

# NYE COUNTY NUCLEAR WASTE REPOSITORY PROJECT OFFICE

## CUTTINGS SAMPLE LOG

Borehole ID NC-EWDP-12P/B Drill Depth From 0 To 60 (T.D. = 400.0') Page 1 of 7  
Driller BRYAN MORRIS Start Date/Time 3-28-00/0942 End Date/Time 3-30-00/1013  
Drilling Equip./Method AP-1000/HAMMER Sampling Equip. Method CYCLONE  
9.5" crowd out bit

DEPTH (Feet)	Top/Bottom of Cuttings Sample Interval	Description of Lithology - Petrology	GRAPHIC LOG	LITHOLOGIC UNIT	Notes
5	BCS0000 3901 2 MIN	SILTY SAND: Trace fine ang gravel, fine sand Very pale orange (10YR 8/2)			0942 Strong HCl reaction
10	BCS0000 3902 2 MIN				Strong HCl reaction
15	BCS0000 3903 2 MIN				Mod HCl reaction
20	BCS0000 3904 1 MIN				Weak HCl reaction
25	BCS0000 3905 1 MIN	Pale yellow brn (10YR 6/2)			No HCl reaction
30	BCS0000 3906 1 MIN	SILTY SAND: Trace fine gravel, well graded sand, very pale orange (10YR 8/2)			No HCl reaction
35	BCS0000 3907 1 MIN	Decreased silt			No HCl reaction
40	BCS0000 3908 1 MIN	Increased silt & fine gravel			No HCl reaction
45	BCS0000 3909 1 MIN	GRAVELLY SAND: Predom fine subang - subbrnd gravel, well graded sand, some silt, Lt brn (5YR 6/4)			No HCl reaction
50	BCS0000 3910 1 MIN	Increased fine gravel			No HCl reaction
55	BCS0000 3911 1 MIN				No HCl reaction
60	BCS0000 3912 2 MIN	Some coarse subbrnd - subang gravel			No HCl reaction

Prepared By KEN DONNELSON Date 3-28-00 Checked By JAMIE WALKER

2703  
QUALITY ASSURANCE RECORD  
NO HCl reaction  
MAY - 9 2000  
THIS IS A REF STAMP  
QUALITY ASSURANCE RECORD E  
MAY - 9 2000  
Date 3-8-00  
THIS IS A REF STAMP  
DO NOT REMOVE FROM FILE  
REV. 1

# NYE COUNTY NUCLEAR WASTE REPOSITORY PROJECT OFFICE

## CUTTINGS SAMPLE LOG

CONTINUATION

Borehole ID NC-EWDP-12PB Drill Depth From 60 To 125 Page 2 of 7

DEPTH (Feet)	Top/Bottom Sample of Cuttings Interval	Description of Lithology - Petrology	GRAPHIC LOG	LITHOLOGIC UNIT	Notes
65	BCS0000 3913 1 MIN	Decreased silt, some non-calcareous cemented sand zones.			No HCl reaction
70	BCS0000 3914 3 MIN	Increased silt, some non-calc cem zones			No HCl reaction
75	BCS0000 3915 6 MIN	SANDY GRAVEL: Predom fine subround gravel, well graded sand, some caliche cemented zones. Very pale orange (10YR 8/2) - Grayish orange (10YR 7/4)			Strong HCl reaction
80	BCS0000 3916 3 MIN	Increased silt, Lt brn (5YR 6/4)			Strong HCl reaction
85	BCS0000 3917 2 MIN	Decreased silt & increased sand			Strong HCl reaction
90	BCS0000 3918 2 MIN	GRAVELLY SAND: Trace - some silt, predom fine gravel, well graded sand, Lt brn (5YR 6/4 - 5/6)			No HCl reaction
95	BCS0000 3919 2 MIN	Decreased silt, some fine caliche layers			Strong HCl reaction
100	BCS0000 3920 3 MIN	SAND: Trace - some silt, trace fine gravel, well graded sand, Lt brn (5YR 5/6)			Mod HCl reaction
105	BCS0000 3921 2 MIN	Decreased silt & increased gravel			No HCl reaction
110	BCS0000 3922 1 MIN				No HCl reaction
115	BCS0000 3923 2 MIN				No HCl reaction
120	BCS0000 3924 2 MIN	Some coarse gravel, Increased fine sand (Trace moisture)			No HCl reaction
125	BCS0000 3925 2 MIN	SILTY SAND: Trace - some fine gravel, fine sand, Lt brn (5YR 5/6) (some moisture)			No HCl reaction

Prepared By KEN DONNELSON Date 3-28-00 Checked By JAMIE WALKER Date 5-8-00

REV.

**NYE COUNTY NUCLEAR WASTE REPOSITORY PROJECT OFFICE**

**CUTTINGS SAMPLE LOG**

CONTINUATION

Borehole ID NC-EWDP-12PB Drill Depth From 125 To 190 Page 3 of 7

DEPTH (Feet)	Top/Bottom of Cuttings Sample Interval	Description of Lithology - Petrology	GRAPHIC LOG	LITHOLOGIC UNIT	Notes
	BCS0000 3926	Some well graded sand (some moisture)			No HCl reaction
139	2 MIN BCS0000 3927	SAND: Trace fine gravel, trace-some silt, well graded sand, Lt brn (5YR 5/6)			No HCl reaction
135	4 MIN BCS0000 3928	Increased fine gravel, trace coarse gravel			No HCl reaction
140	2 MIN BCS0000 3929	GRAVELLY SAND: Predom fine submd gravel, well graded sand, trace silt, Lt brn (5YR 6/4- 5/6)			No HCl reaction No HCl reaction
145	4 MIN BCS0000 3930	Trace of clay			No HCl reaction
150	2 MIN BCS0000 3931				No HCl reaction
155	8 MIN BCS0000 3932	Increased coarse gravel & cobbles			No HCl reaction
160	7 MIN BCS0000 3933				No HCl reaction
165	9 MIN BCS0000 3934	CLAYEY SAND & GRAVEL, predom fine submd gravel, well graded sand, low plasticity, Lt brn (5YR 6/4- 5/6). Moist			No HCl reaction
	3 MIN BCS0000 3935	0728, 3-30-00 (WITH BIT AT 380') Decreased gravel & clay			No HCl reaction
175	4 MIN BCS0000 3936	Increased clay, saturated - but not yielding water.			No HCl reaction
180	3 MIN BCS0000 3937	SANDY & GRAVELLY CLAY: coarse sand, fine gravel, low-med plasticity, Lt brn (5YR 5/6) saturated.			No HCl reaction
185	3 MIN BCS0000 3938	GRAVELLY SAND: Fine gravel, coarse angular sand, grayish red (10R 4/2) - mod brn (5YR 4/4)			No HCl reaction FIRST WATER NOTICED AT 188'
190	3 MIN				1323, 3-28-00

Prepared By KEN DOWNER Date 3-28-00 Checked By JAMIE WALKER Date 5-8-00

# NYE COUNTY NUCLEAR WASTE REPOSITORY PROJECT OFFICE

## CUTTINGS SAMPLE LOG

CONTINUATION

NC-EWDP-12PB  
Borehole ID \_\_\_\_\_ Drill Depth From 190 To 255 Page 4 of 7

DEPTH (Feet)	Top/Bottom of Cuttings Sample Interval	Description of Lithology - Petrology	GRAPHIC LOG	LITHOLOGIC UNIT	Notes
195	BCS0000 3939 3 MIN	CLAYEY SAND & GRAVEL: Coarse sand, fine angular gravel, low plasticity, Lt brn (SYR 6/4)			No HCl reaction
200	BCS0000 3940 4 MIN	SANDY & GRAVELLY CLAY: Well graded sand & subrad gravel, low-med plasticity (SYR 6/4)			No HCl reaction
205	BCS0000 3941 2 MIN	Predom sandy-silty clay, med-high plast.			No HCl reaction
210	BCS0000 3942 4 MIN	Increased sand			No HCl reaction
215	BCS0000 3943 3 MIN	GRAVEL: Fine angular, multicolored			No HCl reaction
220	BCS0000 3944 2 MIN	CLAYEY SAND: Fine sand, low-med plasticity, Lt brn (SYR 6/4)			No HCl reaction
225	BCS0000 3945 1 MIN	SANDY CLAY: Fine sand, med-high plasticity, Lt brn (SYR 6/4)			No HCl reaction
230	BCS0000 3946 3 MIN	some gravel			No HCl reaction
235	BCS0000 3947 2 MIN	CLAYEY SAND: Some fine ang gravel, coarse sand, Lt brn (SYR 6/4)			No HCl reaction
240	BCS0000 3948 3 MIN	SANDY CLAY: Fine sand, trace-some gravel, Lt brn (SYR 6/4), med-high plasticity			No HCl reaction
245	BCS0000 3949 2 MIN	SILTY CLAY: Med plasticity, Lt brn (SYR 6/4) - gray orange (10YR 7/4) - dk yel orange (10YR 6/6) trace wht non-calc on bedding			No HCl reaction
250	BCS0000 3950 4 MIN	SILTY CLAY: low-med plasticity, pale yellow brn (10YR 6/2) Consid silt. Some wht non-calc veinlets			No HCl reaction
255	BCS0000 3951 2 MIN	Increased fine sand			No HCl reaction

Prepared By KEN DONNELSON Date 3-28-00 Checked By JAMIE WALKER Date 5-8-00

NYE COUNTY NUCLEAR WASTE REPOSITORY PROJECT OFFICE

CUTTINGS SAMPLE LOG

CONTINUATION

Borehole ID NC-EWDP-12PB Drill Depth From 255 To 320 Page 5 of 7

DEPTH (Feet)	Top/Bottom of Cuttings Sample Interval	Description of Lithology - Petrology	GRAPHIC LOG	LITHOLOGIC UNIT	Notes
	BCS0000 3952				No HCl reaction
260	1 MIN BCS0000 3953				
265	1 MIN BCS0000 3954				
270	2 MIN BCS0000 3955	Traces of coarse ang orange sand & fine gravel clasts, partially welded xtal-rich tuff with minor matrics			
275	2 MIN BCS0000 3956				
280	2 MIN BCS0000 3957				
285	1 MIN BCS0000 3958				
290	2 MIN BCS0000 3959	Increased fine angular orange gravel clasts with depth, as above			
295	2 MIN BCS0000 3960				
300	2 MIN BCS0000 3961				3-28-00, 1627
305	4 MIN BCS0000 3962				3-29-00, 0943
310	4 MIN BCS0000 3963				No HCl reaction
315	4 MIN BCS0000 3964				
320	2 MIN	CLAYEY SAND & GRAVEL: Coarse angular sand, fine ang gravel, some coarse gravel. gravel consists of gray red (SR 4/2) welded tuff with flattened weathered pumice			

Prepared By KEN DONNELSON Date 3-29-00 Checked By JAMIE WALKER Date 5-8-00

NYE COUNTY NUCLEAR WASTE REPOSITORY PROJECT OFFICE

CUTTINGS SAMPLE LOG

CONTINUATION

NC-EWDP-12PB  
 Borehole ID \_\_\_\_\_ Drill Depth From 320 To 385 Page 6 of 7

DEPTH (Feet)	Top/Bottom of Cuttings Sample Interval	Description of Lithology - Petrology	GRAPHIC LOG	LITHOLOGIC UNIT	Notes
325	BCS0000 3965 12 MIN	TUFFACEOUS SANDSTONE: Fine grained, mod hard Lt red (5R 6/6) - Mod red (5R 4/6) in contact with Lt brn gry (5YR 6/1), fine biotite, xtal rich, volcanoclastic, some fine "lichen" MnOx.			No HCl reaction
	BCS0000 3966 22 MIN				
335	BCS0000 3967 58 MIN	CONGLOMERATE?: Cobbles and gravel in a sandy clay matrix. Abundant lithics, Lt brn (5YR 6/4-5/6) mud flow?			
340	BCS0000 3968 6 MIN	CONGLOMERATE?: Predom fine gravels, gry brn (5YR 3/2) - Dark yellow orange (10YR 6/6) Abundant lithics			
345	BCS0000 3969 11 MIN	TUFFACEOUS SANDSTONE: v. f. grained, some fine MnOx - yel gry (5Y 8/1) - gry orange (10YR 7/4) volcanoclastic (ash?)			No HCl reaction
350	BCS0000 3970 14 MIN	PYROCLASTIC Flow: Coarse grained, porphyritic, xtal rich, some mafics, white (N9) - yel gry (5Y 8/1) & gry orange pink (10R 8/2) - mod pink (5R 7/4)			No HCl reaction
355	BCS0000 3971 11 MIN	Limonic stain, DK yel orange (10YR 6/6) & mod pink (5R 7/4)			
360	BCS0000 3972 9 MIN	Predom white (N9) with some mod pink (5R 7/4)			
365	BCS0000 3973 14 MIN	Increased Mod red orange (10R 6/6) Coarse pale yel orange (10YR 8/6) grains			
370	BCS0000 3974 24 MIN	Increased Mod red (5R 4/6)			
375	BCS0000 3975 49 MIN	All Mod red (5R 4/6)			
380	BCS0000 3976 19 MIN				3-29-00, 1652
385	BCS0000 3977 28 MIN	Pale yellow orange (10YR 8/6), DK yel orange (10YR 6/6) & gry yell (5Y 8/4)			3-30-00, 0750 No HCl reaction

Prepared By K. DONNELSON Date 3-30-00 Checked By JAMIE WALKER Date 5-8-00


REV.

**NYE COUNTY NUCLEAR WASTE REPOSITORY PROJECT OFFICE**

**CUTTINGS SAMPLE LOG**

CONTINUATION

Borehole ID NC-EWDP-12PB      Drill Depth From 385 To 400      Page 7 of 7

DEPTH (Feet)	Top/Bottom of Cuttings Sample Interval	Description of Lithology - Petrology	GRAPHIC LOG	LITHOLOGIC UNIT	Notes
	BCS0000 3978	Slightly lighter than above			No HCl reaction
390	26 MIN BCS0000 3979	Becoming porphyritic. Soft, very pale orange (10YR 8/2) zeolite (?) clasts (<6mm) increasing.  Mod pink (10R 7/4) - Mod red orange (10R 6/6)			
395	22 MIN BCS0000 3980				
400	20 MIN				
					3-30-00, 1013
					TOTAL DEPTH

Prepared By KEN DONNELSON      Date 3-30-00      Checked By JAMIE WALKER      Date 5-8-00