sbf-mw1.vsd

BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
			Surface: Gravel				10" Boring
			Imported Fill Material, Sand and Gravel Mix				Well Box, Well Cap, Concrete Seal
			Inorganic Silt, Brown, Moderate Cementation, Damp				Bentonite Seal
			1.5'-2' Wet 2'-3' Moist 3'-5'				2" PVC Blank
		SBF-B1-5'			ML		
			Inorganic Silt, Brown, Moderate Cementation, Wet 5'-6' Moist 6'-10'				2" PVC Screen, Sand
			Inorganic Silt, Brown, Moderate Cementation, Moist		ML		
		SBF-B1-15'					Caving
			EOB at 15'				2" PVC Plug

0 5 10 15 20 25 30

Depth in feet

Drilling Method:	Direct Push	**Date:** 8-7-2013	**Other Information:**
Drilling Company:	ESN	**Weather:**	DOE Tag BIJ-813
Boring Diameter:	Four inches	**Page** 1 **of** 1	
Logged By:	Alex Koch		

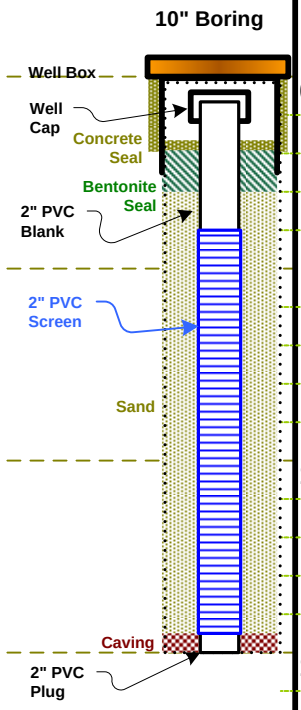
BLUE SAGE ENVIRONMENTAL INC
KENNEWICK, WA

Boring/Well Log
Smith Brother Farms
27441 68th Avenue South
Kent, WA 98032

SBF-MW1

sbf-mw2.vsd

BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
			Surface: Gravel				
			Imported Fill Material, Sand and Gravel Mix				
			Inorganic Silt, Brown, Moderate Cementation, Damp				
		SBF-B2-5'			ML		
			Inorganic Silt, Brown, Moderate Cementation, Wet 5'-6' Damp 6'-10'				
			Inorganic Silt, Brown, Moderate Cementation, Moist		ML		
		SBF-B2-15'					
			EOB at 15'				



0 5 10 15 20 25 30

Depth in feet

Drilling Method:	Direct Push	**Date:**	8-7-2013
Drilling Company:	ESN	**Weather:**	
Boring Diameter:	Four inches	**Page**	1 of 1
Logged By:	Alex Koch		

Other Information:

DOE Tag BIJ-814

BLUE SAGE ENVIRONMENTAL INC
KENNEWICK, WA

Boring/Well Log
Smith Brother Farms
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Kent, WA 98032

SBF-MW2

sbf-mw3.vsd

BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
			Surface: Gravel				10" Boring
			Imported Fill Material, Sand and Gravel Mix				Well Box, Well Cap, Concrete Seal
			Inorganic Silt, Brown, Moderate Cementation, Damp				Bentonite Seal
			1.5'-4' Moist 4'-5'				2" PVC Blank
		SBF-B3-5'			ML		
			Inorganic Silt, Brown, Moderate Cementation, Moist				2" PVC Screen
							Sand
		SBF-B3-10'					
			Inorganic Silt, Brown, Moderate Cementation, Wet		ML		
			10'-12' Moist 12'-15'				
		SBF-B3-15'					Caving
			EOB at 15'				2" PVC Plug

0 5 10 15 20 25 30

Depth in feet

Drilling Method: Direct Push	**Date:** 8-7-2013	**Other Information:**
Drilling Company: ESN	**Weather:**	DOE Tag BIJ-815
Boring Diameter: Four inches	**Page** 1 **of** 1	
Logged By: Alex Koch		

BLUE SAGE ENVIRONMENTAL INC
KENNEWICK, WA

Boring/Well Log
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Kent, WA 98032

SBF-MW3

sbf-mw4.vsd

BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
			Surface: Gravel				10" Boring
			Imported Fill Material, Sand and Gravel Mix				Well Box, Well Cap, Concrete Seal
			Inorganic Silt, Brown, Moderate Cementation, Damp				Bentonite Seal, 2" PVC Blank
		SBF-B4-5'			ML		
			Inorganic Silt, Brown, Moderate Cementation, Moist, Diesel Odor				2" PVC Screen, Sand
		SBF-B4-10'					
			Inorganic Silt, Brown, Moderate Cementation, Wet		ML		
		SBF-B4-15'					
			EOB at 15'				Caving, 2" PVC Plug

0, 5, 10, 15, 20, 25, 30

Depth in feet

Drilling Method:	Direct Push	**Date:** 8-7-2013	**Other Information:**
Drilling Company:	ESN	**Weather:**	DOE Tag BIJ-816
Boring Diameter:	Four inches	**Page** 1 **of** 1	
Logged By:	Alex Koch		

BLUE SAGE ENVIRONMENTAL INC
KENNEWICK, WA

Boring/Well Log
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27441 68th Avenue South
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SBF-MW4

Unified Soil Classification System (USCS)

PRIMARY DIVISIONS			SYMBOL	DESCRIPTIONS
COARSE GRAINED SOILS Sands & Gravels, Over 50% retained on #200 sieve	**GRAVELS** Over 50% of coarse material retained on #4 sieve	**CLEAN GRAVEL** Less than 5% passing #200 sieve	GW	Well graded gravel, many different particle sizes, little or no fines
			GP	Poorly graded, few different particle sizes, little or no fines
		GRAVEL WITH FINES	GM	Silty gravels, gravel-sand-silt mixtures
			GC	Clayey gravels, gravel-sand-clay mixtures
	SAND Over 50% of coarse material passed #4 sieve	**CLEAN SANDS** Less than 5% passing #200 sieve	SW	Well graded gravel, many different particle sizes, little or no fines
			SP	Poorly graded, few different particle sizes, little or no fines
		SAND WITH FINES	SM	Silty gravels, gravel-sand-silt mixtures
			SC	Clayey gravels, gravel-sand-clay mixtures
FINE GRAINED SOILS Silts & Clays, Over 50% passing the #200 sieve	**SILTS AND CLAYS** Liquid limit is less than 50 %		ML	Inorganic silts, slight to no plasticity
			CL	Inorganic clays, low to moderate plasticity
			OL	Organic silts and clays of low plasticity
	SILTS AND CLAYS Liquid limit is more than 50 %		MH	Inorganic silts, moderate to high plasticity
			CH	Inorganic clays, high plasticity, fat clays
			OH	Organic silts and clays of high plasticity
Highly Organic Soils			PT	Peat and other highly organic soils

Soil Samples

- Disturbed, bag, bulk, or grab sample
- Standard penetration split spoon sample
- Cuttings
- ✱ No Sample Recovery
- **P** Tube Pushed, Not Driven

Field Measurements

- Water Level Observed During Drilling
- Groundwater Seepage (Testpits)
- OVA — Organic Vapor Analyzer
- PID — Photoionization Detector
- ppmv — Parts Per Million by Volume

Note: Blows per foot is the number of blows used to drive a split-spoon (2" OD) sampler through the last 12 inches of an 18-inch sampling attempt. One blow is a 30-inch fall of a 140-pound hammer.

Note: The line separating strata on the logs represents approximate boundaries only. The actual transition may be gradual. No warranty is provided as to the continuity of the strata between exploration locations. Logs represent the soil section observed at the exploration location on the date of exploration only.

ExplorationLogLegend.pub

g-logics

Exploration Log Legend