	2′		Dry	ND	NO WELL INSTALLED	24″ Dark brown, fine SAND and silt, with organic material in first 4″, traces of brick/charred wood and glass, loose
S-2A	4–6	3.75′		Dry	ND		4″ Dark brown, fine SAND and silt, traces of brick/charred wood and glass, loose
S-2B	6–8			Dry	ND		41″ Light tan, fine SAND and silt, smooth, dense
S-3A	8–9			Dry	ND		4″ Dark brown, fine SAND and silt, traces of brick/charred wood and glass, loose (collapse)
S-3B	9–10	4′		Dry	ND		12″ Light tan, fine SAND and silt, smooth, dense
S-3C	10–11			Dry	ND		12″ Dark grey, layered, weathered rock, smooth, soft, dense
S-3D**	11–12			Dry	ND		20″ Dark grey, fine SAND and silt, with weathered rock, smooth, soft, dense
	12–20						Refusal @ 12′

* Sample submitted for metals analysis;
** sample submitted for TPH & VOC analysis

SAGE ENVIRONMENTAL, INC.

SOIL BORING / MONITOR WELL CONSTRUCTION LOG

DRILLED BY:	Martin GeoEnvironmental	***WELL NUMBER:***	B-10
DRILLING METHOD:	6610DT Geoprobe	***PROJECT NUMBER:***	S2244
SAMPLING METHOD:	4' Macrocore	***LOCATION:***	Queen Anne Sq., Newport
SCREENING INSTRUMENT:	OVM 580B	***DATE:***	1/23/12
DEPTH TO WATER:	Not encountered	***LOGGED BY:***	JD

RISER:	***TYPE***		***DIAMETER***	***LENGTH***	***WELL SEAL:***	***HOLE DIA.:*** 2″
SCREEN:	***TYPE***	***SLOT***	***DIAMETER***	***LENGTH***	***SAND PACK:***	***TOTAL DEPTH:*** ≈12′

SAMPLE NO.	DEPTH	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
S-1*	0–4	3′		Dry	ND	NO WELL INSTALLED	36″ Dark brown, fine SAND and silt, some brick and small cobbles, moderately loose
S-2A	4–8	3′		Dry	ND		32″ Light brown to tan, fine SAND and silt, dense
S-2B**	6–8			Dry	ND		4″ Light tan, weathered rock, soft, dense
S-3	8–12	4′		Dry	ND		48″ Dark tan to grey, weathered rock and shale, soft, dense
	12						Refusal @ 12′

* Sample submitted for metals analysis;
** sample submitted for TPH & VOC analysis

SAGE ENVIRONMENTAL, INC.

SOIL BORING / MONITOR WELL CONSTRUCTION LOG

DRILLED BY:	Martin GeoEnvironmental	***WELL NUMBER:***	B-11
DRILLING METHOD:	6610DT Geoprobe	***PROJECT NUMBER:***	S2244
SAMPLING METHOD:	4' Macrocore	***LOCATION:***	Queen Anne Sq., Newport
SCREENING INSTRUMENT:	OVM 580B	***DATE:***	1/23/12
DEPTH TO WATER:	Not encountered	***LOGGED BY:***	JD

RISER:	***TYPE***		***DIAMETER***	***LENGTH***	***WELL SEAL:***	***HOLE DIA.:*** 2″
SCREEN:	***TYPE***	***SLOT***	***DIAMETER***	***LENGTH***	***SAND PACK:***	***TOTAL DEPTH:*** ≈11.5′

SAMPLE NO.	DEPTH	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
	0						
	1					NO WELL INSTALLED	No recovery
	2						
	3						
	4						
S-2*/**	5	2′		Dry	ND		24″ Dark grey and brown, fine SAND and silt mixed with layers of of weathered rock, soft and dense, some traces of brick-like material
	6						
	7						
	8						
S-3	9	4′		Dry	ND		48″ Dark grey, weathered rock, soft and smooth, dense
	10						
	11						
	12						Refusal @ 11.5′
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						

* Sample submitted for metals analysis;
** sample submitted for TPH & VOC analysis

SAGE ENVIRONMENTAL, INC.

SOIL BORING / MONITOR WELL CONSTRUCTION LOG

DRILLED BY:	Martin GeoEnvironmental	**WELL NUMBER:**	B-12
DRILLING METHOD:	6610DT Geoprobe	**PROJECT NUMBER:**	S2244
SAMPLING METHOD:	4' Macrocore	**LOCATION:**	Queen Anne Sq., Newport
SCREENING INSTRUMENT:	OVM 580B	**DATE:**	1/23/12
DEPTH TO WATER:	Not encountered	**LOGGED BY:**	JD

RISER:	**TYPE**		**DIAMETER**	**LENGTH**	**WELL SEAL:**	**HOLE DIA.:** 2″
SCREEN:	**TYPE**	**SLOT**	**DIAMETER**	**LENGTH**	**SAND PACK:**	**TOTAL DEPTH:** ≈12′

SAMPLE NO.	DEPTH	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
	0						
S-1A*	1	2′		Dry	ND	NO WELL INSTALLED	4″ Dark brown, organics and fine SAND and silt
S-1B*	2			Dry	ND		20″ Dark brown, fine SAND and silt with crushed cobbles and evidence of brink and coal ash, moderately loose
S-2A**	3			Dry	ND		10″ Dark brown, fine SAND and silt with crushed cobbles and evidence of brink and coal ash, moderately loose
S-2B	4	3′		Dry	ND		26″ Dark grey and light tan, fine SAND and silt mixed with layers of weather rock, dense
S-3	5	4′		Dry	ND		48″ Light grayish tan, some fine SAND and silt mixed with mostly weather rock, soft, smooth, very dense
	6						
	7						
	8						
	9						
	10						
	11						
	12						Refusal @ 12′
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						

* Sample composited and submitted for metals analysis;
** sample submitted for TPH & VOC analysis

SAGE ENVIRONMENTAL, INC.

SOIL BORING / MONITOR WELL CONSTRUCTION LOG

DRILLED BY:	Martin GeoEnvironmental	***WELL NUMBER:***	B-13
DRILLING METHOD:	6610DT Geoprobe	***PROJECT NUMBER:***	S2244
SAMPLING METHOD:	4' Macrocore	***LOCATION:***	Queen Anne Sq., Newport
SCREENING INSTRUMENT:	OVM 580B	***DATE:***	1/23/12
DEPTH TO WATER:	Not encountered	***LOGGED BY:***	JD

RISER:	***TYPE***		***DIAMETER***	***LENGTH***	***WELL SEAL:***	***HOLE DIA.:*** 2″
SCREEN:	***TYPE***	***SLOT***	***DIAMETER***	***LENGTH***	***SAND PACK:***	***TOTAL DEPTH:*** ≈12′

SAMPLE NO.	DEPTH	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
	0						
S-1A*	1	3′		Dry	ND	NO WELL INSTALLED	26″ Dark brown, fine SAND and silt mixed with traces of brick and coal, loose
S-1B*	2			Dry	ND		10″ Light brown, fine SAND and silt, dense, smooth
	3						
	4						
S-2A**	5	4′		Dry	ND		36″ Light brown, fine SAND and silt with layers of crushed, weathered rock, smooth, soft, dense
S-2B	6			Dry	ND		12″ Light grey and tan, weathered rock, soft, smooth, very dense
	7						
	8						
S-3	9	2′		Dry	ND		24″ Light gray and tan, weathered rock, soft, smooth, very dense
	10						
	11						
	12						Refusal @ 12′
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						* Sample composited and submitted for metals analysis; ** sample submitted for TPH & VOC analysis

SAGE ENVIRONMENTAL, INC.

SOIL BORING / MONITOR WELL CONSTRUCTION LOG

DRILLED BY:	Martin GeoEnvironmental	***WELL NUMBER:***	B-14
DRILLING METHOD:	6610DT Geoprobe	***PROJECT NUMBER:***	S2244
SAMPLING METHOD:	4' Macrocore	***LOCATION:***	Queen Anne Sq., Newport
SCREENING INSTRUMENT:	OVM 580B	***DATE:***	1/23/12
DEPTH TO WATER:	Not encountered	***LOGGED BY:***	JD

RISER:	***TYPE***		***DIAMETER***	***LENGTH***	***WELL SEAL:***	***HOLE DIA.:*** 2″
SCREEN:	***TYPE***	***SLOT***	***DIAMETER***	***LENGTH***	***SAND PACK:***	***TOTAL DEPTH:*** ≈12′

SAMPLE NO.	DEPTH	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
	0						
S-1A*	1	3′		Dry	ND	NO WELL INSTALLED	18″ Dark brown, fine SAND and with organic material, fairly loose
S-1B*	2–3			Dry	ND		18″ Light brown, fine SAND and silt, dense, smooth
S-2	4–6	3′		Dry	ND		36″ Light tan, fine SAND and silt mixed with dense layers of crushed, rock, soft and smooth
S-3A**	7–9	2′		Dry	ND		18″ Light tan, fine SAND and silt mixed with dense layers of crushed, rock, soft and smooth
S-3B	10–11			Dry	ND		6″ Dark grey, weathered rock, soft and smooth, very dense
	12						Refusal @ 12′
	13–20						

* Sample composited and submitted for metals analysis;
** sample submitted for TPH & VOC analysis

SAGE ENVIRONMENTAL, INC.

SOIL BORING / MONITOR WELL CONSTRUCTION LOG

DRILLED BY:	Martin GeoEnvironmental	***WELL NUMBER:***	B-15
DRILLING METHOD:	6610DT Geoprobe	***PROJECT NUMBER:***	S2244
SAMPLING METHOD:	4' Macrocore	***LOCATION:***	Queen Anne Sq., Newport
SCREENING INSTRUMENT:	OVM 580B	***DATE:***	1/23/12
DEPTH TO WATER:	Not encountered	***LOGGED BY:***	JD

RISER:	***TYPE***		***DIAMETER***	***LENGTH***	***WELL SEAL:***	***HOLE DIA.:*** 2″
SCREEN:	***TYPE***	***SLOT***	***DIAMETER***	***LENGTH***	***SAND PACK:***	***TOTAL DEPTH:*** ≈3′

SAMPLE NO.	DEPTH	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
	0						
	1					NO WELL INSTALLED	Granite-like in bottom of drive point
	2						
	3						Refusal @ ≈3′
	4						
	5						
	6						
	7						
	8						
	9						
	10						
	11						
	12						
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						

SAGE ENVIRONMENTAL, INC.

SOIL BORING / MONITOR WELL CONSTRUCTION LOG

DRILLED BY:	Martin GeoEnvironmental	***WELL NUMBER:***	B-16
DRILLING METHOD:	6610DT Geoprobe	***PROJECT NUMBER:***	S2244
SAMPLING METHOD:	4' Macrocore	***LOCATION:***	Queen Anne Sq., Newport
SCREENING INSTRUMENT:	OVM 580B	***DATE:***	1/23/12
DEPTH TO WATER:	Not encountered	***LOGGED BY:***	JD

RISER:	***TYPE***		***DIAMETER***	***LENGTH***	***WELL SEAL:***	***HOLE DIA.:*** 2″
SCREEN:	***TYPE***	***SLOT***	***DIAMETER***	***LENGTH***	***SAND PACK:***	***TOTAL DEPTH:*** ≈3′

SAMPLE NO.	DEPTH	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
	0						
	1					NO WELL INSTALLED	Granite-like in bottom of drive point
	2						
	3						Refusal @ ≈3′
	4						
	5						
	6						
	7						
	8						
	9						
	10						
	11						
	12						
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						

SAGE ENVIRONMENTAL, INC.

SOIL BORING / MONITOR WELL CONSTRUCTION LOG

DRILLED BY:	Martin GeoEnvironmental	***WELL NUMBER:***	B-17
DRILLING METHOD:	6610DT Geoprobe	***PROJECT NUMBER:***	S2244
SAMPLING METHOD:	4' Macrocore	***LOCATION:***	Queen Anne Sq., Newport
SCREENING INSTRUMENT:	OVM 580B	***DATE:***	1/23/12
DEPTH TO WATER:	Not encountered	***LOGGED BY:***	JD

RISER:	***TYPE***		***DIAMETER***	***LENGTH***	***WELL SEAL:***	***HOLE DIA.:***	2″
SCREEN:	***TYPE***	***SLOT***	***DIAMETER***	***LENGTH***	***SAND PACK:***	***TOTAL DEPTH:***	≈11.5′

SAMPLE NO.	DEPTH	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
	0						
S-1A*	1	3.5′		Dry	ND	NO WELL INSTALLED	10″ Dark brown, fine SAND and silt, with organic material, moderately dense
	2						8″ Crushed rock from Geoprobe
S-1B*	3			Dry	ND		24″ Dark brown, fine SAND and silt with brick, crushed small cobbles, moderately loose
	4						
S-2A	5	42″		Dry	ND		6″ Dark brown, fine SAND and silt with brick, crushed small cobbles, moderately loose
S-2B	6			Dry	ND		6″ Light tan, fine SAND and silt, very dense and smooth
S-2C	7			Dry	ND		30″ Light tan, weathered rock, soft and smooth with some fine SAND and silt, dense
	8						
S-3A	9	4′		Dry	ND		10″ Light tan, weathered rock, soft and smooth with some fine SAND and silt, dense
S-3B**	10			Dry	ND		38″ Light grey mixed with tan, layers of weathered rock, soft and smooth, some fine SAND and silt, mixed throughout, dense
	11						
	12						Refusal @ 11.5′
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						

* Sample composited and submitted for metals analysis;
** sample submitted for TPH & VOC analysis

SAGE ENVIRONMENTAL, INC.

SOIL BORING / MONITOR WELL CONSTRUCTION LOG

DRILLED BY:	Martin GeoEnvironmental	**WELL NUMBER:**	B-18
DRILLING METHOD:	6610DT Geoprobe	**PROJECT NUMBER:**	S2244
SAMPLING METHOD:	4' Macrocore	**LOCATION:**	Queen Anne Sq., Newport
SCREENING INSTRUMENT:	OVM 580B	**DATE:**	1/23/12
DEPTH TO WATER:	Not encountered	**LOGGED BY:**	JD

RISER:	**TYPE**		**DIAMETER**	**LENGTH**	**WELL SEAL:**	**HOLE DIA.:** 2″
SCREEN:	**TYPE**	**SLOT**	**DIAMETER**	**LENGTH**	**SAND PACK:**	**TOTAL DEPTH:** ≈11.5′

SAMPLE NO.	DEPTH	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
	0						
S-1A*	1	3′		Dry	ND	NO WELL INSTALLED	3″ Dark brown, fine SAND and silt, with organic material, dense
S-1B*	2			Dry	ND		33″ Dark brown, fine SAND and silt, traces of brick and small cobbles, moderately loose
	3						
	4						
S-2A	5			Dry	ND		4″ Dark brown, fine SAND and silt, traces of brick and small cobbles, moderately loose
	6	2′		Dry	ND		
S-2B	7			Dry	ND		20″ Light grey and tan, fine SAND and silt, mostly weathered rock, soft and smooth, dense
	8						
S-3A**	9			Dry	ND		12″ Light grey and tan, fine SAND and silt, mostly weathered rock, soft and smooth, dense
	10	2′					
S-3B	11			Dry	ND		12″ Light to dark grey, weathered rock, soft and smooth, very dense
	12						Refusal @ 11.5′
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						* Sample composited and submitted for metals analysis; ** sample submitted for TPH & VOC analysis

SAGE ENVIRONMENTAL, INC.

SOIL BORING / MONITOR WELL CONSTRUCTION LOG

DRILLED BY:	Martin GeoEnvironmental	***WELL NUMBER:***	B-19
DRILLING METHOD:	6610DT Geoprobe	***PROJECT NUMBER:***	S2244
SAMPLING METHOD:	4' Macrocore	***LOCATION:***	Queen Anne Sq., Newport
SCREENING INSTRUMENT:	OVM 580B	***DATE:***	1/23/12
DEPTH TO WATER:	Not encountered	***LOGGED BY:***	JD

RISER:	***TYPE***		***DIAMETER***	***LENGTH***	***WELL SEAL:***	***HOLE DIA.:*** 2″
SCREEN:	***TYPE***	***SLOT***	***DIAMETER***	***LENGTH***	***SAND PACK:***	***TOTAL DEPTH:*** ≈12′

SAMPLE NO.	DEPTH	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
	0						
S-1A*	1	3.75′		Dry	ND	NO WELL INSTALLED	10″ Dark brown, fine SAND and silt, with organic material, moderately dense
S-1B*	2						22″ Dark brown, fine SAND and silt, with brick-like material, coal and small cobbles, loose
S-1C*	3			Dry	ND		10″ Light brown, fine SAND and silt, smooth, dense
	4						
S-2A	5	3.75′		Dry	ND		32″ Light brown, fine SAND and silt, smooth, dense
	6			Dry	ND		
S-2B	7			Dry	ND		10″ Light tan, weathered rock with some fine SAND and silt, dense
	8						
S-3A**	9	3′		Dry	ND		18″ Light tan, weathered rock with some fine SAND and silt, dense
	10						
S-3B	11			Dry	ND		18″ Light grey, weathered rock, soft and smooth, very dense
	12						Refusal @ 12′
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						* Sample composited and submitted for metals analysis; ** sample submitted for TPH & VOC analysis

SAGE ENVIRONMENTAL, INC.

SOIL BORING / MONITOR WELL CONSTRUCTION LOG

DRILLED BY:	Martin GeoEnvironmental	***WELL NUMBER:***	B-20
DRILLING METHOD:	6610DT Geoprobe	***PROJECT NUMBER:***	S2244
SAMPLING METHOD:	4' Macrocore	***LOCATION:***	Queen Anne Sq., Newport
SCREENING INSTRUMENT:	OVM 580B	***DATE:***	1/23/12
DEPTH TO WATER:	Not encountered	***LOGGED BY:***	JD

RISER:	***TYPE***		***DIAMETER***	***LENGTH***	***WELL SEAL:***	***HOLE DIA.:*** 2″
SCREEN:	***TYPE***	***SLOT***	***DIAMETER***	***LENGTH***	***SAND PACK:***	***TOTAL DEPTH:*** ≈3′

SAMPLE NO.	DEPTH	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
	0						
	1					NO WELL INSTALLED	Granite-like in bottom of drive point
	2						
	3						Refusal @ ≈3′
	4						
	5						
	6						
	7						
	8						
	9						
	10						
	11						
	12						
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						

SAGE ENVIRONMENTAL, INC.

SOIL BORING / MONITOR WELL CONSTRUCTION LOG

DRILLED BY:	Martin GeoEnvironmental	***WELL NUMBER:***	MW-2 (B-21)
DRILLING METHOD:	6610DT Geoprobe	***PROJECT NUMBER:***	S2244
SAMPLING METHOD:	4' Macrocore	***LOCATION:***	Queen Anne Sq., Newport
SCREENING INSTRUMENT:	OVM 580B	***DATE:***	1/19/12
DEPTH TO WATER:	Not encountered	***LOGGED BY:***	JD

RISER:	PVC	***TYPE***	SCH 40		***DIAMETER*** 2"	***LENGTH*** 2'	***WELL SEAL:***	BENTONITE	***HOLE DIA.:*** 2"
SCREEN:	PVC	***TYPE***	SCH 40	***SLOT*** 0.010"	***DIAMETER*** 2"	***LENGTH*** 10'	***SAND PACK:***	FILTER SAND	***TOTAL DEPTH:*** 12'

SAMPLE NO.	DEPTH (FEET)	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
	0					CONCRETE; ROAD BOX; LOCKING CAP; BENTONITE	BENTONITE
S-1A	1	3.25′		Dr	19.2		36" Light brown and dark brown, fine SAND and silt with brick and wood and crushed cobble, black staining, spotty throughout
	2						
S-1B	3			Dry	ND		3" Light tan, coarse SAND, loose
	4						
S-2A	5	4′		Dry	298	FILTER SAND	2" Tan, coarse SAND with black staining in bottom 1″, loose, petroleum odor
S-2B	6			Dry	635		34" Light grey, fine SAND and silt with layers of weathered rock, dense, petroleum odor
S-2C	7			Dry	211		12" Dark tan and grey, weathered rock with some fine SAND and silt
	8						
S-3A	9	4′		Dry	350		40" Dark tan and grey, weathered rock with some fine SAND and silt
	10						
S-3B	11			Dry	206		8" Dark tan, fine SAND and silt, very dense with cobbles throughout
	12					Well set @ ≈12′	Refusal @ ≈12′
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						

SAGE ENVIRONMENTAL, INC.

SOIL BORING / MONITOR WELL CONSTRUCTION LOG

DRILLED BY:	Martin GeoEnvironmental	***WELL NUMBER:***	B-22
DRILLING METHOD:	6610DT Geoprobe	***PROJECT NUMBER:***	S2244
SAMPLING METHOD:	4' Macrocore	***LOCATION:***	Queen Anne Sq., Newport
SCREENING INSTRUMENT:	OVM 580B	***DATE:***	1/23/12
DEPTH TO WATER:	Not encountered	***LOGGED BY:***	JD

RISER:	***TYPE***		***DIAMETER***	***LENGTH***	***WELL SEAL:***	***HOLE DIA.:***	2″
SCREEN:	***TYPE***	***SLOT***	***DIAMETER***	***LENGTH***	***SAND PACK:***	***TOTAL DEPTH:***	≈11.5-12′

SAMPLE NO.	DEPTH	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
	0						
S-1A	1	3′		Dry	ND	NO WELL INSTALLED	8″ Dark brown, fine SAND and silt, with organic material, dense
S-1B	2			Dry	ND		28″ Dark brown and tan, fine SAND and silt, with brick-like and coal present
	3						
	4						
S-2A	5	4′		Dry	ND		8″ Light tan, fine SAND and silt, dense, smooth
S-2B	6			Dry	ND		40″ Tan, fine SAND and silt with mostly weathered rock, dense
	7						
	8						
S-3	9	4′		Dry	ND		48″ Tan, fine SAND and silt with mostly weathered rock, dense
	10						
	11						
	12						Refusal @ 11.5-12′
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						

SAGE ENVIRONMENTAL, INC.

SOIL BORING / MONITOR WELL CONSTRUCTION LOG

DRILLED BY:	Martin GeoEnvironmental	***WELL NUMBER:***	B-23
DRILLING METHOD:	6610DT Geoprobe	***PROJECT NUMBER:***	S2244
SAMPLING METHOD:	4' Macrocore	***LOCATION:***	Queen Anne Sq., Newport
SCREENING INSTRUMENT:	OVM 580B	***DATE:***	1/23/12
DEPTH TO WATER:	Not encountered	***LOGGED BY:***	JD

RISER:	***TYPE***		***DIAMETER***	***LENGTH***	***WELL SEAL:***	***HOLE DIA.:*** 2″
SCREEN:	***TYPE***	***SLOT***	***DIAMETER***	***LENGTH***	***SAND PACK:***	***TOTAL DEPTH:*** ≈11′

SAMPLE NO.	DEPTH	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
	0						
S-1A	1	3′		Dry	ND	NO WELL INSTALLED	8″ Dark brown, fine SAND and silt, with organic material, dense
S-1B	2			Dry	ND		28″ Dark brown and tan, fine SAND and silt, with brick-like and coal present
	3						
	4						
S-2A	5	4′		Dry	ND		8″ Light brown, fine SAND and silt, dense, smooth
S-2B	6			Dry	ND		40″ Tan, fine SAND and silt with mostly weathered rock, dense
	7						
	8						
S-3	9	2′		Dry	ND		48″ Tan, fine SAND and silt with mostly weathered rock, dense
	10						
	11						Refusal @ 11′
	12						
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						

SAGE ENVIRONMENTAL, INC.

SOIL BORING / MONITOR WELL CONSTRUCTION LOG

DRILLED BY:	Martin GeoEnvironmental	***WELL NUMBER:***	B-24
DRILLING METHOD:	6610DT Geoprobe	***PROJECT NUMBER:***	S2244
SAMPLING METHOD:	4' Macrocore	***LOCATION:***	Queen Anne Sq., Newport
SCREENING INSTRUMENT:	OVM 580B	***DATE:***	1/24/12
DEPTH TO WATER:	Not encountered	***LOGGED BY:***	JD

RISER:	***TYPE***		***DIAMETER***	***LENGTH***	***WELL SEAL:***	***HOLE DIA.:*** 2″
SCREEN:	***TYPE***	***SLOT***	***DIAMETER***	***LENGTH***	***SAND PACK:***	***TOTAL DEPTH:*** ≈11′

SAMPLE NO.	DEPTH	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
	0						
S-1A	1	4′		Dry	ND	NO WELL INSTALLED	2″ Dark brown, fine SAND and silt with organic material, dense
S-1B	2–3			Dry	ND		46″ Dark brown, fine SAND and silt, brick present
	4						
S-2A	5	4′		Dry	ND		2″ Dark brown, fine SAND and silt, brick present
S-2B	6–7			Dry	ND		46″ Light tan, fine SAND and silt, mostly weathered rock, soft, smooth, dense
	8						
S-3	9–10	2′		Dry	ND		48″ Light tan, fine SAND and silt, mostly weathered rock, soft, smooth, dense
	11						Refusal @ 11′
	12–20						

SAGE ENVIRONMENTAL, INC.

SOIL BORING / MONITOR WELL CONSTRUCTION LOG

DRILLED BY:	Martin GeoEnvironmental	WELL NUMBER:	B-25
DRILLING METHOD:	6610DT Geoprobe	PROJECT NUMBER:	S2244
SAMPLING METHOD:	4' Macrocore	LOCATION:	Queen Anne Sq., Newport
SCREENING INSTRUMENT:	OVM 580B	DATE:	1/24/12
DEPTH TO WATER:	Not encountered	LOGGED BY:	JD

RISER:	TYPE		DIAMETER	LENGTH	WELL SEAL:	HOLE DIA.: 2″
SCREEN:	TYPE	SLOT	DIAMETER	LENGTH	SAND PACK:	TOTAL DEPTH: 9′

SAMPLE NO.	DEPTH	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
	0						
S-1A	1	2′		Dry	ND	NO WELL INSTALLED	20″ Dark brown, fine SAND and silt mixed with organic material, dense
S-1B	2			Dry	ND		2″ Crushed concrete
	3						
	4						
S-2A	5	3′		Dry	ND		24″ Light brown, fine SAND and silt with crushed brick, Styrofoam and glass, loose
S-2B	6			Dry	ND		12″ Crushed, hard rock mixed with layers of weathered, soft rock
	7						
S-3	8	2′		Dry	ND		24″ Crushed, hard rock mixed with layers of weathered, soft rock with dense layers of weathered rock
	9						Refusal @ 9′
	10						
	11						
	12						
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						

SAGE ENVIRONMENTAL, INC.

SOIL BORING / MONITOR WELL CONSTRUCTION LOG

DRILLED BY:	Martin GeoEnvironmental	**WELL NUMBER:**	B-26
DRILLING METHOD:	6610DT Geoprobe	**PROJECT NUMBER:**	S2244
SAMPLING METHOD:	4' Macrocore	**LOCATION:**	Queen Anne Sq., Newport
SCREENING INSTRUMENT:	OVM 580B	**DATE:**	1/24/12
DEPTH TO WATER:	Not encountered	**LOGGED BY:**	JD

RISER:	**TYPE**		**DIAMETER**	**LENGTH**	**WELL SEAL:**	**HOLE DIA.:** 2″
SCREEN:	**TYPE**	**SLOT**	**DIAMETER**	**LENGTH**	**SAND PACK:**	**TOTAL DEPTH:** 10′

SAMPLE NO.	DEPTH	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
	0						
S-1A	1			Dry	ND	NO WELL INSTALLED	6″ Dark brown, fine SAND and silt mixed with organic material, dense
S-1B	2	3.5′		Dry	ND		15″ Dark brown, fine SAND and silt with brick and black coarse sand
S-1C	3			Dry	ND		15″ Crushed/pulverized concrete
	4						
S-2A	5			Dry	ND		20″ Crushed/pulverized concrete
S-2B	6	4′		Dry	ND		4″ Light brown, fine SAND and silt with small amount of cobbles, dense
S-2C	7			Dry	ND		24″ Light tan, fine to medium SAND, mostly crushed rock
	8						
S-3	9	2′		Dry	ND		24″ Light tan, fine to medium SAND, mostly crushed rock
	10						Refusal @ 10′
	11						
	12						
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						

SAGE ENVIRONMENTAL, INC.

SOIL BORING / MONITOR WELL CONSTRUCTION LOG

DRILLED BY:	Martin GeoEnvironmental	**WELL NUMBER:**	B-27
DRILLING METHOD:	6610DT Geoprobe	**PROJECT NUMBER:**	S2244
SAMPLING METHOD:	4' Macrocore	**LOCATION:**	Queen Anne Sq., Newport
SCREENING INSTRUMENT:	OVM 580B	**DATE:**	1/24/12
DEPTH TO WATER:	Not encountered	**LOGGED BY:**	JD

RISER:	**TYPE**		**DIAMETER**	**LENGTH**	**WELL SEAL:**	**HOLE DIA.:** 2″
SCREEN:	**TYPE**	**SLOT**	**DIAMETER**	**LENGTH**	**SAND PACK:**	**TOTAL DEPTH:** 9′

SAMPLE NO.	DEPTH	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
	0						
S-1A	1	3′		Dry	ND	NO WELL INSTALLED	10″ Dark brown, fine SAND and silt mixed with organic material, dense
S-1B	2			Dry	ND		14″ Tan, coarse to medium SAND with cobbles, trace gravel, loose
S-1C	3			Dry	ND		10″ Brown, medium to fine SAND and silt with crushed layers of weathered rock and some brick, dense
	4						
S-2A	5	3′		Dry	ND		12″ White to grey, crushed stone, hard, pulverized concrete
S-2B	6			Dry	ND		24″ Dark brown, medium to fine SAND with trace amounts of brick and wood
S-3A	7	1′		Dry	ND		8″ Dark brown, medium to fine SAND with trace amounts of brick and wood
S-3B	8			Dry	ND		4″ Tan, crushed, soft, weathered rock, very dense
	9						Refusal @ 9′
	10						
	11						
	12						
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						

SAGE ENVIRONMENTAL, INC.

SOIL BORING / MONITOR WELL CONSTRUCTION LOG

DRILLED BY:	Martin GeoEnvironmental	***WELL NUMBER:***	MW-3 (B-28)
DRILLING METHOD:	6610DT Geoprobe	***PROJECT NUMBER:***	S2244
SAMPLING METHOD:	4' Macrocore	***LOCATION:***	Queen Anne Sq., Newport
SCREENING INSTRUMENT:	OVM 580B	***DATE:***	1/24/12
DEPTH TO WATER:	≈11′	***LOGGED BY:***	JD

RISER:	PVC	***TYPE***	SCH 40			***DIAMETER***	2"	***LENGTH***	1.5'	***WELL SEAL:*** BENTONITE	***HOLE DIA.:*** 3"
SCREEN:	PVC	***TYPE***	SCH 40	***SLOT***	0.010"	***DIAMETER***	2"	***LENGTH***	10'	***SAND PACK:*** FILTER SAND	***TOTAL DEPTH:*** 11.5'

SAMPLE NO.	DEPTH (FEET)	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
	0					CONCRETE; ROAD BOX; LOCKING CAP; BENTONITE	BENTONITE
S-1A	1			Dry	ND		8" Dark brown, fine SAND and silt with organic material, dense
S-1B	2	2′′		Dry	ND		4" Dark brown, fine SAND and silt with black, coarse SAND
S-1C	3			Dry	ND		12" Crushed stone (hard) and layers of soft, tan, weathered rock
	4						
S-2A	5			Dry	ND	FILTER SAND	12" Crushed stone (hard) and layers of soft, weathered rock, dense
	6	2′					
S-2C	7			Dry	ND		12" Dark brown, fine SAND and silt, moderately loose
	8						
S-3A	9			Dry	ND		10" Dark grey, crushed, weathered rock, soft, dense
S-3B	10	4′		Dry	ND		14" Light brown, fine SAND and silt, dense
S-3C	11			Wet	ND		24" Dark brown, medium to coarse SAND mixed with crushed layers of tan, weathered rock, soft, very dense
	12					Well set @ ≈11.5′	Refusal @ ≈11.5′
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						

SAGE ENVIRONMENTAL, INC.

SOIL BORING / MONITOR WELL CONSTRUCTION LOG

DRILLED BY:	Martin GeoEnvironmental	WELL NUMBER:	B-29
DRILLING METHOD:	6610DT Geoprobe	PROJECT NUMBER:	S2244
SAMPLING METHOD:	4' Macrocore	LOCATION:	Queen Anne Sq., Newport
SCREENING INSTRUMENT:	OVM 580B	DATE:	1/24/12
DEPTH TO WATER:	Not encountered	LOGGED BY:	JD

RISER:	TYPE		DIAMETER	LENGTH	WELL SEAL:	HOLE DIA.: 2″
SCREEN:	TYPE	SLOT	DIAMETER	LENGTH	SAND PACK:	TOTAL DEPTH: 9.5′

SAMPLE NO.	DEPTH	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
	0						
S-1A	1	1′		Dry	ND	NO WELL INSTALLED	8″ Dark brown, fine SAND and silt, some organic material
S-1B	2			Dry	ND		4″ Hard, crushed rock
	3						
	4						No recovery
	5						
	6						
	7						
S-3A	8	26″		Dry	ND		14″ Dark brown, fine to medium SAND with some brown and black coarse sand, small cobbles throughout
S-3B	9			Dry	ND		12″ Layers of crushed rock, hard, very dense
	10						Refusal @ 9.5′
	11						
	12						
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						

SAGE ENVIRONMENTAL, INC.

SOIL BORING / MONITOR WELL CONSTRUCTION LOG

DRILLED BY:	Martin GeoEnvironmental	***WELL NUMBER:***	B-30
DRILLING METHOD:	6610DT Geoprobe	***PROJECT NUMBER:***	S2244
SAMPLING METHOD:	4' Macrocore	***LOCATION:***	Queen Anne Sq., Newport
SCREENING INSTRUMENT:	OVM 580B	***DATE:***	1/24/12
DEPTH TO WATER:	Not encountered	***LOGGED BY:***	JD

RISER:	***TYPE***		***DIAMETER***	***LENGTH***	***WELL SEAL:***	***HOLE DIA.:*** 2″
SCREEN:	***TYPE***	***SLOT***	***DIAMETER***	***LENGTH***	***SAND PACK:***	***TOTAL DEPTH:*** ≈11.5′

SAMPLE NO.	DEPTH	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
	0						
S-1A	1	3′		Dry	ND	NO WELL INSTALLED	4″ Dark brown, fine SAND and silt with organic material, dense
S-1B	2–3			Dry	ND		32″ Dark brown, fine to medium SAND with trace of crushed cobble and brick
S-2A	4–5	30″		Dry	ND		22″ Dark brown, fine to medium SAND with some coarse sand and cobbles, brick and fill-like material, loose
S-2B	6–7			Dry	ND		8″ Layers of grey, weathered rock, very dense
S-3	8–10	2′		Dry	ND		24″ Layers of grey, weathered rock, very dense
	11–20						Refusal @ 11.5′

SAGE ENVIRONMENTAL, INC.

SOIL BORING / MONITOR WELL CONSTRUCTION LOG

DRILLED BY:	Martin GeoEnvironmental	***WELL NUMBER:***	B-31
DRILLING METHOD:	6610DT Geoprobe	***PROJECT NUMBER:***	S2244
SAMPLING METHOD:	4' Macrocore	***LOCATION:***	Queen Anne Sq., Newport
SCREENING INSTRUMENT:	OVM 580B	***DATE:***	1/24/12
DEPTH TO WATER:	Not encountered	***LOGGED BY:***	JD

RISER:	***TYPE***		***DIAMETER***	***LENGTH***	***WELL SEAL:***	***HOLE DIA.:***	2″
SCREEN:	***TYPE***	***SLOT***	***DIAMETER***	***LENGTH***	***SAND PACK:***	***TOTAL DEPTH:***	≈12′

SAMPLE NO.	DEPTH	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
	0						
S-1A	1	2′		Dry	ND	NO WELL INSTALLED	2″ Dark brown, fine SAND and silt with organic material
S-1B	2			Dry	ND		22″ Dark brown, fine to medium SAND with brick and glass, loose
	3						
	4						
S-2A	5	2′		Dry	ND		18″ Dark brown, fine to medium SAND with brick and glass, loose
S-2B	6			Dry	ND		6″ White/grey, layered rock, hard
	7						
	8						
S-3A	9	4′		Dry	ND		12″ Dark brown, fine to medium SAND with brick and glass, loose
S-3B	10			Dry	ND		36″ Tan, layered, weathered rock, soft, very dense
	11						
	12						Refusal @ 12′
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						

SAGE ENVIRONMENTAL, INC.

SOIL BORING / MONITOR WELL CONSTRUCTION LOG

DRILLED BY:	Martin GeoEnvironmental	**WELL NUMBER:**	B-32
DRILLING METHOD:	6610DT Geoprobe	**PROJECT NUMBER:**	S2244
SAMPLING METHOD:	4' Macrocore	**LOCATION:**	Queen Anne Sq., Newport
SCREENING INSTRUMENT:	OVM 580B	**DATE:**	1/24/12
DEPTH TO WATER:	Not encountered	**LOGGED BY:**	JD

RISER:	**TYPE**		**DIAMETER**	**LENGTH**	**WELL SEAL:**	**HOLE DIA.:** 2″
SCREEN:	**TYPE**	**SLOT**	**DIAMETER**	**LENGTH**	**SAND PACK:**	**TOTAL DEPTH:** 7′

SAMPLE NO.	DEPTH	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
S-1A	0–1	3′		Dry	ND	NO WELL INSTALLED	4″ Dark brown, fine SAND and silt with organic material
S-1B	1–2			Dry	ND		22″ Dark brown, fine to medium SAND, some silt with brick and coal, loose
S-1C	2–3			Dry	ND		10″ Dark grey, coarse SAND and pulverized rock
S-2A	4–5	3′		Dry	ND		12″ Dark brown, fine SAND and silt, dense
S-2B	5–6			Dry	ND		24″ Large cobbles and layers of tan, weathered rock
	6–7						Refusal @ 7′
	7–8						
	8–9						
	9–10						
	10–11						
	11–12						
	12–13						
	13–14						
	14–15						
	15–16						
	16–17						
	17–18						
	18–19						
	19–20						

SAGE ENVIRONMENTAL, INC.

SOIL BORING / MONITOR WELL CONSTRUCTION LOG

DRILLED BY:	Martin GeoEnvironmental	**WELL NUMBER:**	B-33
DRILLING METHOD:	6610DT Geoprobe	**PROJECT NUMBER:**	S2244
SAMPLING METHOD:	4' Macrocore	**LOCATION:**	Queen Anne Sq., Newport
SCREENING INSTRUMENT:	OVM 580B	**DATE:**	1/24/12
DEPTH TO WATER:	Not encountered	**LOGGED BY:**	JD

RISER:	**TYPE**		**DIAMETER**	**LENGTH**	**WELL SEAL:**	**HOLE DIA.:** 2″
SCREEN:	**TYPE**	**SLOT**	**DIAMETER**	**LENGTH**	**SAND PACK:**	**TOTAL DEPTH:** 10′

SAMPLE NO.	DEPTH	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
	0						
S-1A	1	3′		Dry	ND	NO WELL INSTALLED	4″ Dark brown, fine SAND and silt with organic material
S-1B	2			Dry	ND		30″ Dark brown, fine SAND and silt with brick present and dark brown coarse sand
S-1C	3			Dry	ND		2″ Solid rock in core
	4						
S-2A	5	2′		Dry	ND		14″ Dark brown, fine SAND and silt mixed with small cobbles and layers of weathered, tan rock, dense
S-2B	6			Dry	ND		10″ Tan, soft, weathered rock, very dense
S-3A	7			Dry	ND		6″ Dark brown, fine SAND and silt, dense
S-3B	8	2′		Dry	ND		18″ Tan, soft, weathered rock layers and hard cobbles throughout, dense
	9						
	10						Refusal @ 10′
	11						
	12						
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						

SAGE ENVIRONMENTAL, INC.

SOIL BORING / MONITOR WELL CONSTRUCTION LOG

DRILLED BY:	Martin GeoEnvironmental	***WELL NUMBER:***	MW-5 (B-34)
DRILLING METHOD:	6610DT Geoprobe	***PROJECT NUMBER:***	S2244
SAMPLING METHOD:	4' Macrocore	***LOCATION:***	Queen Anne Sq., Newport
SCREENING INSTRUMENT:	OVM 580B	***DATE:***	1/24/12
DEPTH TO WATER:	Not encountered	***LOGGED BY:***	JD

RISER:	PVC	***TYPE***	SCH 40		***DIAMETER*** 2"	***LENGTH*** —	***WELL SEAL:***	BENTONITE	***HOLE DIA.:*** 3"
SCREEN:	PVC	***TYPE***	SCH 40	***SLOT*** 0.010"	***DIAMETER*** 2"	***LENGTH*** 8'	***SAND PACK:***	FILTER SAND	***TOTAL DEPTH:*** 8'

SAMPLE NO.	DEPTH (FEET)	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
S-1A	0	3.5″		Dry	ND	CONCRETE; ROAD BOX; LOCKING CAP; BENTONITE; FILTER SAND	6" Dark brown, fine SAND and silt with organic material, dense
S-1B	1			Dry	ND		12" Dark brown, fine to medium SAND with some bricks and coal-like material
S-1C	2			Dry	ND		12" Light grey, fine SAND with black stained medium sand, odor, burnt wood present
S-1D	3			Dry	ND		6" Black, stained coarse SAND with grey, moderately dense, odor, burnt smell
S-2	4	6″		Dry	ND		6" Black, stained coarse SAND with grey, moderately dense, odor, burnt smell
	5						
	6						
	7						
	8					Well set @ 8′	Refusal @ 7.5-8′
	9						
	10						
	11						
	12						
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						

SAGE ENVIRONMENTAL, INC.

SOIL BORING / MONITOR WELL CONSTRUCTION LOG

DRILLED BY:	Martin GeoEnvironmental	***WELL NUMBER:***	MW-4 (B-35)
DRILLING METHOD:	6610DT Geoprobe	***PROJECT NUMBER:***	S2244
SAMPLING METHOD:	4' Macrocore	***LOCATION:***	Queen Anne Sq., Newport
SCREENING INSTRUMENT:	OVM 580B	***DATE:***	1/24/12
DEPTH TO WATER:	Not encountered	***LOGGED BY:***	JD

RISER:	PVC	***TYPE***	SCH 40		***DIAMETER*** 2"	***LENGTH*** 2.5'	***WELL SEAL:***	BENTONITE	***HOLE DIA.:*** 3"
SCREEN:	PVC	***TYPE***	SCH 40	***SLOT*** 0.010"	***DIAMETER*** 2"	***LENGTH*** 7'	***SAND PACK:***	FILTER SAND	***TOTAL DEPTH:*** 10'

SAMPLE NO.	DEPTH (FEET)	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
	0			BENTONITE		CONCRETE, ROAD BOX, LOCKING CAP; BENTONITE	
S-1A	1	2′		Dry	ND		12" Dark brown, fine SAND and silt with some organic material, dense
S-1B	2			Dry	ND		12" Top 2″ solid rock in core; dark brown with black, fine SAND and Silt with some coarse sand, brick, wood and coal, loose
S-2A	3			Dry	ND	FILTER SAND	2" Tan, coarse SAND, dense
S-2B	4	2′		Dry	ND	FILTER SAND	22" Light brown, fine SAND and silt, trace amounts of brick, dense
S-3A	5			Dry	ND	FILTER SAND	6" Dark brown, fine SAND with coarse sand, crushed brick, loose
S-3B	6	10″		Dry	ND	FILTER SAND	4" Light grey, soft layers of weathered rock, very dense
	7					FILTER SAND	
	8					FILTER SAND	
	9					FILTER SAND	
	10					FILTER SAND; Well set @ 9.5′	Refusal @ 10′
	11						
	12						
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						

SAGE ENVIRONMENTAL, INC.

SOIL BORING / MONITOR WELL CONSTRUCTION LOG

DRILLED BY:	Martin GeoEnvironmental	WELL NUMBER:	B-36
DRILLING METHOD:	6610DT Geoprobe	PROJECT NUMBER:	S2244
SAMPLING METHOD:	4' Macrocore	LOCATION:	Queen Anne Sq., Newport
SCREENING INSTRUMENT:	OVM 580B	DATE:	1/24/12
DEPTH TO WATER:	Not encountered	LOGGED BY:	JD

RISER:	TYPE		DIAMETER	LENGTH	WELL SEAL:	HOLE DIA.: 2″
SCREEN:	TYPE	SLOT	DIAMETER	LENGTH	SAND PACK:	TOTAL DEPTH: 12′

SAMPLE NO.	DEPTH	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
S-1A	0–1	3.5′		Dry	ND	NO WELL INSTALLED	24″ Dark brown, fine SAND and silt with some organic material
S-1B	1–2			Dry	ND		6″ Light tan, medium to fine SAND, loose
S-1C	2–3			Dry	ND		12″ Dark brown, fine to medium SAND with fine silt, evidence of brick
S-2	4–8	2.5′		Dry	ND		30″ Dark brown, fine to medium SAND with fine silt, evidence of brick
S-3A	8–10	2′		Dry	ND		4″ Dark brown, fine to medium SAND with fine silt, evidence of brick
S-3B	10–11			Dry	ND		20″ Light grey to tan, weathered rock, soft, very dense
	12–20						Refusal @ 12′