

Project Name: SSFL Area IV Radiological Study	Project Number: EP038.01.22.04.03	Subarea: 5C	Group: 6	Location ID: 141
Drilling Company: Boart Longyear	Driller: Don Hansen	Ground Elevation: NA	Total Depth Drilled: 6'10" ft bgs.	
Drilling Equipment: 6600 Geoprobe	Borehole Diameter: 1.75 in.	Date/Time Drilling Started: 3-5-12 5:30 AM	Date/Time Total Depth Reached: 3-5-12 1540	
Type of Sampling Device: 1.75 macrocore with acetate liner	Samples Collected: One 1/2 Gallon Bag (Approx 8 lbs.) 10270(1540)			
Geologist: C. Knight	Checked By / Date: J. Rebbin Goldman 3/6/12			

Radiological Background: 5MR/2793/60	Radiological Equipment Used: Micro R / Downhole / Pancake Meters	PID Used: Mini Rae 2000 - Background: 0.0 ppm
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Depth (ft bgs)	Interval	Recovery	PID	Radiological	Description (Include lithology, grain size, sorting, angularity, Munsell color name & notation, minerology, bedding, plasticity, density, consistency, etc., as applicable)	USCS Symbol	Borehole Gamma Readings (CPM)
					Surface = Soil mudgrass		40.5' 2789
0.5			0.0	42	Fill: silt with sand & dark yellowish brown (10YR 4/6), dry, soft, no odor, 10% fine sand, trace medium sand, 90% silt, cohesive, low plasticity, low toughness, trace rootlets, some pin hole pores, mottled	AP/ML	2990
			0.0	60			4525
1.0			0.0	48			5219
2.0			0.0	90	14" Sandy silt: yellowish brown (10YR 5/4), dry, medium stiff, no odor, 15% fine sand, 5% medium sand, 5% clay, 75% silt, cohesive, low plasticity, low toughness	ML	5374
			0.0	96			5244
			0.0	114			4766
3.0			0.0	84	2'6" Silty clay: Brown (10YR 5/3), moist, stiff, no odor, 15% silt, 5% fine sand, 80% clay, cohesive, medium plasticity, medium toughness	CL	4872
			0.0	66			4997
			0.0	72			4869
4.0			0.0	78			4929
5.0			0.0	84	Same as above	CL	4638
			0.0	60	5.5'		4801
6.0			0.0	66	Same as above See next page	SM CL CK	4888

SSFL BORING LOG

Project Name: SSFL Area IV Radiological Study		Project Number: EP038.01.22.04.03		Subarea: <u>3</u>	Group: <u>5C</u>	Location ID: <u>149</u>	
Drilling Company: HGL		Driller: T. Morse		Ground Elevation: NA		Total Depth Drilled: 0.5 ft bgs.	
Drilling Equipment: Shovel/trowel		Borehole Diameter: NA		Date/Time Drilling Started: <u>3/23/12 1335</u>		Date/Time Total Depth Reached: <u>3/23/12 1339</u>	
Type of Sampling Device: Shovel/trowel		Geologist: Ian Stone		Samples Collected: (1) 1/2 Gallon Bag (Approx 5 lbs.) <u>60 IS</u> 10252-1340 10271(N7) (1) 1/2 gal. bag (5 lbs)			
Radiological Background: <u>311 / 93</u>		Radiological Equipment Used: Micro R / Downhole / Pancake Meters		PID Used: Mini Rae 3000 - Background: <u>0.0</u> ppm			
Depth (ft bgs)	Interval	Recovery	PID	Radiological	Description (Include lithology, grain size, sorting, angularity, Munsell color name & notation, mineralogy, bedding, plasticity, density, consistency, etc., as applicable)	USCS Symbol	Borehole Gamma Readings (CPM)
0.5			0.0	54	<p>Silty Sand, Dark yellowish brown (3/4 10YR) 60% fine sand, 35% silt, 5% gravel, trace rocklets, low dense, moist, no odor on skimming</p> <p>TD = 0.5 ft bgs No gw encountered</p>	SM	
1.0		0.0	90				
2.0							
3.0							
4.0							
5.0							
6.0							

Project Name: SSFL Area IV Radiological Study	Project Number: EP038.01.22.04.03	Subarea: 5C	Group: 3	Location ID: 149
Drilling Company: Boart Longyear HGL	Driller: B. Hansen T. Morse	Ground Elevation: NA	Total Depth Drilled: 4.33 ft bgs.	
Drilling Equipment: Geoprobe 6600 hand auger	Borehole Diameter: 1.75" 2.75"	Date/Time Drilling Started: 3/23/12 1340	Date/Time Total Depth Reached: 3/23/12 1447	
Type of Sampling Device: 1.75" macrocore with acetate liner hand auger	Samples Collected: 60ES 10253-1500 (1) 1/2 Gallon Bag (Approx 5 lbs.)			
Geologist: Ian Stone	Checked By / Date: Duff Threlkoff 3-27-12			

Radiological Background: 3111 / 98	Radiological Equipment Used: Micro R / Downhole / Pancake Meters	PID Used: Mini Rae 3000 - Background: 0.0 ppm
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Depth (ft bgs)	Interval	Recovery	PID	Radiological	Description (Include lithology, grain size, sorting, angularity, Munsell color name & notation, mineralogy, bedding, plasticity, density, consistency, etc., as applicable)	USCS Symbol	Borehole Gamma Readings (CPM)
0.0			0.0	54	Silty Sand, Dark yellowish brown (3/4 10YR) 60% fine sand, 40% silt, 5% gravel, trace rootlets, low dense, moist, no odor or staining	AF/SM	4003
0.5			0.0	90			4725
1.0			0.0	66	Sandy Silt, Dark Yellowish Brown (4/4 10YR) 40% fine sand, 60% silt, trace gravel, trace rootlets, low tough, low strength, low plasticity, dry, no odor or staining	AF/ML	5315
			0.0	72			5213
2.0			0.0	120			5417
			0.0	66			5430
3.0			0.0	90			5708
			0.0	60			5689
4.0			0.0	84			5744
5.0					TD = 4.33 ft bgs no gw encountered no anomalies detected		
6.0							

Project Name: SSFL Area IV Radiological Study		Project Number: EP038.01.22.04.03		Subarea: 5C	Group: 3	Location ID: 250 150	
Drilling Company: HydroGeoLogic		Driller: P. Moore		Ground Elevation: NA		Total Depth Drilled: 0.5 0.75 ft bgs.	
Drilling Equipment: Trowel/shovel		Borehole Diameter: NA		Date/Time Drilling Started: 3/5/12 1020		Date/Time Total Depth Reached: 3/5/12 1030	
Type of Sampling Device: Trowel/shovel				Samples Collected: One 1/2 Gallon Bag (Approx 8 lbs.) 10254 (1025)			
Geologist: C. Knight				Checked By / Date: J. Robbins / J. Goldman 3/6/12			
Radiological Background: 21MR/3716/76		Radiological Equipment Used: Micro R / Downhole / Pancake Meters		PID Used: Mini Rae 2000 - Background: 0.0 ppm			

Depth (ft bgs)	Interval	Recovery	PID	Radiological	Description (Include lithology, grain size, sorting, angularity, Munsell color name & notation, mineralogy, bedding, plasticity, density, consistency, etc., as applicable)	USCS Symbol	Borehole Gamma Readings	
							Feet bgs.	(CPM)
0.0			0.0	19MR	Surface: pea gravel			
0.0 - 0.5			0.0	20MR	3" of pea gravel	FS / GP		
0.5 - 1.0					Fill: Silty Sand: yellowish brown (10YR 5/4), moist, medium dense, no odor, 35% silt, 5% coarse sand, 10% medium sand, 50% fine sand, mottled, trace fine subrounded gravel, trace rootlets	AF / SM		
1.0 - 2.0								
2.0 - 3.0								
3.0 - 4.0								
4.0 - 5.0								
5.0 - 6.0								

TD: 0.75' bgs
No GW encountered
Sampled 0.25 - 0.75

~~3' 1" silty clay: Dark brown (10YR 3/3), moist, st: ff, no odor, 30% silt, 5% fine sand, 65% clay, cohesive, medium plasticity, medium toughness~~

Project Name: SSFL Area IV Radiological Study	Project Number: EP038.01.22.04.03	Subarea: 5C	Group: 3	Location ID: 150
Drilling Company: Boart Longyear	Driller: Don Hansen	Ground Elevation: NA	Total Depth Drilled: 9.0 ft bgs.	
Drilling Equipment: 6600 Geoprobe	Borehole Diameter: 1.75 in.	Date/Time Drilling Started: 3/5/12 1040	Date/Time Total Depth Reached: 3/5/12 1112	
Type of Sampling Device: 1.75 macrocore with acetate liner	Samples Collected: One 1/2 Gallon Bag (Approx 8 lbs.) 10255(1115)			
Geologist: C. Knight	Checked By / Date: J. Robbins / J. Waldman 3/6/12			

Radiological Background: 21mR/3716/76	Radiological Equipment Used: Micro R / Downhole / Pancake Meters	PID Used: Mini Rae 2000 - Background: 0.0 ppm
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Depth (ft bgs)	Interval	Recovery	PID	Radiological	Description (AF: Artificial Fill) (Include lithology, grain size, sorting, angularity, Munsell color name & notation, minerology, bedding, plasticity, density, consistency, etc., as applicable)	USCS Symbol	Borehole Gamma Readings (CPM/KK)
					Surface gravel		10.5' 3773 3349
			0.0	96	3" pea gravel	GP	4906 3713
0.5			0.0	72	Fill: Silty Sand: Yellowish brown (10YR 3/4), moist, medium dense, no odor, 35% silt, 5% coarse sand, 10% medium sand, 50% fine sand, mottled, trace fine sub rounded gravel, trace rootlets	AF / SM	5069 4906
1.0		0.0	66	5137 5069			
		0.0	54	5085 5137			
2.0		0.0	72	5172 5085			
		0.0	84	4942 5172			
3.0		0.0	66	4940 4942			
			0.0	78	3'1" Silty Clay: Dark brown (10YR 3/3), moist, stiff, no odor, 30% silt, 5% fine sand, 65% clay, cohesive, medium plasticity, medium toughness	CL	5000 4940
4.0		0.0	66	5066 5000			
		0.0	72	4939 5066			
5.0		0.0	84	4997 4939			
		0.0	84	4972 4997			
6.0			0.0	78			4972

Project Name: SSFL Area IV Radiological Study	Project Number: EP038.01.22.04.03	Subarea: 5C	Group: <u>3</u>	Location ID: <u>151</u>
Drilling Company: Boart Longyear	Driller: Don Hansen	Ground Elevation: NA	Total Depth Drilled: <u>10.0</u> ft bgs.	
Drilling Equipment: 6600 Geoprobe	Borehole Diameter: 1.75 in.	Date/Time Drilling Started: 3-5-12 0910	Date/Time Total Depth Reached: 3-5-12 1005	
Type of Sampling Device: 1.75 macrocore with acetate liner	Samples Collected: One 1/2 Gallon Bag (Approx 8 lbs.) <u>10257(1000)</u>			
Geologist: <u>C. L. Lought</u>	Checked By / Date: <u>Robbins/Goldman 3/6/12</u>			

Radiological Background: <u>17MR/2710/44</u>	Radiological Equipment Used: Micro R / Downhole / Pancake Meters	PID Used: Mini Rae 2000 - Background: <u>0.0</u> ppm
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Depth (ft bgs)	Interval	Recovery	PID	Radiological	Description (Include lithology, grain size, sorting, angularity, Munsell color name & notation, mineralogy, bedding, plasticity, density, consistency, etc., as applicable)	USCS Symbol	Borehole Gamma Readings Feet bgs. 3299 (CPM)
					Surface: soil, gravel, leaves		
0.5			0.0	90	Fill: Silty Sand: Dark yellowish brown (10YR 4/6), moist, medium dense, no odor, 35% silt, 5% fine granitic subrounded gravel, 10% medium sand, 50% fine sand, mottled	AF SM	4125
			0.0	96			4896
1.0			0.0	60			5290
			0.0	78			5219
2.0			0.0	54			5088
			0.0	60			5175
3.0			0.0	90	Sandy silt with ^{clay} sand: Dark yellowish brown (10YR 3/6), moist, medium stiff, no odor, 20% fine sand, 30% clay, 50% silt, cohesive, medium toughness, low plasticity	CK AF ML	4852
			0.0	54	4853		
4.0			0.0	72	Clay with sand: Dark brown (10YR 3/3), moist, stiff, no odor, 10% fine sand, 90% clay, medium to high toughness, medium plasticity, cohesive	CL	4766
			0.0	66			4672
5.0			0.0	60			4843
			0.0	72			4680
6.0			0.0	60			4641

Project Name: SSFL Area IV Radiological Study	Project Number: EP038.01.22.04.03	Subarea: 5c	Group: 3	Location ID: 152
Drilling Company: Boart Longyear HGL	Driller: B. Hanson T. Morse	Ground Elevation: NA	Total Depth Drilled: 10 ft bgs.	
Drilling Equipment: Geoprobe 6600 hand auger	Borehole Diameter: 1.75" 2.75"	Date/Time Drilling Started: 3/23/12 1526	Date/Time Total Depth Reached: 3/23/12 1602	
Type of Sampling Device: 1.75" macrocore with acetate liner hand auger	Samples Collected: (1) 1/2 Gallon Bag (Approx 5 lbs.)		10259-1630	
Geologist: Ian Stone		Checked By / Date: <i>[Signature]</i> 3-27-12		

Radiological Background: 2857 / 80	Radiological Equipment Used: Micro R7 Downhole / Pancake Meters	PID Used: Mini Rae 3000 - Background: 0.0 ppm
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Depth (ft bgs)	Interval	Recovery	PID	Radiological	Description (Include lithology, grain size, sorting, angularity, Munsell color name & notation, minerology, bedding, plasticity, density, consistency, etc., as applicable)	USCS Symbol	Borehole Gamma Readings Feet bgs. No. 5: 3140 (CPM)
0.0			0.0	78	Silty Sand, Brown (4/3 10YR) 60% fine sand, 35% silt, 5% clay, trace gravel, trace rootlets, moist, low dense, no odor or staining	AF/SM	3721
0.5			0.2	66			4706
1.0			0.0	54	Clayey Silt w/sand, Dark Brown (3/2 7.5YR) 10% fine sand, 60% silt, 30% clay, trace gravel, low tough, low strength, med plasticity, no odor or staining, moist.	AF/ML	4880
			0.0	78			4951
2.0			0.0	96			5110
			0.0	60			5464
3.0			0.0	96	Silty Clay w/sand, Dark yellowish brown (3/4 10YR) 10% fine sand, 30% silt, 60% clay, dry, moist, med tough, med strength, med plasticity, no odor or staining	CL	5462
			0.0	60			5523
4.0			0.0	66			5535
			0.0	72			5469
5.0			0.0	72	Sandy Silt/clay, Yellowish brown (5/6 10YR) 30% fine sand, 60% silt, 10% clay, dry, low tough, low strength, low plasticity, no odor or staining	ML	5620
			0.0	66			5634
6.0			0.0	72			5447

Project Name: SSFL Area IV Radiological Study		Project Number: EP038.01.22.04.03	Subarea: 5C	Group: 3	Location ID: 152			
Radiological Background: 2853 / 80		Radiological Equipment Used: Micro R / Downhole / Pancake Meters		PID Used: Mini Rae 3000 - Background: 0.0 ppm				
Depth (ft bgs)	Interval	Recovery	PID	Radiological	Description (Include lithology, grain size, sorting, angularity, Munsell color name & notation, mineralogy, bedding, plasticity, density, consistency, etc., as applicable)	USCS Symbol	Feet bgs.	Borehole Gamma Readings (CPM)
6.0			0.0	72	Sandy Silt w/clay, same as above	ML	6	5447
			0.0	84			7	5786
7.0			0.0	78			7	5788
			0.0	66				5503
8.0			0.0	54	Silty Clay, Dark Brown (3/3 10R) 5% fine sand, 35% silt, 60% clay, dry, med tough, med strength, med plasticity, no odor or plasticity	CL	8	5341
			0.0	54				5400
9.0			0.0	66			9	5141
			0.0	66				5346
10.0			0.0	48	TD = 10ft bgs No gw encountered no anomalies		10	5266
							11	
11.0							12	
							13	

Project Name: SSFL Area IV Radiological Study		Project Number: EP038.01.22.04.03		Subarea: 5C	Group: E	Location ID: 154	
Drilling Company: HydroGeoLogic		Driller: T. Morse		Ground Elevation: NA		Total Depth Drilled: 0.5 ft bgs.	
Drilling Equipment: Trowel/shovel		Borehole Diameter: NA		Date/Time Drilling Started: 3/6/12 1016		Date/Time Total Depth Reached: 3/6/12 1018	
Type of Sampling Device: Trowel/shovel				Samples Collected: One 1/2 Gallon Bag (Approx 8 lbs.) 10262 - 1020			
Geologist: I. Stone				Checked By / Date: Robbins/Goldman 3/7/12			
Radiological Background: 17 / 2947 / 75		Radiological Equipment Used: Micro R / Downhole / Pancake Meters		PID Used: Mini Rae 2000 - Background: 0.0 ppm			
Depth (ft bgs)	Interval	Recovery	PID	Radiological	Description (Include lithology, grain size, sorting, angularity, Munsell color name & notation, mineralogy, bedding, plasticity, density, consistency, etc., as applicable)	USCS Symbol	Borehole Gamma Readings (CPM)
0.5			0.0	17/66	<p><i>MR/pancake</i></p> <p>Sandy Silt, Dark yellowish brown (4/4 10YR) 40% fine sand, 60% silt, trace fine gravel, trace rootlets, dry, low strength, low toughness, no odor or staining</p> <p>TD = 0.5 ft bgs no gw encountered</p>	<i>ML</i>	
1.0			0.0	12/62			
2.0							
3.0							
4.0							
5.0							
6.0							

SSFL BORING LOG

Project Name: SSFL Area IV Radiological Study	Project Number: EP038.01.22.04.03	Subarea: 5C	Group: 6	Location ID: 154
Drilling Company: Boart Longyear	Driller: Don Hansen	Ground Elevation: NA	Total Depth Drilled: 9'10" 33 f.bgs.	
Drilling Equipment: 6600 Geoprobe	Borehole Diameter: 1.75 in.	Date/Time Drilling Started: 3/6/12 1035	Date/Time Total Depth Reached: 3/6/12 1049	
Type of Sampling Device: 1.75 macrocore with acetate liner	Samples Collected: 10263 - 1125		One 1/2 Gallon Bag (Approx 8 lbs.)	
Geologist: I. Stone	Checked By / Date: Robbins Feldman 3/7/12			

Radiological Background: 17 / 2947 / 75	Radiological Equipment Used: Micro R / Downhole / Pancake Meters	PID Used: Mini Rae 2000 - Background: 0.0 ppm
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Depth (ft bgs)	Interval	Recovery	PID	Radiological	Description (Include lithology, grain size, sorting, angularity, Munsell color name & notation, minerology, bedding, plasticity, density, consistency, etc., as applicable)	USCS Symbol	Borehole Gamma Readings (CPM)
0.0			0.0	66	Sandy Silt, dark yellowish brown (4/4 10YR), 40% fine sand, 60% silt, dry, trace fine gravel, trace fossils, low strength, low toughness, low plasticity, no odor or staining	AF/ML	3054
0.5			0.0	78	Sandy Silt w/ Clay.	ML	4338
1.0			0.0	78	Dark yellowish brown (4/6 10YR), 25% fine sand, 65% silt, 10% clay, dry, low toughness, low strength, low-med plasticity, no odor or staining		5012
1.5			0.0	60			5160
2.0			0.0	78			5196
2.5			0.0	54			5037
3.0			0.0	72	Silty Clay, Brown (4/3 7.5YR)	CL	4708
3.5			0.0	54	5% fine sand, 35% silt, 60% clay, dry, med-high strength, med-high toughness, med plasticity, no dilatancy, no odor or staining		4717
4.0			0.0	78			4643
4.5			0.0	72			4326
5.0			0.0	66			4065
5.5			0.0	72			4045
6.0			0.0	60			4432



Project Name: SSFL Area IV Radiological Study	Project Number: EP038.01.22.04.03	Subarea: 5C	Group: 6	Location ID: 155
Drilling Company: HydroGeoLogic	Driller: T. Morse	Ground Elevation: NA	Total Depth Drilled: 0.5 ft bgs.	
Drilling Equipment: Trowel/shovel	Borehole Diameter: NA	Date/Time Drilling Started: 3/6/12 1258	Date/Time Total Depth Reached: 3/6/12 1300	
Type of Sampling Device: Trowel/shovel	Samples Collected: One 1/2 Gallon Bag (Approx. 8 lbs.)		10264-1305	
Geologist: I. Stone		Checked By / Date: J. Robbins, J. Goldman 3/7/12		

Radiological Background: 16 / 2922 / 80	Radiological Equipment Used: Micro R / Downhole / Pancake Meters	PID Used: Mini Rae 2000 - Background:	0.0 ppm
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Depth (ft bgs)	Interval	Recovery	PID	Radiological	Description (Include lithology, grain size, sorting, angularity, Munsell color name & notation, mineralogy, bedding, plasticity, density, consistency, etc., as applicable)	USCS Symbol	Borehole Gamma Readings (CPM)
0.0			0.0	17/90	Sandy Silt, Dark yellowish brown (4/4 104R), 40% fine sand, 60% silt, trace fine gravel, trace pebbles, dry, low strength, low toughness, low plasticity, no odor or skinning TD = 0.5 ft bgs	AF/ML	
0.5			0.0	17/66			
1.0							1
2.0							2
3.0							3
4.0							4
5.0							5
6.0							6

Project Name: SSFL Area IV Radiological Study	Project Number: EP038.01.22.04.03	Subarea: 5C	Group: 6	Location ID: 155
Drilling Company: Boart Longyear	Driller: Don Hansen	Ground Elevation: NA	Total Depth Drilled: 7 ft bgs.	
Drilling Equipment: 6600 Geoprobe	Borehole Diameter: 1.75 in.	Date/Time Drilling Started: 3/6/12 1310	Date/Time Total Depth Reached: 3/6/12 1325	
Type of Sampling Device: 1.75 macrocore with acetate liner	Samples Collected: 10265 - 1345		One 1/2 Gallon Bag (Approx 8 lbs.)	
Geologist: I. Stone	Checked By / Date: J. Robbins / 3/7/12			

Radiological Background: 16 / 2922 / 80	Radiological Equipment Used: Micro R / Downhole / Pancake Meters	PID Used: Mini Rae 2000 - Background: 2.0 ppm
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Depth (ft bgs)	Interval	Recovery	PID	Radiological	Description (Include lithology, grain size, sorting, angularity, Munsell color name & notation, minerology, bedding, plasticity, density, consistency, etc., as applicable)	USCS Symbol	Borehole Gamma Readings (CPM)
0.0			0.0	84	Sandy Silt, Dark yellowish brown (4/4 104R), 40% fine sand, 60% silt, trace fine gravel, trace rocks, dry, low strength, low toughness, low plasticity, no odor or staining	AF/ML	2910
0.5			0.0	66	Sandy Silt w/ clay, Dark yellowish brown (4/6 104R), 30% fine sand, 60% silt, 10% clay, dry, low toughness, low strength, low-med plasticity, no odor or staining	ML	4001
1.0			0.0	78			5105
			0.0	54			5128
2.0			0.0	72	Silty Clay, Brown (4/3 7.5YR), 5% fine sand, 35% silt, 60% clay, dry, med strength, med toughness, med plasticity, no dilating, no odor or staining	CL	5000
			0.0	78			4717
3.0			0.0	72			4708
			0.0	60			4684
4.0			0.0	54			4812
			0.0	48	Sandy Silt, Yellowish Brown (5/4 104R), 25% fine sand, 5% medium sand, 65% silt, 5% clay, dry, low-med toughness, low-med strength, low plasticity, no odor or staining	ML	4850
5.0			0.0	66			4510
			0.0	78			4587
6.0			0.0	84			4784

Project Name: SSFL Area IV Radiological Study				Project Number: EP038.01.22.04.03	Subarea: 5C	Group: 6	Location ID: 155
Radiological Background: 16 / 2922 / 80				Radiological Equipment Used: Micro R / Downhole / Pancake Meters		PID Used: Mini Rae 2000 - Background: 0.0 ppm	
Depth (ft bgs)	Interval	Recovery	PID	Radiological	Description (Include lithology, grain size, sorting, angularity, Munsell color name & notation, minerology, bedding, plasticity, density, consistency, etc., as applicable)	USCS Symbol	Borehole Gamma Readings (CPM)
6.0			0.0	84	Silty Sand, Dark yellowish brown (4/6 10YR), 70% fine sand, 30% silt, med dense, no odor or staining, moist	SM	4784
			2.0	66	Sand, Brownish yellow (5/6 10YR), (weathered sandstone)	SP	5157
7.0			0.0	96	95% fine sand, 5% silt, moist, med-high dense, no odor or staining		5041
8.0					TO = 7 ft bgs no gw encountered refusal on sandstone no anomalies detected		
9.0							
10.0							
11.0							
12.0							
13.0							

Project Name: SSFL Area IV Radiological Study	Project Number: EP038.01.22.04.03	Subarea: 5C	Group: 6	Location ID: 156
Drilling Company: Boart Longyear	Driller: Don Hansen	Ground Elevation: NA	Total Depth Drilled: 6.5 ft bgs.	
Drilling Equipment: 6600 Geoprobe	Borehole Diameter: 1.75 in.	Date/Time Drilling Started: 3/6/12 0837	Date/Time Total Depth Reached: 3/6/12 0852	
Type of Sampling Device: 1.75 macrocore with acetate liner	Samples Collected: One 1/2 Gallon Bag (Approx 8 lbs.)		10267 - 0925	
Geologist: I. Stone	Checked By / Date: J. Robbins Goldman 3/7/12			

Radiological Background: 18 / 3242 / 85	Radiological Equipment Used: Micro R / Downhole / Pancake Meters	PID Used: Mini Rae 2000 - Background: 0.0 ppm
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Depth (ft bgs)	Interval	Recovery	PID	Radiological	Description (Include lithology, grain size, sorting, angularity, Munsell color name & notation, minerology, bedding, plasticity, density, consistency, etc., as applicable)	USCS Symbol	Feet bgs.	Borehole Gamma Readings 6.5 = 3153 (CPM)	
0.0			0.0	108	Sandy silt, Dark yellowish Brown (4/4 10YR), 40% fine sand, 60% silt, trace fine gravel, trace rootlets, low strength, low toughness, low plasticity, dry, no odor or staining	ML		4059	
0.5			0.0	54				4765	
1.0			0.0	66			Sandy silt w/ clay, Dark yellowish Brown (4/6 10YR), 25% fine sand, 65% silt, 10% clay, dry, low tough, low strength, low-med plasticity, no odor or staining		5130
			0.0	54					5106
2.0			0.0	48	Silty clay, Brown (4/3 7.5)YR 5% fine sand, 35% silt, 60% clay, dry, med-high strength, med-high toughness, med plasticity, no odor or staining	CL	2	4794	
			0.0	54				4853	
3.0			0.0	60				4763	
			0.0	84				4843	
4.0			0.0	54				4860	
			0.0	72				4810	
5.0			0.0	66	Silty clay w/ sand, Brown (4/3 10YR) 10% fine sand, 40% silt, 50% clay, dry, med toughness, med strength med plasticity, no odor or staining	CL	5	4816	
			0.0	66				4822	
6.0			0.0	78				4382	

Project Name: SSFL Area IV Radiological Study		Project Number: EP038.01.22.04.03		Subarea: 5C	Group: 6	Location ID: 157	
Drilling Company: HydroGeoLogic		Driller: J. Morse		Ground Elevation: NA		Total Depth Drilled: 0.5 ft bgs.	
Drilling Equipment: Trowel/shovel		Borehole Diameter: NA		Date/Time Drilling Started: 3-5-12 1335		Date/Time Total Depth Reached: 3-5-12 1345	
Type of Sampling Device: Trowel/shovel				Samples Collected: One 1/2 Gallon Bag (Approx 8 lbs.)			
Geologist: C. Knight				Checked By / Date: J. Robbins, J. Alderman 3/6/12			
Radiological Background: 17MR/2899/71		Radiological Equipment Used: Micro R / Downhole / Pancake Meters		PID Used: Mini Rae 2000 - Background: 0.0		ppm	
Depth (ft bgs)	Interval	Recovery	PID	Radiological	Description (Include lithology, grain size, sorting, angularity, Munsell color name & notation, minerology, bedding, plasticity, density, consistency, etc., as applicable)	USCS Symbol	Borehole Gamma Readings (CPM)
0.5			0.0	17	Surface Soil and gravel	AF	
			0.0	17	Fill: Sandy Silt: Brown (10YR 5/3), dry, medium stiff, no odor, 20% fine sand, 80% silt, cohesive, low plasticity, low toughness, with trace concrete	ML	
1.0			CL				1
			CL				
2.0			CL				2
			CL				
3.0			CL				3
			CL				
4.0			CL				4
			CL				
5.0							5
6.0							6

T D: 0.5' bgs
No GW encountered

Project Name: SSFL Area IV Radiological Study	Project Number: EP038.01.22.04.03	Subarea: 5C	Group: 6	Location ID: 157
Drilling Company: Boart Longyear	Driller: Don Hansen	Ground Elevation: NA	Total Depth Drilled: 10.0 ft bgs.	
Drilling Equipment: 6600 Geoprobe	Borehole Diameter: 1.75 in.	Date/Time Drilling Started: 3-5-12 1400	Date/Time Total Depth Reached: 3-5-12 1445	
Type of Sampling Device: 1.75 macrocore with acetate liner	Samples Collected: One 1/2 Gallon Bag (Approx 8 lbs.) 10269(1440)			
Geologist: C. Knight	Checked By / Date: J. Robbins / 3/6/12			

Radiological Background: DRR/2899/71	Radiological Equipment Used: Micro R / Downhole / Pancake Meters	PID Used: Mini Rae 2000 - Background: 0.0 ppm
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Depth (ft bgs)	Interval	Recovery	PID	Radiological	Description	USCS Symbol	Borehole Gamma Readings (CPM)
					Surface: soil and grass		40.5' 2894
0.5			0.0	96	Fill: Sandy Silt: Brown (10YR 5/3), dry, medium dense, stiff, no odor, 20% fine sand, 80% silt, cohesive, low toughness, low plasticity, trace concrete	AF ML	3166
			0.0	72	Same as above: without concrete	ML	4591
1.0			0.0	78			5023
			0.0	46			6290
2.0			0.0	78			5277
			0.0	72			4901
3.0			0.0	66	2' li" Silty Clay: Dark yellowish brown (10YR 3/4), moist, stiff, no odor, 5% fine sand, 15% silt, 80% clay, cohesive, medium plasticity, medium toughness	CL	4737
			0.0	60			4788
4.0			0.0	66			4861
			0.0	72			4630
5.0			0.0	66			4777
			0.0	78	Clayey Silt with Sand: Light yellowish brown (10YR 6/4), moist, stiff, no odor, 25% clay, 15% fine sand, 60% silt, cohesive, low plasticity, low toughness, no dilatancy	ML	4709
6.0			0.0	90			4680

