

SUMMARY OF SOIL LABORATORY TEST RESULTS¹

Boring / Test Pit No.	Sample Top Depth (ft.)	Sample Type ²	USCS Sample Class. (D 2487) ³	Sieve Results (D 422)		Atterberg Limits* (D 4318)				Organic Content (%)	Natural Moisture (%) (D 2216)	Moist Unit Weight (PCF)	Specific Gravity (D 854)	Moisture-Density Relationship (D 1557)		Bearing Ratio (D 1883)		Specimen		Shear Strength					Consolidation (D 2435)				
				Percent Passing No. 200	Percent Retained No. 4	LL	PL	PI	Oven Dried LL					Dry Unit Wt. (PCF)	Optimum Moisture (%)	Dry	Soaked	Intact	Compacted	Test Type ⁵	Total		Effective		Failure Criterion ⁶	C _{er}	C _{ec}	e _o	P _p /tsf
																					f deg.	C psi	f deg.	C psi					
B-320	48.5	UD	CH	81.5	0.0	59	19	40		34.4	114	2.74					X	-	UU	NA	12.7	NA	NA	Dev					
B-320	53.5	SPT	CH			69	24	43		34.9							X	-	DS	NA	NA	21.9	9.6	NA					
B-320	73.5	SPT	SM	15.3	5.0					18.8																			
B-320	93.5	SPT	SM	15.1	1.8					25.4																			
B-320	103.5	SPT	SM	16.8	0.0					29.2																			
B-320	113.5	SPT	CL			44	16	28		28.5																			
B-320	128.5	SPT	MH			50	30	20		34.1																			
B-320	148.5	SPT	SM	47.7	1.4					37.0																			
B-321	2.5	SPT	SC	31.0	0.9					9.7																			
B-321	5.0	SPT	SP-SM							7.4																			
B-321	7.5	SPT	CL							25.2																			
B-321	10.5	SPT	CH	65.9	0.0	55	20	35		36.2																			
B-321	13.5	SPT	SC							30.0																			
B-321	18.5	SPT	SC	35.3	0.0					29.7																			
B-321	23.5	UD	CL	99.7	0.0	45	18	27		26.2	117.8	2.79					X	-	UU	NA	32	NA	NA	Dev	0.009	0.306	1.03	19	
B-321	28.5	SPT	SM	43.6	0.0	47	29	18		27.0																			
B-321	33.5	SPT	SP-SM							30.9																			
B-321	38.5	SPT	SP-SM	9.0	1.5					27.1																			
B-321	43.5	SPT	SP-SM							26.0																			
B-321	48.5	SPT	MH	73.0	0.0					35.1																			
B-321	53.5	SPT	SM	14.3	8.6	NP	NP	NP		25.0																			
B-321	58.5	SPT	SM	18.6	5.1					27.4																			
B-321	63.5	SPT	SM							27.6																			
B-321	68.5	SPT	SM	16.0	0.2					28.4																			
B-321	73.5	UD	SM	15.3	0.0	NP	NP	NP		28.5	120.5	2.67					X	-	CU-bar	20	13.5	30	7	PSR	0.003	0.064	0.72	14.2	
B-321	78.5	SPT	SM							34.9																			
B-321	83.5	SPT	SM							20.6																			
B-321	88.5	SPT	SM	30.0	0.2					31.0																			
B-321	93.5	SPT	SC	32.2	1.0	59	26	33		36.9																			
B-321	98.5	SPT	SM	29.8	0.0					36.1																			
B-321	103.5	SPT	SM							58.2																			
B-321	108.5	SPT	SM							42.6																			
B-321	113.5	SPT	SM	36.3	0.0					34.6																			
B-321	118.5	SPT	SM							39.8																			
B-321	123.5	SPT	SM							43.1																			
B-321	128.5	SPT	MH	60.8	0.0					49.5																			



Project Name:

Constellation Generation Group
Calvert Cliffs Nuclear Power Plant (CCNPP)
Calvert County, Maryland

Project Number:

06120048.00

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Boring / Test Pit No.	Sample Top Depth (ft.)	Sample Type ²	USCS Sample Class. (D 2487) ³	Sieve Results (D 422)		Atterberg Limits ⁴ (D 4318)				Organic Content (%)	Natural Moisture (%) (D 2216)	Moist Unit Weight (PCF)	Specific Gravity (D 854)	Moisture-Density Relationship (D 1557)		Bearing Ratio (D 1883)		Specimen		Shear Strength					Consolidation (D 2435)																
				Percent Passing No. 200	Percent Retained No. 4	LL	PL	PI	Oven Dried LL					Dry Unit Wt. (PCF)	Optimum Moisture (%)	Dry	Soaked	Intact	Compacted	Test Type ⁵	Total		Effective		Failure Criterion ⁶	C _{cr}	C _{ec}	e _o	Pp' tsf												
																					f deg.	C psi	f deg.	C psi																	
B-328	18.5	SPT	MH			64	36	28																																	
B-328	23.5	SPT	CH			77	28	49																																	
B-328	28.5	SPT	SC	42.6	0.1	40	23	19																																	
B-328	33.5	SPT	SP-SM																																						
B-328	38.5	SPT	SP-SM	7.8	0.0																																				
B-328	43.5	SPT	SP-SM	10.8	4.2	NP	NP	NP																																	
B-328	48.5	SPT	ML																																						
B-328	53.5	SPT	SM	21.9	9.6																																				
B-328	63.5	UD	OH	87.0	0.0	72	41	31	50		44.2	121	2.66					X	-	UU	Test Not Performed					<0.01	0.060	0.90	2.3												
B-328	68.5	SPT	SM			NP	NP	NP			29.4																														
B-328	73.5	SPT	SM			NP	NP	NP			32.2																														
B-328	83.5	SPT	SM	18.6	15.7	NP	NP	NP			21.2																														
B-328	88.5	SPT	MH			47	31	16			34.0																														
B-328	98.5	SPT	MH			53	34	19			38.2																														
B-328	103.5	SPT	SM	30.6	0.0						62.7																														
B-328	113.5	SPT	MH								30.5																														
B-328	118.5	SPT	MH								44.7																														
B-328	123.5	UD	MH	82.6	0.0	72	45	27			45.6	102	2.76				X	-	CU-bar	Test Not Performed					0.020	0.380	1.74	10.0													
B-328	133.5	SPT	MH	52.8	0.0	70	51	19			48.2																														
B-328	143.5	SPT	MH								59.3																														
B-328	148.5	SPT	MH			134	100	34			74.8																														
B-331	5.0	SPT	CL	66.9	0.0	43	15	28			20.2																														
B-331	18.5	UD	CH	97.1	0.0	57	23	34			30.8	111	2.71				X	-	Qu	NA	28.2	NA	NA	Dev																	
B-331	33.5	SPT	SP-SM	8.3	0.8						21.9																														
B-331	43.5	SPT	SM	50.6	0.0						31.6																														
B-331	58.5	SPT	SM								26.6																														
B-331	73.5	SPT	SM								35.8																														
B-331	88.5	SPT	SM								32.7																														
B-333	2.5	SPT	SP-SM	6.9	0.4						6.2																														
B-333	7.5	SPT	SP-SM	5.3	0.1						4.8																														
B-333	23.5	SPT	CH	74.2	0.0	57	33	24			32.0																														
B-333	28.5	UD	CH	85.3	0.0	52	19	33			38.9	114	2.82				X	-	Qu	NA	10.4	NA	NA	Dev	0.021	0.316	1.15	9.3													
B-333	38.5	UD	CH	98.8	0.0	61	23	38			39.7	115	2.85				X	-	Qu	NA	20.7	NA	NA	Dev	0.009	0.240	1.10	15.2													
B-333	43.5	SPT	SM	38.8	0.0						26.1																														



Project Name: Constellation Generation Group COLA Project
 Calvert Cliffs Nuclear Power Plant (CCNPP)
 Calvert County, Maryland

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				Percent Passing No. 200	Percent Retained No. 4	LL	PL	PI	Oven Dried LL					Dry Unit Wt. (PCF)	Optimum Moisture (%)	Dry	Soaked	Intact	Compacted	Test Type ⁵	Total		Effective		Failure Criterion ⁶	C _{er}	C _{ec}	e _o	P _p ' tsf
																					f deg.	c psi	f' deg.	c' psi					
B-333	48.5	UD	SC	20.0	2.0	34	13	21		25.2	Test Not Performed	2.73					X	-	Qu	Test Not Performed									
B-333	53.5	SPT	SM	13.4	1.6					20.9																			
B-333	58.5	SPT	SM							34.5																			
B-333	68.5	SPT	SM	23.2	20.4					19.3																			
B-333	78.5	SPT	SP-SM	10.8	5.7	NP	NP	NP		28.7																			
B-333	93.5	SPT	SM	23.7	23.3					16.1																			
B-334	0.0	SPT	SP-SM	11.2	0.0					9.6																			
B-334	5.0	SPT	SM	21.3	0.0					15.9																			
B-334	10.5	SPT	SM			NP	NP	NP		15.6																			
B-334	18.5	SPT	CL							31.3																			
B-334	23.0	UD	CH	79.0	0.0	51	16	35		35.3	119	2.7				X	-	UU	NA	10.1	NA	NA	Dev	0.020	0.220	1.12	5.3		
B-334	28.5	SPT	CH							42.5																			
B-334	33.0	UD	CL	95.0	0.0	47	13	34		32.6	115	2.71				X	-	UU	Test Not Performed					0.020	0.210	1.06	5.4		
B-334	43.5	SPT	SM							27.0																			
B-334	48.5	SPT	SM	26.2	0.0					27.2																			
B-334	53.5	SPT	SP-SM							21.4																			
B-334	63.5	SPT	GM	29.8	36.1	NP	NP	NP		19.0																			
B-334	73.5	SPT	SM	12.6	9.9					27.3																			
B-334	83.5	SPT	SM	13.8	0.1					28.0																			
B-334	98.5	SPT	SM	16.6	1.0					28.9																			
B-336	13.5	SPT	SC							11.4																			
B-336	28.5	SPT	CH							26.9																			
B-336	48.5	SPT	CL							25.9																			
B-336	58.5	SPT	SL							19.6																			
B-336	83.5	SPT	SM							27.3																			
B-336	98.5	SPT	SC							32.1																			
B-337	33.5	SPT	ML							29.0																			
B-337	48.5	SPT	SC							39.9																			
B-337	53.5	UD	SC	39.0	2.0	38	19	19		25.7	126	2.75				X	-	UU	NA	6.2	NA	NA	Dev						
B-337	73.5	SPT	SM							30.9																			
B-337	88.5	SPT	SM							21.0																			
B-339	5.0	SPT	SP	4.6	0.1					6.9																			
B-339	13.5	SPT	SM	12.1	10.8					19.9																			
B-339	28.5	SPT	CH			55	19	36		31.5																			
B-339	33.5	SPT	CH	62.7	0.0	62	21	41		27.0																			
B-339	38.5	SPT	CH			71	17	54		28.6																			



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				Percent Passing No. 200	Percent Retained No. 4	LL	PL	PI	Oven Dried LL					Dry Unit Wt. (PCF)	Optimum Moisture (%)	Dry	Soaked	Intact	Compacted	Test Type ⁵	Total		Effective		Failure Criterion ⁶	C _{cr}	C _{cc}	e ₀	P _p tsf											
																					f deg	C psi	f deg	C psi																
B-401	173.5	UD	CH	98.2	0.0	57	17	40		33.7	95	2.76						X	-	UU	Test Not Performed						0.040	0.540	2.80	11										
B-401	183.5	SPT	SM	32.2	0.0					31.2							X	-	DS	NA	NA	18.9	32.5	NA																
B-401	193.5	SPT	ML							49.2																														
B-401	198.5	UD	Not yet available (Fugro)																																					
B-401	203.5	SPT	MH			94	69	25		58.4																														
B-401	208.5	SPT	MH	64.5	0.0	113	74	39		62.7																														
B-401	213.5	UD	Not yet available (Fugro)																																					
B-401	218.5	SPT	MH	64.6	0.0					77.4																														
B-401	228.5	UD	Not yet available (Fugro)																																					
B-401	238.5	SPT	MH							122.5																														
B-401	243.5	UD	MH	98.7	0.0	140	65	75		96.2	86.0	2.36																						0.006	0.519	2.41	18.3			
B-401	248.5	SPT	MH			218	100	118		122.8																														
B-401	258.5	SPT	MH							130.2																														
B-401	268.5	SPT	SM	43.0	0.0					63.5																														
B-401	281.5	SPT	MH			76	42	34		30.2																														
B-401	293.5	SPT	SC							20.7																														
B-401	307.5	SPT	SM	16.3	0	57	42	15		27.4																														
B-401	318.5	SPT	CH			58	28	30		28.9																														
B-401	338.5	SPT	ML							25.3																														
B-401	368.5	SPT	SP-SM	11.7	0.0					36.9																														
B-401	400.0	SPT	SM	18.2	0.0					33.1																														
B-404	52.0	UD	Not yet available (Fugro)																																					
B-404	83.5	UD	Not yet available (Fugro)																																					
B-406	63.5	UD	OH	90.1	0.0	63	19	44	41	1.6	36.1	122.0	2.74					X	-	Qu	NA	20	NA	NA	Dev	0.04	0.3	1.17	10.5											
B-407	2.5	SPT	ML			NP	NP	NP		4.8								X	-	UU	NA	8.2	NA	NA	Dev															
B-407	10.5	SPT	SP-SM							12.3																														
B-407	18.5	SPT	SM	30.4	0.0					24.9																														
B-407	28.5	SPT	MH							35.1																														
B-407	33.5	SPT	MH	96.0	0.0	77	43	34		39.4																														
B-407	43.5	SPT	SM	17.4	1.6					23.3																														
B-407	63.5	SPT	SM							28.1																														
B-407	68.5	SPT	SM	11.4	6.0					30.0																														
B-407	73.5	SPT	SM							27.3																														
B-407	83.5	SPT	SM	14.8	12.5					38.3																														
B-407	88.5	SPT	SM							12.4																														