

# 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.
	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				
	2				
	2				
20	3				
	2	@ 60 ft: 20% weakly cemented clay fragments.			
	5	@ 65 ft: <5% weakly cemented clay fragments.			
	2	@ 70 ft: 20% weakly cemented clay fragments and clay balls present.			
	2				Static water at 75 ft bgs.
	2				
	3				
	2	@ 80 ft: 5% weakly cemented clay fragments, 10% sand content.			
	2				
	3	@ 90 ft: <1% popcorn caliche up to ½ inch size.			
90	2	@ 95 ft: 10% popcorn caliche up to ½ inch size.			
	2			Qal	

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## CUTTINGS SAMPLE LOG

## 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 $\frac{1}{2}$ inch in size.		Qal	
	2	@ 105 ft: 10% weakly cemented clay fragments.			
120	1	@ 115 ft: 1% weakly cemented clay fragments.			
	2	@ 120 ft: clay balls present.			
130	2	@ 125 ft: 15% weakly cemented clay fragments.			
	4	@ 130 ft: 60% of sample is clay balls.			
140	1				
	1				
150	1	@ 150 ft: 10% clay balls, 20% clay fragments up to $\frac{1}{4}$ inch in size.			
	2	@ 155 ft: 50% clay fragments up to $\frac{1}{4}$ inch in size.			
160	1				
	1				
170	2	@ 170 ft: <5% clay fragments.			
	1				
180	1	@ 175 ft: 1% popcorn caliche present to T.D.			T.D. hole at 180 ft.
	1			Qal	
190					
200					