Alluvium Core Logging Form - Nye County Nuclear Waste Repository Project Office

Key for Sample Number: SC = Sonic core; SCA = Sonic core duplicate interval; C = Drive core. Key for Sample Type: L = Logging; D = Density; F = Fill; LC = Lost core; R = Entire run; X = End of run (overlaps with next run).

Borehole ID: **NC-EWDP-19PB** (Phase 4) Driller/Drilling Company Shawn Cain/Boart Longyear Drilling Method: Sonic Coring Alluvium Depth (ft bgs): 350.8 to 633.8 Start Date: 12/2/2003 End Date: 12/18/2003

Date Logged	Logged By (Initials)	Date Checked	Checked By (Initials)	Core Run Number	Sample Type	Sample Number	Depth Interval (feet bgs) From	Depth Interval (feet bgs) To	Coring Data: Coring Rate (feet/min)	Coring Data: Sample Recovery (feet)	Coring Data: Core Diameter (inches)	Sample Density Data: Tare Weight (kg) (gal)	Sample Density Data: Sample Plus Tare Weight (kg)	Sample Density Data: Sample Weight (kg) (gall)	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	Grading: POORLY	Grading: NA	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
12/2/2003	JSW	12/2/2003	DPH	1	D	19PB-350.8-351.9-SC	350.80	351.90			6.2	0.20	12.20	12.00																															
12/2/2003	JSW	12/2/2003	DPH	1	L	19PB-350.8-352.4-SC	350.80	352.40							5YR 5/6		✓							✓				✓					✓				✓			✓			100		
12/2/2003	JSW	12/2/2003	DPH	1	R	19PB-350.8-353.6-SC	350.80	353.60	0.6	2.9																																			
12/2/2003	JSW	12/2/2003	DPH	1	D	19PB-351.9-353.6-SC	351.90	353.60			6.2	0.20	20.30	20.10																															
12/2/2003	JSW	12/2/2003	DPH	1	L	19PB-352.4-352.9-SC	352.40	352.90							5YR 5/6		✓												✓				✓				✓			✓			100		
12/2/2003	JSW	12/2/2003	DPH	1	L	19PB-352.9-353.3-SC	352.90	353.30							5YR 6/4		✓							✓				✓					✓				✓			✓			100		
12/2/2003	JSW	12/2/2003	DPH	1	LX	19PB-353.3-353.6-SC	353.30	353.60							5YR 6/4		✓												✓				✓				✓			✓			100		
12/2/2003	JSW	12/2/2003	DPH	2	LC	19PB-353.6-353.7-SC	353.60	353.70																																					
12/2/2003	JSW	12/2/2003	DPH	2	R	19PB-353.6-355.0-SC	353.60	355.00	0.7	1.3																																			
12/2/2003	JSW	12/2/2003	DPH	2	LX	19PB-353.7-354.3-SC	353.70	354.30							5YR 6/6		✓											✓					✓				✓			✓			100		
12/2/2003	JSW	12/2/2003	DPH	2	D	19PB-353.7-355.0-SC	353.70	355.00			6.2	0.20	14.15	13.95																															
12/2/2003	JSW	12/2/2003	DPH	2	LX	19PB-354.3-355.0-SC	354.30	355.00							5YR 6/6		✓							✓				✓					✓				✓			✓			100		
12/2/2003	JSW	12/2/2003	DPH	3	D	19PB-355.0-355.6-SC	355.00	355.60			6.2	0.20	6.30	6.10																															
12/2/2003	JSW	12/2/2003	DPH	3	LX	19PB-355.0-356.6-SC	355.00	356.60							5YR 5/6		✓							✓				✓					✓				✓			✓			100		
12/2/2003	JSW	12/2/2003	DPH	3	R	19PB-355.0-359.3-SC	355.00	359.30	0.9	4.3																																			
12/2/2003	JSW	12/2/2003	DPH	3	D	19PB-355.6-357.5-SC	355.60	357.50			6.2	0.20	21.00	20.80																															
12/2/2003	JSW	12/2/2003	DPH	3	L	19PB-356.6-356.9-SC	356.60	356.90							5Y 7/1		✓							✓				✓					✓						✓			100		
12/2/2003	JSW	12/2/2003	DPH	3	L	19PB-356.9-357.9-SC	356.90	357.90							5YR 5/6		✓							✓				✓					✓				✓			✓			100		
12/2/2003	JSW	12/2/2003	DPH	3	D	19PB-357.5-359.3-SC	357.50	359.30			6.2	0.20	20.15	19.95																															
12/2/2003	JSW	12/2/2003	DPH	3	LX	19PB-357.9-359.3-SC	357.90	359.30							5YR 6/4		✓												✓				✓				✓			✓			100		
12/3/2003	BW	10/12/2005	JSW	4	LX	19PB-359.3-360.0-SC	359.30	360.00							5YR 4/3		✓											✓					✓				✓			✓			100		
12/3/2003	BW	10/12/2005	JSW	4	D	19PB-359.3-361.4-SC	359.30	361.40			6.2	0.20	25.90	25.70																															
12/3/2003	BW	10/12/2005	JSW	4	R	19PB-359.3-363.1-SC	359.30	363.10	1.0	3.8																																			
12/3/2003	BW	10/12/2005	JSW	4	L	19PB-360.0-361.7-SC	360.00	361.70							5YR 4/6		✓							✓				✓					✓				✓			✓			100		
12/3/2003	BW	10/12/2005	JSW	4	D	19PB-361.4-363.1-SC	361.40	363.10			6.2	0.20	18.85	18.65																															
12/3/2003	BW	10/12/2005	JSW	4	L	19PB-361.7-362.0-SC	361.70	362.00							5YR 5/4		✓							✓				✓					✓				✓			✓			100		
12/3/2003	BW	10/12/2005	JSW	4	LX	19PB-362.0-363.1-SC	362.00	363.10							5YR 5/6		✓											✓					✓				✓			✓			100		
12/3/2003	BW	10/12/2005	JSW	5	LX	19PB-363.1-364.6-SC	363.10	364.60							5YR 5/4		✓											✓					✓				✓			✓			100		
12/3/2003	BW	10/12/2005	JSW	5	D	19PB-363.1-365.0-SC	363.10	365.00			6.2	0.20	23.60	23.40																															
12/3/2003	BW	10/12/2005	JSW	5	R	19PB-363.1-367.0-SC	363.10	367.00	1.0	4.0																																			
12/3/2003	BW	10/12/2005	JSW	5	L	19PB-364.6-364.9-SC	364.60	364.90							5YR 5/6		✓												✓				✓				✓			✓			100		

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Borehole ID: **NC-EWDP-19PB** (Phase 4) Driller/Drilling Company Shawn Cain/Boart Longyear Drilling Method: Sonic Coring Alluvium Depth (ft bgs): 350.8 to 633.8 Start Date: 12/2/2003 End Date: 12/18/2003

Date Logged	Logged By (Initials)	Date Checked	Checked By (Initials)	Core Run Number	Sample Type	Sample Number	Depth Interval (feet bgs) From	Depth Interval (feet bgs) To	Coring Data: Coring Rate (feet/min)	Coring Data: Sample Recovery (feet)	Coring Data: Core Diameter (inches)	Sample Density Data: Tare Weight (kg) (gal)	Sample Density Data: Sample Plus Tare Weight (kg)	Sample Density Data: Sample Weight (kg) (gall)	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	Grading: POORLY	Grading: NA	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
12/3/2003	BW	10/12/2005	JSW	5	L	19PB-364.9-366.7-SC	364.90	366.70							5YR 4/4	☐	☑	☐									☐	☑	☐	☐		☐	☐	☑	☐	☑	☐	☐	☐	☑	☐	☐	100		
12/3/2003	BW	10/12/2005	JSW	5	D	19PB-365.0-367.0-SC	365.00	367.00			6.2	0.20	23.60	23.40																														
12/3/2003	BW	10/12/2005	JSW	5	LX	19PB-366.7-367.0-SC	366.70	367.00							5YR 5/4	☐	☑	☐									☐	☐	☑	☐		☐	☐	☑	☐	☑	☐	☐	☐	☐	☐	☑	100		
12/3/2003	BW	10/12/2005	JSW	6	LX	19PB-367.0-368.5-SC	367.00	368.50							5YR 4/4	☐	☑	☐									☐	☑	☐	☐		☐	☐	☑	☐	☑	☐	☐	☐	☑	☐	☐	100		
12/3/2003	BW	10/12/2005	JSW	6	D	19PB-367.0-368.8-SC	367.00	368.80			6.2	0.20	24.20	24.00																														
12/3/2003	BW	10/12/2005	JSW	6	R	19PB-367.0-371.1-SC	367.00	371.10	1.6	4.0																																		
12/3/2003	BW	10/12/2005	JSW	6	L	19PB-368.5-369.9-SC	368.50	369.90							5YR 5/4	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☑	☐	☐	☐	☑	☐	☐	100		
12/3/2003	BW	10/12/2005	JSW	6	D	19PB-368.8-371.0-SC	368.80	371.00			6.2	0.20	28.60	28.40																														
12/3/2003	BW	10/12/2005	JSW	6	LX	19PB-369.9-371.0-SC	369.90	371.00							5YR 5/6	☐	☐	☑									☐	☐	☑	☐		☐	☐	☑	☐	☑	☐	☐	☐	☐	☑	☐	100		
12/3/2003	BW	10/12/2005	JSW	6	LC	19PB-371.0-371.1-SC	371.00	371.10																																				
12/3/2003	BW	10/12/2005	JSW	7	LX	19PB-371.0-372.9-SC	371.00	372.90							5YR 5/6	☐	☐	☑									☐	☐	☑	☐		☐	☐	☑	☐	☑	☐	☐	☐	☐	☑	☐	100		
12/3/2003	BW	10/12/2005	JSW	7	D	19PB-371.0-373.6-SC	371.00	373.60			6.2	0.20	29.20	29.00																														
12/3/2003	BW	10/12/2005	JSW	7	R	19PB-371.1-375.4-SC	371.10	375.40	0.9	4.4																																		
12/3/2003	BW	10/12/2005	JSW	7	L	19PB-372.9-373.6-SC	372.90	373.60							5YR 5/2	☐	☐	☑									☐	☐	☑	☐		☐	☐	☑	☐	☑	☐	☐	☐	☐	☑	☐	100		
12/3/2003	BW	10/12/2005	JSW	7	L	19PB-373.6-374.6-SC	373.60	374.60							5YR 5/6	☐	☐	☑									☐	☐	☑	☐		☐	☐	☑	☐	☑	☐	☐	☐	☐	☑	☐	100		
12/3/2003	BW	10/12/2005	JSW	7	D	19PB-373.6-375.4-SC	373.60	375.40			6.2	0.20	22.20	22.00																														
12/3/2003	BW	10/12/2005	JSW	7	LX	19PB-374.6-375.4-SC	374.60	375.40							10YR 4/2	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☑	☐	☐	☐	☐	☑	☐	100		
12/3/2003	BW	10/12/2005	JSW	7	LC	19PB-375.4-375.7-SC	375.40	375.70																																				
12/3/2003	BW	10/12/2005	JSW	8	D	19PB-375.7-376.5-SC	375.70	376.50			6.2	0.20	14.75	14.55																														
12/3/2003	BW	10/12/2005	JSW	8	LX	19PB-375.7-377.1-SC	375.70	377.10							5YR 6/4	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☑	☐	☐	☐	☑	☐	☐	100		
12/3/2003	BW	10/12/2005	JSW	8	R	19PB-375.7-380.0-SC	375.70	380.00	0.8	2.7																																		
12/3/2003	BW	10/12/2005	JSW	8	D	19PB-376.5-378.4-SC	376.50	378.40			6.2	0.20	20.95	20.75																														
12/3/2003	BW	10/12/2005	JSW	8	L	19PB-377.1-377.4-SC	377.10	377.40							5YR 6/6	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☑	☐	☐	☐	☑	☐	☐	100		
12/3/2003	BW	10/12/2005	JSW	8	L	19PB-377.4-378.1-SC	377.40	378.10							10YR 6/6	☐	☐	☑						☑	☐	☐	☐	☑	☐	☐		☐	☐	☑	☐	☑	☐	☐	☐	☑	☐	☐	100		
12/3/2003	BW	10/12/2005	JSW	8	LX	19PB-378.1-378.4-SC	378.10	378.40							5YR 5/6	☐	☐	☑									☐	☐	☑	☐		☐	☐	☑	☐	☑	☐	☐	☐	☑	☐	☐	100		
12/3/2003	BW	10/12/2005	JSW	8	LC	19PB-378.4-380.0-SC	378.40	380.00																																				
12/4/2003	BW	10/12/2005	JSW	9	F	19PB-379.3-380.0-C	379.30	380.00																																				
12/4/2003	BW	10/12/2005	JSW	9	LX	19PB-380.00-380.50-C	380.00	380.50							5YR 4/2	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☑	☐	☐	☐	☑	☐	☐	100		
12/4/2003	BW	10/12/2005	JSW	9	RD	19PB-380.00-381.31-C	380.00	381.31	0.2	1.0	4.0	28.90																																
12/4/2003	BW	10/12/2005	JSW	9	LX	19PB-380.50-381.00-C	380.50	381.00							5YR 6/6	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☑	☐	☐	☐	☑	☐	☐	100		
12/4/2003	BW	10/12/2005	JSW	9	LC	19PB-381.00-381.31-C	381.00	381.31																																				

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Borehole ID: **NC-EWDP-19PB** (Phase 4) Driller/Drilling Company Shawn Cain/Boart Longyear Drilling Method: Sonic Coring Alluvium Depth (ft bgs): 350.8 to 633.8 Start Date: 12/2/2003 End Date: 12/18/2003

Date Logged	Logged By (Initials)	Date Checked	Checked By (Initials)	Core Run Number	Sample Type	Sample Number	Depth Interval (feet bgs) From	Depth Interval (feet bgs) To	Coring Data: Coring Rate (feet/min)	Coring Data: Sample Recovery (feet)	Coring Data: Core Diameter (inches)	Sample Density Data: Tare Weight (kg) (gal)	Sample Density Data: Sample Plus Tare Weight (kg)	Sample Density Data: Sample Weight (kg) (gall)	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	Grading: POORLY	Grading: NA	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
12/4/2003	BW	10/12/2005	JSW	10	LX	19PB-381.3-382.4-SC	381.30	382.40							5YR 5/4	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☑	☐	☐	☑	☐	☐	100		
12/4/2003	BW	10/12/2005	JSW	10	D	19PB-381.3-382.8-SC	381.30	382.80			6.2	0.20	19.45	19.25																														
12/4/2003	BW	10/12/2005	JSW	10	R	19PB-381.3-386.1-SC	381.30	386.10	1.1	4.8																																		
12/4/2003	BW	10/12/2005	JSW	10	L	19PB-382.4-383.7-SC	382.40	383.70							5YR 5/6	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☑	☐	☐	☑	☐	☐	100		
12/4/2003	BW	10/12/2005	JSW	10	D	19PB-382.8-384.4-SC	382.80	384.40			6.2	0.20	20.70	20.50																														
12/4/2003	BW	10/12/2005	JSW	10	LX	19PB-383.7-386.1-SC	383.70	386.10							5YR 6/6	☐	☐	☑									☐	☐	☑	☐		☐	☐	☑	☐	☐	☑	☐	☑	☐	☐	100		
12/4/2003	BW	10/12/2005	JSW	10	D	19PB-384.4-386.1-SC	384.40	386.10			6.2	0.20	19.35	19.15																														
12/4/2003	BW	10/12/2005	JSW	11	LX	19PB-386.1-387.2-SC	386.10	387.20							5YR 6/8	☐	☐	☑									☐	☐	☑	☐		☐	☐	☑	☐	☑	☐	☐	☑	☐	☐	100		
12/4/2003	BW	10/12/2005	JSW	11	D	19PB-386.1-387.6-SC	386.10	387.60			6.2	0.20	20.50	20.30																														
12/4/2003	BW	10/12/2005	JSW	11	R	19PB-386.1-396.1-SC	386.10	396.10	1.1	10.0																																		
12/4/2003	BW	10/12/2005	JSW	11	L	19PB-387.2-388.9-SC	387.20	388.90							5YR 5/6	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☑	☐	☐	☑	☐	☐	100		
12/4/2003	BW	10/12/2005	JSW	11	D	19PB-387.6-389.3-SC	387.60	389.30			6.2	0.20	21.45	21.25																														
12/4/2003	BW	10/12/2005	JSW	11	L	19PB-388.9-394.1-SC	388.90	394.10							5YR 5/6	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☑	☐	☐	☑	☐	☐	100		
12/4/2003	BW	10/12/2005	JSW	11	D	19PB-389.3-390.9-SC	389.30	390.90			6.2	0.20	18.80	18.60																														
12/4/2003	BW	10/12/2005	JSW	11	D	19PB-390.9-392.7-SC	390.90	392.70			6.2	0.20	20.10	19.90																														
12/4/2003	BW	10/12/2005	JSW	11	D	19PB-392.7-394.4-SC	392.70	394.40			6.2	0.20	21.35	21.15																														
12/4/2003	BW	10/12/2005	JSW	11	L	19PB-394.1-395.4-SC	394.10	395.40							5YR 5/6	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☑	☐	☐	☐	☑	☐	☐	100		
12/4/2003	BW	10/12/2005	JSW	11	D	19PB-394.4-396.1-SC	394.40	396.10			6.2	0.20	23.25	23.05																														
12/4/2003	BW	10/12/2005	JSW	11	LX	19PB-395.4-396.1-SC	395.40	396.10							5YR 5/6	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☑	☐	☐	☐	☑	☐	☐	100		
12/5/2003	BW	10/12/2005	JSW	12	LC	19PB-396.1-396.3-SC	396.10	396.30																																				
12/4/2003	BW	10/12/2005	JSW	12	D	19PB-396.3-396.8-SC	396.30	396.80			6.2	0.20	7.50	7.30																														
12/5/2003	BW	10/12/2005	JSW	12	LX	19PB-396.3-397.1-SC	396.30	397.10							5YR 5/6	☐	☐	☑						☑	☐	☐	☐	☑	☐	☐		☐	☐	☑	☐	☑	☐	☐	☐	☑	☐	☐	100		
12/4/2003	BW	10/12/2005	JSW	12	R	19PB-396.3-406.1-SC	396.30	406.10	1.6	9.8																																		
12/4/2003	BW	10/12/2005	JSW	12	D	19PB-396.8-398.6-SC	396.80	398.60			6.2	0.20	20.35	20.15																														
12/5/2003	BW	10/12/2005	JSW	12	L	19PB-397.1-398.2-SC	397.10	398.20							5YR 6/6	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☑	☐	☐	☐	☑	☐	☐	100		
12/5/2003	BW	10/12/2005	JSW	12	L	19PB-398.2-398.7-SC	398.20	398.70							5YR 6/6	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☑	☐	☐	☐	☑	☐	☐	100		
12/4/2003	BW	10/12/2005	JSW	12	D	19PB-398.6-400.5-SC	398.60	400.50			6.2	0.20	21.90	21.70																														
12/5/2003	BW	10/12/2005	JSW	12	L	19PB-398.7-399.8-SC	398.70	399.80							5YR 6/6	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☑	☐	☐	☐	☑	☐	☐	100		
12/5/2003	BW	10/12/2005	JSW	12	L	19PB-399.8-401.1-SC	399.80	401.10							5YR 6/6	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☑	☐	☐	☐	☑	☐	☐	100		
12/4/2003	BW	10/12/2005	JSW	12	D	19PB-400.5-402.4-SC	400.50	402.40			6.2	0.20	20.50	20.30																														
12/5/2003	BW	10/12/2005	JSW	12	LX	19PB-401.1-406.1-SC	401.10	406.10							5YR 6/6	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☑	☐	☐	☐	☑	☐	☐	100		

Alluvium Core Logging Form - Nye County Nuclear Waste Repository Project Office

Key for Sample Number: SC = Sonic core; SCA = Sonic core duplicate interval; C = Drive core. Key for Sample Type: L = Logging; D = Density; F = Fill; LC = Lost core; R = Entire run; X = End of run (overlaps with next run).

Borehole ID: **NC-EWDP-19PB** (Phase 4) Driller/Drilling Company Shawn Cain/Boart Longyear Drilling Method: Sonic Coring Alluvium Depth (ft bgs): 350.8 to 633.8 Start Date: 12/2/2003 End Date: 12/18/2003

Date Logged	Logged By (Initials)	Date Checked	Checked By (Initials)	Core Run Number	Sample Type	Sample Number	Depth Interval (feet bgs) From	Depth Interval (feet bgs) To	Coring Data: Coring Rate (feet/min)	Coring Data: Sample Recovery (feet)	Coring Data: Core Diameter (inches)	Sample Density Data: Tare Weight (kg) (gal)	Sample Density Data: Sample Plus Tare Weight (kg)	Sample Density Data: Sample Weight (kg) (gall)	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	Grading: POORLY	Grading: NA	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
12/4/2003	BW	10/12/2005	JSW	12	D	19PB-402.4-404.2-SC	402.40	404.20			6.2	0.20	21.95	21.75																														
12/4/2003	BW	10/12/2005	JSW	12	D	19PB-404.2-406.1-SC	404.20	406.10			6.2	0.20	21.50	21.30																														
12/5/2003	BW	10/12/2005	JSW	13	LC	19PB-406.1-406.3-SC	406.10	406.30																																				
12/5/2003	BW	10/12/2005	JSW	13	LX	19PB-406.3-407.5-SC	406.30	407.50							5YR 5/6			✓										✓								✓			✓			100		
12/5/2003	BW	10/12/2005	JSW	13	D	19PB-406.3-407.9-SC	406.30	407.90			6.2	0.20	20.15	19.95																														
12/5/2003	BW	10/12/2005	JSW	13	R	19PB-406.3-416.1-SC	406.30	416.10	1.4	9.8																																		
12/5/2003	BW	10/12/2005	JSW	13	L	19PB-407.5-407.9-SC	407.50	407.90							5YR 6/6			✓										✓								✓			✓			100		
12/5/2003	BW	10/12/2005	JSW	13	L	19PB-407.9-408.5-SC	407.90	408.50							5YR 5/6			✓										✓								✓			✓			100		
12/5/2003	BW	10/12/2005	JSW	13	D	19PB-407.9-409.4-SC	407.90	409.40			6.2	0.20	18.85	18.65																														
12/5/2003	BW	10/12/2005	JSW	13	L	19PB-408.5-409.9-SC	408.50	409.90							5YR 6/6			✓										✓								✓			✓			100		
12/5/2003	BW	10/12/2005	JSW	13	D	19PB-409.4-411.1-SC	409.40	411.10			6.2	0.20	20.35	20.15																														
12/5/2003	BW	10/12/2005	JSW	13	L	19PB-409.9-411.9-SC	409.90	411.90							5YR 5/6			✓										✓								✓			✓			100		
12/5/2003	BW	10/12/2005	JSW	13	D	19PB-411.1-412.7-SC	411.10	412.70			6.2	0.20	20.55	20.35																														
12/5/2003	BW	10/12/2005	JSW	13	L	19PB-411.9-413.1-SC	411.90	413.10							5YR 6/6			✓										✓								✓			✓			100		
12/5/2003	BW	10/12/2005	JSW	13	D	19PB-412.7-414.5-SC	412.70	414.50			6.2	0.20	19.60	19.40																														
12/5/2003	BW	10/12/2005	JSW	13	L	19PB-413.1-413.9-SC	413.10	413.90							7.5YR 5/2			✓											✓								✓			✓			100		
12/5/2003	BW	10/12/2005	JSW	13	L	19PB-413.9-414.4-SC	413.90	414.40							5YR 5/6			✓										✓								✓			✓			100		
12/5/2003	BW	10/12/2005	JSW	13	L	19PB-414.4-415.7-SC	414.40	415.70							5YR 5/6			✓											✓								✓			✓			100		
12/5/2003	BW	10/12/2005	JSW	13	D	19PB-414.5-416.1-SC	414.50	416.10			6.2	0.20	20.20	20.00																														
12/5/2003	BW	10/12/2005	JSW	13	LX	19PB-415.7-416.1-SC	415.70	416.10							5YR 5/6			✓											✓								✓			✓			100		
12/5/2003	BW	10/12/2005	JSW	14	LC	19PB-416.1-416.2-SC	416.10	416.20																																				
12/5/2003	BW	10/12/2005	JSW	14	LX	19PB-416.2-416.8-SC	416.20	416.80							5YR 6/6			✓											✓							✓			✓			100		
12/5/2003	BW	10/12/2005	JSW	14	D	19PB-416.2-417.1-SC	416.20	417.10			6.2	0.20	12.05	11.85																														
12/5/2003	BW	10/12/2005	JSW	14	R	19PB-416.2-424.4-SC	416.20	424.40	0.6	8.2																																		
12/5/2003	BW	10/12/2005	JSW	14	L	19PB-416.8-418.4-SC	416.80	418.40							5YR 5/6			✓											✓							✓			✓			100		
12/5/2003	BW	10/12/2005	JSW	14	D	19PB-417.1-418.6-SC	417.10	418.60			6.2	0.20	17.10	16.90																														
12/5/2003	BW	10/12/2005	JSW	14	L	19PB-418.4-419.6-SC	418.40	419.60							5YR 5/6			✓											✓							✓			✓			100		
12/5/2003	BW	10/12/2005	JSW	14	D	19PB-418.6-420.1-SC	418.60	420.10			6.2	0.20	16.20	16.00																														
12/5/2003	BW	10/12/2005	JSW	14	L	19PB-419.6-421.2-SC	419.60	421.20							5YR 6/4			✓											✓							✓			✓			100		
12/5/2003	BW	10/12/2005	JSW	14	D	19PB-420.1-421.5-SC	420.10	421.50			6.2	0.20	15.70	15.50																														
12/5/2003	BW	10/12/2005	JSW	14	L	19PB-421.2-422.5-SC	421.20	422.50							5YR 6/6			✓											✓							✓			✓			100		

Alluvium Core Logging Form - Nye County Nuclear Waste Repository Project Office

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Borehole ID: **NC-EWDP-19PB** (Phase 4) Driller/Drilling Company Shawn Cain/Boart Longyear Drilling Method: Sonic Coring Alluvium Depth (ft bgs): 350.8 to 633.8 Start Date: 12/2/2003 End Date: 12/18/2003

Date Logged	Logged By (Initials)	Date Checked	Checked By (Initials)	Core Run Number	Sample Type	Sample Number	Depth Interval (feet bgs) From	Depth Interval (feet bgs) To	Coring Data: Coring Rate (feet/min)	Coring Data: Sample Recovery (feet)	Coring Data: Core Diameter (inches)	Sample Density Data: Tare Weight (kg) (gal)	Sample Density Data: Sample Plus Tare Weight (kg)	Sample Density Data: Sample Weight (kg) (gall)	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	Grading: POORLY	Grading: NA	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
12/5/2003	BW	10/12/2005	JSW	14	D	19PB-421.5-423.0-SC	421.50	423.00			6.2	0.20	17.45	17.25																															
12/5/2003	BW	10/12/2005	JSW	14	LX	19PB-422.5-424.4-SC	422.50	424.40							5YR 6/6			✓										✓					✓				✓			✓			100		
12/5/2003	BW	10/12/2005	JSW	14	D	19PB-423.0-424.4-SC	423.00	424.40			6.2	0.20	16.45	16.25																															
12/5/2003	BW	10/12/2005	JSW	15	LC	19PB-424.4-424.6-SC	424.40	424.60																																					
12/5/2003	BW	10/12/2005	JSW	15	D	19PB-424.6-426.2-SC	424.60	426.20			6.2	0.20	16.55	16.35																															
12/5/2003	BW	10/12/2005	JSW	15	LX	19PB-424.6-428.7-SC	424.60	428.70							5YR 6/6			✓										✓					✓				✓			✓			100		
12/5/2003	BW	10/12/2005	JSW	15	R	19PB-424.6-429.3-SC	424.60	429.30	0.3	4.7																																			
12/5/2003	BW	10/12/2005	JSW	15	D	19PB-426.2-427.9-SC	426.20	427.90			6.2	0.20	18.60	18.40																															
12/5/2003	BW	10/12/2005	JSW	15	D	19PB-427.9-429.3-SC	427.90	429.30			6.2	0.20	17.70	17.50																															
12/5/2003	BW	10/12/2005	JSW	15	LX	19PB-428.7-429.3-SC	428.70	429.30							5YR 6/6			✓										✓					✓				✓			✓			100		
12/5/2003	BW	10/12/2005	JSW	16	D	19PB-429.3-429.5-SC	429.30	429.50			6.2	0.20	3.90	3.70																															
12/6/2003	BW	10/12/2005	JSW	16	LX	19PB-429.3-431.0-SC	429.30	431.00							5YR 6/6			✓										✓					✓				✓			✓			100		
12/5/2003	BW	10/12/2005	JSW	16	R	19PB-429.3-435.2-SC	429.30	435.20	0.6	4.8																																			
12/5/2003	BW	10/12/2005	JSW	16	D	19PB-429.5-431.2-SC	429.50	431.20			6.2	0.20	20.20	20.00																															
12/6/2003	BW	10/12/2005	JSW	16	L	19PB-431.0-431.9-SC	431.00	431.90							5YR 5/6			✓										✓					✓				✓			✓			100		
12/5/2003	BW	10/12/2005	JSW	16	D	19PB-431.2-432.8-SC	431.20	432.80			6.2	0.20	19.50	19.30																															
12/6/2003	BW	10/12/2005	JSW	16	L	19PB-431.9-432.4-SC	431.90	432.40							5YR 6/6			✓										✓					✓				✓			✓			100		
12/6/2003	BW	10/12/2005	JSW	16	LX	19PB-432.4-434.1-SC	432.40	434.10							5YR 6/6			✓										✓					✓				✓			✓			100		
12/5/2003	BW	10/12/2005	JSW	16	D	19PB-432.8-434.1-SC	432.80	434.10			6.2	0.20	16.25	16.05																															
12/6/2003	BW	10/12/2005	JSW	16	LC	19PB-434.1-435.2-SC	434.10	435.20																																					
12/6/2003	BW	10/12/2005	JSW	17	LC	19PB-435.2-435.5-SC	435.20	435.50																																					
12/6/2003	BW	10/12/2005	JSW	17	D	19PB-435.5-436.1-SC	435.50	436.10			6.2	0.20	6.00	5.80																															
12/6/2003	BW	10/12/2005	JSW	17	LX	19PB-435.5-437.2-SC	435.50	437.20							5YR 6/6			✓										✓					✓				✓			✓			100		
12/6/2003	BW	10/12/2005	JSW	17	R	19PB-435.5-445.3-SC	435.50	445.30	1.0	9.3																																			
12/6/2003	BW	10/12/2005	JSW	17	D	19PB-436.1-437.8-SC	436.10	437.80			6.2	0.20	20.15	19.95																															
12/6/2003	BW	10/12/2005	JSW	17	L	19PB-437.2-441.2-SC	437.20	441.20							5YR 6/6			✓						✓				✓					✓				✓			✓			100		
12/6/2003	BW	10/12/2005	JSW	17	D	19PB-437.8-439.6-SC	437.80	439.60			6.2	0.20	21.85	21.65																															
12/6/2003	BW	10/12/2005	JSW	17	D	19PB-439.6-441.6-SC	439.60	441.60			6.2	0.20	21.75	21.55																															
12/6/2003	BW	10/12/2005	JSW	17	L	19PB-441.2-442.9-SC	441.20	442.90							5YR 6/6			✓						✓				✓					✓				✓			✓			100		
12/6/2003	BW	10/12/2005	JSW	17	D	19PB-441.6-443.4-SC	441.60	443.40			6.2	0.20	22.30	22.10																															
12/6/2003	BW	10/12/2005	JSW	17	LX	19PB-442.9-445.1-SC	442.90	445.10							5YR 5/6			✓										✓					✓				✓			✓			100		

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Borehole ID: **NC-EWDP-19PB** (Phase 4) Driller/Drilling Company Shawn Cain/Boart Longyear Drilling Method: Sonic Coring Alluvium Depth (ft bgs): 350.8 to 633.8 Start Date: 12/2/2003 End Date: 12/18/2003

Date Logged	Logged By (Initials)	Date Checked	Checked By (Initials)	Core Run Number	Sample Type	Sample Number	Depth Interval (feet bgs) From	Depth Interval (feet bgs) To	Coring Data: Coring Rate (feet/min)	Coring Data: Sample Recovery (feet)	Coring Data: Core Diameter (inches)	Sample Density Data: Tare Weight (kg) (gal)	Sample Density Data: Sample Plus Tare Weight (kg)	Sample Density Data: Sample Weight (kg) (gall)	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	Grading: POORLY	Grading: NA	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
12/6/2003	BW	10/12/2005	JSW	17	D	19PB-443.4-445.1-SC	443.40	445.10			6.2	0.20	20.45	20.25																														
12/6/2003	BW	10/12/2005	JSW	17	LC	19PB-445.1-445.3-SC	445.10	445.30																																				
12/6/2003	BW	10/12/2005	JSW	18	D	19PB-445.3-446.2-SC	445.30	446.20			6.2	0.20	10.65	10.45																														
12/6/2003	BW	10/12/2005	JSW	18	LX	19PB-445.3-447.9-SC	445.30	447.90							7.5YR 5/4			✓										✓					✓				✓			100		
12/6/2003	BW	10/12/2005	JSW	18	R	19PB-445.3-448.4-SC	445.30	448.40	1.0	2.6																																		
12/6/2003	BW	10/12/2005	JSW	18	D	19PB-446.2-447.9-SC	446.20	447.90			6.2	0.20	20.20	20.00																														
12/8/2003	BW	10/12/2005	JSW	19	F	19PB-447.60-449.09-C	447.60	449.09																																				
12/6/2003	BW	10/12/2005	JSW	18	LC	19PB-447.9-448.4-SC	447.90	448.40																																				
12/8/2003	BW	10/12/2005	JSW	19	LC	19PB-448.37-449.09-C	448.37	449.09																																				
12/8/2003	BW	10/12/2005	JSW	19	LX	19PB-449.09-449.40-C	449.09	449.40							5YR 6/3			✓										✓					✓				✓			100		
12/8/2003	BW	10/12/2005	JSW	19	RD	19PB-449.09-450.59-C	449.09	450.59	0.5	0.6	4.0	28.90	38.15	9.25																														
12/8/2003	BW	10/12/2005	JSW	19	LX	19PB-449.40-449.70-C	449.40	449.70							5YR 6/3			✓										✓					✓				✓			100		
12/8/2003	BW	10/12/2005	JSW	19	LC	19PB-449.70-450.59-C	449.70	450.59																																				
12/8/2003	BW	10/12/2005	JSW	20	D	19PB-450.6-452.4-SC	450.60	452.40			6.2	0.20	20.20	20.00																														
12/8/2003	BW	10/12/2005	JSW	20	LX	19PB-450.6-453.0-SC	450.60	453.00							7.5YR 5/6			✓										✓					✓		✓			✓			100		
12/8/2003	BW	10/12/2005	JSW	20	R	19PB-450.6-460.7-SC	450.60	460.70	1.0	10.2																																		
12/8/2003	BW	10/12/2005	JSW	20	D	19PB-452.4-453.9-SC	452.40	453.90			6.2	0.20	20.35	20.15																														
12/8/2003	BW	10/12/2005	JSW	20	L	19PB-453.0-455.1-SC	453.00	455.10							7.5YR 5/6			✓										✓					✓		✓			✓			100		
12/8/2003	BW	10/12/2005	JSW	20	D	19PB-453.9-455.5-SC	453.90	455.50			6.2	0.20	20.55	20.35																														
12/8/2003	BW	10/12/2005	JSW	20	L	19PB-455.1-455.5-SC	455.10	455.50							5YR 5/4			✓										✓					✓		✓			✓			100		
12/8/2003	BW	10/12/2005	JSW	20	L	19PB-455.5-456.6-SC	455.50	456.60							7.5YR 5/4			✓										✓					✓		✓			✓			100		
12/8/2003	BW	10/12/2005	JSW	20	D	19PB-455.5-457.4-SC	455.50	457.40			6.2	0.20	21.65	21.45																														
12/8/2003	BW	10/12/2005	JSW	20	L	19PB-456.6-457.2-SC	456.60	457.20							7.5YR 5/4			✓										✓					✓		✓			✓			100		
12/8/2003	BW	10/12/2005	JSW	20	LX	19PB-457.2-460.7-SC	457.20	460.70							7.5YR 5/4			✓										✓					✓		✓			✓			100		
12/8/2003	BW	10/12/2005	JSW	20	D	19PB-457.4-459.1-SC	457.40	459.10			6.2	0.20	21.95	21.75																														
12/8/2003	BW	10/12/2005	JSW	20	D	19PB-459.1-460.7-SC	459.10	460.70			6.2	0.20	20.65	20.45																														
12/8/2003	BW	10/12/2005	JSW	21	LX	19PB-460.7-461.8-SC	460.70	461.80							5YR 5/4			✓										✓					✓		✓			✓			100		
12/8/2003	BW	10/12/2005	JSW	21	D	19PB-460.7-462.7-SC	460.70	462.70			6.2	0.20	21.45	21.25																														
12/8/2003	BW	10/12/2005	JSW	21	R	19PB-460.7-466.5-SC	460.70	466.50	1.0	5.8																																		
12/8/2003	BW	10/12/2005	JSW	21	L	19PB-461.8-463.4-SC	461.80	463.40							5YR 5/4			✓						✓				✓					✓		✓			✓			100		
12/8/2003	BW	10/12/2005	JSW	21	D	19PB-462.7-464.5-SC	462.70	464.50			6.2	0.20	20.10	19.90																														

Alluvium Core Logging Form - Nye County Nuclear Waste Repository Project Office

Key for Sample Number: SC = Sonic core; SCA = Sonic core duplicate interval; C = Drive core. Key for Sample Type: L = Logging; D = Density; F = Fill; LC = Lost core; R = Entire run; X = End of run (overlaps with next run).

Borehole ID: **NC-EWDP-19PB** (Phase 4) Driller/Drilling Company Shawn Cain/Boart Longyear Drilling Method: Sonic Coring Alluvium Depth (ft bgs): 350.8 to 633.8 Start Date: 12/2/2003 End Date: 12/18/2003

Date Logged	Logged By (Initials)	Date Checked	Checked By (Initials)	Core Run Number	Sample Type	Sample Number	Depth Interval (feet bgs) From	Depth Interval (feet bgs) To	Coring Data: Coring Rate (feet/min)	Coring Data: Sample Recovery (feet)	Coring Data: Core Diameter (inches)	Sample Density Data: Tare Weight (kg) (gal)	Sample Density Data: Sample Plus Tare Weight (kg)	Sample Density Data: Sample Weight (kg) (gall)	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	Grading: POORLY	Grading: NA	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
12/8/2003	BW	10/12/2005	JSW	21	L	19PB-463.4-464.5-SC	463.40	464.50							5YR 5/4	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☑	☐	☐	☑	☐	☐	100		
12/8/2003	BW	10/12/2005	JSW	21	L	19PB-464.5-465.6-SC	464.50	465.60							7.5YR 6/2	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☑	☐	☐	☑	☐	☐	100		
12/8/2003	BW	10/12/2005	JSW	21	D	19PB-464.5-466.5-SC	464.50	466.50			6.2	0.20	20.55	20.35																														
12/8/2003	BW	10/12/2005	JSW	21	LX	19PB-465.6-466.3-SC	465.60	466.30							7.5YR 6/2	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☑	☐	☐	☑	☐	☐	100		
12/8/2003	BW	10/12/2005	JSW	21	LC	19PB-466.3-466.5-SC	466.30	466.50																																				
12/8/2003	BW	10/12/2005	JSW	22	D	19PB-466.5-467.7-SC	466.50	467.70			6.2	0.20	15.80	15.60																														
12/8/2003	BW	10/12/2005	JSW	22	LX	19PB-466.5-468.1-SC	466.50	468.10							7.5YR 5/4	☐	☐	☑						☑			☐	☑	☐	☐		☐	☐	☑	☐	☑	☐	☐	☑	☐	☐	100		
12/8/2003	BW	10/12/2005	JSW	22	R	19PB-466.5-476.4-SC	466.50	476.40	1.4	9.7																																		
12/8/2003	BW	10/12/2005	JSW	22	D	19PB-467.7-469.4-SC	467.70	469.40			6.2	0.20	23.55	23.35																														
12/8/2003	BW	10/12/2005	JSW	22	L	19PB-468.1-469.0-SC	468.10	469.00							5YR 5/4	☐	☐	☑									☑	☐	☐	☐		☐	☐	☑	☐	☑	☐	☐	☑	☐	☐	100		
12/8/2003	BW	10/12/2005	JSW	22	L	19PB-469.0-470.5-SC	469.00	470.50							7.5YR 5/3	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☑	☐	☐	☑	☐	☐	100		
12/8/2003	BW	10/12/2005	JSW	22	D	19PB-469.4-471.2-SC	469.40	471.20			6.2	0.20	22.85	22.65																														
12/8/2003	BW	10/12/2005	JSW	22	L	19PB-470.5-474.3-SC	470.50	474.30							7.5YR 5/4	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☑	☐	☐	☑	☐	☐	100		
12/8/2003	BW	10/12/2005	JSW	22	D	19PB-471.2-473.1-SC	471.20	473.10			6.2	0.20	22.35	22.15																														
12/8/2003	BW	10/12/2005	JSW	22	D	19PB-473.1-474.8-SC	473.10	474.80			6.2	0.20	19.05	18.85																														
12/8/2003	BW	10/12/2005	JSW	22	L	19PB-474.3-475.1-SC	474.30	475.10							7.5YR 5/1	☐	☐	☑						☑			☐	☑	☐	☐		☐	☐	☑	☐	☑	☐	☐	☑	☐	☐	100		
12/8/2003	BW	10/12/2005	JSW	22	D	19PB-474.8-476.2-SC	474.80	476.20			6.2	0.20	18.50	18.30																														
12/8/2003	BW	10/12/2005	JSW	22	LX	19PB-475.1-476.2-SC	475.10	476.20							7.5YR 6/4	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☑	☐	☐	☑	☐	☐	100		
12/8/2003	BW	10/12/2005	JSW	22	LC	19PB-476.2-476.4-SC	476.20	476.40																																				
12/9/2003	BW	10/12/2005	JSW	23	LX	19PB-476.4-476.6-SC	476.40	476.60							7.5YR 5/4	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☑	☐	☐	☑	☐	☐	100		
12/9/2003	BW	10/12/2005	JSW	23	D	19PB-476.4-478.0-SC	476.40	478.00			6.2	0.20	22.10	21.90																														
12/9/2003	BW	10/12/2005	JSW	23	R	19PB-476.4-478.2-SC	476.40	478.20	0.5	1.6																																		
12/9/2003	BW	10/12/2005	JSW	23	LX	19PB-476.6-478.0-SC	476.60	478.00							7.5YR 6/4	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☑	☐	☐	☑	☐	☐	100		
12/9/2003	BW	10/12/2005	JSW	23	LC	19PB-478.0-478.2-SC	478.00	478.20																																				
12/9/2003	BW	10/12/2005	JSW	24	D	19PB-478.2-479.0-SC	478.20	479.00			6.2	0.20	9.90	9.70																														
12/9/2003	BW	10/12/2005	JSW	24	LX	19PB-478.2-481.9-SC	478.20	481.90							5YR 5/4	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☑	☐	☐	☑	☐	☐	100		
12/9/2003	BW	10/12/2005	JSW	24	R	19PB-478.2-482.9-SC	478.20	482.90	0.4	3.7																																		
12/9/2003	BW	10/12/2005	JSW	24	D	19PB-479.0-480.5-SC	479.00	480.50			6.2	0.20	16.50	16.30																														
12/9/2003	BW	10/12/2005	JSW	24	D	19PB-480.5-481.9-SC	480.50	481.90			6.2	0.20	15.50	15.30																														
12/9/2003	BW	10/12/2005	JSW	25	D	19PB-481.9-482.3-SC	481.90	482.30			6.2	0.20	4.70	4.50																														
12/9/2003	BW	10/12/2005	JSW	24	LC	19PB-481.9-482.9-SC	481.90	482.90																																				

Alluvium Core Logging Form - Nye County Nuclear Waste Repository Project Office

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Borehole ID: **NC-EWDP-19PB** (Phase 4) Driller/Drilling Company Shawn Cain/Boart Longyear Drilling Method: Sonic Coring Alluvium Depth (ft bgs): 350.8 to 633.8 Start Date: 12/2/2003 End Date: 12/18/2003

Date Logged	Logged By (Initials)	Date Checked	Checked By (Initials)	Core Run Number	Sample Type	Sample Number	Depth Interval (feet bgs) From	Depth Interval (feet bgs) To	Coring Data: Coring Rate (feet/min)	Coring Data: Sample Recovery (feet)	Coring Data: Core Diameter (inches)	Sample Density Data: Tare Weight (kg) (gal)	Sample Density Data: Sample Plus Tare Weight (kg)	Sample Density Data: Sample Weight (kg) (gall)	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	Grading: POORLY	Grading: NA	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
12/9/2003	BW	10/12/2005	JSW	25	LX	19PB-481.9-484.4-SC	481.90	484.40							7.5YR 5/6	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/9/2003	BW	10/12/2005	JSW	25	D	19PB-482.3-483.9-SC	482.30	483.90			6.2	0.20	17.25	17.05																														
12/9/2003	BW	10/12/2005	JSW	25	R	19PB-482.9-489.6-SC	482.90	489.60	0.4	7.4																																		
12/9/2003	BW	10/12/2005	JSW	25	D	19PB-483.9-485.4-SC	483.90	485.40			6.2	0.20	14.50	14.30																														
12/9/2003	BW	10/12/2005	JSW	25	L	19PB-484.4-486.0-SC	484.40	486.00							7.5YR 6/6	☑	☐	☐									☐	☑	☐	☐		☐	☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/9/2003	BW	10/12/2005	JSW	25	D	19PB-485.4-486.7-SC	485.40	486.70			6.2	0.20	13.25	13.05																														
12/9/2003	BW	10/12/2005	JSW	25	L	19PB-486.0-487.2-SC	486.00	487.20							7.5YR 5/6	☑	☐	☐									☐	☑	☐	☐		☐	☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/9/2003	BW	10/12/2005	JSW	25	D	19PB-486.7-487.9-SC	486.70	487.90			6.2	0.20	14.35	14.15																														
12/9/2003	BW	10/12/2005	JSW	25	L	19PB-487.2-488.8-SC	487.20	488.80							7.5YR 6/6	☑	☐	☐									☐	☑	☐	☐		☐	☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/9/2003	BW	10/12/2005	JSW	25	D	19PB-487.9-489.4-SC	487.90	489.40			6.2	0.20	15.05	14.85																														
12/9/2003	BW	10/12/2005	JSW	25	LX	19PB-488.8-489.4-SC	488.80	489.40							7.5YR 5/6	☑	☐	☐									☐	☑	☐	☐		☐	☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/9/2003	BW	10/12/2005	JSW	25	LC	19PB-489.4-489.6-SC	489.40	489.60																																				
12/9/2003	BW	10/12/2005	JSW	26	LX	19PB-489.6-490.6-SC	489.60	490.60							7.5YR 5/6	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/9/2003	BW	10/12/2005	JSW	26	D	19PB-489.6-491.0-SC	489.60	491.00			6.2	0.20	14.95	14.75																														
12/9/2003	BW	10/12/2005	JSW	26	R	19PB-489.6-496.2-SC	489.60	496.20	0.5	5.0																																		
12/9/2003	BW	10/12/2005	JSW	26	L	19PB-490.6-492.0-SC	490.60	492.00							7.5YR 6/6	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/9/2003	BW	10/12/2005	JSW	26	D	19PB-491.0-492.4-SC	491.00	492.40			6.2	0.20	14.90	14.70																														
12/9/2003	BW	10/12/2005	JSW	26	L	19PB-492.0-493.6-SC	492.00	493.60							7.5YR 5/6	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/9/2003	BW	10/12/2005	JSW	26	D	19PB-492.4-493.0-SC	492.40	493.00			6.2	0.20	9.85	9.65																														
12/9/2003	BW	10/12/2005	JSW	26	D	19PB-493.0-494.6-SC	493.00	494.60			6.2	0.20	21.30	21.10																														
12/9/2003	BW	10/12/2005	JSW	26	LX	19PB-493.6-494.6-SC	493.60	494.60							7.5YR 6/6	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/9/2003	BW	10/12/2005	JSW	26	LC	19PB-494.6-496.2-SC	494.60	496.20																																				
12/9/2003	BW	10/12/2005	JSW	27	D	19PB-495.2-496.1-SC	495.20	496.10			6.2	0.20	10.50	10.30																														
12/9/2003	BW	10/12/2005	JSW	27	LX	19PB-495.2-496.7-SC	495.20	496.70							7.5YR 6/6	☐	☐	☑						☑	☐	☐	☐	☑	☐	☐		☐	☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/9/2003	BW	10/12/2005	JSW	27	D	19PB-496.1-497.6-SC	496.10	497.60			6.2	0.20	17.15	16.95																														
12/9/2003	BW	10/12/2005	JSW	27	R	19PB-496.2-499.7-SC	496.20	499.70	1.0	3.8																																		
12/9/2003	BW	10/12/2005	JSW	27	LX	19PB-496.7-499.0-SC	496.70	499.00							7.5YR 6/6	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/9/2003	BW	10/12/2005	JSW	27	D	19PB-497.6-499.0-SC	497.60	499.00			6.2	0.20	15.40	15.20																														
12/9/2003	BW	10/12/2005	JSW	27	LC	19PB-499.0-499.7-SC	499.00	499.70																																				
12/10/2003	BW	10/12/2005	JSW	28	LC	19PB-499.7-500.1-SC	499.70	500.10																																				
12/10/2003	BW	10/12/2005	JSW	28	D	19PB-500.1-500.8-SC	500.10	500.80			6.2	0.20	8.55	8.35																														

Alluvium Core Logging Form - Nye County Nuclear Waste Repository Project Office

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Borehole ID: **NC-EWDP-19PB** (Phase 4) Driller/Drilling Company Shawn Cain/Boart Longyear Drilling Method: Sonic Coring Alluvium Depth (ft bgs): 350.8 to 633.8 Start Date: 12/2/2003 End Date: 12/18/2003

Date Logged	Logged By (Initials)	Date Checked	Checked By (Initials)	Core Run Number	Sample Type	Sample Number	Depth Interval (feet bgs) From	Depth Interval (feet bgs) To	Coring Data: Coring Rate (feet/min)	Coring Data: Sample Recovery (feet)	Coring Data: Core Diameter (inches)	Sample Density Data: Tare Weight (kg) (gal)	Sample Density Data: Sample Plus Tare Weight (kg)	Sample Density Data: Sample Weight (kg) (gall)	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	Grading: POORLY	Grading: NA	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
12/10/2003	BW	10/12/2005	JSW	28	LX	19PB-500.1-501.5-SC	500.10	501.50							7.5YR 5/6	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/10/2003	BW	10/12/2005	JSW	28	R	19PB-500.1-510.0-SC	500.10	510.00	1.4	9.9																																		
12/10/2003	BW	10/12/2005	JSW	28	D	19PB-500.8-502.4-SC	500.80	502.40			6.2	0.20	17.75	17.55																														
12/10/2003	BW	10/12/2005	JSW	28	L	19PB-501.5-503.4-SC	501.50	503.40							7.5YR 5/6	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/10/2003	BW	10/12/2005	JSW	28	D	19PB-502.4-504.0-SC	502.40	504.00			6.2	0.20	19.90	19.70																														
12/10/2003	BW	10/12/2005	JSW	28	L	19PB-503.4-506.0-SC	503.40	506.00							7.5YR 6/6	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/10/2003	BW	10/12/2005	JSW	28	D	19PB-504.0-505.5-SC	504.00	505.50			6.2	0.20	17.40	17.20																														
12/10/2003	BW	10/12/2005	JSW	28	D	19PB-505.5-506.9-SC	505.50	506.90			6.2	0.20	15.25	15.05																														
12/10/2003	BW	10/12/2005	JSW	28	L	19PB-506.0-506.6-SC	506.00	506.60							7.5YR 6/6	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/10/2003	BW	10/12/2005	JSW	28	L	19PB-506.6-508.1-SC	506.60	508.10							7.5YR 5/6	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/10/2003	BW	10/12/2005	JSW	28	D	19PB-506.9-508.5-SC	506.90	508.50			6.2	0.20	17.25	17.05																														
12/10/2003	BW	10/12/2005	JSW	28	L	19PB-508.1-509.1-SC	508.10	509.10							7.5YR 6/6	☐	☐	☑									☐	☑	☐	☐		☐	☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/10/2003	BW	10/12/2005	JSW	28	D	19PB-508.5-510.0-SC	508.50	510.00			6.2	0.20	16.05	15.85																														
12/10/2003	BW	10/12/2005	JSW	28	LX	19PB-509.1-510.0-SC	509.10	510.00							7.5YR 5/6	☐	☐	☑						☑	☐	☐	☐	☑	☐	☐		☐	☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/10/2003	BW	10/12/2005	JSW	29	LX	19PB-510.0-510.3-SC	510.00	510.30							7.5YR 5/6	☐	☐	☑														☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/10/2003	BW	10/12/2005	JSW	29	D	19PB-510.0-511.6-SC	510.00	511.60			6.2	0.20	17.25	17.05																														
12/10/2003	BW	10/12/2005	JSW	29	R	19PB-510.0-519.4-SC	510.00	519.40	1.8	9.5																																		
12/10/2003	BW	10/12/2005	JSW	29	L	19PB-510.3-512.1-SC	510.30	512.10							7.5YR 5/6	☐	☐	☑									☐	☐	☑	☐		☐	☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/10/2003	BW	10/12/2005	JSW	29	D	19PB-511.6-513.2-SC	511.60	513.20			6.2	0.20	18.20	18.00																														
12/10/2003	BW	10/12/2005	JSW	29	L	19PB-512.1-514.2-SC	512.10	514.20							5YR 5/4	☐	☐	☑									☐	☐	☑	☐		☐	☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/10/2003	BW	10/12/2005	JSW	29	D	19PB-513.2-514.8-SC	513.20	514.80			6.2	0.20	17.85	17.65																														
12/10/2003	BW	10/12/2005	JSW	29	L	19PB-514.2-515.3-SC	514.20	515.30							5YR 5/4	☐	☐	☑						☑	☐	☐						☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/10/2003	BW	10/12/2005	JSW	29	D	19PB-514.8-516.4-SC	514.80	516.40			6.2	0.20	17.10	16.90																														
12/10/2003	BW	10/12/2005	JSW	29	L	19PB-515.3-517.3-SC	515.30	517.30							5YR 6/6	☐	☐	☑						☑	☐	☐						☐	☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/10/2003	BW	10/12/2005	JSW	29	D	19PB-516.4-517.9-SC	516.40	517.90			6.2	0.20	15.10	14.90																														
12/10/2003	BW	10/12/2005	JSW	29	LX	19PB-517.3-519.4-SC	517.30	519.40							5YR 6/6	☐	☐	☑									☐	☐	☑	☐		☐	☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/10/2003	BW	10/12/2005	JSW	29	D	19PB-517.9-519.4-SC	517.90	519.40			6.2	0.20	17.30	17.10																														
12/10/2003	BW	10/12/2005	JSW	30	LX	19PB-519.4-519.7-C	519.40	519.70							7.5YR 6/4	☐	☐	☑						☑	☐	☐						☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/10/2003	BW	10/12/2005	JSW	30	D	19PB-519.4-519.7-SC	519.40	519.70			6.2	0.20	3.45	3.25																														
12/10/2003	BW	10/12/2005	JSW	30	R	19PB-519.4-526.0-SC	519.40	526.00	0.6	3.3																																		
12/10/2003	BW	10/12/2005	JSW	30	D	19PB-519.7-521.1-SC	519.70	521.10			6.2	0.20	18.25	18.05																														

Alluvium Core Logging Form - Nye County Nuclear Waste Repository Project Office

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Borehole ID: **NC-EWDP-19PB** (Phase 4) Driller/Drilling Company Shawn Cain/Boart Longyear Drilling Method: Sonic Coring Alluvium Depth (ft bgs): 350.8 to 633.8 Start Date: 12/2/2003 End Date: 12/18/2003

Date Logged	Logged By (Initials)	Date Checked	Checked By (Initials)	Core Run Number	Sample Type	Sample Number	Depth Interval (feet bgs) From	Depth Interval (feet bgs) To	Coring Data: Coring Rate (feet/min)	Coring Data: Sample Recovery (feet)	Coring Data: Core Diameter (inches)	Sample Density Data: Tare Weight (kg) (gal)	Sample Density Data: Sample Plus Tare Weight (kg)	Sample Density Data: Sample Weight (kg) (gall)	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	Grading: POORLY	Grading: NA	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
12/10/2003	BW	10/12/2005	JSW	30	L	19PB-519.7-522.1-SC	519.70	522.10							7.5YR 6/4	☐	☐	☑						☑	☐	☐						☐	☑	☐	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/10/2003	BW	10/12/2005	JSW	30	D	19PB-521.1-522.7-SC	521.10	522.70			6.2	0.20	17.50	17.30																														
12/10/2003	BW	10/12/2005	JSW	30	LX	19PB-522.1-522.7-SC	522.10	522.70							7.5YR 6/4	☐	☐	☑									☐	☑	☐	☐		☐	☑	☐	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/10/2003	BW	10/12/2005	JSW	30	LC	19PB-522.7-526.0-SC	522.70	526.00																																				
12/10/2003	BW	10/12/2005	JSW	31	D	19PB-524.4-525.1-SC	524.40	525.10			4.7	0.20	6.80	6.60																														
12/10/2003	BW	10/12/2005	JSW	31	LX	19PB-524.4-526.1-SC	524.40	526.10							7.5YR 6/4	☐	☐	☑									☐	☑	☐	☐		☐	☑	☐	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/10/2003	BW	10/12/2005	JSW	31	D	19PB-525.1-527.1-SC	525.10	527.10			4.7	0.20	9.70	9.50																														
12/10/2003	BW	10/12/2005	JSW	31	R	19PB-526.0-527.1-SC	526.00	527.10	1.0	2.8																																		
12/10/2003	BW	10/12/2005	JSW	31	LX	19PB-526.1-527.1-SC	526.10	527.10							7.5YR 6/4	☐	☐	☑									☐	☑	☐	☐		☐	☑	☐	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/11/2003	BW	10/12/2005	JSW	32	F	19PB-526.11-527.05-C	526.11	527.05																																				
12/11/2003	BW	10/12/2005	JSW	32	LX	19PB-527.05-527.11-C	527.05	527.11							7.5YR 5/6	☐	☐	☑									☐	☑	☐	☐		☐	☑	☐	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/11/2003	BW	10/12/2005	JSW	32	RD	19PB-527.05-528.80-C	527.05	528.80	0.1	1.8	4.0	31.25	44.25	13.00																														
12/11/2003	BW	10/12/2005	JSW	32	L	19PB-527.11-527.61-C	527.11	527.61							7.5YR 5/6	☐	☐	☑									☐	☑	☐	☐		☐	☑	☐	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/11/2003	BW	10/12/2005	JSW	32	L	19PB-527.61-528.11-C	527.61	528.11							7.5YR 5/6	☐	☐	☑									☐	☑	☐	☐		☐	☑	☐	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/11/2003	BW	10/12/2005	JSW	32	L	19PB-528.11-528.61-C	528.11	528.61							7.5YR 5/6	☐	☐	☑									☐	☑	☐	☐		☐	☑	☐	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/11/2003	BW	10/12/2005	JSW	32	LX	19PB-528.61-528.80-C	528.61	528.80							7.5YR 5/6	☐	☐	☑									☐	☑	☐	☐		☐	☑	☐	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/11/2003	BW	10/12/2005	JSW	33	D	19PB-528.8-529.8-SC	528.80	529.80			4.7	0.20	8.70	8.50																														
12/11/2003	BW	10/12/2005	JSW	33	LX	19PB-528.8-530.4-SC	528.80	530.40							7.5YR 6/6	☐	☐	☑						☑	☐	☐	☐	☑	☐	☐		☐	☑	☐	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/11/2003	BW	10/12/2005	JSW	33	R	19PB-528.8-532.0-SC	528.80	532.00	0.4	2.3																																		
12/11/2003	BW	10/12/2005	JSW	33	D	19PB-529.8-531.1-SC	529.80	531.10			4.7	0.20	9.50	9.30																														
12/11/2003	BW	10/12/2005	JSW	33	LX	19PB-530.4-531.1-SC	530.40	531.10							7.5YR 5/4	☐	☐	☑									☐	☑	☐	☐		☐	☑	☐	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/11/2003	BW	10/12/2005	JSW	33	LC	19PB-531.1-532.0-SC	531.10	532.00																																				
12/12/2003	BW	10/12/2005	JSW	34	LC	19PB-532.0-533.0-SC	532.00	533.00																																				
12/12/2003	BW	10/12/2005	JSW	34	R	19PB-532.0-534.4-SC	532.00	534.40	0.8	1.1																																		
12/12/2003	BW	10/12/2005	JSW	34	D	19PB-533.0-533.1-SC	533.00	533.10			4.7	0.20	1.30	1.10																														
12/12/2003	BW	10/12/2005	JSW	34	LX	19PB-533.0-534.1-SC	533.00	534.10							7.5YR 5/4	☐	☐	☑									☐	☑	☐	☐		☐	☑	☐	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/12/2003	BW	10/12/2005	JSW	34	D	19PB-533.1-534.1-SC	533.10	534.10			4.7	0.20	8.10	7.90																														
12/12/2003	BW	10/12/2005	JSW	34	LC	19PB-534.1-534.4-SC	534.10	534.40																																				
12/12/2003	BW	10/12/2005	JSW	35	LX	19PB-534.4-535.2-SC	534.40	535.20							5YR 5/4	☐	☐	☑									☐	☑	☐	☐		☐	☑	☐	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/12/2003	BW	10/12/2005	JSW	35	D	19PB-534.4-536.0-SC	534.40	536.00			4.7	0.20	10.70	10.50																														
12/12/2003	BW	10/12/2005	JSW	35	R	19PB-534.4-543.3-SC	534.40	543.30	0.6	8.7																																		

Alluvium Core Logging Form - Nye County Nuclear Waste Repository Project Office

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Borehole ID: **NC-EWDP-19PB** (Phase 4) Driller/Drilling Company Shawn Cain/Boart Longyear Drilling Method: Sonic Coring Alluvium Depth (ft bgs): 350.8 to 633.8 Start Date: 12/2/2003 End Date: 12/18/2003

Date Logged	Logged By (Initials)	Date Checked	Checked By (Initials)	Core Run Number	Sample Type	Sample Number	Depth Interval (feet bgs) From	Depth Interval (feet bgs) To	Coring Data: Coring Rate (feet/min)	Coring Data: Sample Recovery (feet)	Coring Data: Core Diameter (inches)	Sample Density Data: Tare Weight (kg) (gal)	Sample Density Data: Sample Plus Tare Weight (kg)	Sample Density Data: Sample Weight (kg) (gall)	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	Grading: POORLY	Grading: NA	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
12/12/2003	BW	10/12/2005	JSW	35	L	19PB-535.2-538.2-SC	535.20	538.20							5YR 5/4	☐	☐	☑									☐	☑	☐	☐		☐	☑	☐	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/12/2003	BW	10/12/2005	JSW	35	D	19PB-536.0-537.5-SC	536.00	537.50			4.7	0.20	11.45	11.25																														
12/12/2003	BW	10/12/2005	JSW	35	D	19PB-537.5-539.0-SC	537.50	539.00			4.7	0.20	10.40	10.20																														
12/12/2003	BW	10/12/2005	JSW	35	L	19PB-538.2-540.7-SC	538.20	540.70							7.5YR 5/4	☐	☐	☑									☐	☑	☐	☐		☐	☑	☐	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/12/2003	BW	10/12/2005	JSW	35	D	19PB-539.0-540.3-SC	539.00	540.30			4.7	0.20	7.35	7.15																														
12/12/2003	BW	10/12/2005	JSW	35	D	19PB-540.3-541.7-SC	540.30	541.70			4.7	0.20	10.20	10.00																														
12/12/2003	BW	10/12/2005	JSW	35	L	19PB-540.7-541.7-SC	540.70	541.70							7.5YR 5/4	☑	☐	☐									☐	☑	☐	☐		☐	☑	☐	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/12/2003	BW	10/12/2005	JSW	35	D	19PB-541.7-543.1-SC	541.70	543.10			4.7	0.20	8.10	7.90																														
12/12/2003	BW	10/12/2005	JSW	35	LX	19PB-541.7-543.1-SCA	541.70	543.10							7.5YR 5/4	☑	☐	☐									☐	☑	☐	☐		☐	☑	☐	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/12/2003	BW	10/12/2005	JSW	35	LC	19PB-543.1-543.3-SC	543.10	543.30																																				
12/12/2003	BW	10/12/2005	JSW	36	LX	19PB-543.3-543.5-SC	543.30	543.50							7.5YR 5/4	☐	☐	☑									☐	☑	☐	☐		☐	☑	☐	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/12/2003	BW	10/12/2005	JSW	36	D	19PB-543.3-544.5-SC	543.30	544.50			4.7	0.20	10.00	9.80																														
12/12/2003	BW	10/12/2005	JSW	36	R	19PB-543.3-546.7-SC	543.30	546.70	0.4	2.4																																		
12/12/2003	BW	10/12/2005	JSW	36	L	19PB-543.5-544.7-SC	543.50	544.70							7.5YR 6/4	☐	☐	☑									☐	☑	☐	☐		☐	☑	☐	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/12/2003	BW	10/12/2005	JSW	36	D	19PB-544.5-545.7-SC	544.50	545.70			4.7	0.20	9.60	9.40																														
12/12/2003	BW	10/12/2005	JSW	36	LX	19PB-544.7-545.7-SC	544.70	545.70							7.5YR 5/4	☐	☐	☑									☐	☑	☐	☐		☐	☑	☐	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/12/2003	BW	10/12/2005	JSW	36	LC	19PB-545.7-546.7-SC	545.70	546.70																																				
12/12/2003	BW	10/12/2005	JSW	37	LX	19PB-545.9-546.1-SC	545.90	546.10							7.5YR 5/6	☐	☐	☑									☐	☑	☐	☐		☐	☑	☐	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/12/2003	BW	10/12/2005	JSW	37	D	19PB-545.9-546.7-SC	545.90	546.70			4.7	0.20	6.75	6.55																														
12/12/2003	BW	10/12/2005	JSW	37	L	19PB-546.1-547.2-SC	546.10	547.20							7.5YR 5/6	☐	☐	☑									☐	☑	☐	☐		☐	☑	☐	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/12/2003	BW	10/12/2005	JSW	37	D	19PB-546.7-548.2-SC	546.70	548.20			4.7	0.20	9.70	9.50																														
12/12/2003	BW	10/12/2005	JSW	37	R	19PB-546.7-551.5-SC	546.70	551.50	0.5	3.7																																		
12/12/2003	BW	10/12/2005	JSW	37	L	19PB-547.2-547.6-SC	547.20	547.60							7.5YR 5/6	☐	☐	☑									☐	☑	☐	☐		☐	☑	☐	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/12/2003	BW	10/12/2005	JSW	37	LX	19PB-547.6-549.6-SC	547.60	549.60							7.5YR 5/6	☐	☐	☑									☐	☑	☐	☐		☐	☑	☐	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/12/2003	BW	10/12/2005	JSW	37	D	19PB-548.2-549.6-SC	548.20	549.60			4.7	0.20	8.35	8.15																														
12/12/2003	BW	10/12/2005	JSW	37	LC	19PB-549.6-551.5-SC	549.60	551.50																																				
12/12/2003	BW	10/12/2005	JSW	38	D	19PB-550.7-551.9-SC	550.70	551.90			4.7	0.20	9.50	9.30																														
12/12/2003	BW	10/12/2005	JSW	38	LX	19PB-550.7-553.3-SC	550.70	553.30							7.5YR 6/4	☐	☐	☑									☐	☑	☐	☐		☐	☑	☐	☐	☐	☑	☐		☑	☐		100		
12/12/2003	BW	10/12/2005	JSW	38	R	19PB-551.5-554.3-SC	551.50	554.30	0.3	2.7																																		
12/12/2003	BW	10/12/2005	JSW	38	D	19PB-551.9-553.3-SC	551.90	553.30			4.7	0.20	7.45	7.25																														
12/12/2003	BW	10/12/2005	JSW	38	LC	19PB-553.3-554.3-SC	553.30	554.30																																				

Alluvium Core Logging Form - Nye County Nuclear Waste Repository Project Office

Key for Sample Number: SC = Sonic core; SCA = Sonic core duplicate interval; C = Drive core. Key for Sample Type: L = Logging; D = Density; F = Fill; LC = Lost core; R = Entire run; X = End of run (overlaps with next run).

Borehole ID: **NC-EWDP-19PB** (Phase 4) Driller/Drilling Company Shawn Cain/Boart Longyear Drilling Method: Sonic Coring Alluvium Depth (ft bgs): 350.8 to 633.8 Start Date: 12/2/2003 End Date: 12/18/2003

Date Logged	Logged By (Initials)	Date Checked	Checked By (Initials)	Core Run Number	Sample Type	Sample Number	Depth Interval (feet bgs) From	Depth Interval (feet bgs) To	Coring Data: Coring Rate (feet/min)	Coring Data: Sample Recovery (feet)	Coring Data: Core Diameter (inches)	Sample Density Data: Tare Weight (kg) (gal)	Sample Density Data: Sample Plus Tare Weight (kg)	Sample Density Data: Sample Weight (kg) (gall)	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	Grading: POORLY	Grading: NA	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
12/15/2003	BW	10/12/2005	JSW	39	D	19PB-553.7-554.3-SC	553.70	554.30			4.7	0.20	4.05	3.85																															
12/15/2003	BW	10/12/2005	JSW	39	LX	19PB-553.7-554.8-SC	553.70	554.80							7.5YR 6/4			✓										✓				✓				✓			✓			100		
12/15/2003	BW	10/12/2005	JSW	39	D	19PB-554.3-555.5-SC	554.30	555.50			4.7	0.20	10.65	10.45																															
12/15/2003	BW	10/12/2005	JSW	39	R	19PB-554.3-559.8-SC	554.30	559.80	1.1	4.1																																			
12/15/2003	BW	10/12/2005	JSW	39	L	19PB-554.8-555.2-SC	554.80	555.20							7.5YR 5/6			✓										✓				✓				✓			✓			100		
12/15/2003	BW	10/12/2005	JSW	39	LX	19PB-555.2-557.8-SC	555.20	557.80							7.5YR 6/4			✓										✓				✓				✓				✓		100		
12/15/2003	BW	10/12/2005	JSW	39	D	19PB-555.5-556.6-SC	555.50	556.60			4.7	0.20	8.20	8.00																															
12/15/2003	BW	10/12/2005	JSW	39	D	19PB-556.6-557.8-SC	556.60	557.80			4.7	0.20	9.20	9.00																															
12/15/2003	BW	10/12/2005	JSW	39	LC	19PB-557.8-559.8-SC	557.80	559.80																																					
12/15/2003	EJH	10/12/2005	JSW	40	LX	19PB-559.6-559.8-SC	559.60	559.80							7.5YR 5/6			✓										✓				✓				✓			✓			100		
12/15/2003	EJH	10/12/2005	JSW	40	D	19PB-559.6-560.4-SC	559.60	560.40			4.7	0.20	8.00	7.80																															
12/15/2003	EJH	10/12/2005	JSW	40	LX	19PB-559.8-560.4-SC	559.80	560.40							5YR 5/3	✓												✓				✓			✓				✓			100		
12/15/2003	EJH	10/12/2005	JSW	40	R	19PB-559.8-560.9-SC	559.80	560.90	0.2	0.8																																			
12/15/2003	EJH	10/12/2005	JSW	40	LC	19PB-560.4-560.9-SC	560.40	560.90																																					
12/15/2003	EJH	10/12/2005	JSW	41	LC	19PB-560.94-561.52-C	560.94	561.52																																					
12/15/2003	EJH	10/12/2005	JSW	41	F	19PB-561.06-561.74-C	561.06	561.74																																					
12/15/2003	EJH	10/12/2005	JSW	41	RD	19PB-561.52-563.34-C	561.52	563.34	0.6	1.6	4.0	36.35	47.80	11.45																															
12/15/2003	EJH	10/12/2005	JSW	41	LX	19PB-561.74-562.07-C	561.74	562.07							7.5YR 7/6			✓										✓				✓				✓			✓			100		
12/15/2003	EJH	10/12/2005	JSW	41	L	19PB-562.07-562.57-C	562.07	562.57							7.5YR 5/4			✓						✓				✓				✓				✓			✓			100		
12/15/2003	EJH	1/9/2004	BW	41	L	19PB-562.57-563.07-C	562.57	563.07							7.5YR 5/4			✓						✓				✓				✓				✓			✓			100		
12/15/2003	EJH	1/9/2004	BW	41	LX	19PB-563.07-563.34-C	563.07	563.34							7.5YR 5/4			✓						✓				✓				✓				✓			✓			100		
12/16/2003	EJH	1/9/2004	BW	42	LX	19PB-563.3-564.2-SC	563.30	564.20							7.5YR 5/4			✓											✓			✓				✓			✓			100		
12/16/2003	EJH	1/9/2004	BW	42	D	19PB-563.3-564.5-SC	563.30	564.50			4.7	0.20	7.40	7.20																															
12/16/2003	EJH	1/9/2004	BW	42	R	19PB-563.3-565.9-SC	563.30	565.90	1.0	2.5																																			
12/16/2003	EJH	1/9/2004	BW	42	LX	19PB-564.2-565.9-SC	564.20	565.90							7.5YR 5/4			✓										✓				✓				✓			✓			100		
12/16/2003	EJH	1/9/2004	BW	42	D	19PB-564.5-565.9-SC	564.50	565.90			4.7	0.20	7.95	7.75																															
12/16/2003	EJH	1/9/2004	BW	43	D	19PB-565.9-567.1-SC	565.90	567.10			4.7	0.20	8.95	8.75																															
12/16/2003	EJH	1/9/2004	BW	43	LX	19PB-565.9-567.1-SCA	565.90	567.10							7.5YR 6/4			✓										✓				✓				✓			✓			100		
12/16/2003	EJH	1/9/2004	BW	43	R	19PB-565.9-568.4-SC	565.90	568.40	0.3	1.3																																			
12/16/2003	EJH	1/9/2004	BW	43	LC	19PB-567.1-568.4-SC	567.10	568.40																																					
12/16/2003	EJH	1/9/2004	BW	44	D	19PB-568.4-568.6-SC	568.40	568.60			4.7	0.20	1.25	1.05																															

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Date Logged	Logged By (Initials)	Date Checked	Checked By (Initials)	Core Run Number	Sample Type	Sample Number	Depth Interval (feet bgs) From	Depth Interval (feet bgs) To	Coring Data: Coring Rate (feet/min)	Coring Data: Sample Recovery (feet)	Coring Data: Core Diameter (inches)	Sample Density Data: Tare Weight (kg) (gal)	Sample Density Data: Sample Plus Tare Weight (kg)	Sample Density Data: Sample Weight (kg) (gall)	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	Grading: POORLY	Grading: NA	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
12/16/2003	EJH	1/9/2004	BW	44	LX	19PB-568.4-568.6-SCA	568.40	568.60							7.5YR 4/8	☐	☐	☑						☑	☐	☐	☐	☑	☐	☐		☐	☑	☐	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/16/2003	EJH	1/9/2004	BW	44	R	19PB-568.4-571.7-SC	568.40	571.70	0.7	2.6						■	■	■						■	■	■	■	■	■	■		■	■	■	■	■	■	■	■	■	■			
12/16/2003	EJH	1/9/2004	BW	44	L	19PB-568.6-568.8-SC	568.60	568.80							7.5YR 3/2	☐	☐	☑						☐	☑	☐	☑	☐	☐	☐		☐	☑	☐	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/16/2003	EJH	1/9/2004	BW	44	D	19PB-568.6-569.8-SC	568.60	569.80			4.7	0.20	11.15	10.95		■	■	■						■	■	■	■	■	■	■		■	■	■	■	■	■	■	■	■	■			
12/16/2003	EJH	1/9/2004	BW	44	L	19PB-568.8-569.0-SC	568.80	569.00							7.5YR 4/3	☐	☐	☑						■	■	■	☐	☑	☐	☐		☐	☑	☐	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/16/2003	EJH	1/9/2004	BW	44	L	19PB-569.0-569.4-SC	569.00	569.40							7.5YR 5/4	☐	☐	☑						☑	☐	☐	☐	☑	☐	☐		☐	☑	☐	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/16/2003	EJH	1/9/2004	BW	44	L	19PB-569.4-570.1-SC	569.40	570.10							5YR 5/4	☐	☐	☑						■	■	■	☐	☑	☐	☐		☐	☑	☐	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/16/2003	EJH	1/9/2004	BW	44	D	19PB-569.8-570.9-SC	569.80	570.90			4.7	0.20	9.45	9.25		■	■	■						■	■	■	■	■	■	■		■	■	■	■	■	■	■	■	■	■			
12/16/2003	EJH	1/9/2004	BW	44	LX	19PB-570.1-570.9-SC	570.10	570.90							5YR 5/6	☐	☐	☑						■	■	■	☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
12/16/2003	EJH	1/9/2004	BW	44	LC	19PB-570.9-571.7-SC	570.90	571.70								■	■	■						■	■	■	■	■	■	■		■	■	■	■	■	■	■	■	■	■			
12/16/2003	EJH	1/9/2004	BW	45	LX	19PB-571.7-572.2-SC	571.70	572.20							10YR 5/3	☐	☐	☑						■	■	■	☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
12/16/2003	EJH	1/9/2004	BW	45	D	19PB-571.7-572.6-SC	571.70	572.60			4.7	0.20	5.60	5.40		■	■	■						■	■	■	■	■	■	■		■	■	■	■	■	■	■	■	■	■			
12/16/2003	EJH	1/9/2004	BW	45	R	19PB-571.7-578.3-SC	571.70	578.30	1.9	6.6						■	■	■						■	■	■	■	■	■	■		■	■	■	■	■	■	■	■	■	■			
12/16/2003	EJH	1/9/2004	BW	45	L	19PB-572.2-574.4-SC	572.20	574.40							10YR 5/8	☐	☐	☑						■	■	■	☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
12/16/2003	EJH	1/9/2004	BW	45	D	19PB-572.6-574.0-SC	572.60	574.00			4.7	0.20	8.95	8.75		■	■	■						■	■	■	■	■	■	■		■	■	■	■	■	■	■	■	■	■			
12/16/2003	EJH	1/9/2004	BW	45	D	19PB-574.0-575.3-SC	574.00	575.30			4.7	0.20	9.45	9.25		■	■	■						■	■	■	■	■	■	■		■	■	■	■	■	■	■	■	■	■			
12/16/2003	EJH	1/9/2004	BW	45	L	19PB-574.4-576.5-SC	574.40	576.50							10YR 5/6	☐	☐	☑						■	■	■	☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
12/16/2003	EJH	1/9/2004	BW	45	D	19PB-575.3-576.8-SC	575.30	576.80			4.7	0.20	9.50	9.30		■	■	■						■	■	■	■	■	■	■		■	■	■	■	■	■	■	■	■	■			
12/16/2003	EJH	1/9/2004	BW	45	L	19PB-576.5-576.7-SC	576.50	576.70							10YR 5/6	☐	☐	☑						■	■	■	☐	☐	☑	☐		☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
12/16/2003	EJH	1/9/2004	BW	45	LX	19PB-576.7-578.3-SC	576.70	578.30							10YR 5/4	☐	☐	☑						■	■	■	☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
12/16/2003	EJH	1/9/2004	BW	45	D	19PB-576.8-578.3-SC	576.80	578.30			4.7	0.20	0.35	0.15		■	■	■						■	■	■	■	■	■	■		■	■	■	■	■	■	■	■	■	■			
12/16/2003	EJH	1/9/2004	BW	46	LX	19PB-578.3-578.7-SC	578.30	578.70							7.5YR 4/3	☐	☐	☑						☑	☐	☐	☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
12/16/2003	EJH	1/9/2004	BW	46	D	19PB-578.3-579.2-SC	578.30	579.20			4.7	0.20	7.35	7.15		■	■	■						■	■	■	■	■	■	■		■	■	■	■	■	■	■	■	■	■			
12/16/2003	EJH	1/9/2004	BW	46	R	19PB-578.3-581.9-SC	578.30	581.90	0.6	3.6						■	■	■						■	■	■	■	■	■	■		■	■	■	■	■	■	■	■	■	■			
12/16/2003	EJH	1/9/2004	BW	46	L	19PB-578.7-579.2-SC	578.70	579.20							10YR 5/6	☐	☐	☑						■	■	■	☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
12/16/2003	EJH	1/9/2004	BW	46	L	19PB-579.2-580.3-SC	579.20	580.30							10YR 5/6	☐	☐	☑						■	■	■	☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
12/16/2003	EJH	1/9/2004	BW	46	D	19PB-579.2-580.6-SC	579.20	580.60			4.7	0.20	10.25	10.05		■	■	■						■	■	■	■	■	■	■		■	■	■	■	■	■	■	■	■	■			
12/16/2003	EJH	1/9/2004	BW	46	L	19PB-580.3-581.1-SC	580.30	581.10							10YR 5/3	☐	☐	☑						■	■	■	☐	☐	☑	☐		☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
12/16/2003	EJH	1/9/2004	BW	46	D	19PB-580.6-581.8-SC	580.60	581.80			4.7	0.20	9.55	9.35		■	■	■						■	■	■	■	■	■	■		■	■	■	■	■	■	■	■	■	■			
12/16/2003	EJH	1/9/2004	BW	46	LX	19PB-581.1-581.8-SC	581.10	581.80							10YR 5/4	☐	☐	☑						■	■	■	☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
12/16/2003	EJH	1/9/2004	BW	46	LC	19PB-581.8-581.9-SC	581.80	581.90								■	■	■						■	■	■	■	■	■	■		■	■	■	■	■	■	■	■	■	■			

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12/17/2003	EJH	1/9/2004	BW	47	LX	19PB-581.9-582.9-SC	581.90	582.90							7.5YR 5/2	☐	☐	☑									☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/17/2003	EJH	1/9/2004	BW	47	D	19PB-581.9-583.3-SC	581.90	583.30			4.7	0.20	8.80	8.60																														
12/17/2003	EJH	1/9/2004	BW	47	R	19PB-581.9-588.3-SC	581.90	588.30	0.8	5.6																																		
12/17/2003	EJH	1/9/2004	BW	47	L	19PB-582.9-584.1-SC	582.90	584.10							5YR 4/2	☐	☐	☑						☑	☐	☐	☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/17/2003	EJH	1/9/2004	BW	47	D	19PB-583.3-584.7-SC	583.30	584.70			4.7	0.20	9.10	8.90																														
12/17/2003	EJH	1/9/2004	BW	47	LX	19PB-584.1-587.4-SC	584.10	587.40							5YR 5/6	☐	☐	☑									☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/17/2003	EJH	1/9/2004	BW	47	D	19PB-584.7-586.1-SC	584.70	586.10			4.7	0.20	8.00	7.80																														
12/17/2003	EJH	1/9/2004	BW	47	D	19PB-586.1-587.5-SC	586.10	587.50			4.7	0.20	7.70	7.50																														
12/17/2003	EJH	1/9/2004	BW	47	LC	19PB-587.4-588.3-SC	587.40	588.30																																				
12/17/2003	EJH	1/9/2004	BW	48	D	19PB-588.3-589.0-SC	588.30	589.00			4.7	0.20	6.60	6.40																														
12/17/2003	EJH	1/9/2004	BW	48	LX	19PB-588.3-589.8-SC	588.30	589.80							7.5YR 5/6	☐	☐	☑						☑	☐	☐	☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/17/2003	EJH	1/9/2004	BW	48	R	19PB-588.3-591.9-SC	588.30	591.90	0.9	3.4																																		
12/17/2003	EJH	1/9/2004	BW	48	D	19PB-589.0-590.3-SC	589.00	590.30			4.7	0.20	8.80	8.60																														
12/17/2003	EJH	1/9/2004	BW	48	L	19PB-589.8-590.2-SC	589.80	590.20							5YR 5/6	☐	☐	☑						☐	☑	☐	☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/17/2003	EJH	1/9/2004	BW	48	LX	19PB-590.2-591.7-SC	590.20	591.70							5YR 4/2	☐	☐	☑						☑	☐	☐	☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/17/2003	EJH	1/9/2004	BW	48	D	19PB-590.3-591.7-SC	590.30	591.70			4.7	0.20	7.45	7.25																														
12/17/2003	EJH	1/9/2004	BW	48	LC	19PB-591.7-591.9-SC	591.70	591.90																																				
12/17/2003	EJH	1/9/2004	BW	49	LX	19PB-591.9-592.5-SC	591.90	592.50							5YR 5/8	☐	☐	☑									☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/17/2003	EJH	1/9/2004	BW	49	D	19PB-591.9-593.0-SC	591.90	593.00			4.7	0.20	7.60	7.40																														
12/17/2003	EJH	1/9/2004	BW	49	R	19PB-591.9-601.9-SC	591.90	601.90	2.9	9.1																																		
12/17/2003	EJH	1/9/2004	BW	49	L	19PB-592.5-593.0-SC	592.50	593.00							5YR 5/8	☐	☐	☑						☐	☑	☐	☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/17/2003	EJH	1/9/2004	BW	49	L	19PB-593.0-593.6-SC	593.00	593.60							5YR 6/4	☐	☐	☑									☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/17/2003	EJH	1/9/2004	BW	49	D	19PB-593.0-594.5-SC	593.00	594.50			4.7	0.20	10.25	10.05																														
12/17/2003	EJH	1/9/2004	BW	49	L	19PB-593.6-594.6-SC	593.60	594.60							5YR 6/4	☐	☐	☑						☐	☑	☐	☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	100		
12/17/2003	EJH	1/9/2004	BW	49	D	19PB-594.5-595.7-SC	594.50	595.70			4.7	0.20	8.65	8.45																														
12/17/2003	EJH	1/9/2004	BW	49	L	19PB-594.6-595.2-SC	594.60	595.20							7.5YR 5/4	☐	☐	☑									☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/17/2003	EJH	1/9/2004	BW	49	L	19PB-595.2-596.2-SC	595.20	596.20							7.5YR 6/6	☐	☐	☑									☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/17/2003	EJH	1/9/2004	BW	49	D	19PB-595.7-597.1-SC	595.70	597.10			4.7	0.20	10.10	9.90																														
12/17/2003	EJH	1/9/2004	BW	49	L	19PB-596.2-596.9-SC	596.20	596.90							7.5YR 6/4	☐	☐	☑									☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/17/2003	EJH	1/9/2004	BW	49	L	19PB-596.9-598.2-SC	596.90	598.20							7.5YR 6/4	☐	☐	☑									☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/17/2003	EJH	1/9/2004	BW	49	D	19PB-597.1-598.4-SC	597.10	598.40			4.7	0.20	9.05	8.85																														

Alluvium Core Logging Form - Nye County Nuclear Waste Repository Project Office

Key for Sample Number: SC = Sonic core; SCA = Sonic core duplicate interval; C = Drive core. Key for Sample Type: L = Logging; D = Density; F = Fill; LC = Lost core; R = Entire run; X = End of run (overlaps with next run).

Borehole ID: **NC-EWDP-19PB** (Phase 4) Driller/Drilling Company Shawn Cain/Boart Longyear Drilling Method: Sonic Coring Alluvium Depth (ft bgs): 350.8 to 633.8 Start Date: 12/2/2003 End Date: 12/18/2003

Date Logged	Logged By (Initials)	Date Checked	Checked By (Initials)	Core Run Number	Sample Type	Sample Number	Depth Interval (feet bgs) From	Depth Interval (feet bgs) To	Coring Data: Coring Rate (feet/min)	Coring Data: Sample Recovery (feet)	Coring Data: Core Diameter (inches)	Sample Density Data: Tare Weight (kg) (gal)	Sample Density Data: Sample Plus Tare Weight (kg)	Sample Density Data: Sample Weight (kg) (gall)	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	Grading: POORLY	Grading: NA	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
12/17/2003	EJH	1/9/2004	BW	49	L	19PB-598.2-598.7-SC	598.20	598.70							7.5YR 6/6	☐	☐	☑						■	■	■	☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/17/2003	EJH	1/9/2004	BW	49	D	19PB-598.4-599.7-SC	598.40	599.70			4.7	0.20	8.65	8.45		■	■	■						■	■	■	■	■	■	■		■	■	■	■	■	■	■	■	■	■			
12/17/2003	EJH	1/9/2004	BW	49	LX	19PB-598.7-601.0-SC	598.70	601.00							7.5YR 6/4	☐	☐	☑						☑	☐	☐	☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/17/2003	EJH	1/9/2004	BW	49	D	19PB-599.7-601.0-SC	599.70	601.00			4.7	0.20	9.05	8.85		■	■	■						■	■	■	■	■	■	■		■	■	■	■	■	■	■	■	■	■			
12/17/2003	EJH	1/9/2004	BW	49	LC	19PB-601.0-601.9-SC	601.00	601.90								■	■	■						■	■	■	■	■	■	■		■	■	■	■	■	■	■	■	■	■			
12/17/2003	EJH	1/9/2004	BW	50	D	19PB-601.9-602.1-SC	601.90	602.10			4.7	0.20	2.45	2.25		■	■	■						■	■	■	■	■	■	■		■	■	■	■	■	■	■	■	■	■			
12/17/2003	EJH	1/9/2004	BW	50	LX	19PB-601.9-602.9-SC	601.90	602.90							7.5YR 6/4	☐	☐	☑						■	■	■	☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/17/2003	EJH	1/9/2004	BW	50	R	19PB-601.9-605.2-SC	601.90	605.20	0.8	3.4						■	■	■						■	■	■	■	■	■	■		■	■	■	■	■	■	■	■	■	■			
12/17/2003	EJH	1/9/2004	BW	50	D	19PB-602.1-603.6-SC	602.10	603.60			4.7	0.20	9.35	9.15		■	■	■						■	■	■	■	■	■	■		■	■	■	■	■	■	■	■	■	■			
12/17/2003	EJH	1/9/2004	BW	50	L	19PB-602.9-603.6-SC	602.90	603.60							7.5YR 6/4	☐	☐	☑						■	■	■	☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/17/2003	EJH	1/9/2004	BW	50	L	19PB-603.6-604.2-SC	603.60	604.20							7.5YR 6/4	☐	☐	☑						☑	☐	☐	☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/17/2003	EJH	1/9/2004	BW	50	D	19PB-603.6-605.2-SC	603.60	605.20			4.7	0.20	9.85	9.65		■	■	■						■	■	■	■	■	■	■		■	■	■	■	■	■	■	■	■	■			
12/17/2003	EJH	1/9/2004	BW	50	LX	19PB-604.2-605.2-SC	604.20	605.20							5YR 4/6	☐	☐	☑						■	■	■	☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/17/2003	EJH	1/9/2004	BW	51	LX	19PB-605.2-605.6-SC	605.20	605.60							7.5YR 4/3	☐	☐	☑						☐	☑	☐	☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/17/2003	EJH	1/9/2004	BW	51	D	19PB-605.2-606.4-SC	605.20	606.40			4.7	0.20	7.75	7.55		■	■	■						■	■	■	■	■	■	■		■	■	■	■	■	■	■	■	■	■			
12/17/2003	EJH	1/9/2004	BW	51	R	19PB-605.2-615.3-SC	605.20	615.30	2.6	10.1						■	■	■						■	■	■	■	■	■	■		■	■	■	■	■	■	■	■	■	■			
12/17/2003	EJH	1/9/2004	BW	51	L	19PB-605.6-606.4-SC	605.60	606.40							7.5YR 4/6	☐	☐	☑						☑	☐	☐	☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/17/2003	EJH	1/9/2004	BW	51	L	19PB-606.4-607.0-SC	606.40	607.00							7.5YR 4/3	☐	☐	☑						■	■	■	☑	☐	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/17/2003	EJH	1/9/2004	BW	51	D	19PB-606.4-608.1-SC	606.40	608.10			4.7	0.20	11.35	11.15		■	■	■						■	■	■	■	■	■	■		■	■	■	■	■	■	■	■	■	■			
12/17/2003	EJH	1/9/2004	BW	51	L	19PB-607.0-608.1-SC	607.00	608.10							10YR 5/3	☐	☐	☑						■	■	■	☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/17/2003	EJH	1/9/2004	BW	51	L	19PB-608.1-608.7-SC	608.10	608.70							7.5YR 4/3	☐	☐	☑						☐	☑	☐	☑	☐	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/17/2003	EJH	1/9/2004	BW	51	D	19PB-608.1-609.8-SC	608.10	609.80			4.7	0.20	11.65	11.45		■	■	■						■	■	■	■	■	■	■		■	■	■	■	■	■	■	■	■	■			
12/17/2003	EJH	1/9/2004	BW	51	L	19PB-608.7-609.8-SC	608.70	609.80							7.5YR 4/3	☐	☐	☑						☑	☐	☐	☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/17/2003	EJH	1/9/2004	BW	51	L	19PB-609.8-611.1-SC	609.80	611.10							7.5YR 4/3	☐	☐	☑						☑	☐	☐	☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/17/2003	EJH	1/9/2004	BW	51	D	19PB-609.8-611.5-SC	609.80	611.50			4.7	0.20	11.55	11.35		■	■	■						■	■	■	■	■	■	■		■	■	■	■	■	■	■	■	■	■			
12/17/2003	EJH	1/9/2004	BW	51	L	19PB-611.1-612.7-SC	611.10	612.70							7.5YR 4/3	☐	☐	☑						☐	☑	☐	☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/17/2003	EJH	1/9/2004	BW	51	D	19PB-611.5-613.2-SC	611.50	613.20			4.7	0.20	11.20	11.00		■	■	■						■	■	■	■	■	■	■		■	■	■	■	■	■	■	■	■	■			
12/17/2003	EJH	1/9/2004	BW	51	L	19PB-612.7-613.2-SC	612.70	613.20							7.5YR 5/4	☐	☐	☑						■	■	■	☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/17/2003	EJH	1/9/2004	BW	51	D	19PB-613.2-615.3-SC	613.20	615.30			4.7	0.20	12.25	12.05		■	■	■						■	■	■	■	■	■	■		■	■	■	■	■	■	■	■	■	■			
12/17/2003	EJH	1/9/2004	BW	51	LX	19PB-613.2-615.3-SCA	613.20	615.30							7.5YR 4/6	☐	☐	☑						■	■	■	☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/17/2003	EJH	1/9/2004	BW	52	D	19PB-615.3-615.7-SC	615.30	615.70			4.7	0.20	2.60	2.40		■	■	■						■	■	■	■	■	■	■		■	■	■	■	■	■	■	■	■	■			

Alluvium Core Logging Form - Nye County Nuclear Waste Repository Project Office

Key for Sample Number: SC = Sonic core; SCA = Sonic core duplicate interval; C = Drive core. Key for Sample Type: L = Logging; D = Density; F = Fill; LC = Lost core; R = Entire run; X = End of run (overlaps with next run).

Borehole ID: **NC-EWDP-19PB** (Phase 4) Driller/Drilling Company Shawn Cain/Boart Longyear Drilling Method: Sonic Coring Alluvium Depth (ft bgs): 350.8 to 633.8 Start Date: 12/2/2003 End Date: 12/18/2003

Date Logged	Logged By (Initials)	Date Checked	Checked By (Initials)	Core Run Number	Sample Type	Sample Number	Depth Interval (feet bgs) From	Depth Interval (feet bgs) To	Coring Data: Coring Rate (feet/min)	Coring Data: Sample Recovery (feet)	Coring Data: Core Diameter (inches)	Sample Density Data: Tare Weight (kg) (gal)	Sample Density Data: Sample Plus Tare Weight (kg)	Sample Density Data: Sample Weight (kg) (gall)	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	Grading: POORLY	Grading: NA	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
12/17/2003	EJH	1/9/2004	BW	52	LX	19PB-615.3-616.2-SC	615.30	616.20							7.5YR 4/3	☐	☐	☑									☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/17/2003	EJH	1/9/2004	BW	52	R	19PB-615.3-619.9-SC	615.30	619.90	1.6	4.6																																		
12/17/2003	EJH	1/9/2004	BW	52	D	19PB-615.7-617.3-SC	615.70	617.30			4.7	0.20	9.70	9.50																														
12/17/2003	EJH	1/9/2004	BW	52	L	19PB-616.2-618.9-SC	616.20	618.90							7.5YR 4/6	☐	☐	☑									☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/18/2003	EJH	1/9/2004	BW	53	F	19PB-619.75-619.89-C	616.75	619.89																																				
12/17/2003	EJH	1/9/2004	BW	52	D	19PB-617.3-618.5-SC	617.30	618.50			4.7	0.20	7.65	7.45																														
12/17/2003	EJH	1/9/2004	BW	52	D	19PB-618.5-619.9-SC	618.50	619.90			4.7	0.20	7.75	7.55																														
12/17/2003	EJH	1/9/2004	BW	52	LX	19PB-618.9-619.9-SC	618.90	619.90							7.5YR 4/6	☐	☐	☑									☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/18/2003	EJH	1/9/2004	BW	53	LX	19PB-619.89-620.00-C	619.89	620.00							7.5YR 5/3	☐	☐	☑									☐	☐	☑	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/18/2003	EJH	1/9/2004	BW	53	RD	19PB-619.99-622.02-C	619.99	622.02	1.7	1.9	4.0	29.40	40.65	11.25																														
12/18/2003	EJH	1/9/2004	BW	53	L	19PB-620.00-620.25-C	620.00	620.25							7.5YR 5/3	☐	☐	☑									☐	☐	☑	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/18/2003	EJH	1/9/2004	BW	53	L	19PB-620.25-620.75-C	620.25	620.75							7.5YR 5/4	☐	☐	☑									☐	☐	☑	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/18/2003	EJH	1/9/2004	BW	53	L	19PB-620.75-621.25-C	620.75	621.25							7.5YR 4/6	☐	☐	☑						☑	☐	☐	☑	☐	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/18/2003	EJH	1/9/2004	BW	53	L	19PB-621.25-621.75-C	621.25	621.75							7.5YR 4/6	☐	☐	☑						☐	☑	☐	☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/18/2003	EJH	1/9/2004	BW	53	LX	19PB-621.75-622.02-C	621.75	622.02							7.5YR 4/6	☐	☐	☑						☑	☐	☐	☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/18/2003	EJH	1/9/2004	BW	54	D	19PB-622.0-622.4-SC	622.00	622.40			4.7	0.20	2.45	2.25																														
12/18/2003	EJH	1/9/2004	BW	54	LX	19PB-622.0-622.5-SC	622.00	622.50							5YR 4/6	☐	☐	☑						☑	☐	☐	☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/18/2003	EJH	1/9/2004	BW	54	R	19PB-622.0-628.4-SC	622.00	628.40	1.0	5.8																																		
12/18/2003	EJH	1/9/2004	BW	54	D	19PB-622.4-623.8-SC	622.40	623.80			4.7	0.20	9.55	9.35																														
12/18/2003	EJH	1/9/2004	BW	54	L	19PB-622.5-624.0-SC	622.50	624.00							5YR 4/3	☐	☐	☑						☐	☑	☐	☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/18/2003	EJH	1/9/2004	BW	54	D	19PB-623.8-625.2-SC	623.80	625.20			4.7	0.20	9.40	9.20																														
12/18/2003	EJH	1/9/2004	BW	54	L	19PB-624.0-624.9-SC	624.00	624.90							7.5YR 4/3	☐	☐	☑									☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/18/2003	EJH	1/9/2004	BW	54	L	19PB-624.9-627.1-SC	624.90	627.10							7.5YR 6/4	☐	☐	☑									☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/18/2003	EJH	1/9/2004	BW	54	D	19PB-625.2-626.5-SC	625.20	626.50			4.7	0.20	7.65	7.45																														
12/18/2003	EJH	1/9/2004	BW	54	D	19PB-626.5-627.9-SC	626.50	627.90			4.7	0.20	7.90	7.70																														
12/18/2003	EJH	1/9/2004	BW	54	LX	19PB-627.1-627.9-SC	627.10	627.90							7.5YR 5/6	☐	☐	☑						☑	☐	☐	☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/18/2003	EJH	1/9/2004	BW	54	LC	19PB-627.9-628.4-SC	627.90	628.40																																				
12/18/2003	EJH	1/9/2004	BW	55	D	19PB-628.4-629.5-SC	628.40	629.50			4.7	0.20	7.30	7.10																														
12/18/2003	EJH	1/9/2004	BW	55	LX	19PB-628.4-629.7-SC	628.40	629.70							5YR 5/6	☐	☐	☑									☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☑	☐	☐	100		
12/18/2003	EJH	1/9/2004	BW	55	R	19PB-628.4-634.0-SC	628.40	634.00	0.9	5.4																																		
12/18/2003	EJH	1/9/2004	BW	55	D	19PB-629.5-630.9-SC	629.50	630.90			4.7	0.20	9.15	8.95																														

Alluvium Core Logging Form - Nye County Nuclear Waste Repository Project Office

Key for Sample Number: SC = Sonic core; SCA = Sonic core duplicate interval; C = Drive core. Key for Sample Type: L = Logging; D = Density; F = Fill; LC = Lost core; R = Entire run; X = End of run (overlaps with next run).

Borehole ID: **NC-EWDP-19PB** (Phase 4) Driller/Drilling Company Shawn Cain/Boart Longyear Drilling Method: Sonic Coring Alluvium Depth (ft bgs): 350.8 to 633.8 Start Date: 12/2/2003 End Date: 12/18/2003

Date Logged	Logged By (Initials)	Date Checked	Checked By (Initials)	Core Run Number	Sample Type	Sample Number	Depth Interval (feet bgs)		Coring Data			Sample Density Data			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	Coring Rate (feet/min)	Sample Recovery (feet)	Core Diameter (inches)	Tare Weight (kg) (gal)	Sample Plus Tare Weight (kg)	Sample Weight (kg) (gall)		DRY	MOIST	WET	Gravel	Sand	Silt	Clay	Fines (Silt plus Clay)	WELL	POORLY	NA	NONE	LOW	MODERATE	HIGH		ANGULAR	SUBANGULAR	SUBROUNDED	ROUNDED	NONE	WEAK	MODERATE	STRONG	NONE	WEAK	STRONG	VOLCANICS	CARBONATES	OTHER
12/18/2003	EJH	1/9/2004	BW	55	L	19PB-629.7-631.1-SC	629.70	631.10							5YR 5/4	☐	☐	☑						☑	☐	☐	☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
12/18/2003	EJH	1/9/2004	BW	55	D	19PB-630.9-632.3-SC	630.90	632.30			4.7	0.20	9.20	9.00		☐	☐	☐						☐	☐	☐	☐	☐	☐	☐		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐			
12/18/2003	EJH	1/9/2004	BW	55	LX	19PB-631.1-633.8-SC	631.10	633.80							5YR 4/3	☐	☐	☑						☐	☐	☐	☐	☑	☐	☐		☐	☑	☐	☐	☑	☐	☐	☐	☑	☐	☐	100		
12/18/2003	EJH	1/9/2004	BW	55	D	19PB-632.3-633.8-SC	632.30	633.80			4.7	0.20	9.80	9.60		☐	☐	☐						☐	☐	☐	☐	☐	☐	☐		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐			
12/18/2003	EJH	1/9/2004	BW	55	LC	19PB-633.8-634.0-SC	633.80	634.00								☐	☐	☐						☐	☐	☐	☐	☐	☐	☐		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐			