

**NYE COUNTY NUCLEAR WASTE REPOSITORY PROJECT OFFICE**

**CUTTINGS SAMPLE LOG**

Borehole ID: NC-GWE-GF-OV-1 Drill Depth From: 0.0 to 120 ft Page: 1 of 2

Driller: Evan Barto/Ray Wilson Start Date/Time: 11/14/10 at 0823 End Date/Time: 1/12/11 at 1113

Drilling Equip./Method: Bucket Auger/16" Auger IR. TH-60/Conventional Air-Foam Sampling Equip. Method: Auger/Cyclone Collector

DEPTH (FEET)	Drilling Time (min/5 ft)	DESCRIPTION OF LITHOLOGY-PETROLOGY	GRAPHIC LOG	LITHOLOGIC UNIT	NOTES
0-10	22	0-20 ft Organic Clay (OL): brown (10YR 5/3), clay is firm, stiff, dense, and moist. Contains 1-2% organics (roots), 3 to 5% very fine sand, organic odor, strong reaction to HCl, moderate plasticity. @ 7 ft moisture increases.		Qal	All colors logged wet.  Clay is dense and difficult to auger.
10-15	65	@ 9 ft saturated, clay becomes soft, color changes to light brownish-gray (10YR 6/2) @ 9.5 ft clay is very dark gray (5Y 3/1), organic and strong odor, plasticity increases to moderately high. Samples are wet.			Water at 9 ft flowing into auger hole from sidewall. Note: encountered artesian flowing conditions when the borehole depth was advanced to 30 ft.
15-20	57				Due to saturated conditions of sediments it was not necessary to use drilling additives (foam) to advance the borehole.
20-25	13				
25-30	1	20 to 29 ft Organic Clay (OH), very dark gray (2.5YR 3/1) fat clay with high plasticity, 1 to 2% gravel clasts up to ¼" in size, gravels are dark gray (2.5YR 3/1) and volcanic in origin, gravels are rounded to sub-rounded. Reacts strongly to 10% HCl. No cementation observed. Samples are wet. Strong odor.			
30-35	1				
35-40	7	29 to 40 ft Poorly Graded Sand (SP): black (GLE Y 1 2.5/N) to dark reddish-brown (2.5YR ¼). Gravels are fine to coarse with clasts up to 2" in size. Clasts are volcanic in origin and are sub-rounded to sub-angular. Some fine to coarse sand up to 35%. Gravels have no cementation. Reacts strongly to 10% HCl. @30 ft thin layer of brown, fat clay. Samples are wet.			@ 30 ft bit chattering on cobbles. Also gravels are falling out of formation and contaminating samples below 30 ft.
40-45	3				
45-50	2	@ 40 to 60 ft Poorly Graded Sand (SP): dark gray (2.5Y 4/1) 100% fine and medium sand. Grains are sub-rounded to rounded, volcanic in origin, and no cementation is observed. Weak to no reaction to 10% HCl. Samples are wet.			@ 40 ft gravels are contamination from above.
50-55	2				
55-60	4	@ 57 ft approximately 1 ft layer of 10% gravel clasts, gravels are predominantly volcanic in origin with less than 1% quartz clasts.			
60-65	5				
65-70	7	60 to 120 ft TD. Silty Sand (SM): dark gray (2.5Y 4/1). Silt content ranges from 12 to 50% and increases with depth. Samples contain up to 1% organic wood fragments. Material is volcanic in origin. Reacts weakly to 10% HCl. Samples are wet.			
70-75	7				
75-80	9				
80-85	7				
85-90	6				
90-95	2				
95-100	9				
100-120	5			100 to 120 ft no recovery.	

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**CONTINUATION**

Borehole ID: NC-GWE-OV-1    Drill Depth From: 0.00' to 120'    Page: 2 of 2

DEPTH (FEET)	Drilling Time (min/5 ft)	DESCRIPTION OF LITHOLOGY-PETROLOGY	GRAPHIC LOG	LITHOLOGIC UNIT	NOTES
110	7			Qal.	
110	5				
110	7				
120	4	120 ft TD.			
120					
0					
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