

TABLES

Table 1
Test Pit Exploration and Soil Sampling Summary
Department of State Lands, Bend, Oregon

PBS Project #: 80416.000, Task 4
Report Date: April 2009 / Revised August, 2009

Test Pit	Top of Debris (FT)	Base of Debris (FT)	Total Depth (FT)	Material at Base of Excavation	Suspect Material found in Test Pit	Sample No.	Depth (FT)	PID (ppm)	Sheen Test	NWTPH-HCID	NWTPH-DX	Total Trace Metals	Polynuclear Aromatic Hydrocarbons	Volatile Organic Compounds	Polychlorinated Biphenyls	Total Organic Carbon	Organochlorine Pesticides	
TP-1 ¹	ne	na	4.6	Basalt Rock	None													
TP-1A ¹	0.7	10.0	10.0	Brown Sand	Glass/plastic/aluminum containers, documents dated 1968, scrap metal, dimensional wood, fiberglass, sheet flooring, wall covering, barbed wire, tires	S-1	2.2	0	None	X	X	X						
						S-2	10.0	0	None	X	X	X						
TP-2 ¹	1.0	9.3	9.3	Vesicular Basalt	Glass/plastic/aluminum/tin containers, documents dated 1969-1972, aerosol cans, scrap metal, dimensional wood, agricultural/medical bottle, tires, empty motor oil containers.	S-1	1.3	0	None	X	X	X	X					
						S-2	9.0	0	None	X	X	X	X	X	X	X	X	X
TP-3 ¹	2.0	>6.5	6.5	Debris	Glass/plastic/aluminum containers, cleaning products, scrap metal, fire extinguisher, tires	S-1	2.3	0	None	X	X	X						
TP-3A	2.0	10.0	13.5	Brown and Grey pumice sand	Glass/plastic/aluminum containers, hot water heater, agricultural/medical containers, documents dated 1972	S-2	13.0	0.1	None	X		X	X	X	X		X	
TP-4 ¹	1.0	>6.5	6.5	Debris	Glass/plastic/aluminum/tin containers, empty antifreeze jugs, washing machine	S-1	1.3	0	None									
TP-4A ¹	1.5	8.5	8.5	Vesicular Basalt	Glass/plastic/aluminum/tin containers, empty tubes of battery additives, C-batteries, sheet flooring, tires	S-2	8.5	0	None	X		X						
TP-5	1.0	10.0	13.0	Brown Sand no debris	Glass/plastic/aluminum containers, carpet, dimensional wood, remnant flooring, fiberglass, tires, metal auto-body parts.	S-1	1.5	0	None	X		X						
						S-2	12.5	0	None	X		X						
TP-6	0	9.5	11.5	Grey pumice sand	Glass/plastic containers, documents dated 1971, aerosol cans, scrap metal, dimensional wood, sheet flooring, tires, oil filters, washing machine.	S-1	1.3	0	None									
						S-2	11.0	0	None	X		X						
TP-7 ¹	1.5	>9.0	9.0	Debris	Glass/aluminum/tin containers, scrap metal, bedsprings.													
TP-7A	1.0	11.0	11.0	Vesicular Basalt	Glass/aluminum/tin containers, scrap metals, dimensional wood, barbed wire, large animal bones, old oil filters, tires, automotive batteries	S-1	1.3	0	None	X	X	X						
						S-2	11.0	0	None	X		X						
TP-8	1.5	12.0	12.0	Vesicular Basalt	Glass/plastic/aluminum/tin containers, carpeting, documents dated 1971, scrap metal, dimensional wood, wall covering, sheet flooring, composition shingles, animal syringe, tractor parts, tires, washing machine.	S-1	1.0	0	None	X	X	X						
						S-2	11.5	1.7	None	X	X	X	X	X	X	X	X	X
TP-9 ²	1.5	>17	17.0	Debris	Glass/plastic/aluminum/tin containers, documents dated 1969-1970, sheet flooring, composition shingles, tires, aerosol spray paint cans, scrap metal, gypsum wall board, metal fencing, metal auto-body parts.	S-1	1.3	0	None	X	X	X						
						VP-2/S-2	15-20	0	None	X		X	X	X	X	X	X	X
TP-10	ne	na	3.0	Basalt Rock	None	S-1	2.0	0	None	X		X						
TP-10A	ne	na	0.5	Basalt Rock	None													
TP-11	ne	na	6.0	Basalt Rock	None	S-1	2.0	0	None									
TP-11A	1.0	4.5	4.5	Basalt Rock	Scattered glass bottles	S-2	4.5	0	None	X		X						
TP-12	ne	na	2.5	Basalt Rock	None													
TP-12A	1.5	4.0	4.0	Basalt Rock	Trench 25' long: scattered glass/tin containers, burnt ridged roofing, cement board, empty tin bucket of brake fluid, minor amounts of animal bones.	S-1	1.3	0	None									
						S-2	4.0	0	None	X		X	X	X	X	X	X	
Trench ³	1.5	4.0	4.0	Basalt Rock	Trench 50' long: scattered glass/tin containers, cement board, ridged roofing material.													
TP-13	ne	na	4.5	Basalt Rock	None	S-1	2.0	0	None	X		X						
TP-14	1.5	14.0	16.0	Vesicular Basalt	Glass/plastic containers, batteries, washing machine, metal, documents dated 1968, scrap metal, dimensional wood, fiberglass, tires, empty containers of antifreeze.	S-1	1.3	0	None	X		X						
						S-2	15.0	0.3	None	X	X	X	X	X	X	X	X	
TP-15	ne	na	4.0	Basalt Rock	None	S-1	2.0	0	None	X		X						
TP-16	0.7	4.0	4.0	Basalt Rock	Glass/tin containers, burnt dimensional wood, cement board, minor amounts of bones	S-1	1.2	0	None									
						S-2	3.5	0	None	X		X						
TP-17	0.7	7.5	10.0	Brown Sand no debris	Glass/tin containers, melted materials, ceramics, cement board, pipe insulation, felt paper, metal auto-body parts.	S-1	2.0	0	None	X		X						
						S-2	9.0	0	None	X		X						
TP-18	1.0	>4.5	4.5	Concrete and boulders	Glass/plastic/aluminum/tin containers, some melted material													
TP-18A	1.0	10.5	12.0	Brown Sand no debris	Glass/plastic/aluminum/tin containers, washing machine, scrap metal, dimensional wood, gypsum board, cement roofing, metal auto-body parts.	S-1	1.5	0	None									
						S-2	11.5	0.1	None	X		X	X	X	X	X	X	X
TP-19	1.5	10.0	13.0	Basalt Rock	Glass/plastic/aluminum containers, documents dated 1968, rug, scrap metal, dimensional wood, wall covering, sheet flooring, particle board, wood shingles, oil filters, metal auto-body parts, tires.	S-1	1.3	0	None	X		X						
						S-2	12.0	0	None	X		X						
TP-20	1.3	9.0	10.0	Vesicular Basalt	Glass/plastic containers, possible electric stereo box, scrap metal, dimensional wood, cement board, remnant roofing, cleaning products, metal auto-body parts.	S-1	1.0	0.1	None	X		X						
						S-2	9.0	0.1	None	X	X	X	X	X	X	X	X	X
TP-21	1.0	8.0	10.0	Brown sand no debris	Glass containers, carpet, corroded electrical component, scrap metal, dimensional wood, chain link fence, sheet flooring, barbed wire, tires, radiator, battery cables.	S-1	0.7	0	None	X		X						
						S-2	9.0	0	None	X		X	X	X	X	X	X	
TP-22	ne	na	1.0	Basalt Rock	None													
TP-22A	1.5	7.5	7.5	Basalt Rock	Glass/plastic/aluminum containers, cleaning products, oil filter, scrap dimensional wood, laminated paneling, metal auto-body parts.	S-1	1.3	0.1	None									
						S-2	7.5	0	None	X		X	X	X				X
TP-23	1.5	10.0	10.0	Basalt Rock	Glass/plastic/aluminum containers, documents dated 1972, medical syringe, carpet, scrap metal, dimensional wood, tires, empty container of WD-40.	S-1	1.2	0	None									
						S-2	10.0	0	None	X		X						
TP-24	1.5	11.0	12.0	Basalt Rock	Glass/plastic/aluminum containers, household cleaning products, scrap metal, dimensional wood, metal auto-body parts, tires, empty container of oil supplement.	S-1	2.0	0	None	X		X						
						S-2	12.0	0	None	X		X	X	X	X	X	X	
TP-24A	ne	ne	1.5	Basalt Rock	None													
TP-24B	1.5	>3.0	3.0	Debris	Define Northern boundary of debris 55' north of TP-24													
TP-25	ne	na	3.3	Basalt Rock	None	S-1	2.0	0	None	X		X						
TP-25A	ne	na	2.5	Basalt Rock	None													
TP-25B	ne	na	1.5	Basalt Rock	None													
TP-25C	2.0	>3.0	3.0	Debris	Define Eastern boundary of debris 55' west of TP-25													
TP-26	2.0	>16.0	16.0	Debris	Glass/plastic/aluminum containers, documents dated 1970, washing machine, empty 5gl can of lacquer, scrap metal, roofing material, metal auto-body parts, oil filters, empty motor oil containers, tires.	S-1	1.5	0	None	X		X						
TP-27	2.0	>15.0	15.0	Debris	Glass/plastic/aluminum containers, documents dated 1970, scrap metal, dimensional wood, oil filters, empty containers of antifreeze, tires.	S-1	1.5	0	None	X		X						
TP-27A	ne	na	1.5	Basalt Rock	Define Southern boundary of debris 15' SE of TP-27													
TP-28	ne	na	4.0	Basalt Rock	None	S-1	2.0	0	None									
						S-2	4.0	0	None	X		X						
TP-29	ne	na	5.0	Basalt Rock	None	S-1	2.0	0	None	X		X						
						S-2	5.0	0	None									
TP-30	ne	na	5.5	Basalt Boulders	None	S-1	2.0	0	None	X		X						
						S-2	5.5	0	None									

Notes:
See Appendix C-1 for test pit logs. See Appendix C-2 for vapor probe logs.
na = not encountered
na = not applicable
1 = Backhoe with 10-foot reach was used to excavate test pit.
2 = A vapor probe (VP-2) was installed by TP-9. A push probe soil sample was collected near the bottom of VP-2 prior to the installation of the vapor probe.
3 = Trench 50' long located 30' NE of TP-12A. An attempt to inspect a trench perpendicular to the previous described seepage trenches.

Table 3
Individual Bulk Asbestos Sampling & Analysis Summary
Department of State Lands, Stevens Road Tract, Bend, Oregon

PBS Project #: 80416.000, Task 4
Report Date: April 2009

Sample Number	Test Pit	Approximate Sample Collection Depth (FT)	Material Type	Laboratory Result
A001	TP-1A	6.0	Grey sheet floor covering/tan fibrous backing	45% Chrysotile
A002	TP-1A	7.3	Miscellaneous wall covering	NAD
A003	TP-3A	7.7	Built-up roofing	NAD
A004	TP-4A	6.5	Grey sheet floor covering/grey fibrous backing	45% Chrysotile
A005	TP-8	5.3	Grey sheet floor covering/tan fibrous backing	4% / 45% Chrysotile
A006	TP-8	5.5	Composition shingles with green granules	NAD
A007	TP-9	6.3	Beige sheet floor covering/grey fibrous backing	NAD
A008	TP-9	15.3	Multiple layers of composition shingles	NAD
A009	TP-9	15.5	Black sheet floor covering/grey fibrous backing	45% Chrysotile
A010	TP-12A	2.3	Grey cement asbestos board	12% Chrysotile
A011	TP-12A	2.5	Reddish/brown remnant roofing	25% Chrysotile
A012	TP-16	3.3	Grey cement asbestos board	10% Chrysotile
A013	TP-17	2.7	Grey cement asbestos board	10% Chrysotile
A014	TP-17	5.7	Grey fibrous felt-like paper/insulation	50% Chrysotile
A015	TP-17	6.0	Grey air Cell-type pipe insulation	40% Chrysotile
A016	TP-18	3.3	Grey compressed thermal insulating board/paper	65% Chrysotile
A017	TP-18A	1.0	Gypsum board	NAD
A018	TP-18A	1.3	Gypsum board	NAD
A019	TP-18A	4.3	Green cement asbestos board	10% Chrysotile
A020	TP-21	3.3	Tan sheet floor covering	7% Chrysotile
A021	TP-9	16.3	Grey fibrous felt like paper/insulation	55% Chrysotile
A022	TP-9	16.5	Gypsum board	NAD

Notes:
NAD = No Asbestos Detected
See Appendix F-2 for Laboratory Report for Bulk Asbestos Analyses

Table 4
Positive Asbestos-Containing Material Summary
Department of State Lands, Stevens Road Tract, Bend, Oregon

PBS Project #: 80416.000, Task 4
Report Date: April 2009

Test Pits	Sample Numbers	Asbestos-Containing Materials	Laboratory Results	Comments
TP-1A, -4A, 8, -9, and -21	A001, A004, A005, A009, A020	Sheet Floor Coverings	4% to 45% Chrysotile	Similar flooring materials were observed in TP-5, -6, and -19, however these materials were not sampled. These materials should be considered as asbestos-containing without further testing.
TP-12A, -16, -17, 18A	A010, A012, A013, A019	Cement Asbestos Board (CAB)	10% to 12% Chrysotile	Similar CAB products were observed in TP-20 and scattered throughout the ground surface in the vicinity of TP-11 and -12A. These materials should be considered as asbestos-containing without further testing.
TP-9 and -17	A021 and A014	Felt-like paper/insulation	50% to 55% Chrysotile	This material was observed to be severely degraded and is considered a fully regulated friable material.
TP-17	A015	Air Cell-type pipe insulation	40% Chrysotile	This material was observed to be severely degraded and is considered a fully regulated friable material.
TP-18	A016	Thermal insulating board/liner	65% Chrysotile	This material was observed to be severely degraded and is considered a fully regulated friable material.
TP-12A	A011	Roofing material	25% Chrysotile	This material was observed to be severely degraded and is considered a friable material in its current condition.

Notes:

NAD = No Asbestos Detected

See Appendix F-2 for Laboratory Report for Bulk Asbestos Analyses

Table 5

Vapor Probe Field Monitoring Data Summary

PBS Project #: 80416.00, Task 4

Department of State Lands, Stevens Road Tract, Bend, Oregon

Report Date: April 2009

Sample Location	Date	Methane Gas - CH ₄ (%)	Carbon Dioxide - CO ₂ (%)	Oxygen - O ₂ (%)	Differential Pressure (inches of H ₂ O)	Barometric Pressure ¹	Comments
VP-1	1/8/2009	0.0	5.5	15.0	0	29.88	
	1/14/2009	0.0	5.4	15.1	0	30.30	
	1/22/2009	0.0	5.6	14.8	0	29.97	
	1/27/2009	0.0	6.7	15.0	0	30.21	
	<i>Average</i>	<i>0.0</i>	<i>5.8</i>	<i>15.0</i>			
VP-2	1/8/2009	0.0	13.4	7.6	0	29.91	At the start of the reading methane read 0.1%
	1/14/2009	0.0	15.4	4.1	0	30.33	Green stake pulled out, put back in
	1/22/2009	0.0	18.7	2.0	0	29.97	
	1/27/2009	0.1	16.8	4.6	0	30.21	
	<i>Average</i>	<i>0.0</i>	<i>16.1</i>	<i>4.6</i>			
VP-3	1/8/2009	0.0	13.6	8.0	0	29.91	
	1/14/2009	0.0	13.2	8.5	0	30.30	
	1/22/2009	0.0	13.9	8.1	0	29.97	
	1/27/2009	0.0	16.1	7.3	0	30.21	
	<i>Average</i>	<i>0.0</i>	<i>14.2</i>	<i>8.0</i>			
VP-4	1/8/2009	0.0	13.4	7.8	0	29.91	
	1/14/2009	0.0	17.6	4.1	0	30.30	Green stake removed completely
	1/22/2009	0.0	18.9	3.1	0	29.97	
	1/27/2009	0.1	19.0	3.4	0	30.21	
	<i>Average</i>	<i>0.0</i>	<i>17.2</i>	<i>4.6</i>			
VP-5	1/8/2009	0.0	0.1	20.2	0	29.88	
	1/14/2009	0.0	0.0	20.2	0	30.33	Green stake removed completely
	1/22/2009	0.0	0.1	20.0	0	29.97	
	1/27/2009	0.0	0.1	20.4	0	30.18	
	<i>Average</i>	<i>0.0</i>	<i>0.1</i>	<i>20.2</i>			
Three Pines Cave	1/8/2009	0.0	0.0	20.4	0	29.88	Smoke smell inside the cave.
	1/14/2009	0.0	0.0	20.1	0	30.30	Smoke smell inside the cave.
	1/22/2009	0.0	0.0	19.8	0	29.97	Smoke smell inside the cave.
	1/27/2009	0.0	0.0	21.1	0	30.21	
	<i>Average</i>	<i>0.0</i>	<i>0.0</i>	<i>20.4</i>			
Garbage Cave No. 1	1/8/2009	0.0	0.1	20.3	0	29.91	Skunk like odor inside the cave.
	1/14/2009	0.0	0.0	20.2	0	30.30	
	1/22/2009	0.0	0.1	19.9	0	29.97	
	1/27/2009	0.0	0.0	21.3	0	30.21	
	<i>Average</i>	<i>0.0</i>	<i>0.1</i>	<i>20.4</i>			
Garbage Cave No. 2	1/8/2009	0.0	0.0	20.5	0	29.88	
	1/14/2009	0.0	0.1	20.1	0	30.33	
	1/22/2009	0.0	0.1	20.2	0	29.97	
	1/27/2009	0.0	0.0	20.3	0	30.21	
	<i>Average</i>	<i>0.0</i>	<i>0.1</i>	<i>20.3</i>			
Davenport Cave	1/8/2009	0.0	0.0	20.6	0	29.88	
	1/14/2009	0.0	0.0	20.1	0	30.33	
	1/22/2009	0.0	0.0	20.3	0	29.97	
	1/27/2009	0.0	0.0	20.5	0	30.18	
	<i>Average</i>	<i>0.0</i>	<i>0.0</i>	<i>20.4</i>			

Notes

1 - Barometric Pressure (BP) in inches of Mercury from the Greenmont Dr. weather station.

BP Range during Monitoring Period 1/8/09: slight rise (29.88 - 29.91); 1/14/09: slight rise (30.30 - 30.33);

1/22/09: steady (29.97); 1/27/09: slight fall (29.75 - 29.73)