Alluvium Drill Cuttings Logging Form - Nye County Nuclear Waste Repository Project Office

Borehole ID: **NC-EWDP-22PC** (Phase 5) Driller/Drilling Company: Shawn Cain/Boart Longyear Drilling Method: Dual Rotary/Conventional Return Alluvium Depth (ft bgs): 0 to 763 Start Date: 10/14/2004 End Date: 10/20/2004

Date Logged	Logged By (Initials)	Date Checked	Checked By (Initials)	Sample Number	Depth Interval (feet bgs)		Drilling Data					Sample Density Measurements			Munsell Color Symbol	Moisture Content			Particle Size Distribution (%)					Gra-ding		Estimated Plasticity				USCS Group Symbol	Gravel/Sand GrainShape				Cementation				HCL Reaction			Major Rock Type (%)		
					From	To	Liquid Drilling Fluid Injection Rate (gpm)	Drilling Rate (feet/min)	Water Production (gpm)	Sample Recovery (gallons)	Borehole Diameter (inches)	Tare Weight (kg)	Sample Plus Tare Weight (kg)	Sample Weight (kg)		Dry	Moist	Wet	Gravel	Sand	Silt	Clay	Fines (Silt plus Clay)	Well Graded	Poorly Graded	None	Low	Moderate	High		Angular	Subangular	Subrounded	Rounded	None	Weak	Moderate	Strong	None	Weak	Strong	Volcanics	Carbonates	Other
10/14/2004	BW/DD	6/2/2005	DD/DPH	22PC-0.0-2.5-D	0.00	2.50	0.00	0.41	0.00		16.750				10YR 3/6	☑	☐	☐	0	92	5	3	8	☐	☑	☑	☐	☐	☐	SP-SC	☐	☐	☐	☑	☑	☐	☐	☐	☐	☐	☑	100		
10/14/2004	BW/DD	6/2/2005	DD/DPH	22PC-2.5-5.0-D	2.50	5.00	0.00	0.41	0.00		16.750				10YR 3/6	☑	☐	☐	0	92	5	3	8	☐	☑	☑	☐	☐	☐	SP-SC	☐	☐	☐	☑	☑	☐	☐	☐	☐	☐	☑	100		
10/14/2004	BW/DD	6/2/2005	DD/DPH	22PC-5.0-7.5-D	5.00	7.50	0.00	0.41	0.00		16.750				10YR 3/6	☑	☐	☐	0	92	2	6	8	☐	☑	☑	☐	☐	☐	SP-SC	☐	☐	☐	☑	☑	☐	☐	☐	☐	☐	☑	100		
10/14/2004	BW/DD	6/2/2005	DD/DPH	22PC-7.5-10-D	7.50	10.00	0.00	0.41	0.00		16.800				10YR 3/6	☑	☐	☐	69	29	1	1	2	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☐	☐	☑	100		
10/14/2004	BW/DD	6/2/2005	DD/DPH	22PC-10-12.5-D	10.00	12.50	0.00	0.41	0.00		16.800				10YR 4/2	☑	☐	☐	68	30	1	1	2	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☐	☐	☑	100		
10/14/2004	BW/DD	6/2/2005	DD/DPH	22PC-12.5-15-D	12.50	15.00	0.00	0.41	0.00		16.750				10YR 4/2	☑	☐	☐	74	24	1	1	2	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☐	☐	☑	100		
10/15/2004	BW/DD	6/2/2005	DD/DPH	22PC-15-17.5-D	15.00	17.50	0.00	0.41	0.00		16.750				5YR 4/4	☑	☐	☐	94	5	0	1	1	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☐	☐	☑	100		
10/15/2004	BW/DD	6/2/2005	DD/DPH	22PC-17.5-20-D	17.50	20.00	0.00	0.41	0.00		16.750				5YR 4/4	☑	☐	☐	81	18	0	1	1	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☐	☐	☑	100		
10/15/2004	BW/DD	6/2/2005	DD/DPH	22PC-20-22.5-D	20.00	22.50	0.00	0.41	0.00		16.750				5YR 4/4	☑	☐	☐	94	5	0	1	1	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/15/2004	BW/DD	6/2/2005	DD/DPH	22PC-22.5-25-D	22.50	25.00	0.00	0.41	0.00		16.750				5 YR 4/4	☑	☐	☐	91	8	0	1	1	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☐	☐	☑	100		
10/15/2004	BW/DD	6/2/2005	DD/DPH	22PC-25-27.5-D	25.00	27.50	0.00	0.41	0.00		16.750				5 YR 4/4	☑	☐	☐	81	18	0	1	1	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☐	☐	☑	100		
10/15/2004	BW/DD	6/2/2005	DD/DPH	22PC-27.5-30-D	27.50	30.00	0.00	0.41	0.00		16.750				10YR 5/3	☑	☐	☐	59	39	1	1	2	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☐	☐	☑	100		
10/15/2004	BW/DD	6/2/2005	DD/DPH	22PC-30-32.5-D	30.00	32.50	0.00	0.41	0.00		16.750				10YR 5/3	☑	☐	☐	70	28	1	1	2	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☐	☑	☐	100		
10/15/2004	BW/DD	6/2/2005	DD/DPH	22PC-32.5-35-D	32.50	35.00	0.00	0.41	0.00		16.750				10YR 5/3	☑	☐	☐	80	19	0	1	1	☐	☑	☑	☐	☐	☐	GP	☐	☑	☐	☐	☑	☐	☐	☐	☐	☑	☐	100		
10/15/2004	BW/DD/EH	6/2/2005	DD/DPH	22PC-35-37.5-D	35.00	37.50	0.00	0.41	0.00		16.750				10YR 5/3	☑	☐	☐	75	24	0	1	1	☐	☑	☑	☐	☐	☐	GP	☐	☑	☐	☐	☑	☐	☐	☐	☐	☐	☑	100		
10/15/2004	BW/DD/EH	6/2/2005	DD/DPH	22PC-37.5-40-D	37.50	40.00	0.00	0.31	0.00		16.750				10YR 5/3	☑	☐	☐	95	4	0	1	1	☐	☑	☑	☐	☐	☐	GP	☐	☑	☐	☐	☑	☐	☐	☐	☐	☐	☑	100		
10/15/2004	BW/DD/EH	6/2/2005	DD/DPH	22PC-40-42.5-D	40.00	42.50	0.00	0.31	0.00		16.750				10YR 5/3	☑	☐	☐	93	6	0	1	1	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☐	☐	☑	100		
10/15/2004	BW/DD/EH	6/2/2005	DD/DPH	22PC-42.5-45-D	42.50	45.00	0.00	0.31	0.00		16.750				10YR 5/3	☑	☐	☐	72	27	0	1	1	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☐	☐	☑	100		
10/15/2004	BW/DD/EH	6/2/2005	DD/DPH	22PC-45-47.5-D	45.00	47.50	0.00	0.31	0.00		16.750				10YR 5/3	☑	☐	☐	91	8	0	1	1	☐	☑	☑	☐	☐	☐	GP	☐	☑	☐	☐	☑	☐	☐	☐	☐	☐	☑	100		
10/15/2004	BW/DD/EH	6/2/2005	DD/DPH	22PC-47.5-50-D	47.50	50.00	0.00	0.31	0.00		16.750				10YR 5/3	☑	☐	☐	71	27	1	1	2	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☐	☐	☑	100		
10/15/2004	DD/BW	6/2/2005	DD/DPH	22PC-50-52.5-D	50.00	52.50	0.00	0.31	0.00		16.750				10YR 5/3	☑	☐	☐	1	99	0	0	0	☐	☑	☑	☐	☐	☐	SP	☐	☑	☐	☐	☑	☐	☐	☐	☐	☐	☑	100		
10/15/2004	DD/BW	6/2/2005	DD/DPH	22PC-52.5-55-D	52.50	55.00	0.00	0.31	0.00		16.750				10YR 5/3	☑	☐	☐	90	9	0	1	1	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☐	☑	☐	100		
10/15/2004	DD/BW	6/2/2005	DD/DPH	22PC-55-57.5-D	55.00	57.50	0.00	0.31	0.00		16.750				10YR 5/3	☑	☐	☐	71	27	1	1	2	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☐	☑	☐	100		
10/15/2004	DD/BW	6/2/2005	DD/DPH	22PC-57.5-60-D	57.50	60.00	0.00	0.43	0.00		16.750				10YR 5/3	☑	☐	☐	75	24	0	1	1	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☐	☑	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-60-62.5-D	60.00	62.50	0.00	0.43	0.00		11.375				10YR 5/3	☑	☐	☐	38	60	1	1	2	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-62.5-65-D	62.50	65.00	0.00	0.43	0.00		11.375				10YR 5/3	☑	☐	☐	35	63	1	1	2	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-65-67.5-D	65.00	67.50	0.00	0.43	0.00		11.375				10YR 5/3	☑	☐	☐	27	69	1	3	4	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-67.5-70-D	67.50	70.00	0.00	0.43	0.00		11.375				10YR 5/3	☑	☐	☐	21	75	1	3	4	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-70-72.5-D	70.00	72.50	0.00	0.43	0.00		11.375				10YR 5/3	☑	☐	☐	18	78	1	3	4	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-72.5-75-D	72.50	75.00	0.00	0.43	0.00		11.375				10YR 4/6	☑	☐	☐	33	64	1	2	3	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☐	☐	☑	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-75-77.5-D	75.00	77.50	0.00	0.43	0.00		11.375				10R 4/4	☑	☐	☐	25	73	1	1	2	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☐	☐	☑	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-77.5-80-D	77.50	80.00	0.00	1.33	0.00		11.375				10R 4/4	☑	☐	☐	24	73	1	2	3	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☐	☐	☑	100		

Alluvium Drill Cuttings Logging Form - Nye County Nuclear Waste Repository Project Office

Borehole ID: **NC-EWDP-22PC** (Phase 5) Driller/Drilling Company: Shawn Cain/Boart Longyear Drilling Method: Dual Rotary/Conventional Return Alluvium Depth (ft bgs): 0 to 763 Start Date: 10/14/2004 End Date: 10/20/2004

Date Logged	Logged By (Initials)	Date Checked	Checked By (Initials)	Sample Number	Depth Interval (feet bgs) From	Depth Interval (feet bgs) To	Drilling Data: Liquid Drilling Fluid Injection Rate (gpm)	Drilling Data: Drilling Rate (feet/min)	Drilling Data: Water Production (gpm)	Drilling Data: Sample Recovery (gallons)	Drilling Data: Borehole Diameter (inches)	Sample Density Measurements: Tare Weight (kg)	Sample Density Measurements: Sample Plus Tare Weight (kg)	Sample Density Measurements: Sample Weight (kg)	Munsell Color Symbol	Moisture Content: Dry	Moisture Content: Moist	Moisture Content: Wet	Particle Size Distribution (%): Gravel	Particle Size Distribution (%): Sand	Particle Size Distribution (%): Silt	Particle Size Distribution (%): Clay	Particle Size Distribution (%): Fines (Silt plus Clay)	Grading: Well Graded	Grading: Poorly Graded	Estimated Plasticity: None	Estimated Plasticity: Low	Estimated Plasticity: Moderate	Estimated Plasticity: High	USCS Group Symbol	Gravel/Sand GrainShape: Angular	Gravel/Sand GrainShape: Subangular	Gravel/Sand GrainShape: Subrounded	Gravel/Sand GrainShape: Rounded	Cementation: None	Cementation: Weak	Cementation: Moderate	Cementation: Strong	HCL Reaction: None	HCL Reaction: Weak	HCL Reaction: Strong	Major Rock Type (%): Volcanics	Major Rock Type (%): Carbonates	Major Rock Type (%): Other
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-80-82.5-D	80.00	82.50	0.00	1.33	0.00		11.375				10R 4/4	☑	☐	☐	22	75	1	2	3	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-82.5-85-D	82.50	85.00	0.00	1.33	0.00		11.375				10R 4/4	☑	☐	☐	28	68	1	3	4	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☐	☐	☑	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-85-87.5-D	85.00	87.50	0.00	1.33	0.00		11.375				10R 4/4	☑	☐	☐	30	65	2	3	5	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☐	☐	☑	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-87.5-90-D	87.50	90.00	0.00	1.33	0.00		11.375				10R 4/4	☑	☐	☐	38	58	1	3	4	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☐	☑	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-90-92.5-D	90.00	92.50	0.00	1.33	0.00		11.375				10R 4/4	☑	☐	☐	45	53	1	1	2	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☐	☐	☑	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-92.5-95-D	92.50	95.00	0.00	1.33	0.00		11.375				10R 4/4	☑	☐	☐	37	60	1	2	3	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☐	☐	☑	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-95-97.5-D	95.00	97.50	0.00	1.33	0.00		11.375				10R 4/4	☑	☐	☐	30	68	1	1	2	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-97.5-100-D	97.50	100.00	0.00	1.54	0.00		11.375				10R 4/4	☑	☐	☐	41	57	1	1	2	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☐	☑	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-100-102.5-D	100.00	102.50	0.00	1.50	0.00		11.375				10R 4/4	☑	☐	☐	47	51	1	1	2	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-102.5-105-D	102.50	105.00	0.00	1.50	0.00		11.375				10R 4/4	☑	☐	☐	33	65	1	1	2	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-105-107.5-D	105.00	107.50	0.00	1.50	0.00		11.375				10R 4/4	☑	☐	☐	44	54	1	1	2	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-107.5-110-D	107.50	110.00	0.00	1.50	0.00		11.375				10R 4/4	☑	☐	☐	40	58	1	1	2	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-110-112.5-D	110.00	112.50	0.00	1.50	0.00		11.375				10R 4/4	☑	☐	☐	44	53	1	2	3	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☐	☑	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-112.5-115-D	112.50	115.00	0.00	1.50	0.00		11.375				10R 4/4	☑	☐	☐	39	58	1	2	3	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☐	☑	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-115-117.5-D	115.00	117.50	0.00	1.50	0.00		11.375				10R 4/4	☑	☐	☐	38	60	1	1	2	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-117.5-120-D	117.50	120.00	0.00	1.00	0.00		11.375				10R 4/4	☑	☐	☐	64	33	1	2	3	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-120-122.5-D	120.00	122.50	0.00	1.00	0.00		11.375				10R 4/4	☑	☐	☐	41	57	1	1	2	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-122.5-125-D	122.50	125.00	0.00	1.00	0.00		11.375				10R 3/2	☑	☐	☐	50	48	1	1	2	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-125-127.5-D	125.00	127.50	0.00	1.00	0.00		11.375				10R 3/2	☑	☐	☐	24	73	1	2	3	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-127.5-130-D	127.50	130.00	0.00	1.00	0.00		11.375				10R 3/2	☑	☐	☐	43	54	1	2	3	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-130-132.5-D	130.00	132.50	0.00	1.00	0.00		11.375				10R 3/2	☑	☐	☐	34	63	1	2	3	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-132.5-135-D	132.50	135.00	0.00	1.00	0.00		11.375				10R 3/2	☑	☐	☐	37	60	1	2	3	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-135-137.5-D	135.00	137.50	0.00	1.00	0.00		11.375				10R 3/2	☑	☐	☐	38	59	1	2	3	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-137.5-140-D	137.50	140.00	0.00	0.70	0.00		11.375				10YR 3/2	☑	☐	☐	39	58	1	2	3	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-140-142.5-D	140.00	142.50	0.00	0.67	0.00		11.375				10R 4/2	☑	☐	☐	49	49	1	1	2	☑	☐	☑	☐	☐	☐	GW-SW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-142.5-145-D	142.50	145.00	0.00	0.67	0.00		11.375				10R 4/2	☑	☐	☐	42	56	1	1	2	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-145-147.5-D	145.00	147.50	0.00	0.67	0.00		11.375				10R 4/2	☑	☐	☐	39	57	1	3	4	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-147.5-150-D	147.50	150.00	0.00	0.67	0.00		11.375				10R 4/2	☑	☐	☐	48	49	1	2	3	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-150-152.5-D	150.00	152.50	0.00	0.67	0.00		11.375				10R 4/2	☑	☐	☐	55	43	1	1	2	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-152.5-155-D	152.50	155.00	0.00	0.67	0.00		11.375				10R 4/2	☑	☐	☐	57	41	1	1	2	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-155-157.5-D	155.00	157.50	0.00	0.67	0.00		11.375				10R 3/2	☑	☐	☐	56	43	0	1	1	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-157.5-160-D	157.50	160.00	0.00	0.95	0.00		11.375				10R 3/2	☑	☐	☐	54	43	1	2	3	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		

Alluvium Drill Cuttings Logging Form - Nye County Nuclear Waste Repository Project Office

Borehole ID: **NC-EWDP-22PC** (Phase 5) Driller/Drilling Company: Shawn Cain/Boart Longyear Drilling Method: Dual Rotary/Conventional Return Alluvium Depth (ft bgs): 0 to 763 Start Date: 10/14/2004 End Date: 10/20/2004

Date Logged	Logged By (Initials)	Date Checked	Checked By (Initials)	Sample Number	Depth Interval (feet bgs)		Drilling Data					Sample Density Measurements			Munsell Color Symbol	Moisture Content			Particle Size Distribution (%)					Grading		Estimated Plasticity				USCS Group Symbol	Gravel/Sand GrainShape				Cementation				HCL Reaction			Major Rock Type (%)		
					From	To	Liquid Drilling Fluid Injection Rate (gpm)	Drilling Rate (feet/min)	Water Production (gpm)	Sample Recovery (gallons)	Borehole Diameter (inches)	Tare Weight (kg)	Sample Plus Tare Weight (kg)	Sample Weight (kg)		Dry	Moist	Wet	Gravel	Sand	Silt	Clay	Fines (Silt plus Clay)	Well Graded	Poorly Graded	None	Low	Moderate	High		Angular	Subangular	Subrounded	Rounded	None	Weak	Moderate	Strong	None	Weak	Strong	Volcanics	Carbonates	Other
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-160-162.5-D	160.00	162.50	0.00	0.95	0.00		11.375				10R 3/2	☑	☐	☐	56	41	1	2	3	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-162.5-165-D	162.50	165.00	0.00	0.95	0.00		11.375				10R 3/2	☑	☐	☐	44	53	1	2	3	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-165-167.5-D	165.00	167.50	0.00	0.95	0.00		11.375				5YR 5/6	☑	☐	☐	34	61	2	3	5	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-167.5-170-D	167.50	170.00	0.00	0.95	0.00		11.375				5YR 5/6	☑	☐	☐	38	59	1	2	3	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-170-172.5-D	170.00	172.50	0.00	0.95	0.00		11.375				5YR 5/6	☑	☐	☐	51	46	1	2	3	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/17/2004	DD/BW	6/2/2005	DD/DPH	22PC-172.5-175-D	172.50	175.00	0.00	0.95	0.00		11.375				5YR 5/6	☑	☐	☐	65	33	1	1	2	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-175-177.5-D	175.00	177.50	0.00	0.95	0.00		11.375				5YR 5/6	☑	☐	☐	48	49	1	2	3	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-177.5-180-D	177.50	180.00	0.00	1.23	0.00		11.375				5YR 5/6	☐	☑	☐	39	58	1	2	3	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-180-182.5-D	180.00	182.50	0.00	1.23	0.00		11.375				5YR 5/6	☐	☑	☐	42	55	1	2	3	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-182.5-185-D	182.50	185.00	0.00	1.23	0.00		11.375				5YR 5/6	☐	☑	☐	42	55	1	2	3	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-185-187.5-D	185.00	187.50	0.00	1.23	0.00		11.375				5YR 5/6	☐	☑	☐	36	56	3	5	8	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-187.5-190-D	187.50	190.00	0.00	1.23	0.00		11.375				5YR 5/6	☐	☑	☐	49	45	2	4	6	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-190-192.5-D	190.00	192.50	0.00	1.23	0.00		11.375				5YR 5/6	☐	☑	☐	48	45	3	4	7	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-192.5-195-D	192.50	195.00	0.00	1.23	0.00		11.375				5YR 5/6	☐	☑	☐	48	46	2	4	6	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-195-197.5-D	195.00	197.50	0.00	1.23	0.00		11.375				5YR 5/6	☐	☑	☐	31	63	2	4	6	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-197.5-200-D	197.50	200.00	0.00	1.00	0.00		11.375				5YR 5/6	☐	☑	☐	37	58	2	3	5	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-200-202.5-D	200.00	202.50	0.00	1.00	0.00		11.375				5YR 5/6	☐	☑	☐	37	59	1	3	4	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-202.5-205-D	202.50	205.00	0.00	1.00	0.00		11.375				5YR 5/6	☐	☑	☐	40	55	2	3	5	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-205-207.5-D	205.00	207.50	0.00	1.00	0.00		11.375				5YR 5/6	☐	☑	☐	38	52	4	6	10	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-207.5-210-D	207.50	210.00	0.00	1.00	0.00		11.375				5YR 5/6	☐	☑	☐	43	51	2	4	6	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-210-212.5-D	210.00	212.50	0.00	1.00	0.00		11.375				5YR 5/6	☐	☑	☐	44	53	1	2	3	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-212.5-215-D	212.50	215.00	0.00	1.00	0.00		11.375				5YR 5/6	☐	☑	☐	50	46	1	3	4	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-215-217.5-D	215.00	217.50	0.00	1.00	0.00		11.375				5YR 5/6	☐	☑	☐	42	55	1	2	3	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-217.5-220-D	217.50	220.00	0.00	1.54	0.00		11.375				5YR 4/4	☐	☑	☐	51	46	1	2	3	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-220-222.5-D	220.00	222.50	0.00	1.54	0.00		11.375				5YR 4/4	☐	☑	☐	57	38	2	3	5	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-222.5-225-D	222.50	225.00	0.00	1.54	0.00		11.375				5YR 4/4	☐	☑	☐	42	53	2	3	5	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-225-227.5-D	225.00	227.50	0.00	1.54	0.00		11.375				5YR 4/4	☐	☑	☐	64	33	1	2	3	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-227.5-230-D	227.50	230.00	0.00	1.54	0.00		11.375				5YR 4/4	☐	☑	☐	67	31	1	1	2	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-230-232.5-D	230.00	232.50	0.00	1.54	0.00		11.375				5YR 5/6	☑	☐	☐	47	47	2	4	6	☑	☐	☑	☐	☐	☐	GW-GC/SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-232.5-235-D	232.50	235.00	0.00	1.54	0.00		11.375				5YR 4/4	☑	☐	☐	44	52	1	3	4	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-235-237.5-D	235.00	237.50	0.00	1.54	0.00		11.375				5YR 3/3	☑	☐	☐	32	65	1	2	3	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-237.5-240-D	237.50	240.00	0.00	1.25	0.00		11.375				5YR 3/3	☑	☐	☐	41	56	1	2	3	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		

Alluvium Drill Cuttings Logging Form - Nye County Nuclear Waste Repository Project Office

Borehole ID: **NC-EWDP-22PC** (Phase 5) Driller/Drilling Company: Shawn Cain/Boart Longyear Drilling Method: Dual Rotary/Conventional Return Alluvium Depth (ft bgs): 0 to 763 Start Date: 10/14/2004 End Date: 10/20/2004

Date Logged	Logged By (Initials)	Date Checked	Checked By (Initials)	Sample Number	Depth Interval (feet bgs)		Drilling Data					Sample Density Measurements			Munsell Color Symbol	Moisture Content			Particle Size Distribution (%)					Gra-ding		Estimated Plasticity				USCS Group Symbol	Gravel/Sand GrainShape				Cementation				HCL Reaction			Major Rock Type (%)		
					From	To	Liquid Drilling Fluid Injection Rate (gpm)	Drilling Rate (feet/min)	Water Production (gpm)	Sample Recovery (gallons)	Borehole Diameter (inches)	Tare Weight (kg)	Sample Plus Tare Weight (kg)	Sample Weight (kg)		Dry	Moist	Wet	Gravel	Sand	Silt	Clay	Fines (Silt plus Clay)	Well Graded	Poorly Graded	None	Low	Moderate	High		Angular	Subangular	Subrounded	Rounded	None	Weak	Moderate	Strong	None	Weak	Strong	Volcanics	Carbonates	Other
10/18/2004	BW	6/2/2005	DD/DPH	22PC-240-242.5-D	240.00	242.50	0.00	1.25	0.00		11.375				5YR 3/3	☑	☐	☐	35	61	1	3	4	☑	☐	☑	☐	☐	☐	SW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-242.5-245-D	242.50	245.00	0.00	1.25	0.00		11.375				5YR 3/3	☑	☐	☐	36	59	2	3	5	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-245-247.5-D	245.00	247.50	0.00	1.25	0.00		11.375				5YR 3/3	☑	☐	☐	45	50	2	3	5	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-247.5-250-D	247.50	250.00	0.00	1.25	0.00		11.375				5YR 4/3	☑	☐	☐	49	47	1	3	4	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-250-252.5-D	250.00	252.50	0.00	1.25	0.00		11.375				5YR 4/3	☑	☐	☐	66	31	1	2	3	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-252.5-255-D	252.50	255.00	0.00	1.25	0.00		11.375				5YR 4/3	☑	☐	☐	53	41	2	4	6	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-255-257.5-D	255.00	257.50	0.00	0.56	0.00		11.375				5YR 4/3	☑	☐	☐	49	48	1	2	3	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-257.5-260-D	257.50	260.00	0.00	0.56	0.00		11.375				5YR 4/3	☑	☐	☐	49	47	1	3	4	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-260-262.5-D	260.00	262.50	0.00	0.56	0.00		11.375				5YR 5/6	☑	☐	☐	49	44	3	4	7	☑	☐	☑	☐	☐	☐	GW-GC	☐	☐	☑	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-262.5-265-D	262.50	265.00	0.00	0.56	0.00		11.375				5YR 5/6	☑	☐	☐	52	42	2	4	6	☑	☐	☑	☐	☐	☐	GW-GC	☐	☐	☑	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-265-267.5-D	265.00	267.50	0.00	0.56	0.00		11.375				5YR 5/6	☑	☐	☐	30	60	4	6	10	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-267.5-270-D	267.50	270.00	0.00	0.56	0.00		11.375				5YR 5/6	☑	☐	☐	42	49	3	6	9	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-270-272.5-D	270.00	272.50	0.00	0.56	0.00		11.375				5YR 4/3	☑	☐	☐	48	45	3	4	7	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/18/2004	BW	6/2/2005	DD/DPH	22PC-272.5-275-D	272.50	275.00	0.00	1.18	0.00		11.375				5YR 5/6	☑	☐	☐	32	57	4	7	11	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-275-277.5-D	275.00	277.50	0.00	1.18	0.00		11.375				5YR 5/4	☐	☑	☐	32	60	3	5	8	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-277.5-280-D	277.50	280.00	0.00	1.18	0.00		11.375				5YR 4/4	☐	☑	☐	44	51	2	3	5	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-280-282.5-D	280.00	282.50	0.00	1.18	0.00		11.375				5YR 4/4	☐	☑	☐	47	48	2	3	5	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-282.5-285-D	282.50	285.00	0.00	1.18	0.00		11.375				5YR 4/4	☐	☑	☐	59	35	2	4	6	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-285-287.5-D	285.00	287.50	0.00	1.18	0.00		11.375				5YR 5/4	☐	☑	☐	43	51	2	4	6	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-287.5-290-D	287.50	290.00	0.00	1.18	0.00		11.375				5YR 5/4	☐	☑	☐	52	42	2	4	6	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22-PC-290-292.5-D	290.00	292.50	0.00	1.18	0.00		11.375				5YR 4/4	☐	☑	☐	61	33	2	4	6	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-292.5-295-D	292.50	295.00	0.00	1.18	0.00		11.375				5YR 4/4	☐	☑	☐	54	40	2	4	6	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-295-297.5-D	295.00	297.50	0.00	1.05	0.00		11.375				5YR 4/4	☐	☑	☐	44	49	3	4	7	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-297.5-300-D	297.50	300.00	0.00	1.05	0.00		11.375				5YR 4/4	☐	☑	☐	50	44	2	4	6	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-300-302.5-D	300.00	302.50	0.00	1.05	0.00		11.375				5YR 4/4	☐	☑	☐	64	32	1	3	4	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-302.5-305-D	302.50	305.00	0.00	1.05	0.00		11.375				5YR 4/4	☐	☑	☐	55	40	2	3	5	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-305-307.5-D	305.00	307.50	0.00	1.05	0.00		11.375				5YR 4/4	☐	☑	☐	43	49	3	5	8	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-307.5-310-D	307.50	310.00	0.00	1.05	0.00		11.375				5YR 4/4	☐	☑	☐	37	55	3	5	8	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-310-312.5-D	310.00	312.50	0.00	1.05	0.00		11.375				5YR 4/4	☐	☑	☐	37	55	3	5	8	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-312.5-315-D	312.50	315.00	0.00	1.05	0.00		11.375				5YR 5/6	☐	☑	☐	50	45	2	3	5	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-315-317.5-D	315.00	317.50	0.00	1.54	0.00		11.375				5YR 5/6	☐	☑	☐	35	55	4	6	10	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-317.5-320-D	317.50	320.00	0.00	1.54	0.00		11.375				5YR 5/6	☐	☑	☐	46	46	3	5	8	☑	☐	☑	☐	☐	☐	GW-GC/SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		

Alluvium Drill Cuttings Logging Form - Nye County Nuclear Waste Repository Project Office

Borehole ID: **NC-EWDP-22PC** (Phase 5) Driller/Drilling Company: Shawn Cain/Boart Longyear Drilling Method: Dual Rotary/Conventional Return Alluvium Depth (ft bgs): 0 to 763 Start Date: 10/14/2004 End Date: 10/20/2004

Date Logged	Logged By (Initials)	Date Checked	Checked By (Initials)	Sample Number	Depth Interval (feet bgs) From	Depth Interval (feet bgs) To	Drilling Data: Liquid Drilling Fluid Injection Rate (gpm)	Drilling Data: Drilling Rate (feet/min)	Drilling Data: Water Production (gpm)	Drilling Data: Sample Recovery (gallons)	Drilling Data: Borehole Diameter (inches)	Sample Density Measurements: Tare Weight (kg)	Sample Density Measurements: Sample Plus Tare Weight (kg)	Sample Density Measurements: Sample Weight (kg)	Munsell Color Symbol	Moisture Content: Dry	Moisture Content: Moist	Moisture Content: Wet	Particle Size Distribution (%): Gravel	Particle Size Distribution (%): Sand	Particle Size Distribution (%): Silt	Particle Size Distribution (%): Clay	Particle Size Distribution (%): Fines (Silt plus Clay)	Grading: Well Graded	Grading: Poorly Graded	Estimated Plasticity: None	Estimated Plasticity: Low	Estimated Plasticity: Moderate	Estimated Plasticity: High	USCS Group Symbol	Gravel/Sand GrainShape: Angular	Gravel/Sand GrainShape: Subangular	Gravel/Sand GrainShape: Subrounded	Gravel/Sand GrainShape: Rounded	Cementation: None	Cementation: Weak	Cementation: Moderate	Cementation: Strong	HCL Reaction: None	HCL Reaction: Weak	HCL Reaction: Strong	Major Rock Type (%): Volcanics	Major Rock Type (%): Carbonates	Major Rock Type (%): Other
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-320-322.5-D	320.00	322.50	0.00	1.54	0.00		11.375				5YR 5/6	☐	☑	☐	58	37	2	3	5	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-322.5-325-D	322.50	325.00	0.00	1.54	0.00		11.375				5YR 4/4	☐	☑	☐	44	49	3	4	7	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-325-327.5-D	325.00	327.50	0.00	1.54	0.00		11.375				5YR 5/6	☐	☑	☐	51	42	3	4	7	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-327.5-330-D	327.50	330.00	0.00	1.54	0.00		11.375				5YR 5/6	☐	☑	☐	48	45	3	4	7	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-330-332.5-D	330.00	332.50	0.00	1.54	0.00		11.375				5YR 5/6	☐	☑	☐	46	45	4	5	9	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-332.5-335-D	332.50	335.00	0.00	1.54	0.00		11.375				5YR 4/4	☐	☑	☐	54	40	2	4	6	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-335-337.5-D	335.00	337.50	0.00	1.54	0.00		11.375				5YR 5/6	☐	☑	☐	57	36	3	4	7	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-337.5-340-D	337.50	340.00	0.00	1.54	0.00		11.375				5YR 5/6	☐	☑	☐	47	47	2	4	6	☑	☐	☑	☐	☐	☐	GW-GC/SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-340-342.5-D	340.00	342.50	0.00	1.54	0.00		11.375				5YR 5/6	☐	☑	☐	37	52	5	6	11	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-342.5-345-D	342.50	345.00	0.00	1.54	0.00		11.375				5YR 5/6	☐	☑	☐	52	39	3	6	9	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-345-347.5-D	345.00	347.50	0.00	1.54	0.00		11.375				5YR 5/6	☐	☑	☐	41	47	5	7	12	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-347.5-350-D	347.50	350.00	0.00	1.54	0.00		11.375				5YR 5/6	☐	☑	☐	40	50	4	6	10	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-350-352.5-D	350.00	352.50	0.00	1.54	0.00		11.375				5YR 5/6	☑	☐	☐	43	46	5	6	11	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-352.5-355-D	352.50	355.00	0.00	1.54	0.00		11.375				5YR 4/4	☑	☐	☐	52	39	3	6	9	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-355-357.5-D	355.00	357.50	0.00	1.43	0.00		11.375				5YR 4/4	☑	☐	☐	54	38	2	6	8	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-357.5-360-D	357.50	360.00	0.00	1.43	0.00		11.375				5YR 4/4	☑	☐	☐	51	40	3	6	9	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-360-362.5-D	360.00	362.50	0.00	1.43	0.00		11.375				5YR 5/6	☑	☐	☐	46	44	4	6	10	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-362.5-365-D	362.50	365.00	0.00	1.43	0.00		11.375				5YR 5/6	☑	☐	☐	39	49	5	7	12	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-365-367.5-D	365.00	367.50	0.00	1.43	0.00		11.375				5YR 5/6	☑	☐	☐	50	45	2	3	5	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-367.5-370-D	367.50	370.00	0.00	1.43	0.00		11.375				5YR 5/6	☑	☐	☐	56	40	1	3	4	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-370-372.5-D	370.00	372.50	0.00	1.43	0.00		11.375				5YR 5/6	☑	☐	☐	60	36	1	3	4	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-372.5-375-D	372.50	375.00	0.00	1.43	0.00		11.375				5YR 5/6	☑	☐	☐	52	44	1	3	4	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-375-377.5-D	375.00	377.50	0.00	1.54	0.00		11.375				5YR 5/6	☑	☐	☐	45	47	3	5	8	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-377.5-380-D	377.50	380.00	0.00	1.54	0.00		11.375				5YR 5/6	☑	☐	☐	46	44	4	6	10	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-380-382.5-D	380.00	382.50	0.00	1.54	0.00		11.375				5YR 4/4	☑	☐	☐	53	44	1	2	3	☑	☐	☑	☐	☐	☐	GW	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-382.5-385-D	382.50	385.00	0.00	1.54	0.00		11.375				5YR 4/4	☑	☐	☐	46	43	5	6	11	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-385-387.5-D	385.00	387.50	0.00	1.54	0.00		11.375				5YR 4/4	☑	☐	☐	46	45	2	7	9	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-387.5-390-D	387.50	390.00	0.00	1.54	0.00		11.375				5YR 4/4	☑	☐	☐	40	50	4	6	10	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-390-392.5-D	390.00	392.50	0.00	1.54	0.00		11.375				5YR 4/4	☑	☐	☐	57	37	2	4	6	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-392.5-395-D	392.50	395.00	0.00	1.54	0.00		11.375				5YR 4/4	☑	☐	☐	47	44	4	5	9	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-395-397.5-D	395.00	397.50	0.00	1.67	0.00		11.375				5YR 4/4	☑	☐	☐	47	43	4	6	10	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-397.5-400-D	397.50	400.00	0.00	1.67	0.00		11.375				5YR 4/4	☑	☐	☐	37	50	6	7	13	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		

Alluvium Drill Cuttings Logging Form - Nye County Nuclear Waste Repository Project Office

Borehole ID: **NC-EWDP-22PC** (Phase 5) Driller/Drilling Company: Shawn Cain/Boart Longyear Drilling Method: Dual Rotary/Conventional Return Alluvium Depth (ft bgs): 0 to 763 Start Date: 10/14/2004 End Date: 10/20/2004

Date Logged	Logged By (Initials)	Date Checked	Checked By (Initials)	Sample Number	Depth Interval (feet bgs)		Drilling Data					Sample Density Measurements			Munsell Color Symbol	Moisture Content			Particle Size Distribution (%)					Grading		Estimated Plasticity				USCS Group Symbol	Gravel/Sand GrainShape				Cementation				HCL Reaction			Major Rock Type (%)		
					From	To	Liquid Drilling Fluid Injection Rate (gpm)	Drilling Rate (feet/min)	Water Production (gpm)	Sample Recovery (gallons)	Borehole Diameter (inches)	Tare Weight (kg)	Sample Plus Tare Weight (kg)	Sample Weight (kg)		Dry	Moist	Wet	Gravel	Sand	Silt	Clay	Fines (Silt plus Clay)	Well Graded	Poorly Graded	None	Low	Moderate	High		Angular	Subangular	Subrounded	Rounded	None	Weak	Moderate	Strong	None	Weak	Strong	Volcanics	Carbonates	Other
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-400-402.5-D	400.00	402.50	0.00	1.67	0.00		11.375				5YR 5/6	☑	☐	☐	31	55	6	8	14	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-402.5-405-D	402.50	405.00	0.00	1.67	0.00		11.375				5YR 5/6	☑	☐	☐	37	50	6	7	13	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-405-407.5-D	405.00	407.50	0.00	1.67	0.00		11.375				5YR 5/6	☑	☐	☐	43	46	5	6	11	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-407.5-410-D	407.50	410.00	0.00	1.67	0.00		11.375				5YR 4/4	☑	☐	☐	49	42	4	5	9	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-410-412.5-D	410.00	412.50	0.00	1.67	0.00		11.375				5YR 4/4	☑	☐	☐	25	61	6	8	14	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-412.5-415-D	412.50	415.00	0.00	1.67	0.00		11.375				5YR 4/4	☑	☐	☐	34	53	6	7	13	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-415-417.5-D	415.00	417.50	0.00	0.29	0.00		11.375				5YR 4/4	☑	☐	☐	29	58	6	7	13	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-417.5-420-D	417.50	420.00	0.00	0.29	0.00		11.375				5YR 4/4	☑	☐	☐	42	48	4	6	10	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-420-422.5-D	420.00	422.50	0.00	0.29	0.00		11.375				5YR 4/4	☑	☐	☐	39	51	4	6	10	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-422.5-425-D	422.50	425.00	0.00	0.29	0.00		11.375				5YR 4/4	☑	☐	☐	29	58	4	9	13	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-425-427.5-D	425.00	427.50	0.00	0.29	0.00		11.375				5YR 4/4	☑	☐	☐	51	39	4	6	10	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-427.5-430-D	427.50	430.00	0.00	0.29	0.00		11.375				5YR 4/4	☑	☐	☐	39	48	4	9	13	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-430-432.5-D	430.00	432.50	0.00	0.29	0.00		11.375				5YR 4/4	☑	☐	☐	45	43	4	8	12	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/19/2004	BW/DD	6/2/2005	DD/DPH	22PC-432.5-435-D	432.50	435.00	0.00	0.29	0.00		11.375				5YR 4/4	☑	☐	☐	51	38	4	7	11	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/20/2004	BW/DD	6/2/2005	DD/DPH	22PC-435-437.5-D	435.00	437.50	0.00	0.42	0.00		11.375				5YR 4/3	☑	☐	☐	49	42	3	6	9	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/20/2004	BW/DD	6/2/2005	DD/DPH	22PC-437.5-440-D	437.50	440.00	0.00	0.42	0.00		11.375				5YR 4/3	☑	☐	☐	42	48	4	6	10	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/20/2004	BW/DD	6/2/2005	DD/DPH	22PC-440-442.5-D	440.00	442.50	0.00	0.42	0.00		11.375				5YR 4/3	☑	☐	☐	43	48	3	6	9	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/20/2004	BW/DD	6/2/2005	DD/DPH	22PC-442.5-445-D	442.50	445.00	0.00	0.42	0.00		11.375				5YR 4/3	☑	☐	☐	45	48	2	5	7	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/20/2004	BW/DD	6/2/2005	DD/DPH	22PC-445-447.5-D	445.00	447.50	0.00	0.42	0.00		11.375				5YR 4/3	☑	☐	☐	38	53	3	6	9	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/20/2004	BW/DD	6/2/2005	DD/DPH	22PC-447.5-450-D	447.50	450.00	0.00	0.42	0.00		11.375				5YR 4/3	☑	☐	☐	48	44	3	5	8	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/20/2004	BW/DD	6/2/2005	DD/DPH	22PC-450-452.5-D	450.00	452.50	0.00	0.42	0.00		11.375				5YR 4/3	☑	☐	☐	52	41	2	5	7	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/20/2004	BW/DD	6/2/2005	DD/DPH	22PC-452.5-455-D	452.50	455.00	0.00	0.42	0.00		11.375				5YR 4/3	☑	☐	☐	50	42	3	5	8	☑	☐	☑	☐	☐	☐	GW-GC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/20/2004	BW/DD	6/2/2005	DD/DPH	22PC-455-457.5-D	455.00	457.50	0.00	0.69	0.00		11.375				5YR 4/3	☑	☐	☐	28	61	4	7	11	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
10/20/2004	BW/DD	6/2/2005	DD/DPH	22PC-457.5-460-D	457.50	460.00	0.00	0.40	0.00		11.375				5YR 4/3	☑	☐	☐	12	75	4	9	13	☑	☐	☑	☐	☐	☐	SW-SC	☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		