

US EPA ARCHIVE DOCUMENT

Appendix E

Appendix E Subsurface Logs

Appendix E1 Trenches

**SHIELD**Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509**FIELD
TEST TRENCH
LOGS****PROJECT/CLIENT: Peterson/Puritan****SHIELD PROJECT NO: 300-1821-0200****SITE NAME/LOCATION: Peterson/Puritan, Cumberland, Rhode Island****DATE: 8/21/2003****EXCAVATOR: TMC, Dick Hadley-Operator****LOGGED BY: Michael E. Morris****SIGNATURE: **

Interval	Depth Interval (ft bgs)	Top Elevation (ft MSL)	Description	Lab Sample ID*
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Test Trench- LF-TT-01

Ground Surface	Lower tier of landfill; Large pieces of concrete debris on surface			
0 - 2	Grayish brown poorly sorted Silt and Sand, loose, dry, no odor.			
2 - 15	Grayish brown Silty Sand and Gravel, loose, dry, no odor. Debris: concrete, bricks, scrap metal, glass bottles, paper, insulation, wood, plastic garbage bags.			NA
> 15	Grayish brown poorly sorted Sand and Gravel, loose, wet.			

Note: Final dimensions: 30' long x 4' wide x 16' deep. Northeast edge of test trench is within the lower tier of the landfill north of SEA-601. Waste found in first tier and ends at edge of the slope. Photo-documented by Mike Morris. Air monitoring conducted by Chad Kelly.

* No waste soil or leachate samples collected from LF-TT-01

**SHIELD**

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**FIELD
TEST TRENCH
LOGS****PROJECT/CLIENT:** Peterson/Puritan**SHIELD PROJECT NO:** 300-1821-0200**SITE NAME/LOCATION:** Peterson/Puritan, Cumberland, Rhode Island**DATE:** 8/21/2003**EXCAVATOR:** TMC, Dick Hadley-Operator**LOGGED BY:** Michael E. Morris**SIGNATURE:** 

Depth Interval	Interval	Top Elevation	Description	Lab Sample ID
Interval	ft bgs	ft MSL		

Test Trench- LF-TT-02

Ground Surface	Lower tier of landfill; brush, scattered surface debris	
0 - 1	Grayish brown poorly sorted Silt and Sand, loose, dry, no odor (cover material).	
1 - >15	Buried waste including: Hose, wood, plastic bags, plastic strips. Waste buried to > 15 feet - Excavator could not reach to bottom of waste.	GW-LE3-LF

Note: Final dimensions: 36' long x 4' wide x 16' deep. Northeast edge of test trench is within the lower tier of the landfill between SEA-601 and SEA-602. Waste found in first tier and ends at edge of the slope. Photo-documented by Mike Morris. Ground water leachate (GW-LE03-LF) sample collected from LF-TT-02. Air monitoring conducted by Chad Kelley.



SHIELD

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FIELD TEST TRENCH LOGS

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DATE: 8/21/2003

EXCAVATOR: TMC, Dick Hadley-Operator

LOGGED BY: Michael E. Morris

SIGNATURE: 

Depth Interval (ft bgs)	Interval Top Elevation (ft MSL)	Description	Lab Sample ID*
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Test Trench- LF-TT-03

Ground Surface	Lower tier of landfill; Scattered surface debris	
0 - 1	Grayish brown poorly sorted Silt and Sand, loose, dry, no odor.	
2 - 13	Buried waste including: blue plastic strips, dried paint, tires, hose, plastic jugs, and piping/conduits. Water encountered within the buried waste at a depth of approximately 6 feet below the ground surface.	NA

Note: Trench 3 split in two parts on the north and south sides of the haul road in the vicinity of monitoring well P-8. Final dimensions: North side: 12 feet x 4 feet x 13 feet deep. South side: 12 feet x 4 feet x 13 feet deep. Edge of waste encountered at south end of trench. * No waste soil or leachate samples collected from test trench. Photo-documented by Mike Morris. Air monitoring conducted by Chad Kelley.

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Interval	Depth (ft bgs)	Top Elevation (ft MSL)	Description	Lab Sample ID
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Test Trench- LF-TT-04

Ground Surface	Northern edge of Pond B; Overgrowth, brush and scattered miscellaneous surface debris such as tires and scrap metal			
0 - 3	Grayish brown poorly sorted Silt and Sand, loose, dry, no odor.			
3 - 8	Buried waste including: plastic, brick, and scrap metal on north end of test trench. Poorly sorted sand and gravel encountered within Pond B on south side of test trench. Water was encountered at a depth of approximately 4 feet from the surface.			GW-LE4-LF

Note: Final Dimensions: 30' long x 4' wide x 8' deep. Waste encountered on north side of test trench adjacent to Pond B. Waste was not encountered within Pond B. Photo-documented by Mike Morris. Air monitoring conducted by Chad Kelley.

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Depth Interval (ft bgs)	Interval Top Elevation (ft MSL)	Description	Lab Sample ID*
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Test Trench- LF-TT-05

Ground Surface	South side of haul road near retaining wall; scattered debris invicinity (tires, scrap metal, etc)	
0 - 2	Grayish brown poorly sorted Silt and Sand, loose, dry, no odor.	
3 - 9	Section 1: Buried waste including: plastic, nylon strips, hose, plastic bags. Section 2: Buried waste consisting predominantly of buried concrete. Water was encountered at a depth of approximately 6 feet from the surface.	NA
9-12	Grayish brown poorly sorted Silt and Sand, loose, wet.	NA

Note: Final Dimensions: Section 1 (north side) 10' long x 4' wide x 12' deep. Section 2 (south side) 15' long x 4' wide x 12' deep. Industrial/municipal wastes encountered in Section 1; Concrete (demolition debris) encountered in Section 2. Photo-documented by Mike Morris. Air monitoring conducted by Chad Kelley.

* No soil waste or leachate samples collected from LF-TT-05.



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Depth Interval	Interval	Top Elevation	Description	Lab Sample ID*
Interval	(ft bgs)	(ft MSL)		

Test Trench- LF-TT-06

Ground Surface	Adjacent to haul road in the vicinity of MW-C1 and MW-C2 - Scattered debris on surface (tires, scrap metal)	
0 - 1	Grayish brown poorly sorted Silt and Sand, loose, dry, no odor.	
3 - 9	Section 1: Buried waste including: plastic bags, glass containers, plastic bottles, tires. Section 2: Buried waste consisting predominantly of plastic bags, glass and plastic bottles; syringes found in Section 2 on south side of haul road near MW-C1. Water was encountered at a depth of approximately 8 feet from the surface.	NA

Note: Final Dimensions: Section 1 (north side of haul road) 70' long x 4' wide x 9' deep. Section 2 (south side of haul road) 10' long x 4' wide x 9' deep. Industrial/municipal wastes encountered in Section 1; Industrial/municipal wastes including medical waste encountered in Section 2. Photo-documented by Mike Morris. Air monitoring conducted by Chad Kelley. * No waste soil or leachate samples collected from LF-TT-06



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DATE: 8/22/2003

EXCAVATOR: TMC, Dick Hadley-Operator

LOGGED BY: Michael E. Morris

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Interval	(ft bgs)	(ft MSL)		

Test Trench- LF-TT-07

Ground Surface	Adjacent to haul road in the vicinity of SEA-605 - Scattered debris on surface (tires, scrap metal, USTs). Located within the area of Debris Field 4.	
0 - 1	Grayish brown poorly sorted Silt and Sand, loose, dry, no odor.	
3 - 12	Buried waste including blue plastic/nylon strips, hose, and wood. Depth to water approximately 10 feet below the ground surface. Depth of waste approximately 11-12 feet below ground surface. Waste extends to river side of haul road.	GW-LE5-LF
> 12	Poorly sorted Sand and Gravel, loose, wet, mild odor	

Note: Final Dimensions: 14' long x 4' wide x approximately 14' deep. Photo-documented by Mike Morris.
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Depth Interval (ft bgs)	Top Elevation (ft MSL)	Interval Description	Lab Sample ID*
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Test Trench- LF-TT-08

Ground Surface	Adjacent to haul road near the south gate and in the vicinity of MW-109 - Scattered debris on surface (railroad ties, scrap metal, USTs).	
0 - 1	Grayish brown poorly sorted Silt and Sand, loose, dry, no odor.	
3 - >15	Buried waste including plastic bags, wood, plastic food containers. Depth of waste greater than 15 feet below ground surface. Waste extends to river side of haul road near MW-109.	NA

Note: Final Dimensions: 100' long x 4' wide x approximately 15' deep. Photo-documented by Mike Morris.
Air monitoring conducted by Chad Kelley. * No waste soil or leachate samples collected from LF-TT-08.

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PROJECT/CLIENT: **Peterson/Puritan**

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SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**

DATE: **8/22/2003**

EXCAVATOR: **TMC, Dick Hadley-Operator**

LOGGED BY: **Michael E. Morris**

SIGNATURE:

Depth Interval	Interval	Top Elevation	Description	Lab Sample ID
Interval	(ft bgs)	(ft MSL)		

Test Trench- LF-TT-09

Ground Surface	Located on the north side of the landfill near MW-108. Vegetation and surface debris (railroad ties).	
0 - 1	Grayish brown poorly sorted Silt and Sand, loose, dry, no odor.	
3 - 12	Buried waste including plastic bags, hose, tires, carpeting, cable, bottles, wood, cardboard. Depth of waste greater than 10 feet below ground surface. Ground water encountered at approximately 10 feet below the ground surface. Waste extends to fence line.	GW-LE6-LF

Note: Final Dimensions: 12' long x 4' wide x approximately 12' deep. Ground water leachate sample collected from trench with trackhoe bucket. Photo-documented by Mike Morris. Air monitoring conducted by Chad Kelley.



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DATE: 8/22/2003

EXCAVATOR: TMC, Dick Hadley-Operator

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Interval	Depth (ft bgs)	Elevation (ft MSL)		

Test Trench- LF-TT-10

Ground Surface	Located on the north side of the landfill near PZ-19. Vegetation and surface debris (railroad ties).	
0 - 1	Grayish brown poorly sorted Silt and Sand, loose, dry, no odor.	
3 - 10	Buried waste including plastic bags, hose, tires, bottles, wood. Depth of waste greater than 10 feet below ground surface. Ground water encountered at approximately 10 feet below the ground surface. Waste extends to fence line.	NA

Note: Final Dimensions: 8' long x 4' wide x approximately 10' deep. Photo-documented by Mike Morris. Air monitoring conducted by Chad Kelley. *No waste soil or leachate samples collected from LF-TT-10.



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Interval	(ft bgs)	(ft MSL)		

Test Trench- LF-TT-11

Ground Surface	Located on the north side of the landfill at the north gate. Large concrete slabs in the vicinity of Trench 11	
0 - 1	Grayish brown poorly sorted Silt and Sand, loose, dry, no odor.	
3 - 5	Buried waste including plastic bags, bottles, and wood.	NA

Note: Final Dimensions: 8' long x 4' wide x approximately 5' deep. Ground water leachate sample collected from trench with trackhoe bucket. Photo-documented by Mike Morris. Air monitoring conducted by Chad Kelley. *No waste soil or leachate samples collected from LF-TT-11.



SHIELD

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FIELD TEST PIT LOGS

PROJECT/CLIENT: Peterson/Puritan

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DATE: 8/22/2003

EXCAVATOR: TMC, Dick Hadley-Operator

LOGGED BY: Michael E. Morris

SIGNATURE:

Depth Interval	Top Elevation	Interval	Description	Lab Sample ID*
Interval	(ft bgs)	(ft MSL)		

Test Pit- LF-TP-01

Ground Surface	Vegetation and large concrete slabs on surface.	
0 - 1	Grayish brown poorly sorted Silt and Sand, loose, dry, no odor.	
3 - 5	Buried waste including plastic bags, bottles, and wood.	NA

Note: Final Dimensions: 5' long x 4' wide x approximately 5' deep. Air monitoring conducted by Chad Kelley. * No soil waste or leachate samples collected from LF-TP-01.



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Test Pit- LF-TP-02

Ground Surface	Vegetation and large concrete slabs on surface.			
0 - 1	Grayish brown poorly sorted Silt and Sand, loose, dry, no odor.			
3 - 5	Buried waste including plastic bags, bottles, and wood.		NA	

Note: Final Dimensions: 5' long x 4' wide x approximately 5' deep. Air monitoring conducted by Chad Kelley. * No soil waste or leachate samples collected from LF-TP-02.



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Depth Interval (ft bgs)	Top Elevation (ft MSL)	Interval Description	Lab Sample ID*
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Test Pit- LF-TP-03

Ground Surface	Vegetation and large concrete slabs on surface.	
0 - 1	Grayish brown poorly sorted Silt and Sand, loose, dry, no odor.	
3 - 5	Buried waste including large volume of Silly Putty eggs.	NA

Note: Final Dimensions: 5' long x 4' wide x approximately 5' deep. Photo documentation and descriptions conducted by Mike Morris. Air monitoring conducted by Chad Kelley. * No soil waste or leachate samples collected from LF-TP-03.



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Interval	Depth Interval (ft bgs)	Top Elevation (ft MSL)	Description	Lab Sample ID*
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Test Pit- LF-TP-04

Ground Surface	Vegetation and large concrete slabs on surface.			
0 - 1	Grayish brown poorly sorted Silt and Sand, loose, dry, no odor.			
3 - 7	Poorly sorted, yellowish brown Sand and Gravel; loose, dry. No buried waste encountered in test pit.			NA

Note: Final Dimensions: 5' long x 4' wide x approximately 7' deep. Air monitoring conducted by Chad Kelley. * No soil waste or leachate samples collected from LF-TP-04.



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FIELD TEST TRENCH LOGS

PROJECT/CLIENT: Peterson/Puritan

SHIELD PROJECT NO: 300-1821-0200

SITE NAME/LOCATION: Peterson/Puritan, Cumberland, Rhode Island

DATE: 8/14/2003

EXCAVATOR: TMC, Dick Hadley-Operator

LOGGED BY: Stephen Scheidt

SIGNATURE: 

Interval	Depth Interval (ft bgs)	Top Elevation (ft MSL)	Description	Lab Sample ID
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Test Trench- UI-TT-01

Ground Surface		Mounded area above ground surface covered with vegetation. Silty sand and gravel, dry. Littered with surface debris such as scrap metal.	
0 - 5		Dark gray to brown silty sand and gravel, loose, dry, no odor. Debris: bricks, pipe, scrap metal, glass bottles, chain link fence, hose, electrical wire insulation, floor grating and unidentified white fibrous material.	
5 - 8		Dark gray to brown (with some black mottling) silty sand and gravel, loose, dry, no odor. Debris SAA. Additional debris: burnt wood fragments, ceramic electric wire mounts, & a locker door.	SO-W03-UI*

Note: Final dimensions: 18' long x 7' wide x 8' deep. Oriented northeast/southwest. Northeast edge of test trench is 17' from Pond A. Photo-documented by Mike Morris & Steve Scheidt. Air monitoring conducted by Chad Kelly.

* Composited with sample collected from UI-TT-02; VOC sample collected at UI-TT-01.



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DATE: 8/14/2003

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LOGGED BY: Stephen Scheidt

SIGNATURE: 

Depth Interval (ft bgs)	Description	Lab Sample ID
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Test Trench-UI-TT-02

Ground Surface	Mounded area above ground surface covered with vegetation. Silty sand and gravel, dry. Littered with surface debris such as scrap metal, pipe, & tires.	
0 - 5	Dark gray to brown silty sand and gravel, loose, dry, no odor. Debris: bricks, pipe, scrap metal, glass bottles, hose, and electrical wire insulation.	
5 - 8	Dark gray to brown (with some black mottling) silty sand and gravel, loose, dry, no odor. Debris SAA. Additional debris: burnt wood fragments and ceramic electric wire mounts.	SO-W03-UI*
8 - 10	Light gray sandy river gravel with cobbles, poorly sorted, fine to coarse, rounded, loose, saturated, no odor or staining. Below water table.	NA

Note: Final dimensions: 20' long x 7' wide x 10' deep. Oriented northeast/southwest. Northeast edge of test trench is 10' from Pond A. Photo-documented by Mike Morris & Steve Scheidt. Air monitoring conducted by Chad Kelly.

* Composited with sample collected from UI-TT-01; VOC sample collected at UI-TT-01.



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DATE: 8/14/2003 - 8/15/2003

EXCAVATOR: TMC, Dick Hadley-Operator

LOGGED BY: Stephen Scheidt

SIGNATURE:

Depth Interval (ft bgs)	Description	Lab Sample ID
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Test Trench- UI-TT-03

Ground Surface	Mounded area above ground surface covered with vegetation. Large amount of surface debris is present: scrap metal, rusted household appliances such as refrigerators and stoves, rusted/crushed 55 gal drums, and tires.	
0 - 8	Brown silt and fine sand, well sorted, loose, moist, no odor/staining noted. Debris similar to surface debris, but in addition: metal piping, bricks, wire, car parts, large pieces of concrete, cinder blocks, and large tank (estimated to be 250 gal. Tank was not removed.)	SO-W04-UI SO-FD02
> 8	Below tank, similar materials, water table present. Excavation ceased; debris extended to top of water table.	NA

Note: Final dimensions: 27' long x 8' wide x 8' deep. TT3 is located at the southeast end of Pond A where it meets the old access road, and is oriented in the northeast/southwest direction. On 8/15, TT3 was extended approximately another 20' in the west/southwest direction. Additional debris found included a water heater, railroad ties, pipe, and small tanks. Buried debris appeared to extend under the currently used access road between TT1 and TT3. The lateral extend of buried waste was explored in this area. Photo-documented by Mike Morris & Steve Scheidt. Air monitoring conducted by Chad Kelly.

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Depth Interval (ft bgs)	Description	Lab Sample ID*
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Test Trench- UI-TT-04

Ground Surface	Vegetated mound of soil/debris consisting mostly of tires. Brown silt and sand, loose, moist, no odor/staining noted. Pond E ground surface littered with tires.	
0 - 8	Dark grey to brown silty sand and gravel, loose, dry, no odor. Similar demolition debris found (see TT1 - TT3): pipe, brick, tires, scrap metal, car parts, bed springs and a heater tank.	NA
8 - 12	Buried waste extends below water table. Soil SAA & saturated. Side of TT4 extending into low area southwest of Pond E; below water table are a large number of tires. Central area adjacent to Pond E was dug into and more tires were found, approximately 3 - 4' deep.	NA

Note: The ground surface in and around Pond E is littered with tires, and exploratory digging yields buried tires at least 3 - 4' bgs, and extends below water table. Entire Pond E area appears to hold buried tires and debris. The ground surface visibly "bounced" throughout the Pond E area when driven over by the excavator. Photo-documented by Mike Morris & Steve Scheidt. Air monitoring conducted by Chad Kelly. * No soil waste or leachate samples collected from UI-TT-04.

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Depth Interval (ft bgs)	Description	Lab Sample ID*
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Test Trench- UI-TT-05

Ground Surface	Large vegetated mounded area. Aerosol cans of "Cough whip" dated 1965 and a needleless syringe plunger were found in the area.	
0 - 6	Light grey/brown Silt and fine Sand, loose, dry, no odor/staining.	NA
6 - 10	Grey/brown Silt and Sand, loose, moist, no odor/staining noted. Debris: plastics, wires, glass, plastic doll parts, pipe, unidentified cohesive, white granular material, plastic bag labeled "Union Carbide - Polyethylene," and unidentified metal machine parts.	NA
10 - 15	Dark grey Silt and Sand, loose, moist, strong organic/decay odor and black/purple staining. Additional debris: rubber, tires, machine parts, string, unidentified burned material, wire/cable insulation, glass vials, glass bottles, and syringe needles. Glass vials labeled "Abbot Laboratories" and "Sterile Sodium Chloride for Injection." A chunk of material was closely investigated consisted of rust stained deteriorated plastic bags, material, and an aggregate of hollow-point needles.	NA

Note: Final dimensions: 30' long x 6' wide x 15' deep. Trench is located on the berm of the depression southeast of the abandoned excavator. Photo-documented by Mike Morris and Steve Scheidt. Air monitoring conducted by Chad Kelley.

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DATE: **8/15/2003**

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SIGNATURE:

Depth Interval (ft bgs)	Description	Lab Sample ID
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Test Trench- UI-TT-06

Ground Surface		Surface littered with rusted appliances and scrap metal. Covered with vegetation. Berm opposite TT5.	
0 - 2		Brown Silt/Sand, loose, no odor/staining. Debris present.	NA
2 - 8		Municipal waste, bottles, paper, tires, strips of material, rubber and hose, plastic bags and wood debris in black sediment, saturated with water. Waste extends below water table. Strong odors: hydrocarbon, H ₂ S, and decayed organics.	SO-W01-UI GW-LE01-UI

Note: Final dimensions after exploring the lateral extent of buried wastes: 30' long x 7' wide x 8' deep. Extent of waste extends into central depression between TT5, TT6, TT7 and TT8. Photo-documented by Mike Morris & Steve Scheidt. Air monitoring conducted by Chad Kelly.



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Test Trench- UI-TT-07

Ground Surface	Vegetated berm.	
0 - 2	Berm contains burnt and unburnt waste, plastics, cardboard, paper, wood, glass and metal scrap. Water table encountered at 2'.	NA
2 - 11	Area of TT7 extended towards central depression surrounded by TT5, TT6, and TT8. Little to no soil. Waste completely saturated with water. Depth of waste below 11 ft undetermined. Neoprene electrical wire insulation, clear plastic sheeting, rubber strips, garden hose, wooden 2 x 4's, tires, and wastes such cans and an old Tabasco sauce bottle. Strong odors: hydrocarbon H2S, and decayed organics. Leachate is dark grey color.	NA

Note: Extent of waste could not be determined in the north direction. Excavation of berm would break small ponded area on the other side. Final dimensions: Approximately 25' long x 7' wide x 11' deep. Air monitoring conducted by Chad Kelly.

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LOGGED BY: **Stephen Scheidt**

SIGNATURE: 

Depth Interval (ft bgs)	Description	Lab Sample ID*
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Test Trench- UI-TT-08

Ground Surface	Moderate vegetation on small mounded berm. Debris such as wood, tires, and rusted appliances.	
0 - 5.5	Debris found: garden hose, plastics, tires, cans, vinyl tarp. Soil had strong odors: decayed organics, and similar to burnt plastics.	NA
5.5 - 8	Silt and Sand. Black staining.	NA

Note: Final dimensions: 12' long x 6' wide x 8' deep. Extent of waste found on southeastern edge of trench. Air monitoring by Chad Kelly. * No soil waste or leachate samples collected from UI-TT-08.

**SHIELD**

Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

**FIELD
TEST TRENCH
LOGS**

PROJECT/CLIENT: **Peterson/Puritan**

SHIELD PROJECT NO: **300-1821-0200**

SITE NAME/LOCATION: **Peterson/Puritan, Cumberland, Rhode Island**

DATE: **8/18/2003**

EXCAVATOR: **TMC, Dick Hadley-Operator**

LOGGED BY: **Stephen Scheidt**

SIGNATURE: 

Depth Interval (ft bgs)	Description	Lab Sample ID*
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Test Trench- UI-TT-09

Ground Surface	Some surface debris noted: tire, crushed empty drum, and a pipe. Vegetated.	
0 - 9	Light brown Silt and Sand, loose, dry, no odor staining. Minimal debris: a tire, PVC pipe fragments and some wood pieces.	NA
9 - 12	Brown Silty Sand, moderately cohesive, moist, no odor, some light orange and dark grey banding/mottling or staining.	NA

Note: Final dimensions: 16' long x 5' wide x 12' deep. TT9 located 150' west/northwest from Pond A piezometer. Photo-documented by Stephen Scheidt. Air monitoring by Chad Kelly. Refer to S.S. field book for trenching activities log. * No soil waste or leachate samples collected from UI-TT-09.



SHIELD

Environmental Associates, Inc.
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FIELD TEST TRENCH LOGS

PROJECT/CLIENT: Peterson/Puritan

SHIELD PROJECT NO: 300-1821-0200

SITE NAME/LOCATION: Peterson/Puritan, Cumberland, Rhode Island

DATE: 8/18/2003

EXCAVATOR: TMC, Dick Hadley-Operator

LOGGED BY: Stephen Scheidt

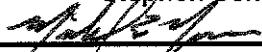
SIGNATURE: 

Depth Interval (ft bgs)	Description	Lab Sample ID
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Test Trench- UI-TT-10

Ground Surface	Vegetated berm top. Little debris on surface.	
0 - 3	Light brown Silt and fine Sand, well sorted, loose, no odor staining. Some debris: pipe, wood, plastic, vinyl strips, and municipal waste items.	NA
3 - 16	Groundwater encountered at 4' BGS. Contents include plastic toys, pipe, wire, plastic sheeting, vinyl strips, rubber strips, electrical insulation, glass bottles, scrap metal, rubber garden hose, unidentified materials/objects, propane cylinder and wood. Waste saturated with water, gray leachate. Slight hydrocarbon odor, dark gray to reddish gray stained soil.	SO-W02-UI GW-LE02-UI

Note: Waste depth ranged from 4' to 16' bgs. TT10 consisted of several small test trenches and therefore do not have length and width measurements. Trenching was photo-documented by Steve Scheidt and air monitoring conducted by Chad Kelly. Refer to S.S. fieldbook for trenching activities log.

**SHIELD**Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509**FIELD
TEST TRENCH
LOGS****PROJECT/CLIENT: Peterson/Puritan****SHIELD PROJECT NO: 300-1821-0200****SITE NAME/LOCATION: Peterson/Puritan, Cumberland, Rhode Island****DATE: 8/18/2003****EXCAVATOR: TMC, Dick Hadley-Operator****LOGGED BY: Stephen Scheidt****SIGNATURE:** 

Depth Interval (ft bgs)	Description	Lab Sample ID
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Test Trench- UI-TT-11

Ground Surface	Vegetated berm top. Some debris: pipe, scrap metal, and plastic.	
0 - 1	Light brown Silt and Sand, loose, dry, no odor, orange rust staining. Debris increasing with depth immediately upon excavation: rusted pipe and plastic.	NA
1 - 9	Debris and waste extending into water table 4' bgs. Rubber hose, rusted metal, pipe, car parts, cylinders, canisters, plastic, and paper.	NA

Note: TT11 adjacent to TT10 to the southwest. Dimensions: Approximately 20' long x 7' wide x 9' deep. Depth of buried waste could not be determined due to high groundwater in test trench. Trenching was photo-documented by Steve Scheidt and air monitoring conducted by Chad Kelly. Refer to S.S. fieldbook for trenching activities log.



SHIELD

Environmental Associates, Inc.
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FIELD TEST TRENCH LOGS

PROJECT/CLIENT: Peterson/Puritan

SHIELD PROJECT NO: 300-1821-0200

SITE NAME/LOCATION: Peterson/Puritan, Cumberland, Rhode Island

DATE: 8/18/2003

EXCAVATOR: TMC, Dick Hadley-Operator

LOGGED BY: Stephen Scheidt

SIGNATURE: 

Depth Interval (ft bgs)	Description	Lab Sample ID*
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Test Trench- UI-TT-12

Ground Surface	Vegetation, wood debris, bare light grey sandy soil, loose, dry, no odor/staining.	
0 - 3	Light gray Sand, loose, dry, no odor/staining. Some debris: tires, plastic, wood.	NA
3-10	Dark gray Silty Sand, loose, moist, reddish black staining, strong decayed organic odor.	NA

Note: TT12 used to delineate the edge of buried waste pit area near TT10, TT11, and TT13. Trenching was photo-documented by Steve Scheidt and air monitoring conducted by Chad Kelly. Refer to S.S. fieldbook for trenching activities log. * No soil waste or leachate samples collected from UI-TT-12.



SHIELD

Environmental Associates, Inc.
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FIELD TEST TRENCH LOGS

PROJECT/CLIENT: Peterson/Puritan

SHIELD PROJECT NO: 300-1821-0200

SITE NAME/LOCATION: Peterson/Puritan, Cumberland, Rhode Island

DATE: 8/18/2003

EXCAVATOR: TMC, Dick Hadley-Operator

LOGGED BY: Stephen Scheidt

SIGNATURE: 

Depth Interval (ft bgs)	Description	Lab Sample ID*
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Test Trench- UI-TT-13

Ground Surface	Vegetated berm, gravel, sand and silt on surface.	
0 - 12	Light grey silt and sand, loose, dry, and some dark grey/black staining near the bottom of the trench. No waste encountered.	NA

Note: Final Dimensions: Approximately 20' long x 6' wide x 12' deep. Trenching was photo-documented by Steve Scheidt and air monitoring conducted by Chad Kelly. Refer to S.S. fieldbook for trenching activities log. * No soil waste or leachate samples collected from UI-TT-13.



SHIELD

Environmental Associates, Inc.
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FIELD TEST TRENCH LOGS

PROJECT/CLIENT: Peterson/Puritan

SHIELD PROJECT NO: 300-1821-0200

SITE NAME/LOCATION: Peterson/Puritan, Cumberland, Rhode Island

DATE: 8/18/2003

EXCAVATOR: TMC, Dick Hadley-Operator

LOGGED BY: Stephen Scheidt

SIGNATURE: 

Depth Interval (ft bgs)	Description	Lab Sample ID*
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Test Trench- UI-TT-14

Ground Surface	Vegetated lowland area, loose Sand and Silt. Little debris.	
0 - 3	Light grey fine Sand, well sorted, loose, dry, and no odor or staining. Some light yellow/brown Sand.	NA

Note: TT14 is located in the depression northeast of the canal berm and between the canal berm and Pond A. Final dimensions: 15' long x 7' wide x 3' deep. Trenching was photo-documented by Steve Scheidt and air monitoring conducted by Chad Kelly. Refer to S.S. fieldbook for trenching activities log. * No soil waste or leachate samples collected from UI-TT-14.



SHIELD

Environmental Associates, Inc.
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FIELD TEST TRENCH LOGS

PROJECT/CLIENT: Peterson/Puritan

SHIELD PROJECT NO: 300-1821-0200

SITE NAME/LOCATION: Peterson/Puritan, Cumberland, Rhode Island

DATE: 8/18/2003

EXCAVATOR: TMC, Dick Hadley-Operator

LOGGED BY: Steve Scheidt

SIGNATURE: 

Depth Interval	Description	Lab Sample ID*
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Test Trench- UI-TT-15

Ground Surface	Trace vegetation, organic/plant matter, Sand.	
0 - 7	Light grey fine Sand, well sorted, loose, dry, and no odor or staining. Some light yellow/brown Sand. No debris/waste found.	NA

Note: Trenching was photo-documented by Steve Scheidt and air monitoring conducted by Chad Kelly. Refer to S.S. fieldbook for trenching activities log. * No soil waste or leachate samples collected from UI-TT-15.



SHIELD

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FIELD TEST TRENCH LOGS

PROJECT/CLIENT: Peterson/Puritan

SHIELD PROJECT NO: 300-1821-0200

SITE NAME/LOCATION: Peterson/Puritan, Cumberland, Rhode Island

DATE: 8/18/2003

EXCAVATOR: TMC, Dick Hadley-Operator

LOGGED BY: Stephen Scheidt

SIGNATURE: 

Depth Interval (ft bgs)	Description	Lab Sample ID*
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Test Trench- UI-TT-16

Ground Surface	Light gray fine Sand, well sorted, loose, low moisture, no odor/staining.	
0 - 3	Light gray fine Sand, well sorted, loose, low moisture, no odor/staining.	NA
3 - 6	Dark brown silty Sand, well sorted, loose, moist, no staining, organic odor	NA
6 - 7	Gravel and cobbles, poorly sorted, rounded, hard, moist, no odor/staining. Not penetrated by excavator.	NA

Note: Final dimensions: 12' long x 5' wide x 7' deep. No debris found; no evidence of dumping. Trench located on northeast end of unnamed island. Trenching was photo-documented by Steve Scheidt and air monitoring conducted by Chad Kelly. Refer to S.S. fieldbook for trenching activities log. * No soil waste or leachate samples collected from UI-TT-16.



SHIELD

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FIELD TEST TRENCH LOGS

PROJECT/CLIENT: Peterson/Puritan

SHIELD PROJECT NO: 300-1821-0200

SITE NAME/LOCATION: Peterson/Puritan, Cumberland, Rhode Island

DATE: 8/18/2003

EXCAVATOR: TMC, Dick Hadley-Operator

LOGGED BY: Stephen Scheidt

SIGNATURE: 

Depth Interval (ft bgs)	Description	Lab Sample ID*
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Test Trench- UI-TT-17

Ground Surface	Vegetated berm and slope into depression (suspected waste pit). Debris: woods planks and scrap metal from cars, appliances, tires, and cinder blocks	
0 - 3	Brown Silt and Sand, loose, low moisture, no odor/staining. Debris: tires, scrap metal, tires, plastics, paper, and wood debris.	NA
3 - 6	Dark grey Silty, Sandy mud, saturated, strong hydrocarbon, H ₂ S, and decayed organic odors. Mostly waste: rubber hose, plastics, scrap metal, strips of material, wood, pipe, and unidentified metal machine parts. Water table at 6' bgs.	NA
> 6	Same as above.	NA

Note: Trash is 6' thick in crest of berm, and slopes into depression where waste is found below water table. Waste at depth could not be determined due to the water table. Area between berms in this area shakes and vibrates with the movement of the excavator similar to Pond E tire pit area. Trenching was photo-documented by Steve Scheidt and air monitoring conducted by Chad Kelly. Refer to S.S. fieldbook for trenching activities log. * No soil waste or leachate samples collected from UI-TT-17.



SHIELD

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FIELD TEST TRENCH LOGS

PROJECT/CLIENT: Peterson/Puritan

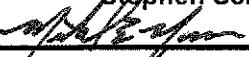
SHIELD PROJECT NO: 300-1821-0200

SITE NAME/LOCATION: Peterson/Puritan, Cumberland, Rhode Island

DATE: 8/18/2003

EXCAVATOR: TMC, Dick Hadley-Operator

LOGGED BY: Stephen Scheidt

SIGNATURE: 

Depth Interval (ft bgs)	Description	Lab Sample ID*
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Test Trench- UI-TT-18

Ground Surface	Dense vegetation. Some debris, such as plastic doll parts.	
0 - 2	Brown Silt and Sand, well sorted, loose, moist, no odor detected, rust and black staining. Debris: plastics, paper, roofing tile, unidentified granular material (see photos)	NA
2 - 8	same as above, depth of waste undefined.	NA
> 8	same as above, depth of waste undefined.	NA

Note: Trench located near haul road built by ENPRO. Waste found on the northwest side; waste not found on southeast side. Trenching was photo-documented by Steve Scheidt and Mike Morris. Air monitoring conducted by Chad Kelly. Refer to S.S. field book for trenching activities. * No soil waste or leachate samples collected from UI-TT-18.



SHIELD

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FIELD TEST TRENCH LOGS

PROJECT/CLIENT: Peterson/Puritan

SHIELD PROJECT NO: 300-1821-0200

SITE NAME/LOCATION: Peterson/Puritan, Cumberland, Rhode Island

DATE: 10/24/2003

EXCAVATOR: TMC, Dick Hadley-Operator

LOGGED BY: Michael E. Morris

SIGNATURE: 

Depth Interval (ft bgs)	Description	Lab Sample ID
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Test Trench- UI-TT-17A

Ground Surface	Vegetation. No surface debris observed.	
0 - 2	Yellowish brown sand.	NA
2 - 7.5	Dark gray Sand and Gravel. Organic odor.	0.8
7.5	Same as above. Ground water encountered	NA

Notes: Dimensions: 22' long, 4' wide, 7.5' deep. No buried waste observed in Trench 17A. Trenching was photo-documented Mike Morris. Air monitoring conducted by Chad Kelly.



SHIELD

Environmental Associates, Inc.
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FIELD TEST TRENCH LOGS

PROJECT/CLIENT: Peterson/Puritan

SHIELD PROJECT NO: 300-1821-0200

SITE NAME/LOCATION: Peterson/Puritan, Cumberland, Rhode Island

DATE: 10/24/2003

EXCAVATOR: TMC, Dick Hadley-Operator

LOGGED BY: Michael E. Morris

SIGNATURE: 

Depth Interval (ft bgs)	Description	Lab Sample ID
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Test Trench- UI-TT-18A

Ground Surface	Vegetation. No surface debris observed.	
0 - 6	Yellowish brown sand.	NA
6-7.5	Poorly sorted Sand and Gravel. Ground water encountered at approximately 7.5 feet below ground surface.	0.8

Notes: Dimensions: 17' long, 4' wide, 7.5' deep. No buried waste observed in Trench 18A. Trenching was photo-documented Mike Morris. Air monitoring conducted by Chad Kelly.



SHIELD

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FIELD TEST TRENCH LOGS

PROJECT/CLIENT: Peterson/Puritan

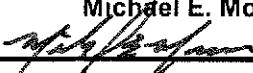
SHIELD PROJECT NO: 300-1821-0200

SITE NAME/LOCATION: Peterson/Puritan, Cumberland, Rhode Island

DATE: 10/24/2003

EXCAVATOR: TMC, Dick Hadley-Operator

LOGGED BY: Michael E. Morris

SIGNATURE: 

Depth Interval (ft bgs)	Description	Lab Sample ID
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Test Trench- UI-TT-19

Ground Surface	Vegetation. No surface debris observed.	
0-9	Well sorted yellowish brown Sand; loose, dry. Ground water encountered at approximately 9 feet below ground surface.	0

Notes: Dimensions: 19' long, 4' wide, 9' deep. No buried waste observed in Trench 19. Trenching was photo-documented Mike Morris. Air monitoring conducted by Chad Kelly.



SHIELD

Environmental Associates, Inc.
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FIELD TEST TRENCH LOGS

PROJECT/CLIENT: Peterson/Puritan

SHIELD PROJECT NO: 300-1821-0200

SITE NAME/LOCATION: Peterson/Puritan, Cumberland, Rhode Island

DATE: 10/24/2003

EXCAVATOR: TMC, Dick Hadley-Operator

LOGGED BY: Michael E. Morris

SIGNATURE: 

Depth Interval (ft bgs)	Description	Lab Sample ID
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Test Trench- UI-TT-20

Ground Surface	Vegetation. No surface debris observed.	
0-8	Well sorted yellowish brown Sand; loose, dry. Mild organic odor.	NA

Notes: Dimensions: 16' long, 4' wide, 8' deep. No buried waste observed in Trench 20. Trenching was photo-documented Mike Morris. Air monitoring conducted by Chad Kelly.



SHIELD

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FIELD TEST TRENCH LOGS

PROJECT/CLIENT: Peterson/Puritan

SHIELD PROJECT NO: 300-1821-0200

SITE NAME/LOCATION: Peterson/Puritan, Cumberland, Rhode Island

DATE: 10/24/2003

EXCAVATOR: TMC, Dick Hadley-Operator

LOGGED BY: Michael E. Morris

SIGNATURE: 

Depth Interval (ft bgs)	Description	Lab Sample ID
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Test Trench- UI-TT-21

Ground Surface	Vegetation. No surface debris observed.	
0-8.5	Well sorted yellowish brown Sand; loose, dry.	NA

Notes: Dimensions: 19' long, 4' wide, 8.5' deep. No buried waste observed in Trench 21. Trenching was photo-documented Mike Morris. Air monitoring conducted by Chad Kelly.



SHIELD

Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

FIELD TEST TRENCH LOGS

PROJECT/CLIENT: Peterson/Puritan

SHIELD PROJECT NO: 300-1821-0200

SITE NAME/LOCATION: Peterson/Puritan, Cumberland, Rhode Island

DATE: 10/24/2003

EXCAVATOR: TMC, Dick Hadley-Operator

LOGGED BY: Michael E. Morris

SIGNATURE:

Depth Interval (ft bgs)	Description	Lab Sample ID
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Test Trench- UI-TT-22

Ground Surface	Vegetation. No surface debris observed.	
0-7	Well sorted yellowish brown Sand; loose, dry.	0.3
7-8	Poorly sorted Sand and Gravel; loose, wet. Ground water encountered at approximately 8 ft below ground surface.	NA

Notes: Dimensions: 20' long, 4' wide, 8' deep. No buried waste observed in Trench 22. Trenching was photo-documented Mike Morris. Air monitoring conducted by Chad Kelly.



SHIELD

Environmental Associates, Inc.
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FIELD TEST TRENCH LOGS

PROJECT/CLIENT: Peterson/Puritan

SHIELD PROJECT NO: 300-1821-0200

SITE NAME/LOCATION: Peterson/Puritan, Cumberland, Rhode Island

DATE: 10/24/2003

EXCAVATOR: TMC, Dick Hadley-Operator

LOGGED BY: Michael E. Morris

SIGNATURE: 

Depth Interval (ft bgs)	Description	Lab Sample ID
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Test Trench- UI-TT-23

Ground Surface	Vegetation. No surface debris observed.	
0-6	Well sorted yellowish brown Sand; loose, dry.	0.8
6-6.5	Poorly sorted Sand and Gravel; loose, moist.	NA

Notes: Dimensions: 17' long, 4' wide, 6.5' deep. No buried waste observed in Trench 23. Trenching was photo-documented Mike Morris. Air monitoring conducted by Chad Kelly.



SHIELD

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FIELD TEST TRENCH LOGS

PROJECT/CLIENT: Peterson/Puritan

SHIELD PROJECT NO: 300-1821-0200

SITE NAME/LOCATION: Peterson/Puritan, Cumberland, Rhode Island

DATE: 10/24/2003

EXCAVATOR: TMC, Dick Hadley-Operator

LOGGED BY: Michael E. Morris

SIGNATURE: 

Depth Interval (ft bgs)	Description	Lab Sample ID
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Test Trench- UI-TT-24

Ground Surface	Vegetation. No surface debris observed.	
0-8	Well sorted yellowish brown Sand; loose, dry.	0.4
8-9	Poorly sorted Sand and Gravel; loose, wet. Ground water encountered at approximately 8 ft. below ground surface.	NA

Notes: Dimensions: 17' long, 4' wide, 9' deep. No buried waste observed in Trench 24. Trenching was photo-documented Mike Morris. Air monitoring conducted by Chad Kelly.



SHIELD

Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

FIELD TEST TRENCH LOGS

PROJECT/CLIENT: Peterson/Puritan

SHIELD PROJECT NO: 300-1821-0200

SITE NAME/LOCATION: Peterson/Puritan, Cumberland, Rhode Island

DATE: 10/24/2003

EXCAVATOR: TMC, Dick Hadley-Operator

LOGGED BY: Michael E. Morris

SIGNATURE:

Depth Interval (ft bgs)	Description	Lab Sample ID
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Test Trench- UI-TT-25

Ground Surface	Vegetation. No surface debris observed.	
0-7.5	Well sorted yellowish brown Sand; loose, dry.	0.8
7.5-8	Poorly sorted Sand and Gravel; loose, wet. Ground water encountered at approximately 8 ft. below ground surface.	NA

Notes: Dimensions: 17' long, 4' wide, 8' deep. No buried waste observed in Trench 25. Trenching was photo-documented Mike Morris. Air monitoring conducted by Chad Kelly.



SHIELD

Environmental Associates, Inc.
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FIELD TEST TRENCH LOGS

PROJECT/CLIENT: Peterson/Puritan

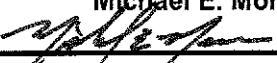
SHIELD PROJECT NO: 300-1821-0200

SITE NAME/LOCATION: Peterson/Puritan, Cumberland, Rhode Island

DATE: 10/24/2003

EXCAVATOR: TMC, Dick Hadley-Operator

LOGGED BY: Michael E. Morris

SIGNATURE: 

Depth Interval (ft bgs)	Description	Lab Sample ID
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Test Trench- UI-TT-26

Ground Surface	Vegetation. No surface debris observed.	
0-7.5	Well sorted yellowish brown Sand; loose, dry.	0.0

Notes: Dimensions: 18' long, 4' wide, 7.5' deep. No buried waste observed in Trench 26. Trenching was photo-documented Mike Morris. Air monitoring conducted by Chad Kelly.

**SHIELD**

Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

**FIELD
TEST TRENCH
LOGS****PROJECT/CLIENT: Peterson/Puritan****SHIELD PROJECT NO: 300-1821-0200****SITE NAME/LOCATION: Peterson/Puritan, Cumberland, Rhode Island****DATE: 10/24/2003****EXCAVATOR: TMC, Dick Hadley-Operator****LOGGED BY: Michael E. Morris****SIGNATURE:** 

Depth Interval (ft bgs)	Description	Lab Sample ID
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Test Trench- UI-TT-27

Ground Surface	Vegetation. No surface debris observed.	
0-7.5	Well sorted yellowish brown Sand with some Gravel; loose, dry.	0.0

Notes: Dimensions: 16' long, 4' wide, 8' deep. No buried waste observed in Trench 27. Trenching was photo-documented Mike Morris. Air monitoring conducted by Chad Kelly.



SHIELD

Environmental Associates, Inc.
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FIELD TEST TRENCH LOGS

PROJECT/CLIENT: Peterson/Puritan

SHIELD PROJECT NO: 300-1821-0200

SITE NAME/LOCATION: Peterson/Puritan, Cumberland, Rhode Island

DATE: 10/24/2003

EXCAVATOR: TMC, Dick Hadley-Operator

LOGGED BY: Michael E. Morris

SIGNATURE: 

Depth Interval (ft bgs)	Description	Lab Sample ID
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Test Trench- UI-TT-28

Ground Surface	Vegetation. No surface debris observed.	
0-8.5	Well sorted yellowish brown Sand; loose, dry.	0.0

Notes: Dimensions: 18' long, 4' wide, 8.5' deep. No buried waste observed in Trench 28. Trenching was photo-documented Mike Morris. Air monitoring conducted by Chad Kelly.



SHIELD

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FIELD TEST TRENCH LOGS

PROJECT/CLIENT: Peterson/Puritan

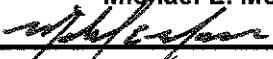
SHIELD PROJECT NO: 300-1821-0200

SITE NAME/LOCATION: Peterson/Puritan, Cumberland, Rhode Island

DATE: 10/24/2003

EXCAVATOR: TMC, Dick Hadley-Operator

LOGGED BY: Michael E. Morris

SIGNATURE: 

Depth Interval (ft bgs)	Description	Lab Sample ID
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Test Trench- UI-TT-29

Ground Surface	Vegetation. No surface debris observed.	
0-5	Poorly sorted, yellowish brown Sand and Gravel; loose, dry.	0.0

Notes: Dimensions: 19' long, 4' wide, 5' deep. No buried waste observed in Trench 29. Trenching was photo-documented Mike Morris. Air monitoring conducted by Chad Kelly.



SHIELD

Environmental Associates, Inc.
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FIELD TEST TRENCH LOGS

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SITE NAME/LOCATION: Peterson/Puritan, Cumberland, Rhode Island

DATE: 10/24/2003

EXCAVATOR: TMC, Dick Hadley-Operator

LOGGED BY: Michael E. Morris

SIGNATURE: 

Depth Interval (ft bgs)	Description	Lab Sample ID
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Test Trench- UI-TT-30

Ground Surface	Vegetation. No surface debris observed.	
0-4	Well sorted reddish brown Sand; loose, dry. Mounded fill material with no buried waste.	0.0

Notes: Dimensions: 10' long, 4' wide, 4' deep. No buried waste observed in Trench 30. Trenching was photo-documented Mike Morris. Air monitoring conducted by Chad Kelly.

**SHIELD**

Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509

**FIELD
TEST TRENCH
LOGS****PROJECT/CLIENT: Peterson/Puritan****SHIELD PROJECT NO: 300-1821-0200****SITE NAME/LOCATION: Peterson/Puritan, Cumberland, Rhode Island****DATE: 10/24/2003****EXCAVATOR: TMC, Dick Hadley-Operator****LOGGED BY: Michael E. Morris****SIGNATURE:** 

Depth Interval (ft bgs)	Description	Lab Sample ID
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Test Trench- UI-TT-31

Ground Surface	Vegetation. No surface debris observed.	
0-7.5	Poorly sorted, grayish brown Silt, Sand and some Gravel; loose, dry.	0.0

Notes: Dimensions: 18' long, 4' wide, 7.5' deep. No buried waste observed in Trench 31. Trenching was photo-documented Mike Morris. Air monitoring conducted by Chad Kelly.



SHIELD

Environmental Associates, Inc.
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FIELD TEST TRENCH LOGS

PROJECT/CLIENT: Peterson/Puritan

SHIELD PROJECT NO: 300-1821-0200

SITE NAME/LOCATION: Peterson/Puritan, Cumberland, Rhode Island

DATE: 10/24/2003

EXCAVATOR: TMC, Dick Hadley-Operator

LOGGED BY: Michael E. Morris

SIGNATURE:

Depth Interval (ft bgs)	Description	Lab Sample ID
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Test Trench- UI-TT-32

Ground Surface	Vegetation. No surface debris observed.	
0-7	Poorly sorted, grayish brown Silt and Sand with some Gravel; loose, dry.	0.0

Notes: Dimensions: 17' long, 4' wide, 7' deep. No buried waste observed in Trench 32. Trenching was photo-documented Mike Morris. Air monitoring conducted by Chad Kelly.

Appendix E2 Soil Borings

**SHIELD**Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509**FIELD BOREHOLE LOG**
BOREHOLE # GP-1

Page 1 of 1

PROJECT/CLIENT:	Peterson/Puritan	DATE/TIME DRILLED:	09/05/03 14:00	
SHIELD PROJECT NO:	300-1821-0200	DRILLING COMPANY:	Geologic Exploration, Inc.	
SITE NAME/LOCATN:	Cumberland, Rhode Island	RIG OPERATOR:	Emil Schum	
BORING LOCATION	Nunes Property	RIG TYPE/METHOD:	Track Mounted Geoprobe	
LOGGED BY:	M. Morris	SAMPLER DIAMETER:	2 inches	LENGTH: 4 feet
SIGNATURE:	<i>M. Morris</i>	TOTAL BORING DEPTH:	8 feet BGS	GS ELEV. Not Surveyed

Depth (ft)	Graphic Symbol	USCS Class	Description	Sample ID	PID	% Rec- covery	Notes	
0		ML	0-8' Fill/Waste Material 0-3' Very dark gray (10YR 3/1) SILT with some Sand; Stiff, no plasticity, no odors noted; Brick fragments present	GP-1 (0-1') SO-033-NP		100		0
2				GP-1 (1'-5') SO-W14-NP	2.2	100		2
4			3'5" Very dark gray (10YR 3/1) SILT; Soft, no plasticity, dry; No odors; Brick fragments throughout, glass fragments present at approximately 5 feet BGS.					4
6			5'-8" Black (10YR 2/1) SILT with some sand; soft, no plasticity, wet at approximately 8 feet BGS. No odors noted. Brick fragments present throughout.	GP-1 (5'-8')	0.6	100		6
8			Refusal encountered at 8 feet below ground surface					8
10								10
12								12
14								14
16								16
18								18
20								20

Comments: * Samples in bold submitted to laboratory for analysis
BGS - Below Ground Surface

**SHIELD**Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509**FIELD BOREHOLE LOG**
BOREHOLE # GP-2

Page 1 of 1

PROJECT/CLIENT: **Peterson/Puritan** DATE/TIME DRILLED: **09/05/03 15:50**
 SHIELD PROJECT NC **300-1821-0200** DRILLING COMPANY: **Geologic Exploration, Inc.**
 SITE NAME/LOCATN: **Cumberland, Rhode Island** RIG OPERATOR: **Emil Schum**
 BORING LOCATION **Nunes Property** RIG TYPE/METHOD: **Track Mounted Geoprobe**
 LOGGED BY: **M. Morris** SAMPLER DIAMETER: **2 inches** LENGTH: **4 feet**
 SIGNATURE: **M. Morris** TOTAL BORING DEPTH: **13 feet BGS** GS ELEV. **Not Surveyed**

Depth (ft)	Graphic Symbol	USCS Class	Description	Sample ID	PID	% Recovery	Notes	
0 --		ML	0-11' Fill/Waste Material 0-1' Very dark grayish brown (10YR 3/2) SILT with some Sand; soft, no plasticity; dry Rounded cobbles present	GP-2 (0'-1') SO-034-NP		100		— 0
2 --			1'-3' Very dark gray (10YR 3/1) SILT; stiff, low plasticity dry; No odors or waste present	GP-2 (1'-5')		100		— 2
4 --		SW	3'-6' Dark grayish brown (10YR 4/2) poorly sorted, medium to fine SAND, loose, slightly moist, No odors or waste present					— 4
6 --			6'-11' Dark grayish brown (10YR 3/2) SAND mixed with waste; loose, no plasticity, dry; waste included green garden hose and wood	GP-2 (5'-9') SO-W13-NP (6'-10')		50		— 6
8 --								— 8
10 --				GP-2 (9'-13')		80		— 10
12 --		OH	11'-13' Alluvium/Lacustrine 11'-13' Very dark gray (10YR 3/1) Clayey SILT; Soft, slight plasticity, wet; No odors or waste present					— 12
14 --			Boring terminated at 13 feet BGS (no refusal)					— 14
16 --								— 16
18 --								— 18
20 --								— 20

Comments: * Samples in bold submitted to laboratory for analysis
 BGS - Below Ground Surface

**SHIELD**Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509**FIELD BOREHOLE LOG**
BOREHOLE # GP-3

Page 1 of 1

PROJECT/CLIENT: **Peterson/Puritan** DATE/TIME DRILLED: **09/06/03 9:00**
 SHIELD PROJECT NC **300-1821-0200** DRILLING COMPANY: **Geologic Exploration, Inc.**
 SITE NAME/LOCATN: **Cumberland, Rhode Island** RIG OPERATOR: **Emil Schum**
 BORING LOCATION **Nunes Property** RIG TYPE/METHOD: **Track Mounted Geoprobe**
 LOGGED BY: **M. Morris** SAMPLER DIAMETER: **2 inches LENGTH: 4 feet**
 SIGNATURE:  TOTAL BORING DEPTH: **13 feet BGS GS ELEV. Not Surveyed**

Depth (ft)	Graphic Symbol	USCS Class	Description	Sample ID	PID	% Recovery	Notes	
0		ML	0-11' Fill/Waste Material 0-1' Very dark gray (10YR 3/1) SILT with some Sand; stiff, no plasticity; dry Rounded cobbles present	GP-3 (0-1') SO-035-NP		100		--- 0
2			1-5' Very dark gray (10YR 3/1) SILT; stiff, low plasticity dry; No odors or waste present	GP-3 (1'-5')		100		--- 2
4								--- 4
6		SW	5-11' Black (10YR 2/1) medium sorted SAND; Loose no plasticity, no odors; sand mixed with fiberglass and wood waste	GP-3 (5'-9') SO-W15-NP (5'-9')		60		--- 6
8								--- 8
10				GP-3 (9'-13')		70		--- 10
12		OH	11'-13' Alluvium/Lacustrine 11'-13' Very dark gray (10YR 3/1) Clayey SILT; Soft, slight plasticity, wet; No odors or waste present					--- 12
14			Boring terminated at 13 feet BGS (no refusal)					--- 14
16								--- 16
18								--- 18
20								--- 20

Comments: * Samples in bold submitted to laboratory for analysis
 BGS - Below Ground Surface

**SHIELD**Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509**FIELD BOREHOLE LOG
BOREHOLE # GP-4**

Page 1 of 1

PROJECT/CLIENT:	Peterson/Puritan	DATE/TIME DRILLED:	09/06/03 10:45
SHIELD PROJECT NO	300-1821-0200	DRILLING COMPANY:	Geologic Exploration, Inc.
SITE NAME/LOCATN:	Cumberland, Rhode Island	RIG OPERATOR:	Emil Schum
BORING LOCATION	Nunes Property	RIG TYPE/METHOD:	Track Mounted Geoprobe
LOGGED BY:	M. Morris	SAMPLER DIAMETER:	2 inches LENGTH: 4 feet
SIGNATURE:	<i>M. Morris</i>	TOTAL BORING DEPTH:	13 feet BGS GS ELEV. Not Surveyed

Depth (ft)	Graphic Symbol	USCS Class	Description	Sample ID	PID	% Recov- ery	Notes	
0		SM	0-13' Alluvium/Fill 0-1' Brown (10YR 4/3) and Dark Brown (10YR 3/3) SAND and SILT with some cobbles, loose, no plast, dry	GP-4 (0-1') SO-036-NP		100		--- 0
2		SM	1'-12' Very dark gray (10YR 3/1) SILT with some cobbles and rock fragments Soft, no plasticity, dry; Piece of rubber waste at approx. 3 ft No other waste or odors observed	GP-4 (1'-5') SSO-01-NP	3.2	100		--- 2
4								--- 4
6				GP-4 (5'-9')	1	100		--- 6
8								--- 8
10				GP-4 (9'-13')		100		--- 10
12		OH	12'-13' Very dark gray (10YR 3/1) SILT; Soft, slight plasticity, wet					--- 12
14			Boring terminated at 13 feet BGS (no refusal)					--- 14
16								--- 16
18								--- 18
20								--- 20

Comments: * Samples in bold submitted to laboratory for analysis
BGS - Below Ground Surface

**SHIELD**Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509**FIELD BOREHOLE LOG**
BOREHOLE # GP-5

Page 1 of 1

PROJECT/CLIENT:	Peterson/Puritan	DATE/TIME DRILLED:	09/06/03 13:20
SHIELD PROJECT NC	300-1821-0200	DRILLING COMPANY:	Geologic Exploration, Inc.
SITE NAME/LOCATN:	Cumberland, Rhode Island	RIG OPERATOR:	Emil Schum
BORING LOCATION	Nunes Property	RIG TYPE/METHOD:	Track Mounted Geoprobe
LOGGED BY:	M. Morris	SAMPLER DIAMETER:	2 inches LENGTH: 4 feet
SIGNATURE:		TOTAL BORING DEPTH:	13 feet BGS GS ELEV. Not Surveyed

Depth (ft)	Graphic Symbol	USCS Class	Description	Sample ID	PID	% Recovery	Notes	
0		SM	0-11' Fill/Waste Material 1'-5' Dark grayish brown (10YR 4/2) SILT and SAND with some rounded cobbles; loose, poorly sorted, dry; No odors or waste observed	GP-5 (0'-1') SO-037-NP		100		--- 0
2				GP-5 (1'-5')		100		--- 2
4								--- 4
6			5'-11' Multiple layers of rubber waste; No alluvial fill material; Sample collected directly above and below waste	GP-5 (5'-9') SO-W16-NP (5'-9')		60		--- 6
8								--- 8
10				GP-5 (9'-13')		70		--- 10
12		SM	11'-13' Alluvium 11'-13' Brown (10YR 5/3) SILT and SAND Soft, loose, No odors or waste present					--- 12
14			Boring terminated at 13 feet BGS (no refusal)					--- 14
16								--- 16
18								--- 18
20								--- 20

Comments: * Samples in bold submitted to laboratory for analysis
BGS - Below Ground Surface

**SHIELD**Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509**FIELD BOREHOLE LOG**
BOREHOLE # GP-6

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PROJECT/CLIENT:	Peterson/Puritan	DATE/TIME DRILLED:	09/06/03 14:00
SHIELD PROJECT NC	300-1821-0200	DRILLING COMPANY:	Geologic Exploration, Inc.
SITE NAME/LOCATN:	Cumberland, Rhode Island	RIG OPERATOR:	Emil Schum
BORING LOCATION	Nunes Property	RIG TYPE/METHOD:	Track Mounted Geoprobe
LOGGED BY:	M. Morris	SAMPLER DIAMETER:	2 inches LENGTH: 4 feet
SIGNATURE:	<i>M. Morris</i>	TOTAL BORING DEPTH:	12 feet BGS GS ELEV. Not Surveyed

Depth (ft)	Graphic Symbol	USCS Class	Description	Sample ID	PID	% Rec- covery	Notes	
0		SW	0-12' Alluvium 0-12' Yellowish brown poorly sorted, fine to coarse SAND with some Gravel and rounded cobbles; loose, dry; No odors or waste observed	GP-6 (0'-4')		100		--- 0
2								--- 2
4								--- 4
6								--- 6
8								--- 8
10								--- 10
12								--- 12
14			Boring terminated at 12 feet BGS (no refusal)					--- 14
16								--- 16
18								--- 18
20								--- 20

Comments: * Samples in bold submitted to laboratory for analysis
BGS - Below Ground Surface

**SHIELD**Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509**FIELD BOREHOLE LOG**
BOREHOLE # GP-7

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PROJECT/CLIENT:	Peterson/Puritan	DATE/TIME DRILLED:	09/06/03 14:10
SHIELD PROJECT NC	300-1821-0200	DRILLING COMPANY:	Geologic Exploration, Inc.
SITE NAME/LOCATN:	Cumberland, Rhode Island	RIG OPERATOR:	Emil Schum
BORING LOCATION	Nunes Property	RIG TYPE/METHOD:	Track Mounted Geoprobe
LOGGED BY:	M. Morris	SAMPLER DIAMETER:	2 inches LENGTH: 4 feet
SIGNATURE:		TOTAL BORING DEPTH:	12 feet BGS GS ELEV. Not Surveyed

Depth (ft)	Graphic Symbol	USCS Class	Description	Sample ID	PID	% Recovery	Notes	
0		SW	0-12' Alluvium 0'-12' Yellowish brown poorly sorted, fine to coarse SAND with some Gravel and rounded cobbles; loose, dry; No odors or waste observed	GP-7 (0'-4')		100		--- 0
2								--- 2
4								--- 4
6								--- 6
8								--- 8
10								--- 10
12								--- 12
14			Boring terminated at 12 feet BGS (no refusal)					--- 14
16								--- 16
18								--- 18
20								--- 20

Comments: * Samples in bold submitted to laboratory for analysis
BGS - Below Ground Surface

**SHIELD**Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509**FIELD BOREHOLE LOG**
BOREHOLE # GP-8

Page 1 of 1

PROJECT/CLIENT: **Peterson/Puritan**DATE/TIME DRILLED: **09/06/03 14:20**SHIELD PROJECT NC **300-1821-0200**DRILLING COMPANY: **Geologic Exploration, Inc.**SITE NAME/LOCATN: **Cumberland, Rhode Island**RIG OPERATOR: **Emil Schum**BORING LOCATION **Nunes Property**RIG TYPE/METHOD: **Track Mounted Geoprobe**LOGGED BY: **M. Morris**SAMPLER DIAMETER: **2 inches LENGTH: 4 feet**

SIGNATURE:

TOTAL BORING DEPTH: **12 feet BGS GS ELEV. Not Surveyed**

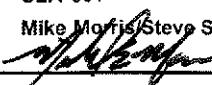
Depth (ft)	Graphic Symbol	USCS Class	Description	Sample ID	PID	% Rec- covery	Notes	
0		SW	0-12' Alluvium 0'-12' Yellowish brown poorly sorted, fine to coarse SAND with some Gravel and rounded cobbles; loose, dry; No odors or waste observed	GP-8 (0'-4')		100		0
2								2
4				GP-8 (4'-8')		100		4
6								6
8				GP-8 (8'-12')		100		8
10								10
12								12
14			Boring terminated at 12 feet BGS (no refusal)					14
16								16
18								18
20								20

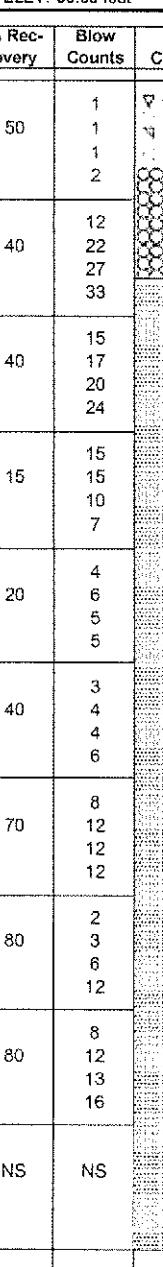
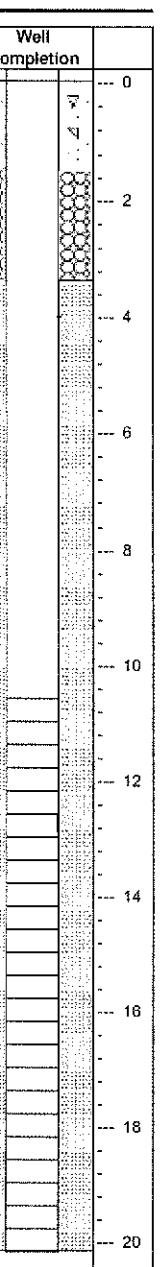
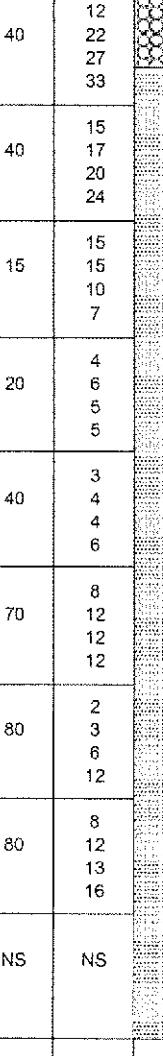
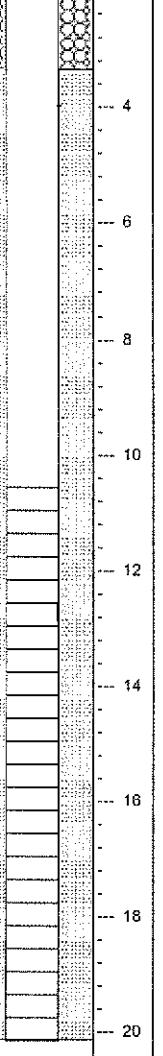
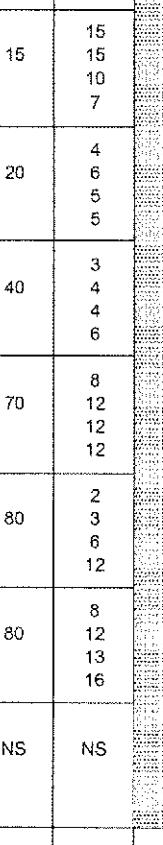
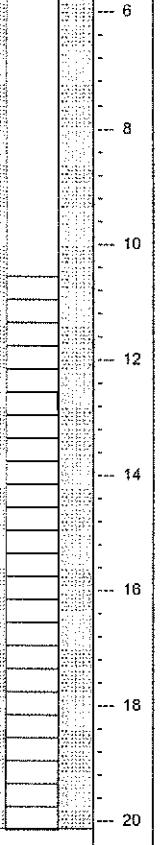
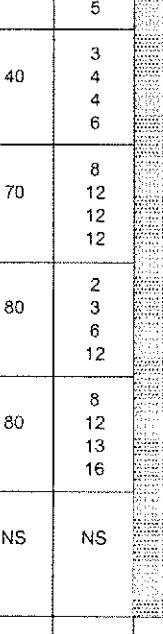
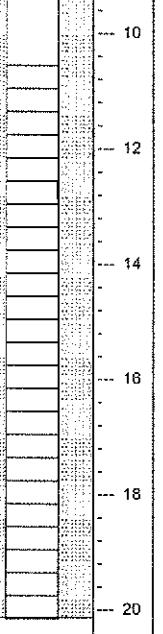
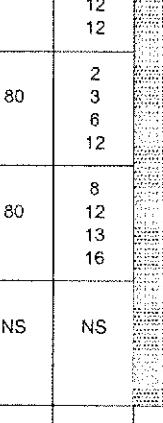
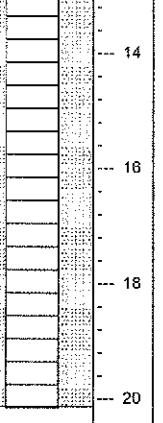
Comments: * Samples in bold submitted to laboratory for analysis
BGS - Below Ground Surface

Appendix E3 Monitoring Wells

**SHIELD**Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509**FIELD WELL LOG
MONITORING WELL SEA-601**

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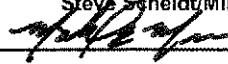
PROJECT/CLIENT: **Peterson/Puritan OU2** DATE/TIME DRILLED: **9/15/2003**
 SHIELD PROJECT NO: **300-1821-0200** DRILLING COMPANY: **Geosearch**
 SITE NAME/LOCATN: **J.M. Mills Landfill** RIG OPERATOR: **Dave Crawford**
 BORING LOCATION **SEA-601** RIG TYPE/METHOD: **Mobile B59**
 LOGGED BY: **Mike Morris/Steve Scheidt** SAMPLER DIAMETER: **2"** TOC Elevation: **62.68 feet**
 SIGNATURE:  TOTAL BORING DEPTH: **20'** GS ELEV. **59.63 feet**

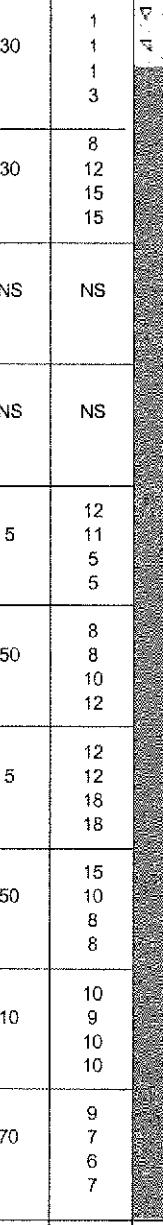
Depth (ft)	Graphic Symbol	USCS Class	Description	Sample ID	PID	% Rec- covery	Blow Counts	Well Completion	
0		SM	0'-20' Alluvium 0-2' Very dark grayish brown (10YR 3/2) SILT and medium sorted, fine SAND, very loose, dry, no staining or odors.	0-2'	0	50	1 1 1 2		0
2		SW	2-4' Yellowish brown (10YR 5/6) poorly sorted, medium to fine SAND with some Gravel, subrounded, medium dense, dry, no staining or odors.	2-4'	0	40	12 22 27 33		2
4		SM	4-6' Yellowish brown (10YR 5/4) poorly sorted fine to coarse SAND with some Gravel subrounded, medium dense, dry, no staining or odors.	4-6' SSO-SPT1-5-LF	0	40	15 17 20 24		4
6			6-8' Brown (10YR 4/3), poorly sorted, fine to coarse SAND with some Gravel, loose, wet, no staining or odors	6-8'	1.4	15	15 10 7		6
8			8-14' Dark gray (2.5YR 4/1) poorly sorted, fine to coarse SAND with little Gravel, loose, wet, no staining or odors	8-10' SSO-SPT1-10-LF	0	20	4 6 5 5		8
10				10-12'	1.8	40	3 4 4 6		10
12			Same as above with some coarse grained Gravel.	12-14'	0	70	8 12 12 12		12
14		SW	14-16' Gray (10YR 5/1) medium sorted SAND with trace of coarse Gravel, loose, wet, no staining or odors.	14-16' SSO-SPT1-15-LF	2.1	80	2 3 6 12		14
16			16-20' Same as above with fine SAND.	16-18'	0.7	80	8 12 13 16		16
18			(15-20' - Composite Sample collected for grain size, soil classification, specific gravity, dry unit weight and porosity analyses)	NS	NS	NS	NS		18
20			Boring terminated at 20' (no refusal)						20

Comments: Samples in bold submitted to Mitkem laboratory for analysis of Total Organic Carbon (TOC) and Total Combustible Organics (TCO), and to Shield Engineering for Grain Size Analysis. Bottom 5 feet (15'-20') submitted to Shield Engineering for grain size, soil classification, specific gravity, dry unit weight and porosity. NS - No lithologic samples collected in this interval.

**SHIELD**Environmental Associates, Inc.
2455 Fortune Drive, Lexington KY 40509**FIELD WELL LOG
MONITORING WELL SEA-602B**

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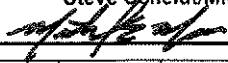
PROJECT/CLIENT: **Peterson/Puritan OU2** DATE/TIME DRILLED: **9/15-9/16/2003**
 SHIELD PROJECT NO: **300-1821-0200** DRILLING COMPANY: **Geosearch**
 SITE NAME/LOCATN: **J. M. Mills Landfill** RIG OPERATOR: **Dave Crawford**
 BORING LOCATION **SEA-602B** RIG TYPE/METHOD: **Mobile B59**
 LOGGED BY: **Steve Scheidt/Mike Morris** SAMPLER DIAMETER: **2"** TOC Elevation: **61.2 feet**
 SIGNATURE:  TOTAL BORING DEPTH: **60'** GS ELEV. **63.69 feet**

Depth (ft)	Graphic Symbol	USCS Class	Description	Sample ID	PID	% Recovery	Blow Counts	Well Completion	
0		SM	0-60' Alluvium 0-4' Dark grayish brown (2.5YR 4/2) poorly sorted fine to medium grained SAND with some Gravel, loose, dry, no staining or odors.	0-2'		30	1 1 1 3		0
2			2-4' Same as above with some coarse grained gravel, medium dense.	2-4' SSO-SPT5-5-LF		30	8 12 15 15		2
4			4-8' No Sample Recovery	NS			NS NS		4
6	NS		Composite sample collected for grain size from 2-4' and 8-10'. (SSO-SPT5-5-LF)				NS NS		6
8		SW	8-10' Black (5Y 2.5/1) medium sorted, medium to coarse SAND subangular, loose, wet, no staining or odors.	8-10'		5	12 11 5 5		8
10			10-12' Black (5Y 2.5/1) poorly sorted, fine to coarse SAND with little Gravel, subangular, loose, wet, no staining or odors.	10-12' SSO-SPT5-10-LF		50	8 8 10 12		10
12		GW	12-14' Black (5Y 2.5/1) medium sorted, coarse GRAVEL subangular, medium dense, wet, no staining or odors.	12-14'		5	12 12 18 18		12
14		SW	14-16' Black (5Y 2.5/1) poorly sorted, fine to coarse SAND with some Gravel subangular, loose, wet no staining, slight odor.	14-16' SSO-SPT5-15-LF		50	15 10 8 8		14
16		GM	16-18' Light gray (5Y 6/1) well sorted, fine SAND and GRAVEL, angular grains, loose, wet, no staining or odors.	16-18'		10	10 9 10 10		16
18			18-20' Olive gray (5Y 5/2), same as above, layers of SAND and GRAVEL.	18-20' SSO-SPT5-20-LF		70	9 7 6 7		18
20			(continued on next page)						20

Comments: Samples in bold submitted to Mitkem laboratory for analysis of Total Organic Carbon (TOC) and Total Combustible Organics (TCO), and to Shield Engineering for Grain Size Analysis. The interval from 30-35' was submitted to Shield Engineering for grain size, soil classification, specific gravity, dry unit weight and porosity analyses. NS - No lithologic samples collected in this interval. PID readings not collected because of equipment failure due to excessive moisture.

**SHIELD**Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509**FIELD WELL LOG
MONITORING WELL SEA-602B**

Page 2 of 3

PROJECT/CLIENT: **Peterson/Puritan OU2** DATE/TIME DRILLED: **9/15-9/16/2003**
 SHIELD PROJECT NO: **300-1821-0200** DRILLING COMPANY: **Geosearch**
 SITE NAME/LOCATN: **J. M. Mills Landfill** RIG OPERATOR: **Dave Crawford**
 BORING LOCATION **SEA-602B** RIG TYPE/METHOD: **Mobile B59**
 LOGGED BY: **Steve Scheidt/Mike Morris** SAMPLER DIAMETER: **2"** TOC Elevation: 61.20 feet
 SIGNATURE:  TOTAL BORING DEPTH: **60'** GS ELEV. 63.69 feet

Depth (ft)	Graphic Symbol	USCS Class	Description	Sample ID	PID	% Rec- covery	Blow Counts	Well Completion	
20		SM	20-22' Dark greenish gray (5BG 4/1) SILT and very poorly sorted SAND with little gravel, sand and gravel are coarse and angular, slight plasticity, soft, moist, no staining or odors.	20-22'		35	10 12 12 16		20
22		GW	22-24' Gray (5Y 6/1) poorly sorted, fine to coarse SAND medium dense, wet, no staining or odors.	22-24'		15	14 14 16 11		22
24		GW	24-26' Gray (5Y 6/1) medium sorted, fine to coarse SAND with trace Gravel, loose, wet, no staining or odors.	24-26' SSO-SPT5- 25-LF		40	7 6 5 8		24
26		NS	26-30' No sample recovery	26-28'		0	8 6 6 7		26
28		NS		28-30'		0	1 2 3 2		28
30		GW	30-36' Gray (5Y 6/1) medium sorted, fine to medium SAND loose, wet, no staining or odors.	30-32' SSO-SPT5- LF-30		10	4 5 4 4		30
32		GW	Sample collected from 30-34' for TOC, TCO, due to low recovery from 30'-32'.	32-34' SSO-SPT5- LF-35		50	7 7 8 7		32
34		GW		34-36'		10	6 3 4 7		34
36		GW	36-38' Same as above with trace of coarse gravel, medium dense.	36-38'		15	7 10 12 12		36
38		GW	38-40' Same as above with trace of coarse gravel, loose.	38-40'		15	4 4 6 6		38
40			(continued on next page)						40

Comments: Samples in bold submitted to Mitkem laboratory for analysis of Total Organic Carbon (TOC) and Total Combustible Organics (TCO), and to Shield Engineering for Grain Size Analysis. The interval from 30'-35' was submitted to Shield Engineering for grain size, soil classification, specific gravity, dry unit weight and porosity analyses. NS - No lithologic samples collected in this interval. PID readings not collected because of equipment failure due to excessive moisture.

**SHIELD**Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509**FIELD WELL LOG**
MONITORING WELL SEA-602B

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PROJECT/CLIENT: **Peterson/Puritan OU2** DATE/TIME DRILLED: **9/15-9/16/2003**
 SHIELD PROJECT NO: **300-1821-0200** DRILLING COMPANY: **Geosearch**
 SITE NAME/LOCATN: **J.M. Mills Landfill** RIG OPERATOR: **Dave Crawford**
 BORING LOCATION **SEA-602B** RIG TYPE/METHOD: **Mobile B59**
 LOGGED BY: **Steve Scheidt/Mike Morris** SAMPLER DIAMETER: **2"** TOC Elevation: **61.2 feet**
 SIGNATURE:  TOTAL BORING DEPTH: **60'** GS ELEV. **63.69 feet**

Depth (ft)	Graphic Symbol	USCS Class	Description	Sample ID	PID	% Rec- covery	Blow Counts	Well Completion	
40		SW	40-46' Same as above with trace of gravel, loose.	40-42'		20	2 4 4 6		40
42				42-44'		10	4 7 8 8		42
44				44-46'		20	3 4 4 3		44
46	NS		46 - 47.3' No sample recovery Blow count of 100 for 0.3'.	46 - 47.3'		0	22 27,100*		46
48		SW	47.3'- 48.8' Gray (5Y 6/1) poorly sorted SAND with trace coarse gravel (rounded pebbles 0.5 - 1" diameter), loose, wet, no staining or odors.	47.3'- 49.3'		10	6 8 10 15		48
50		SW	49.3' - 54' Gray (10BG 6/1) poorly sorted, fine to coarse SAND with some Gravel, subrounded, medium dense, wet, no staining or odors.	49.3' - 51.3'		0	3 3 6 10		50
52				51.3' - 54'		25	12 13 15 15		52
54		SW	54-60' Same as above, fine to coarse grained SAND with no gravel.	54-56'		0	5 11 11 17		54
56				56-58'		5	16 19 30 33		56
58			(55-60' - Composite Sample collected for Grain Size)	58-60'		NS	NS		58
60			Boring terminated at 60' (no refusal)						60

Comments: Samples in bold submitted to Mitkem laboratory for analysis of Total Organic Carbon (TOC) and Total Combustible Organics (TCO), and to Shield Engineering for Grain Size Analysis. The interval from 30'-35' was submitted to Shield Engineering for grain size, soil classification, specific gravity, dry unit weight and porosity analyses. NS - No lithologic samples collected in this interval. PID readings not collected because of equipment failure due to excessive moisture.

**SHIELD**Environmental Associates, Inc.
2458 Fortune Drive, Lexington KY 40509**FIELD WELL LOG
MONITORING WELL SEA-603**

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PROJECT/CLIENT: **Peterson/Puritan OU2** DATE/TIME DRILLED: **9/21/2003**
 SHIELD PROJECT NO: **300-1821-0200** DRILLING COMPANY: **Geologic**
 SITE NAME/LOCATN: **J. M. Mills Landfill** RIG OPERATOR: **Tim Tucker**
 BORING LOCATION **SEA-603** RIG TYPE/METHOD: **CMD55**
 LOGGED BY: **Steve Scheidt/Mike Morris** SAMPLER DIAMETER: **2"** TOC Elevation: 61.18 feet
 SIGNATURE:  TOTAL BORING DEPTH: **20'** GS ELEV. 58.44 feet

Depth (ft)	Graphic Symbol	USCS Class	Description	Sample ID	PID	% Recovery	Blow Counts	Well Completion	
0 --		SM	0-20' Alluvium 0-2' Gray (10YR 7/1) and light yellowish brown (10YR 6/4) SILT and medium sorted SAND, loose, dry, no staining or odors.	0-2'	0	90	3 4 7 13	V 4 F	0
2 --		GM	2-4' Gray (10YR 7/1) and yellowish brown (10YR 5/6) poorly sorted SAND and GRAVEL with some silt, medium dense, dry no staining or odors. (Cobbles also present)	2-4'	0	100	16 22 18 16	16	2
4 --			4-6' Yellowish brown (10YR 5/6), same as above, wet.	4-6' SSO-SPT2- 5-LF	N/A	30	16 14 13 16	16	4
6 --			6-10' Dark gray (10YR 4/1), same as above, no silt.	6-8'	0	100	15 8 14 12	15	6
8 --				8-10' SSO-SPT2- 10-LF	0	100	27 24 11 10	27	8
10 --			10-14' Very dark gray (10YR 3/1) poorly sorted SAND and GRAVEL with trace of silt, poorly sorted, fine to coarse grained, loose, wet, no staining or odors.	10-12'	0	100	3 5 5 6	3	10
12 --				12-14'	0	100	7 6 6 6	7	12
14 --			14-16' Same as above, no silt, very dense, medium to coarse grained.	14-16' SSO-SPT2- 15-LF	0	100	6 14 77 70	6	14
16 --			16-20' Split spoon sampling stopped because of dense sub-surface conditions.	NS		NS	NS	NS	16
18 --				NS		NS	NS	NS	18
20 --			(15-20' - Composite Sample collected for grain size, soil classification, specific gravity, dry unit weight and porosity analyses) Boring terminated at 20' (no refusal)						20

Comments: Samples in bold submitted to Milikem laboratory for analysis of Total Organic Carbon (TOC) and Total Combustible Organics (TCO), and to Shield Engineering for Grain Size Analysis. The interval from 15'-20' was submitted to Shield Engineering for grain size, soil classification, specific gravity, dry unit weight and porosity analyses. NS - No lithologic samples collected in this interval. NA - Not Applicable

**SHIELD**Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509**FIELD WELL LOG
MONITORING WELL SEA-604**

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PROJECT/CLIENT: **Peterson/Puritan OU2** DATE/TIME DRILLED: **9/18/2003**
 SHIELD PROJECT NO: **300-1821-0200** DRILLING COMPANY: **Geosearch**
 SITE NAME/LOCATN: **J.M. Mills Landfill** RIG OPERATOR: **Dave Crawford**
 BORING LOCATION **SEA-604** RIG TYPE/METHOD: **Mobile B59**
 LOGGED BY: **Steve Scheidt/Mike Morris** SAMPLER DIAMETER: **2"** TOC Elevation: 64.55 feet
 SIGNATURE:  TOTAL BORING DEPTH: **20'** GS ELEV. 61.55 feet

Depth (ft)	Graphic Symbol	USCS Class	Description	Sample ID	PID	% Rec- covery	Blow Counts	Well Completion	
0		SM	0-20' Alluvium 0-4' Very dark grayish brown (10YR 3/2) SILT and poorly sorted, fine to coarse SAND with trace of Gravel, loose, dry, no staining or odors.	0-2'	2.6	10	4 4 9 6	0	
2				2-4'	2.2	10	NA	2	
4		SW	4-6' Yellowish brown (10YR 5/4) poorly sorted, fine to medium SAND with some Gravel, medium dense, no staining or odors.	4-6' SSO-SPT3- 5-LF	0.4	50	11 11 10 13	4	
6			6-8' Same as above, slightly moist, subangular gravel.	6-8'	1.6	30	20 19 17 13	6	
8			8-10' no recovery. Sample (SSO-SPT-10-LF) collected from 6-8' and 10-12' split spoon samples.	8-10' SSO-SPT3- 10-LF	NA	NA		8	
10		SP	10-12' Light gray (10 YR 7/1) well sorted, fine SAND, very loose, wet, no staining or odor.	10-12'	0.2	70	2 1 2 2	10	
12			ML 12-14.75' Light gray (10YR 7/1) well sorted, fine SAND with some Silt, soft, low plasticity, wet, no staining or odors. 14.75-15.5' Light brownish gray (10YR 6/4) well sorted, fine SAND with some SILT, soft, low plasticity, wet 15.5-16' Light gray (10YR 7/1) well sorted, fine SAND with some Silt, soft, low plasticity, wet, no staining or odors.	12-14'	0	80	2 2 3 4	12	
14				14-16' SSO-SPT3- 15-LF	1.1	50	4 6 5 5	14	
16		SP	16-18' Light grey (10YR 7/1) medium sorted fine to medium SAND loose, wet, no staining or odors.	16-18'	0	100	4 5 5 6	16	
18			18-20'	NA	NA		18		
20			(15-20' - Composite Sample collected from auger for grain size, soil classification, specific gravity, dry unit weight and porosity analyses) Boring terminated at 20' (no refusal)					20	

Comments: Samples in bold submitted to Mitkem laboratory for analysis of Total Organic Carbon (TOC) and Total Combustible Organics (TCO), and to Shield Engineering for Grain Size Analysis. The interval from 15'-20' was submitted to Shield Engineering for grain size, soil classification, specific gravity, dry unit weight and porosity analyses. **NS** - No lithologic samples collected in this interval. **NA** - Not Applicable.

**SHIELD**Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509**FIELD WELL LOG
MONITORING WELL SEA-605**

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PROJECT/CLIENT: **Peterson/Puritan OU2** DATE/TIME DRILLED: **9/18/2003**
 SHIELD PROJECT NO: **300-1821-0200** DRILLING COMPANY: **Geosearch**
 SITE NAME/LOCATN: **J.M. Mills Landfill** RIG OPERATOR: **Dave Crawford**
 BORING LOCATION **SEA-605** RIG TYPE/METHOD: **Mobile B59**
 LOGGED BY: **Steve Scheidt/Mike Morris** SAMPLER DIAMETER: **2"** TOC Elevation: 64.41 feet
 SIGNATURE: *Steve Scheidt* TOTAL BORING DEPTH: **20'** GS ELEV. 61.53 feet

Depth (ft)	Graphic Symbol	USCS Class	Description	Sample ID	PID	% Rec- covery	Blow Counts	Well Completion	
0		ML	0-9' Fill Material 0-2' Light reddish brown (5YR 6/4) SILT with some poorly sorted Sand and Gravel, subrounded, very loose, dry, no staining or odors. Plastic encountered at 2'.	0-2'	0	50	2 2 2 15	0	0
2	NS		2-5' No sample recovery due to large cobbles and debris in the sub-surface. Cobbles came to surface during augering.	NA	NA	0	0	0	2
4									4
6		SW	5-9' Light reddish brown (5YR 6/4) poorly sorted, fine to coarse SAND and GRAVEL with trace Silt, subrounded gravel, loose, dry, no staining or odors. (High blow counts are likely the result of debris and cobbles in the subsurface. (Rubber tire is suspected of interfering with the split spoon sampling).	5-7' SSO-SPT4-5-LF	0	50	25 37 13 10	0	6
8				7-9'	0	5	10 10 9 11	0	8
10			9-20' Alluvium 9-19' Very dark gray (10YR 3/1) poorly sorted, medium to coarse SAND and GRAVEL with trace Silt, subrounded, medium dense, wet, no staining, mild odor.	9-11' SSO-SPT4-10-LF	0	60	10 10 16 19	0	10
12				11-13'	0	100	19 17 10 10	0	12
14			Same as above, consistency becoming loose to very loose	13-15'	0	40	3 5 3 5	0	14
16				15-17' SSO-SPT4-15-LF	0.4	40	2 2 4 5	0	16
18				17-19'	0	60	6 4 6 6	0	18
20			(15-20' - Composite Sample collected from auger for grain size, soil classification, specific gravity, dry unit weight and porosity analyses)	NS		0			20
			Boring terminated at 20' (no refusal)						

Comments: Samples in bold submitted to Mitkem laboratory for analysis of Total Organic Carbon (TOC) and Total Combustible Organics (TCO), and to Shield Engineering for Grain Size Analysis. The interval from 15'-20' was submitted to Shield Engineering for grain size, soil classification, specific gravity, dry unit weight and porosity analyses. NS - No lithologic samples collected in this interval. NA - Not Applicable

**SHIELD**Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509**FIELD WELL LOG
MONITORING WELL SEA-607**

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PROJECT/CLIENT: **Peterson/Puritan OU2** DATE/TIME DRILLED: **9/19/2003**
 SHIELD PROJECT NO: **300-1821-0200** DRILLING COMPANY: **Geologic**
 SITE NAME/LOCATN: **Unnamed Island** RIG OPERATOR: **Tim Tucker**
 BORING LOCATION **SEA-607** RIG TYPE/METHOD: **CMD55**
 LOGGED BY: **Steve Scheidt Mike Morris** SAMPLER DIAMETER: **2"** TOC Elevation: **65.17 feet**
 SIGNATURE: *[Signature]* TOTAL BORING DEPTH: **20'** GS ELEV. **62.35 feet**

Depth (ft)	Graphic Symbol	USCS Class	Description	Sample ID	PID	% Rec- covery	Blow Counts	Well Completion	
0		GW	0-20' Alluvium 0-4' Brown (10YR 5/3) poorly sorted, fine to coarse SAND and GRAVEL with trace Silt, medium dense, dry, no staining or odors.	0-2'	0	60	4 23 24 34	0	0
2				2-4'	0	100	34 26 58 23	0	2
4		SM	4-8' Olive brown (2.5Y 5/4) poorly sorted, fine to medium SAND with some Gravel and trace Silt, loose, dry no staining or odors. (No sufficient recovery for PID screening)	4-6' SSO-SPT6- 5-LF	NA	40	6 7 7 6	0	4
6				6-8'	0	20	8 7 4 3	0	6
8			8-10' Dark olive brown (2.5Y 3/3) poorly sorted, fine to medium SAND with some SILT and trace of coarse sand, loose, wet, no staining or odors.	8-10'	0	20	3 4 4 6	0	8
10			10-12' Dark gray (2.5Y 4/1) poorly sorted SAND with some medium to coarse Gravel, loose, wet, no staining or odors	10-12' SSO-SPT6- 10-LF	0	50	1 4 7 11	0	10
12		GW	12-18' Dark grayish brown (2.5Y 5/2) poorly sorted, fine to coarse SAND and GRAVEL, medium dense, wet, no staining or odors. (Last 6" dense).	12-14'	0	100	12 19 27 53	0	12
14			14-18' Same as above, consistency changing to loose	14-16' SSO-SPT6- 15-LF	0	30	4 5 6 6	0	14
16				16-18'	0	60	6 10 11 9	0	16
18				NS	NA	0		0	18
20			(15-20' - Composite Sample collected from auger for grain size, soil classification, specific gravity, dry unit weight and porosity analyses) Boring terminated at 20' (no refusal)						20

Comments: Samples in bold submitted to Mitkem laboratory for analysis of Total Organic Carbon (TOC) and Total Combustible Organics (TCO), and to Shield Engineering for Grain Size Analysis. The interval from 15'-20' was submitted to Shield Engineering for grain size, soil classification, specific gravity, dry unit weight and porosity analyses. **NS** - No lithologic samples collected in this interval. **NA** - Not Applicable

**SHIELD**Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509**FIELD WELL LOG
MONITORING WELL SEA-608**

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PROJECT/CLIENT: **Peterson/Puritan OU2** DATE/TIME DRILLED: **9/19/2003**
 SHIELD PROJECT NO: **300-1821-0200** DRILLING COMPANY: **Geologic**
 SITE NAME/LOCATN: **Unnamed Island** RIG OPERATOR: **Tim Tucker**
 BORING LOCATION **SEA-608** RIG TYPE/METHOD: **CMD55**
 LOGGED BY: **Steve Scheldt/Mike Morris** SAMPLER DIAMETER: **2"** TOC Elevation: 66.37 feet
 SIGNATURE: *scheldt/morris* TOTAL BORING DEPTH: **20'** GS ELEV. 63.89 feet

Depth (ft)	Graphic Symbol	USCS Class	Description	Sample ID	PID	% Rec- over	Blow Counts	Well Completion	
0		SW	0-20' Alluvium 0-6' Light olive brown (2.5Y 5/3) poorly sorted, fine to medium SAND with some Silt and trace of Gravel, loose, dry, no staining or odors.	0-2'	0	50	10 11 11 9	7 7 7 7	0
2			SSO-SPT_-5-LF sampled from 2-6' since recovery from 4-6' was only 5%.	2-4'	0	30	10 10 16 14	7 7 7 7	2
4				4-6' SSO-SPT7- 5-LF	NS	5	5 10 2 2	7 7 7 7	4
6		ML	6-8' Very dark grayish brown (10YR 3/2) SILT with some medium sorted Sand, soft, non-plastic, dry, no staining or odors.	6-8'	0	60	2 3 3 6	7 7 7 7	6
8			8-10' Very dark grayish brown (10YR 3/1) well sorted, fine SAND with some SILT, loose, wet at 9', no staining or odors	8-10' SSO-SPT7- 10-LF	0	100	NA	7 7 7 7	8
10		ML	10-12' Very dark grayish brown (10YR 3/2) SILT, very soft, slight plasticity, wet, no staining or odors. Last 6' has little Sand.	10-12'	0	95	0.5 0.5 1 2	7 7 7 7	10
12			12-13' Same as above with some well sorted, fine Sand.	12-14'	0	100	12 21 29 33	7 7 7 7	12
14		GW	13-18' Dark grayish brown (10YR 4/2) poorly sorted, fine to coarse SAND and GRAVEL with little Silt, medium dense, subrounded, wet, no staining or odors.				15 23 24 19	7 7 7 7	14
16				14-16' SSO-SPT7- 15-LF	0	50	14 10 7 6	7 7 7 7	16
18				16-18'	0	40	NA	7 7 7 7	18
20			(15-20' - Composite Sample collected from auger for grain size, soil classification, specific gravity, dry unit weight and porosity analyses) Boring terminated at 20' (no refusal)	NS		0	NA	7 7 7 7	20

Comments: Samples in bold submitted to Mitkem laboratory for analysis of Total Organic Carbon (TOC) and Total Combustible Organics (TCO), and to Shield Engineering for Grain Size Analysis. The interval from 15'-20' was submitted to Shield Engineering for grain size, soil classification, specific gravity, dry unit weight and porosity analyses. **NS** - No lithologic samples collected in this interval. **NA** - Not Applicable

**SHIELD**

Environmental Associates, Inc.
2450 Fortune Drive, Lexington KY 40509

**WELL INSTALLATION LOG
MONITORING WELL SEA-601**

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PROJECT/CLIENT:	Peterson/Puritan OU2 Superfund Site	DATE COMPLETED:	9/15/2003
SHIELD PROJECT NO.:	300-1821	DRILLING COMPANY/OPERATOR:	GeoSearch/Dave Crawford
SITE NAME/LOCATION:	J. M. Mills Landfill	RIG TYPE/METHOD:	Truck Mounted Mobile Drill B-59; 4.25" ID Hollow Stem Augers
WELL LOCATION	Cumberland, RI	GROUND SURFACE (GS) ELEVATION:	59.63 feet
LOGGED BY:	M. Morris/S. Scheidt	TOP OF CASING (TOC) ELEVATION:	62.68 feet
SIGNATURE:		DEPTH OF WELL FROM TOC:	23.5 feet

Materials	Construction Diagram	Dimensions (Feet)	Depth (Ft Below GS)	Elevations (Ft Above Datum)
		Top of Riser	-3.1	62.68
Surface Materials: Above ground, steel, 6" diameter stand pipe with a locking cap in a 2.5' by 2.5' concrete pad. Water tight expansion plug cap at top of riser.		Ground Surface	0.0	59.63
		Top of Seal	1.5	58.13
Annular Seal: Hydrated Pure Gold® Medium Bentonite Chips		Top of Sandpack	3.5	56.13
		Top of Screen	10.2	49.43
Well Riser: 2" Diameter PVC Schedule 40				
Well Screen: 10 Slot (0.010 inch) 2" Diameter PVC Schedule 40				
Bottom Cap: 2" PVC End Cap		Bottom of Screen	20.2	39.43
Borehole Diameter: 8.5 Inches		Bottom of Well	20.4	39.23
Comments: Well developed on 9/22/03 by surging and pumping 60 gallons of water.				

**SHIELD**Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509**WELL INSTALLATION LOG
MONITORING WELL SEA-602A**

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PROJECT/CLIENT:	Peterson/Puritan OU2 Superfund Site	DATE COMPLETED:	9/17/2003
SHIELD PROJECT NO:	300-1821	DRILLING COMPANY/OPERATOR:	GeoSearch/Dave Crawford
SITE NAME/LOCATION:	J. M. Mills Landfill	RIG TYPE/METHOD:	Truck Mounted Mobile Drill B-59; 4.25" ID Hollow Stem Augers
WELL LOCATION	Cumberland, RI	GROUND SURFACE (GS) ELEVATION:	58.97 feet
LOGGED BY:	M. Morris/S. Scheidt	TOP OF CASING (TOC) ELEVATION:	61.72 feet
SIGNATURE:		DEPTH OF WELL FROM TOC:	23.21 feet

Materials	Construction Diagram	Dimensions (Feet)	Depth (Ft Below GS)	Elevations (Ft Above Datum)
		Top of Riser	-2.7	61.72
Surface Materials: Above ground , steel, 6" diameter stand pipe with a locking cap in a 2.5' by 2.5' concrete pad. Water tight expansion plug cap at top of riser.		Ground Surface	0.0	58.97
		Top of Seal	2.5	56.18
Annular Seal: Hydrated Pure Gold® Medium Bentonite Chips		Top of Sandpack	7.0	51.68
		Top of Screen	10.3	48.68
Well Riser: 2" Diameter PVC Schedule 40				
Well Screen: 10 Slot (0.010 inch) 2" Diameter PVC Schedule 40				
Bottom Cap: 2" PVC End Cap		Bottom of Screen	20.3	38.68
Borehole Diameter: 8.5 Inches		Bottom of Well	20.5	38.51
Comments: Well developed on 9/22/03 by surging and pumping 65 gallons of water.				

**SHIELD**Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509**WELL INSTALLATION LOG
MONITORING WELL SEA-602B**

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PROJECT/CLIENT:	Peterson/Puritan OU2 Superfund Site	DATE COMPLETED:	9/17/2003
SHIELD PROJECT NO:	300-1821	DRILLING COMPANY/OPERATOR:	GeoSearch/Dave Crawford
SITE NAME/LOCATION:	J. M. Mills Landfill	RIG TYPE/METHOD:	Truck Mounted Mobile Drill B-59; 4.25" ID Hollow Stem Augers
WELL LOCATION	Cumberland, RI	GROUND SURFACE (GS) ELEVATION:	58.97 feet
LOGGED BY:	M. Morris/S. Scheidt	TOP OF CASING (TOC) ELEVATION:	61.20 feet
SIGNATURE:		DEPTH OF WELL FROM TOC:	63.69 feet

Materials	Construction Diagram	Dimensions (Feet)	Depth (Ft Below GS)	Elevations (Ft Above Datum)
		Top of Riser	-2.2	61.20
Surface Materials: Above ground, steel, 6" diameter stand pipe with a locking cap in a 2.5' by 2.5' concrete pad. Water tight expansion plug cap at top of riser.		Ground Surface	0.0	58.97
Annular Seal: Hydrated Pure Gold® Medium Bentonite Chips		Top of Seal	43.0	15.97
		Top of Sandpack	48.2	10.78
Filter Pack: #2 Quartz Filter Sand		Top of Screen	51.3	7.68
Well Riser: 2" Diameter PVC Schedule 40				
Well Screen: 10 Slot (0.010 inch) 2" Diameter PVC Schedule 40				
Bottom Cap: 2" PVC End Cap		Bottom of Screen	61.3	-2.32
Borehole Diameter: 8.5 Inches		Bottom of Well	61.5	-2.49
Comments: Well developed on 9/22/03 by surging and pumping 65 gallons of water.				

**SHIELD**Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509**WELL INSTALLATION LOG
MONITORING WELL SEA-603**

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PROJECT/CLIENT:	Peterson/Puritan OU2 Superfund Site	DATE COMPLETED:	9/21/2003
SHIELD PROJECT NO.:	300-1821	DRILLING COMPANY/OPERATOR:	Geologic/Tim Tucker
SITE NAME/LOCATION:	J. M. Mills Landfill	RIG TYPE/METHOD:	Track mounted CMD55; 4.25" ID Hollow Stem Augers
WELL LOCATION	Cumberland, RI	GROUND SURFACE (GS) ELEVATION:	58.44 feet
LOGGED BY:	M. Morris/S. Scheidt	TOP OF CASING (TOC) ELEVATION:	61.18 feet
SIGNATURE:		DEPTH OF WELL FROM TOC:	22.7 feet

Materials	Construction Diagram	Dimensions (Feet)	Depth (Ft Below GS)	Elevations (Ft Above Datum)
		Top of Riser	-2.7	61.18
Surface Materials: Above ground, steel, 6" diameter stand pipe with a locking cap in a 2.5' by 2.5' concrete pad. Water tight expansion plug cap at top of riser.		Ground Surface	0.0	58.44
		Top of Seal	2.0	56.44
Annular Seal: Hydrated Pure Gold® Medium Bentonite Chips		Top of Sandpack	8.1	50.34
		Top of Screen	9.8	48.64
Filter Pack: #2 Quartz Filter Sand				
Well Riser: 2" Diameter PVC Schedule 40				
Well Screen: 10 Slot (0.010 inch) 2" Diameter PVC Schedule 40				
Bottom Cap: 2" PVC End Cap		Bottom of Screen	19.8	38.64
Borehole Diameter: 8.5 Inches		Bottom of Well	20.0	38.44
Comments: Well developed on 9/23/03 by surging and pumping approximately 55 gallons of water using an electric submersible pump.				

**SHIELD**Environmental Associates, Inc.
2436 Fortune Drive, Lexington KY 40509**WELL INSTALLATION LOG
MONITORING WELL SEA-604**

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PROJECT/CLIENT:	Peterson/Puritan OU2 Superfund Site	DATE COMPLETED:	9/18/2003
SHIELD PROJECT NO:	300-1821	DRILLING COMPANY/OPERATOR:	GeoSearch/Dave Crawford
SITE NAME/LOCATION:	J. M. Mills Landfill	RIG TYPE/METHOD:	Truck Mounted Mobile Drill B-59; 4.25" ID Hollow Stem Augers
WELL LOCATION	Cumberland, RI	GROUND SURFACE (GS) ELEVATION:	61.55 feet
LOGGED BY:	M. Morris/S. Scheidt	TOP OF CASING (TOC) ELEVATION:	64.55 feet
SIGNATURE:		DEPTH OF WELL FROM TOC:	23.24 feet

Materials	Construction Diagram	Dimensions (Feet)	Depth (Ft Below GS)	Elevations (Ft Above Datum)
		Top of Riser	-3.0	64.55
Surface Materials: Above ground, steel, 6" diameter stand pipe with a locking cap in a 2.5' by 2.5' concrete pad. Water tight expansion plug cap at top of riser.		Ground Surface	0.0	61.55
		Top of Seal	3.5	58.05
Annular Seal: Hydrated Pure Gold® Medium Bentonite Chips		Top of Sandpack	6.8	54.75
		Top of Screen	10.0	51.48
Filter Pack: #2 Quartz Filter Sand				
Well Riser: 2" Diameter PVC Schedule 40				
Well Screen: 10 Slot (0.010 inch) 2" Diameter PVC Schedule 40				
Bottom Cap: 2" PVC End Cap		Bottom of Screen	20.0	41.48
Borehole Diameter: 8.5 Inches		Bottom of Well	20.2	41.31
Comments: Well developed on 9/22/03 by surging and pumping 65 gallons of water.				

**SHIELD**Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509**WELL INSTALLATION LOG
MONITORING WELL SEA-605**

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PROJECT/CLIENT:	Peterson/Puritan OU2 Superfund Site	DATE COMPLETED:	9/18/2003
SHIELD PROJECT NO.:	300-1821	DRILLING COMPANY/OPERATOR:	GeoSearch/Dave Crawford
SITE NAME/LOCATION:	J. M. Mills Landfill	RIG TYPE/METHOD:	Truck Mounted Mobile Drill B-59; 4.25" ID Hollow Stem Augers
WELL LOCATION	Cumberland, RI	GROUND SURFACE (GS) ELEVATION:	61.53 feet
LOGGED BY:	M. Morris/S. Scheidt	TOP OF CASING (TOC) ELEVATION:	64.41 feet
SIGNATURE:		DEPTH OF WELL, FROM TOC:	23.19 feet

Materials	Construction Diagram	Dimensions (Feet)	Depth (Ft Below GS)	Elevations (Ft Above Datum)
		Top of Riser	-3.0	64.41
Surface Materials: Above ground, steel, 6" diameter stand pipe with a locking cap in a 2.5' by 2.5' concrete pad. Water tight expansion plug cap at top of riser.		Ground Surface	0.0	61.53
		Top of Seal	3.6	57.89
Annular Seal: Hydrated Pure Goid® Medium Bentonite Chips		Top of Sandpack	6.5	54.89
		Top of Screen	10.0	51.39
Filter Pack: #2 Quartz Filter Sand.				
Well Riser: 2" Diameter PVC Schedule 40				
Well Screen: 10 Slot (0.010 inch) 2" Diameter PVC Schedule 40				
Bottom Cap: 2" PVC End Cap		Bottom of Screen	20.0	41.39
Borehole Diameter: 8.5 Inches		Bottom of Well	20.2	41.22
Comments: Well developed on 9/23/03 by surging and pumping approximately 60 gallons of water using an electric submersible pump.				

**SHIELD**Environmental Associates, Inc.
2436 Fortune Drive, Lexington KY 40509**WELL INSTALLATION LOG
MONITORING WELL SEA-606**

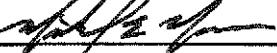
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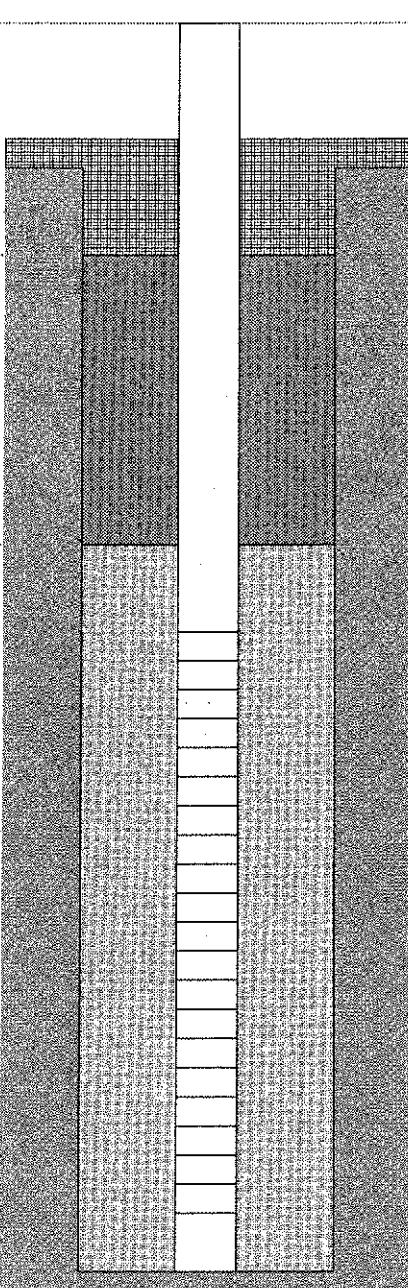
PROJECT/CLIENT:	Peterson/Puritan OU2 Superfund Site	DATE COMPLETED:	9/21/2003
SHIELD PROJECT NO.:	300-1821	DRILLING COMPANY/OPERATOR:	Geologic/Tim Tucker
SITE NAME/LOCATION:	J. M. Mills Landfill	RIG TYPE/METHOD:	Track mounted CMD65; 4.25" ID Hollow Stem Augers
WELL LOCATION	Cumberland, RI	GROUND SURFACE (GS) ELEVATION:	60.86 feet
LOGGED BY:	M. Morris/S. Scheidt	TOP OF CASING (TOC) ELEVATION:	63.83 feet
SIGNATURE:		DEPTH OF WELL FROM TOC:	23.18 feet

Materials	Construction Diagram	Dimensions (Feet)	Depth (Ft Below GS)	Elevations (Ft Above Datum)
		Top of Riser	-3.0	63.83
Surface Materials: Above ground, steel, 6" diameter stand pipe with a locking cap in a 2.5' by 2.5' concrete pad. Water tight expansion plug cap at top of riser.		Ground Surface	0.0	60.86
		Top of Seal	2.0	58.82
Annular Seal: Hydrated Pure Gold® Medium Bentonite Chips		Top of Sandpack	6.5	54.32
		Top of Screen	10.0	50.82
Well Riser: 2" Diameter PVC Schedule 40				
Well Screen: 10 Slot (0.010 inch) 2" Diameter PVC Schedule 40				
Bottom Cap: 2" PVC End Cap		Bottom of Screen	20.0	40.82
Borehole Diameter: 8.5 Inches		Bottom of Well	20.2	40.65
Comments: Well developed on 9/23/03 by surging and pumping approximately 55 gallons of water using an electric submersible pump.				

**SHIELD**Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509**WELL INSTALLATION LOG
MONITORING WELL SEA-607**

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PROJECT/CLIENT: Peterson/Puritan OU2 Superfund Site DATE COMPLETED: 9/19/2003
 SHIELD PROJECT NO: 300-1821 DRILLING COMPANY/OPERATOR: Geologic/Tim Tucker
 SITE NAME/LOCATION: Unnamed Island RIG TYPE/METHOD: Track mounted CMD55; 4.25" ID Hollow Stem Augers
 WELL LOCATION: Cumberland, RI GROUND SURFACE (GS) ELEVATION: 62.35 feet
 LOGGED BY: M. Morris/S Scheidt TOP OF CASING (TOC) ELEVATION: 65.17 feet
 SIGNATURE:  DEPTH OF WELL FROM TOC: 23.13 feet

Materials	Construction Diagram	Dimensions (Feet)	Depth (Ft Below GS)	Elevations (Ft Above Datum)
Surface Materials: Above ground , steel, 6" diameter stand pipe with a locking cap in a 2.5' by 2.5' concrete pad. Water tight expansion plug cap at top of riser.		Top of Riser	-2.8	65.17
Annular Seal: Hydrated Pure Gold® Medium Bentonite Chips		Ground Surface	0.0	62.35
Filter Pack: #2 Quartz Filter Sand		Top of Seal	1.3	61.01
Well Riser: 2" Diameter PVC Schedule 40		Top of Sandpack	7.8	54.51
Well Screen: 10 Slot (0.010 inch) 2" Diameter PVC Schedule 40		Top of Screen	10.1	52.21
Bottom Cap: 2" PVC End Cap		Bottom of Screen	20.1	42.21
Borehole Diameter: 8.5 Inches		Bottom of Well	20.3	42.04
Comments: Well developed on 9/24/03 by surging and pumping approximately 60 gallons of water using an electric submersible pump.				

**SHIELD**Environmental Associates, Inc.
2456 Fortune Drive, Lexington KY 40509**WELL INSTALLATION LOG
MONITORING WELL SEA-608**

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PROJECT/CLIENT:	Peterson/Puritan OU2 Superfund Site	DATE COMPLETED:	9/19/2003
SHIELD PROJECT NO:	300-1821	DRILLING COMPANY/OPERATOR:	Geologic/Tim Tucker
SITE NAME/LOCATION:	Unnamed Island	RIG TYPE/METHOD:	Track mounted CMD55; 4.25" ID Hollow Stem Augers
WELL LOCATION	Cumberland, RI	GROUND SURFACE (GS) ELEVATION:	63.89 feet
LOGGED BY:	M. Morris/S. Scheidt	TOP OF CASING (TOC) ELEVATION:	66.37 feet
SIGNATURE:		DEPTH OF WELL FROM TOC:	22.68 feet

Materials	Construction Diagram	Dimensions (Feet)	Depth (Ft Below GS)	Elevations (Ft Above Datum)
		Top of Riser	-2.5	66.37
Surface Materials: Above ground , steel, 6" diameter stand pipe with a locking cap in a 2.5' by 2.5' concrete pad. Water tight expansion plug cap at top of riser.		Ground Surface	0.0	63.89
		Top of Seal	2.0	61.86
Annular Seal: Hydrated Pure Gold® Medium Bentonite Chips		Top of Sandpack	8.0	55.86
Filter Pack: #2 Quartz Filter Sand		Top of Screen	10.0	53.86
Well Riser: 2" Diameter PVC Schedule 40				
Well Screen: 10 Slot (0.010 inch) 2" Diameter PVC Schedule 40				
Bottom Cap: 2" PVC End Cap		Bottom of Screen	20.0	43.86
Borehole Diameter: 8.5 Inches		Bottom of Well	20.2	43.69
Comments: Well developed on 9/23/03 by surging and pumping approximately 60 gallons of water using an electric submersible pump.				