

NYE COUNTY NUCLEAR WASTE REPOSITORY PROJECT OFFICE

CUTTINGS SAMPLE LOG

Borehole ID: NC-GWE-PV-4 Drill Depth From: 0 to 180 Page: 1 of 2

Driller: Bill Nelson Start Date/Time: 05/20/2010 @ 1132 End Date/Time: 06/05/2010 @ 1130

Drilling Equip./Method: Ford Bucket/Auger Speedstar 50k/Conventional Air-Foam Sampling Equip. Method: Auger to 20 ft/Cyclone from 20 to 180 ft.

DEPTH (FEET)		Drilling Time (min/5 ft)	DESCRIPTION OF LITHOLOGY-PETROLOGY	GRAPHIC LOG	LITHOLOGIC UNIT	NOTES
10		13	From 0 to 180 ft: Clay (CL): Moderate yellowish-brown (10YR 5/4). No gravel, no sand, no cement, high plasticity, dense, moderately hard, strong reaction to HCl acid, dry.		Qal	Dry from surface to 5 ft.
		33	@ 5 ft: Slightly moist. @ 8 ft: Presence of calcium carbonate cement.			Becomes slightly moist.
		28	@ 12 ft: Material changes color to very pale orange (10YR 8/2) and becomes softer. @ 14 ft: Moisture increases.			
		32	Same material to 20 ft.			Set surface casing at 20 ft.
20		2	@ 20 ft: Same as described above. There appears to be some undetermined silt content to this material.			Begin drilling at 20 ft with conventional air-foam methods. All samples are wet due to wet drilling.
		4	@ 25 ft: 10% weakly cemented clay fragments.			
		2				Material is very uniform.
		2				
40		2				
		2				
		2				
		2				
50		2				
		3				
		2	@ 60 ft: 20% weakly cemented clay fragments.			
		5	@ 65 ft: <5% weakly cemented clay fragments.			
70		2	@ 70 ft: 20% weakly cemented clay fragments and clay balls present.			
		2				Static water at 75 ft bgs.
		2	@ 80 ft: 5% weakly cemented clay fragments, 10% sand content.			
		3				
90		2	@ 90 ft: <1% popcorn caliche up to ½ inch size.		↓ Qal	
		2	@ 95 ft: 10% popcorn caliche up to ½ inch size.			

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CONTINUATION

Borehole ID NC-GWE-PV-4 Drill Depth From 0 To 180 ft Page 2 of 2

DEPTH (FEET)		Drilling Time (min/5 ft)	DESCRIPTION OF LITHOLOGY-PETROLOGY	GRAPHIC LOG	LITHOLOGIC UNIT	NOTES	
110		1	@ 100 ft: 2% caliche up to ½ inch in size.		Qal		
		2	@ 105 ft: 10% weakly cemented clay fragments.				
		1					
		2	@ 115 ft: 1% weakly cemented clay fragments.				
120		2	@ 120 ft: clay balls present.				
		4	@ 125 ft: 15% weakly cemented clay fragments.				
130		1	@ 130 ft: 60% of sample is clay balls.				
		1					
140		1					
		2					
150		1	@ 150 ft: 10% clay balls, 20% clay fragments up to ¼ inch in size.				
		1	@ 155 ft: 50% clay fragments up to ¼ inch in size.				
160		1					
		2					
170		1	@ 170 ft: <5% clay fragments.				
		1	@ 175 ft: 1% popcorn caliche present to T.D.				T.D. hole at 180 ft.
180						Qal	
190							
200							

PREPARED BY Jim Foster/Bob Wilcoxon DATE 06/05/2010 CHECKED BY Bob Wilcoxon DATE 06/05/2010