



BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST H. Lyatus					
SITE DESCRIPTION Exelon COL Project (Victoria Site)						MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft) 0 HR. ND 24 HR. ND			
BORING NO. B-2182A		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT									
GROUND SURFACE ELEV. 79.7 ft (NAVD88)		NORTHING 13,412,220		US ft (NAD83)		EASTING 2,600,133		US ft (NAD83)					
TOTAL DEPTH 399.8 ft		DRILL MACHINE CME-75		DRILLER: T. Warren/N. Skoglund				HAMMER (ID) 140 lb. Auto (MEC 09)					
DATE STARTED 11/28/07		COMPLETED 12/6/07		CASING DEPTH: N/A				BITS USED: 4 1/4" and 3 7/8" Drag Bit					
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION
		0.5ft	0.5ft	0.5ft	0	20	40	60	80				
-313.0					Continued from previous page								
-318.6	398.3	21	25	31						SS-43			FAT CLAY (CH) light gray (5Y7/2) mottled brown (10YR5/3), hard, moist, fine to medium grained sand, weak to strong HCl reaction (continued)
													Note: strata adapted from B-2182UD Boring Terminated at Elevation -320.1 ft



GEOTECHNICAL BORING LOG

Prepared By J. J. J. Date 6-12-08Checked By KAW Date 7-10-08

SHEET 1 OF 8

BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST J. Moore						
SITE DESCRIPTION Exelon COL Project (Victoria Site)				MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft)						
BORING NO. B-2182UD		DRILL METHOD: Mud Rotary		SAMPLE METHODS: UD		0 HR. ND		24 HR. ND						
GROUND SURFACE ELEV. 79.5 ft (NAVD88)		NORTHING 13,412,207		US ft (NAD83)		EASTING 2,600,144		US ft (NAD83)						
TOTAL DEPTH 402.5 ft		DRILL MACHINE Failing 1500		DRILLER: A. Palacios/A. Toriba		HAMMER (ID) NA								
DATE STARTED 12/11/07		COMPLETED 12/17/07		CASING DEPTH: N/A		BITS USED: 5" Roller Cone								
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION		
		0.5ft	0.5ft	0.5ft	0	20	40	60	80	100	MOI		G	
79.5					Ground Surface								79.5	0.0
69.5	10.0									UD-1			10.0ft: Sandy LEAN CLAY (CL), light gray (5Y7/1), mottled brownish yellow (10YR6/6), fine to coarse grained sand, trace carbonate nodules, strong HCl reaction - 1.7ft recovery 13.0ft: no recovery	
66.5	13.0									UD-2				
63.5	16.0									UD-3				
49.5	30.0									UD-4			16.0ft: FAT CLAY with sand (CH) light gray (5Y7/2), mottled brownish yellow (10YR6/6), trace carbonate nodules, strong HCl reaction - 1.7ft recovery 30.0ft: no recovery	
46.5	33.0									UD-5				
42.5	37.0									UD-6			33.0ft: FAT CLAY (CH), brownish yellow (10YR6/6), mottled light gray (5Y7/2), fine to coarse grained sand, fine gravel, trace carbonate nodules, strong HCl reaction - 1.7ft recovery 37.0ft: Sandy LEAN CLAY (CL), light gray (5Y7/2), fine to coarse grained sand, fine gravel, trace carbonate nodules, strong HCl reaction - push refusal, 1.25ft recovery 38.5ft: bottom 0.7ft of tube smashed close	

EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08



SHEET 2 OF 8

BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST J. Moore							
SITE DESCRIPTION Exelon COL Project (Victoria Site)								MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft)			
BORING NO. B-2182UD				DRILL METHOD: Mud Rotary				SAMPLE METHODS: UD				0 HR. ND			
GROUND SURFACE ELEV. 79.5 ft (NAVD88)				NORTHING 13,412,207				US ft (NAD83)		EASTING 2,600,144		US ft (NAD83)			
TOTAL DEPTH 402.5 ft				DRILL MACHINE Failing 1500				DRILLER: A. Palacios/A. Toriba				HAMMER (ID) NA			
DATE STARTED 12/11/07				COMPLETED 12/17/07				CASING DEPTH: N/A				BITS USED: 5" Roller Cone			
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT						SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION	
		0.5ft	0.5ft	0.5ft	0	20	40	60	80	100					
23.4					Continued from previous page										
14.5	65.0											UD-7			65.0ft: Clayey SAND (SC), light olive gray (5Y6/2), fine to medium grained sand, weak HCl reaction - 1.6ft recovery 66.7ft: bottom of tube has POORLY GRADED SAND (SP), pale brown (10YR6/3) 68.0ft: Clayey SAND (SC), very pale brown (10YR7/4), strong HCl reaction - 1.6ft recovery 69.7ft: bottom of tube is FAT CLAY with sand (CH), light gray (10YR7/2), strong HCl reaction, trace carbonate nodules
11.5	68.0											UD-8			
-5.5	85.0												UD-9		85.0ft: FAT CLAY (CH), light gray (5Y7/2), mottled brownish yellow (10YR6/6), trace carbonate nodules, strong HCl reaction - 1.4ft recovery 86.7ft: bottom of tube bent, possibly by carbonate nodules 90.0ft: FAT CLAY (CH), very pale brown (10YR7/3), fine grained sand - push refusal, 0.4ft recovery May have refused on a carbonate nodule, switched to pitcher sampler at 95.0ft 90.5ft: Sandy LEAN CLAY (CL), light gray (5Y7/1), mottled brownish yellow (10YR6/6), fine to coarse grained sand, fine gravel, trace carbonate nodules, strong HCl reaction - 2.35ft recovery
-10.5	90.0											UD-10			
-11.0	90.5											UD-11			
-15.5	95.0												UD-12		95.0ft: LEAN CLAY with sand (CL), light gray (5Y7/1), mottled brownish yellow (10YR6/6), fine to coarse grained sand, strong HCl reaction - 1.6ft recovery 97.5ft: bottom of tube is POORLY GRADED SAND with silt (SP-SM), very pale brown (10YR7/3), fine gravel, fine grained sand

EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08



SHEET 3 OF 8

BECHTEL PROJECT NO.: 25352					COUNTY Victoria					GEOLOGIST J. Moore						
SITE DESCRIPTION Exelon COL Project (Victoria Site)										MACTEC PROJECT NO.: 6468-07-1777					GROUND WATER (ft)	
BORING NO. B-2182UD			DRILL METHOD: Mud Rotary			SAMPLE METHODS: UD					0 HR. ND					
GROUND SURFACE ELEV. 79.5 ft (NAVD88)			NORTHING 13,412,207			US ft (NAD83)		EASTING 2,600,144		US ft (NAD83)		24 HR. ND				
TOTAL DEPTH 402.5 ft			DRILL MACHINE Failing 1500			DRILLER: A. Palacios/A. Toriba					HAMMER (ID) NA					
DATE STARTED 12/11/07			COMPLETED 12/17/07			CASING DEPTH: N/A					BITS USED: 5" Roller Cone					
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT						SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION		
		0.5ft	0.5ft	0.5ft	0	20	40	60	80	100						
-32.7					Continued from previous page											
-40.5	120.0										UD-13			120.0ft: Clayey SAND (SC), light gray (10YR7/2), fine to medium grained sand, carbonate nodules - 1.7ft recovery		
-43.5	123.0										UD-14					
-65.5	145.0										UD-15			145.0ft: SILT (ML), very pale brown (10YR7/3), mottled brownish gray (10YR6/6), fine to medium sand, carbonate nodules, strong HCl reaction - 1.3ft recovery		
														147.5ft: bottom of tube damaged and blocked with hard layer of cemented sand, strong HCl reaction		

EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08



SHEET 4 OF 8

BECHTEL PROJECT NO.: 25352					COUNTY Victoria					GEOLOGIST J. Moore						
SITE DESCRIPTION: Exelon COL Project (Victoria Site)										MACTEC PROJECT NO.: 6468-07-1777					GROUND WATER (ft)	
BORING NO. B-2182UD					DRILL METHOD: Mud Rotary					SAMPLE METHODS: UD					0 HR. ND	
GROUND SURFACE ELEV. 79.5 ft (NAVD88)					NORTHING 13,412,207 US ft (NAD83)					EASTING 2,600,144 US ft (NAD83)					24 HR. ND	
TOTAL DEPTH 402.5 ft					DRILL MACHINE Failing 1500					DRILLER: A. Palacios/A. Toriba					HAMMER (ID) NA	
DATE STARTED 12/11/07					COMPLETED 12/17/07					CASING DEPTH: N/A					BITS USED: 5" Roller Cone	
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT						SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION		
		0.5ft	0.5ft	0.5ft	0	20	40	60	80	100						
-88.8					Continued from previous page											
-100.5	180.0										UD-16			180.0ft: Silty SAND (SM), very pale brown (10YR8/2), fine to coarse grained, little fines, carbonate nodules, strong HCl reaction - 1.35ft recovery		
-135.5	215.0										UD-17			215.0ft: Sandy LEAN CLAY (CL), light gray (10YR7/2), fine to coarse grained sand, fine gravel, strong HCl reaction - 0.55ft recovery		
-138.5	218.0										UD-18			218.0ft: FAT CLAY (CH), light gray (5Y7/2), mottled brownish yellow (10YR6/6), trace carbonate nodules - 1.2ft recovery		

EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08



SHEET 5 OF 8

BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST J. Moore							
SITE DESCRIPTION Exelon COL Project (Victoria Site)								MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft)			
BORING NO. B-2182UD		DRILL METHOD: Mud Rotary				SAMPLE METHODS: UD				0 HR. ND					
GROUND SURFACE ELEV. 79.5 ft (NAVD88)		NORTHING 13,412,207		US ft (NAD83)		EASTING 2,600,144		US ft (NAD83)		24 HR. ND					
TOTAL DEPTH 402.5 ft		DRILL MACHINE Failing 1500				DRILLER: A. Palacios/A. Toriba				HAMMER (ID) NA					
DATE STARTED 12/11/07		COMPLETED 12/17/07		CASING DEPTH: N/A				BITS USED: 5" Roller Cone							
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT						SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION	
		0.5ft	0.5ft	0.5ft	0	20	40	60	80	100					
-144.9					Continued from previous page										
-160.5	240.0										UD-19			240.0ft: Silty SAND (SM), light gray (10YR7/2), fine to coarse grained sand, few carbonate nodules, strong HCl reaction - 0.5ft recovery 240.5ft: bottom 0.1ft of tube is bent 242.0ft: Silty Clayey SAND (SC-SM), light gray (10YR7/2), fine to coarse grained sand, fine gravel, strong HCl reaction - 0.45ft recovery	
-162.5	242.0										UD-20				
-185.5	265.0										UD-21			265.0ft: no recovery	
-190.5	270.0										UD-22			270.0ft: FAT CLAY with sand (CH), light gray (5Y7/2), fine to coarse grained sand, fine gravel, trace carbonate nodules, strong HCl reaction - 0.45ft recovery	
-195.5	275.0										UD-23			275.0ft: no recovery	

EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08



SHEET 6 OF 8

BECHTEL PROJECT NO.: 25352					COUNTY Victoria					GEOLOGIST J. Moore						
SITE DESCRIPTION Exelon COL Project (Victoria Site)										MACTEC PROJECT NO.: 6468-07-1777					GROUND WATER (ft)	
BORING NO. B-2182UD			DRILL METHOD: Mud Rotary			SAMPLE METHODS: UD					0 HR. ND					
GROUND SURFACE ELEV. 79.5 ft (NAVD88)			NORTHING 13,412,207			US ft (NAD83)		EASTING 2,600,144		US ft (NAD83)		24 HR. ND				
TOTAL DEPTH 402.5 ft			DRILL MACHINE Failing 1500			DRILLER: A. Palacios/A. Toriba					HAMMER (ID) NA					
DATE STARTED 12/11/07			COMPLETED 12/17/07			CASING DEPTH: N/A					BITS USED: 5" Roller Cone					
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION				
		0.5ft	0.5ft	0.5ft	0	20	40	60	80	100	MOI					
-201.0					Continued from previous page											
-220.5	300.0															
-223.5	303.0										UD-24	300.0ft: FAT CLAY (CH), light gray (5Y7/2), fine to medium grained sand, trace carbonate nodules, strong HCl reaction - push refusal, 1.3ft recovery 301.3ft: bottom 0.1ft of tube damaged				
											UD-25	303.0ft: FAT CLAY (CH), light gray (5Y7/2), fine to medium grained sand, trace carbonate nodules, strong HCl reaction - push refusal, 1.2ft recovery				
-240.5	320.0										UD-26	320.0ft: LEAN CLAY with sand (CL), pale brown (10YR6/3), fine to medium grained sand, trace carbonate nodules, strong HCl reaction - push refusal, 1.45ft recovery 321.3ft: bottom of tube damaged				
-243.5	323.0										UD-27	323.0ft: FAT CLAY (CH), pale brown (10YR6/3), fine grained sand, trace carbonate nodules - 0.3ft recovery 324.7ft: bottom of tube is Clayey SAND (SC), light gray (10YR7/2), fine grained sand, strong HCl reaction				
-250.5	330.0										UD-28	330.0ft: FAT CLAY (CH), pale brown (10YR8/3), fine to medium grained sand, strong HCl reaction - 2.0ft recovery				
-253.5	333.0										UD-29	332.5ft: bottom 0.15ft of tube is bent 333.0ft: FAT CLAY (CH), pale brown (10YR6/3), mottled light gray (5Y7/2), trace carbonate nodules, strong HCl reaction - 1.7ft recovery 334.7ft: bottom of tube is damaged				

EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08

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SHEET 8 OF 8

BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST J. Moore					
SITE DESCRIPTION Exelon COL Project (Victoria Site)						MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft)			
BORING NO. B-2182UD		DRILL METHOD: Mud Rotary				SAMPLE METHODS: UD				0 HR. ND			
GROUND SURFACE ELEV. 79.5 ft (NAVD88)		NORTHING 13,412,207		US ft (NAD83)		EASTING 2,600,144		US ft (NAD83)		24 HR. ND			
TOTAL DEPTH 402.5 ft		DRILL MACHINE Failing 1500				DRILLER: A. Palacios/A. Toriba				HAMMER (ID) NA			
DATE STARTED 12/11/07		COMPLETED 12/17/07				CASING DEPTH: N/A				BITS USED: 5" Roller Cone			
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION
		0.5ft	0.5ft	0.5ft	0	20	40	60	80				
-313.2					Continued from previous page								
-313.5	393.0												393.0ft: FAT CLAY (CH), light gray (2.5Y7/2), fine grained sand, strong HCl reaction - 2.45ft recovery
-320.5	400.0												398.0ft: LEAN CLAY with sand (CL), light gray (5Y7/2), mottled yellowish brown (10YR5/6), fine to medium grained sand, strong HCl reaction - 1.85ft recovery
													400.0ft: LEAN CLAY with sand (CL), light gray (5Y7/2), mottled yellowish brown (10YR5/6), fine grained sand, strong HCl reaction
													402.5ft: Boring Terminated at Elevation -323.0 ft

EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08



GEOTECHNICAL BORING LOG

Prepared By 2224 Date 6-12-08Checked By KAW Date 7-10-08

SHEET 1 OF 3

BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST L. Bisson					
SITE DESCRIPTION Exelon COL Project (Victoria Site)				MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft)					
BORING NO. B-2183		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT				0 HR. ND		24 HR. ND			
GROUND SURFACE ELEV. 79.6 ft (NAVD88)		NORTHING 13,412,266 US ft (NAD83)		EASTING 2,600,166 US ft (NAD83)		HAMMER (ID) 140 lb. Auto (MEC 03)							
TOTAL DEPTH 151.3 ft		DRILL MACHINE CME-550		DRILLER: L. Carter/D. Juhan		BITS USED: 2 15/16" Drag Bit							
DATE STARTED 11/10/07		COMPLETED 11/11/07		CASING DEPTH: N/A									
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	
		0.5ft	0.5ft	0.5ft	0	20	40	60	80	100			
79.6					Ground Surface							79.6	
79.6	0.0	1	2	3						SS-1		FAT CLAY (CH), very dark gray (10YR3/1), firm, moist, trace sand, organics	0.0
76.1	3.5	8	10	11						SS-2		3.5ft: dark gray (2.5Y4/1), very stiff, few sand, trace carbonate and manganese nodules	
73.6	6.0	7	8	8						SS-3		6.0ft: light olive gray (5Y6/2), trace sand, weak HCl reaction	
71.1	8.5	7	8	12						SS-4		8.5ft: few sand, trace orange staining	
68.6	11.0	8	8	9						SS-5			
66.1	13.5	7	8	10						SS-6		13.5ft: greenish gray (10Y6/1), no HCl reaction	
59.8	19.8	6	6	10						SS-7		19.8ft: light olive gray (5YR6/2), black and orange staining	
54.8	24.8	5	5	8						SS-8		24.8ft: greenish gray (10Y6/1), mottled reddish yellow (7.5YR6/8), stiff, no sand, weak HCl reaction, trace black staining	
49.8	29.8	6	7	10						SS-9		29.8ft: strong brown (7.5YR5/8), mottled light greenish gray (10Y7/1), very stiff	
44.8	34.8	4	6	10						SS-10		34.8ft: trace carbonate nodules	
39.8	39.8	8	11	19						SS-11		39.8ft: LEAN CLAY (CL), brownish yellow (10YR6/8), mottled light greenish gray (10Y8/1), very stiff, few sand, trace carbonate nodules, strong HCl reaction	39.8
34.8	44.8	10	18	28						SS-12A/B		44.8ft: Clayey SAND (SC), yellowish brown (10YR5/8), dense, wet, few fines, fine grained sand, strong HCl reaction	45.8
29.8	49.8	9	12	13						SS-13		49.8ft: very firm	
24.8	54.8	9	12	17						SS-14			54.8

EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08



SHEET 2 OF 3

BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST L. Bisson					
SITE DESCRIPTION Exelon COL Project (Victoria Site)						MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft)			
BORING NO. B-2183		DRILL METHOD: Mud Rotary				SAMPLE METHODS: SPT				0 HR.	ND		
GROUND SURFACE ELEV. 79.6 ft (NAVD88)		NORTHING 13,412,266		US ft (NAD83)		EASTING 2,600,166		US ft (NAD83)		24 HR.	ND		
TOTAL DEPTH 151.3 ft		DRILL MACHINE CME-550				DRILLER: L. Carter/D. Juhan				HAMMER (ID) 140 lb. Auto (MEC 03)			
DATE STARTED 11/10/07		COMPLETED 11/11/07				CASING DEPTH: N/A				BITS USED: 2 15/16" Drag Bit			
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	
		0.5ft	0.5ft	0.5ft	0	20	40	60	80	100	MOI		
23.5					Continued from previous page								
20.1	59.5	6	8	11									Sandy FAT CLAY (CH), brownish yellow (10YR5/6), very stiff, moist, some sand, strong HCl reaction, trace carbonate nodules; interbedded with poorly graded sand with clay (SP-SC) from 54.8 to 65.2ft (continued) 59.8ft: strong brown (7.5YR5/8), mottled light greenish gray (10Y7/1)
14.8	64.8	8	8	10									65.2ft: light olive brown (2.5Y5/3), no HCl reaction
9.8	69.8	14	14	19									69.8ft: light yellowish brown (2.5Y6/3), hard, some sand, trace carbonate gravel, weak HCl reaction
4.8	74.8	7	8	11									74.8ft: light gray (2.5Y7/2), mottled olive yellow (2.5Y6/6), very stiff, little sand
-0.2	79.8	8	15	15									-0.2 Clayey SAND (SC), light gray (2.5Y7/2), very firm, wet, some fines, fine grained sand, no HCl reaction
-5.2	84.8	6	7	9									-5.2 FAT CLAY (CH), greenish gray (10Y6/1), mottled strong brown (7.5YR5/8), very stiff, moist, trace sand, no HCl reaction, trace carbonate nodules
-10.2	89.8	9	17	22									89.8ft: light olive gray (5Y6/2), to white (5Y8/1), hard, little gravel
-15.2	94.8	7	9	11									-15.2 POORLY GRADED SAND with clay (SP-SC), pale brown (10YR6/3), firm, wet, fine to medium grained, few fines, weak HCl reaction, trace feldspar grains
-20.2	99.8	46	50/0.4										99.8ft: very pale brown (10YR7/4), to light gray (2.5Y7/2), very dense, wet to moist, fine to coarse grained, weak to strong HCl reaction
-30.2	109.8	50/0.4											109.8ft: light gray (2.5Y7/2)

EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08



SHEET 3 OF 3

BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST L. Bisson						
SITE DESCRIPTION Exelon COL Project (Victoria Site)				MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft)						
BORING NO. B-2183		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND		24 HR. ND						
GROUND SURFACE ELEV. 79.6 ft (NAVD88)		NORTHING 13,412,266		US ft (NAD83)		EASTING 2,600,166		US ft (NAD83)						
TOTAL DEPTH 151.3 ft		DRILL MACHINE CME-550		DRILLER: L. Carter/D. Juhan		HAMMER (ID) 140 lb. Auto (MEC 03)								
DATE STARTED 11/10/07		COMPLETED 11/11/07		CASING DEPTH: N/A		BITS USED: 2 15/16" Drag Bit								
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT						SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	
		0.5ft	0.5ft	0.5ft	0	20	40	60	80	100				
-32.6					Continued from previous page									
-40.2	119.8	8	8	9	17						SS-25		POORLY GRADED SAND with clay (SP-SC), pale brown (10YR6/3), firm, wet, fine to medium grained, few fines, weak HCl reaction, trace feldspar grains (continued)	
-50.2	129.8	8	17	18	35						SS-26		FAT CLAY (CH), light greenish gray (10Y7/1), mottled strong brown (7.5YR5/8), very stiff, moist, few sand, no HCl reaction, trace carbonate nodules, trace black staining	
-60.2	139.8	31	50	23	73						SS-27		129.8ft: greenish gray (10Y6/1), hard, weak HCl reaction	
-70.2	149.8	4	5	10	15						SS-28		LEAN CLAY with sand (CL), light yellowish brown (2.5Y6/3), hard, wet, weak HCl reaction, 2"-thick gravel layer at base of sand	
-71.7													149.8ft: stiff, weak HCl reaction, interbedded with poorly graded sand with clay Boring Terminated at Elevation -71.7 ft	

EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08



GEOTECHNICAL BORING LOG

Prepared By JP Date 6-12-08Checked By KAW Date 7-10-08

SHEET 1 OF 3

BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST L. Bisson				
SITE DESCRIPTION Exelon COL Project (Victoria Site)				MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft)				
BORING NO. B-2184		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT				0 HR. ND				
GROUND SURFACE ELEV. 79.7 ft (NAVD88)		NORTHING 13,412,295 US ft (NAD83)		EASTING 2,600,305 US ft (NAD83)		24 HR. ND						
TOTAL DEPTH 151.2 ft		DRILL MACHINE CME-550		DRILLER: L. Carter/D. Juhan		HAMMER (ID) 140 lb. Auto (MEC 03)						
DATE STARTED 11/12/07		COMPLETED 11/13/07		CASING DEPTH: N/A		BITS USED: 2 15/16" Drag Bit						
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION
		0.5ft	0.5ft	0.5ft	0	20	40	60	80			
79.7					Ground Surface							79.7
79.7	0.0	4	5	5						SS-1		FAT CLAY (CH), dark olive brown (2.5Y3/3), stiff, moist, few sand, no HCl reaction, trace grass and manganese nodules
76.2	3.5	9	10	12						SS-2		3.5ft: dark gray (2.5Y4/1), very stiff, trace carbonate grains
73.7	6.0	3	5	7						SS-3		6.0ft: light olive gray (5Y6/2), stiff, weak HCl reaction
71.2	8.5	4	6	9						SS-4		8.5ft: mottled strong brown (7.5YR5/8)
68.7	11.0	6	9	11						SS-5		11.0ft: very stiff
66.2	13.5	5	6	8						SS-6		13.5ft: light brownish gray (2.5YR6/2), stiff
60.0	19.7	6	8	11						SS-7		19.7ft: light olive gray (5Y6/2), very stiff
55.0	24.7	5	4	6						SS-8		24.7ft: greenish gray (10YR6/1), mottled reddish yellow (7.5YR6/8), stiff
50.0	29.7	6	7	10						SS-9		29.7ft: reddish yellow (7.5YR6/8), mottled greenish gray (10Y6/1), very stiff, strong HCl reaction
45.0	34.7	5	5	7						SS-10		34.7ft: yellowish brown (10YR5/8), veined light greenish gray (10Y7/1), stiff, weak HCl reaction
40.0	39.7	5	6	9						SS-11		
35.0	44.7	7	9	15						SS-12		44.7ft: light olive brown (2.5YR5/4), very stiff, little sand, no HCl reaction
30.0	49.7	10	9	13						SS-13		32.7 Clayey SAND (SC), light yellowish brown (2.5Y6/4), trace yellowish brown (10YR5/8), very firm, some clay, no HCl reaction
25.0	54.7	6	8	9						SS-14		47.0
												54.7ft: light gray (2.5Y7/1), firm

EXELON COL BORE EXELON-2.GPJ EXELON COL.CDT 6/12/08



SHEET 2 OF 3

BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST L. Bisson																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
SITE DESCRIPTION Exelon COL Project (Victoria Site)						MACTEC PROJECT NO.: 6468-07-1777						GROUND WATER (ft)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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GROUND SURFACE ELEV. 79.7 ft (NAVD88)		NORTHING 13,412,295		US ft (NAD83)		EASTING 2,600,305		US ft (NAD83)		24 HR. ND																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
TOTAL DEPTH 151.2 ft		DRILL MACHINE CME-550				DRILLER: L. Carter/D. Juhan				HAMMER (ID) 140 lb. Auto (MEC 03)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
DATE STARTED 11/12/07		COMPLETED 11/13/07				CASING DEPTH: N/A				BITS USED: 2 15/16" Drag Bit																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08



SHEET 3 OF 3

BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST L. Bisson					
SITE DESCRIPTION Exelon COL Project (Victoria Site)								MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft)	
BORING NO. B-2184		DRILL METHOD: Mud Rotary				SAMPLE METHODS: SPT				0 HR. ND			
GROUND SURFACE ELEV. 79.7 ft (NAVD88)		NORTHING 13,412,295		US ft (NAD83)		EASTING 2,600,305		US ft (NAD83)		24 HR. ND			
TOTAL DEPTH 151.2 ft		DRILL MACHINE CME-550				DRILLER: L. Carter/D. Juhan				HAMMER (ID) 140 lb. Auto (MEC 03)			
DATE STARTED 11/12/07		COMPLETED 11/13/07				CASING DEPTH: N/A				BITS USED: 2 15/16" Drag Bit			

ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT						SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION
		0.5ft	0.5ft	0.5ft	0	20	40	60	80	100			
-32.5					Continued from previous page								
-40.0	119.7	9	10	14							SS-25		Sandy FAT CLAY (CH), light greenish gray (10Y7/1), hard, moist, some sand, weak HCl reaction (continued)
-50.0	129.7	20	18	22							SS-26		119.7ft: no HCl reaction
-60.0	139.7	38	41	50							SS-27		129.5ft: hard, few sand
-70.0	149.7	13	19	19							SS-28		POORLY GRADED SAND with clay (SP-SC), light yellowish brown (10YR6/4), very dense, wet, few fines, fine grained sand, strong HCl reaction
													149.7ft: pale brown (10YR6/3), dense
													Boring Terminated at Elevation -71.5 ft

EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08



GEOTECHNICAL BORING LOG

Prepared By JPZ Date 6-12-08Checked By KAW Date 7-10-08

SHEET 1 OF 3

BECHTEL PROJECT NO.: 25352					COUNTY Victoria					GEOLOGIST L. Bisson					
SITE DESCRIPTION Exelon COL Project (Victoria Site)					MACTEC PROJECT NO.: 6468-07-1777					GROUND WATER (ft)					
BORING NO. B-2185		DRILL METHOD: Mud Rotary			SAMPLE METHODS: SPT					0 HR. ND					
GROUND SURFACE ELEV. 79.5 ft (NAVD88)		NORTHING 13,412,321		US ft (NAD83)		EASTING 2,600,809		US ft (NAD83)		24 HR. ND					
TOTAL DEPTH 151.1 ft		DRILL MACHINE CME-550			DRILLER: L. Carter/D. Juhan					HAMMER (ID) 140 lb. Auto (MEC 03)					
DATE STARTED 11/16/07		COMPLETED 11/16/07			CASING DEPTH: N/A					BITS USED: 2 15/16" Drag Bit					
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION		
		0.5ft	0.5ft	0.5ft	0	20	40	60	80	100					
79.5					Ground Surface								79.5		0.0
79.5	0.0	4	4	4	●8					SS-1			FAT CLAY (CH), dark olive brown (2.5Y3/3), firm, moist, few sand, no HCl reaction, trace roots		
76.0	3.5	9	9	11	●20					SS-2			3.5ft: gray (2.5Y6/1), very stiff, weak HCl reaction, trace carbonate nodules		
73.5	6.0	3	6	7	●13					SS-3			6.0ft: stiff, strong HCl reaction,		
71.0	8.5	8	13	15	●28					SS-4			8.5ft: light brownish gray (2.5Y6/2), very stiff, trace manganese staining		
68.5	11.0	6	11	13	●24					SS-5					
66.0	13.5	7	9	11	●20					SS-6			13.5ft: greenish gray (10Y6/1), no HCl reaction, trace manganese nodules		
59.9	19.6	4	6	8	●14					SS-7			19.6ft: light gray (10YR7/1), mottled yellowish brown (10YR5/8), stiff, weak HCl reaction		
54.6	24.9	3	6	7	●13					SS-8			24.6ft: light greenish gray (10YR7/1), no HCl reaction,		
49.9	29.6	5	6	8	●14					SS-9			29.6ft: greenish gray (10Y6/1), mottled strong brown (7.5YR5/8), weak HCl reaction		
44.9	34.6	5	8	9	●17					SS-10			44.9ft: LEAN CLAY with sand (CL), strong brown (7.5YR5/8), mottled greenish gray (10Y6/1), very stiff, little sand, carbonate nodules, strong HCl reaction	34.6	
39.9	39.6	4	7	9	●16					SS-11			39.6ft: veins of light greenish gray (10Y7/1), few sands		
34.9	44.6	7	10	9	●19					SS-12			44.6ft: brownish yellow (10YR6/8), some sand		
29.9	49.6	5	7	14	●21					SS-13			47.0ft: Clayey SAND (SC), brownish yellow (10YR6/8), very firm, moist, fine grained, some fines, strong HCl reaction	47.0	
24.9	54.6	5	6	8	●14					SS-14			54.6ft:	54.6	

EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08



SHEET 3 OF 3

BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST L. Bisson					
SITE DESCRIPTION Exelon COL Project (Victoria Site)				MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft)					
BORING NO. B-2185		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT				0 HR. ND					
GROUND SURFACE ELEV. 79.5 ft (NAVD88)		NORTHING 13,412,321		US ft (NAD83)		EASTING 2,600,809		US ft (NAD83)		24 HR. ND			
TOTAL DEPTH 151.1 ft		DRILL MACHINE CME-550		DRILLER: L. Carter/D. Juhan		HAMMER (ID) 140 lb. Auto (MEC 03)							
DATE STARTED 11/16/07		COMPLETED 11/16/07		CASING DEPTH: N/A		BITS USED: 2 15/16" Drag Bit							
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT						SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION
		0.5ft	0.5ft	0.5ft	0	20	40	60	80	100			
-32.7					Continued from previous page								
-40.1	119.6	8	10	13	23						SS-25		FAT CLAY with sand (CH), greenish gray (10Y6/1), very stiff, moist, little sand, weak HCl reaction, trace carbonate nodules (continued)
-50.1	129.6	9	12	25	37						SS-26		119.6ft: trace sand, strong HCl reaction, trace angular carbonate gravel and nodules
-60.1	139.6	11	20	23	43						SS-27		129.6ft: light gray (2.5Y7/2), mottled yellowish brown (10YR5/8), hard
-70.1	149.6	18	22	26	48						SS-28		POORLY GRADED SAND with clay (SP-SC), brownish yellow (10YR6/6), to light brownish gray (10YR6/2 and 2.5Y6/2), dense, wet, few fines, strong HCl reaction, trace carbonate gravel
													149.6ft: weak HCl reaction
													Boring Terminated at Elevation -71.6 ft

EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08



GEOTECHNICAL BORING LOG

Prepared By 2224 Date 6-12-08Checked By KAW Date 7-10-08

SHEET 1 OF 3

BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST L. Bisson					
SITE DESCRIPTION Exelon COL Project				MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft)					
BORING NO. B-2250		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT				0 HR. ND					
GROUND SURFACE ELEV. 81.1 ft (NAVD88)		NORTHING 13,413,327		US ft (NAD83)		EASTING 2,600,234		US ft (NAD83)		24 HR. ND			
TOTAL DEPTH 151.3 ft		DRILL MACHINE CME-550		DRILLER: L. Carter/J. Landeros				HAMMER (ID) 140 lb. Auto (MEC 03)					
DATE STARTED 11/27/07		COMPLETED 11/28/07		CASING DEPTH: N/A				BITS USED: 2 15/16" Drag Bit					
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	
		0.5ft	0.5ft	0.5ft	0	20	40	60	80	100	MOI		G
81.1					Ground Surface								
81.1	0.0	4	5	5	● 18					SS-1		81.1	0.0
77.6	3.5	10	9	9	● 18					SS-2			
75.1	6.0	4	5	5	● 18					SS-3			
72.6	8.5	5	8	9	● 17					SS-4			
70.1	11.0	4	9	12	● 21					SS-5			
67.6	13.5	3	8	8	● 16					SS-6			
61.3	19.8	3	5	6	● 11					SS-7			
56.3	24.8	2	8	11	● 19					SS-8			
51.3	29.8	6	10	12	● 22					SS-9			
46.3	34.8	6	8	12	● 20					SS-10			
41.3	39.8	8	10	13	● 23					SS-11		43.1	38.0
36.3	44.8	7	11	10	● 21					SS-12			
31.3	49.8	6	12	10	● 22					SS-13		31.3	49.8
26.3	54.8	14	10	18	● 28					SS-14			

EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08



SHEET 3 OF 3

BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST L. Bisson						
SITE DESCRIPTION Exelon COL Project				MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft)						
BORING NO. B-2250		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND		24 HR. ND						
GROUND SURFACE ELEV. 81.1 ft (NAVD88)		NORTHING 13,413,327		US ft (NAD83)		EASTING 2,600,234		US ft (NAD83)						
TOTAL DEPTH 151.3 ft		DRILL MACHINE CME-550		DRILLER: L. Carter/J. Landeros		HAMMER (ID) 140 lb. Auto (MEC 03)								
DATE STARTED 11/27/07		COMPLETED 11/28/07		CASING DEPTH: N/A		BITS USED: 2 15/16" Drag Bit								
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT						SAMP. NO.	LOG MOI	SOIL AND ROCK DESCRIPTION	
		0.5ft	0.5ft	0.5ft	0	20	40	60	80	100				
-31.2					Continued from previous page									
-38.8	119.8	10	10	19	29						SS-25		POORLY GRADED SAND (SP), light yellowish brown (10YR6/4), very dense, wet, fine to coarse grained, trace fines, weak HCl reaction, trace carbonate nodules (continued) 115.0	
-48.8	129.8	23	27	36	63						SS-26		FAT CLAY (CH), light greenish gray (10Y7/1), very stiff, moist, no sand, trace carbonate nodules, black streaks 126.0	
-58.8	139.8	26	38	45	83						SS-27		POORLY GRADED SAND with clay (SP-SC), light brownish gray (2.5Y6/2), very dense, wet, fine grained, few fines, strong HCl reaction 139.8ft: pale brown (10YR6/3)	
-68.8	149.8	10	10	16	26						SS-28A/B		FAT CLAY with sand (CH), light olive gray (5Y6/2), mottled yellowish brown (10YR5/6), very stiff, moist, little sand, strong HCl reaction, trace carbonate nodules 147.0	
													POORLY GRADED SAND with clay (SP-SC), pale brown (10YR6/3), very firm, wet, fine grained, few fines, no HCl reaction 150.8	
													Boring Terminated at Elevation -70.3 ft 151.3	

EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08



GEOTECHNICAL BORING LOG

Prepared By J. P. 24 Date 6-12-08Checked By KAW Date 7-10-08

SHEET 1 OF 4

BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST A. Osorio					
SITE DESCRIPTION Exelon COL Project				MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft)					
BORING NO. B-2251		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT				0 HR. ND					
GROUND SURFACE ELEV. 80.8 ft (NAVD88)		NORTHING 13,413,405 US ft (NAD83)		EASTING 2,600,268 US ft (NAD83)		24 HR. ND							
TOTAL DEPTH 210.0 ft		DRILL MACHINE CME-75		DRILLER: D. Nalls/B. Turner		HAMMER (ID) 140 lb. Auto (MEC 11)							
DATE STARTED 12/3/07		COMPLETED 12/4/07		CASING DEPTH: 2.0 ft		BITS USED: 3" Drag Bit							
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	SOIL AND ROCK DESCRIPTION	
		0.5ft	0.5ft	0.5ft	0	20	40	60	80	100			
80.8					Ground Surface							80.8	0.0
80.8	0.0	3	4	7	● 11					SS-1		Sandy LEAN CLAY (CL), black (2.5/N), stiff, moist, fine to medium grained sand, no HCl reaction, organics	
77.3	3.5	2	3	5	● 8					SS-2		3.5ft: dark gray (4/N), firm, weak HCl reaction, trace carbonate nodules	
74.8	6.0	2	3	5	● 8					SS-3		LEAN CLAY with sand (CL), greenish gray (10YR5/1), firm, moist, black and yellowish brown stains	6.0
72.3	8.5	4	7	10	● 17					SS-4		Silty, clayey SAND (SC-SM), yellowish brown (10YR5/4, 10YR5/6 and 10YR5/8), mottled greenish gray (10YR5/1), firm, moist, fine to medium grained sand, strong to weak HCl reaction	8.5
69.8	11.0	3	5	4	● 9					SS-5		LEAN CLAY with sand (CL), yellowish brown (10YR5/4), stiff, moist, fine to medium grained sand, organics	11.0
67.3	13.5	5	8	9	● 17					SS-6		LEAN CLAY (CL), yellowish brown (10YR5/4), very stiff, moist, fine to medium grained sand	13.5
62.3	18.5	4	4	5	● 9					SS-7		FAT CLAY (CH), yellowish brown (10YR5/4), stiff, moist, fine to medium grained sand, organics	18.5
57.3	23.5	3	6	7	● 13					SS-8		FAT CLAY with sand (CH), yellowish brown (10YR5/4), stiff, moist fine to medium grained sand	23.5
52.3	28.5	2	4	4	● 8					SS-9		LEAN CLAY with sand (CL), light greenish gray (10Y7/1), firm, moist, fine to medium grained sand, no to weak HCl reaction, organics	28.5
47.3	33.5	5	8	12	● 20					SS-10		Clayey SAND (SC), light greenish gray (10Y7/1), firm, moist, fine to medium grained sand	33.5
42.3	38.5	6	7	11	● 18					SS-11		38.5ft: organics	
37.3	43.5	7	7	8	● 15					SS-12		43.5ft: fine to coarse grained sand, fine gravel (visual)	
32.3	48.5	5	5	4	● 9					SS-13		48.5ft: loose, fine to medium grained sand (visual)	
27.3	53.5	5	7	12	● 19					SS-14		53.5ft: firm (visual)	

EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08



SHEET 2 OF 4

BECHTEL PROJECT NO.: 25352					COUNTY Victoria					GEOLOGIST A. Osorio							
SITE DESCRIPTION Exelon COL Project					MACTEC PROJECT NO.: 6468-07-1777					GROUND WATER (ft)							
BORING NO. B-2251		DRILL METHOD: Mud Rotary			SAMPLE METHODS: SPT					0 HR. ND							
GROUND SURFACE ELEV. 80.8 ft (NAVD88)		NORTHING 13,413,405		US ft (NAD83)		EASTING 2,600,268		US ft (NAD83)		24 HR. ND							
TOTAL DEPTH 210.0 ft		DRILL MACHINE CME-75			DRILLER: D. Nalls/B. Turner					HAMMER (ID) 140 lb. Auto (MEC 11)							
DATE STARTED 12/3/07		COMPLETED 12/4/07			CASING DEPTH: 2.0 ft					BITS USED: 3" Drag Bit							
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION					
		0.5ft	0.5ft	0.5ft	0	20	40	60	80	100							
24.7					Continued from previous page												
22.3	58.5									SS-15		22.3	Clayey SAND (SC), light greenish gray (10Y7/1), firm, moist, fine to medium grained sand (continued) 58.5				
		20	25	28									Sandy LEAN CLAY (CL), light greenish gray (10Y7/1), hard, moist, fine to medium grained sand, no to weak HCl reaction				
17.3	63.5									SS-16		17.3	FAT CLAY (CH), greenish gray (10Y6/1), very stiff, moist, fine to medium sand, carbonate nodules, no HCl reaction 63.5				
		17	8	9													
12.3	68.5									SS-17			68.5ft: gray (10YR6/1), stiff, yellowish brown stains, organics				
		3	4	5													
7.3	73.5									SS-18		7.3	Sandy LEAN CLAY (CL), gray (10YR6/1), very stiff, moist, fine to medium grained sand, no to weak HCl reaction 73.5				
		4	9	13													
2.3	78.5									SS-19			78.5ft: stiff, organics				
		5	5	10													
-2.7	83.5									SS-20		-2.7	Clayey SAND (SC), light brownish gray (10YR6/2), very firm, moist, fine to coarse grained sand, carbonate nodules, no HCl reaction (visual) 83.5				
		8	11	12													
-7.7	88.5									SS-21			88.5ft: very dense, strong HCl reaction (visual)				
		25	35	50/0.5													
-12.7	93.5									SS-22			93.5ft: fine gravel (visual)				
		40	50/0.4														
-17.7	98.5									SS-23			98.5ft: 1.4'-thick interbedded layer of lean clay, light greenish gray (10Y7/1)				
		45	50/0.5														
-27.7	108.5									SS-24			108.5ft: light brownish gray (10YR6/2) (visual)				
		27	43	32													

EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08



SHEET 3 OF 4

BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST A. Osorio				
SITE DESCRIPTION Exelon COL Project				MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft)				
BORING NO. B-2251		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND		24 HR. ND				
GROUND SURFACE ELEV. 80.8 ft (NAVD88)		NORTHING 13,413,405		US ft (NAD83)		EASTING 2,600,268		US ft (NAD83)				
TOTAL DEPTH 210.0 ft		DRILL MACHINE CME-75		DRILLER: D. Nalls/B. Turner		HAMMER (ID) 140 lb. Auto (MEC 11)						
DATE STARTED 12/3/07		COMPLETED 12/4/07		CASING DEPTH: 2.0 ft		BITS USED: 3" Drag Bit						
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION
		0.5ft	0.5ft	0.5ft	0	20	40	60	80			
-31.4					Continued from previous page							
-37.7	118.5	5	6	13	● 19					SS-25		-32.7 113.5 FAT CLAY (CH), greenish gray (10Y6/1), very stiff, moist, fine to coarse grained sand, carbonate nodules, black and yellowish brown stains, no HCl reaction
-47.7	128.5	27	25	50/0.4	75/0.6					SS-26		-46.7 127.5 Clayey SAND (SC), gray (10YR6/1), very dense, moist, fine grained, strong HCl reaction (visual)
-57.7	138.5	18	50	43	● 93					SS-27		138.5ft: very pale brown (10YR8/2), fine to medium grained sand, strong HCl reaction (visual)
-67.7	148.5	4	9	10	● 19					SS-28		-64.2 145.0 Sandy LEAN CLAY (CL), very pale brown (10YR7/4), very stiff, moist, fine to medium grained sand, carbonate nodules, strong HCl reaction
-77.7	158.5	18	42	50/0.4	● 92/0.6					SS-29		-77.7 158.5 POORLY GRADED SAND with silt (SP-SM), very pale brown (10YR8/2), very dense, fine to coarse grained sand, fine gravel (visual)

EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08



SHEET 4 OF 4

BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST A. Osorio				
SITE DESCRIPTION Exelon COL Project				MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft)				
BORING NO. B-2251		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND		24 HR. ND				
GROUND SURFACE ELEV. 80.8 ft (NAVD88)		NORTHING 13,413,405		US ft (NAD83)		EASTING 2,600,268		US ft (NAD83)				
TOTAL DEPTH 210.0 ft		DRILL MACHINE CME-75		DRILLER: D. Nalls/B. Turner		HAMMER (ID) 140 lb. Auto (MEC 11)						
DATE STARTED 12/3/07		COMPLETED 12/4/07		CASING DEPTH: 2.0 ft		BITS USED: 3" Drag Bit						
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION
		0.5ft	0.5ft	0.5ft	0	20	40	60	80			
-87.5					Continued from previous page							
-87.7	168.5	38	50/0.5							SS-30		POORLY GRADED SAND with silt (SP-SM), very pale brown (10YR8/2), very dense, fine to coarse grained sand, fine gravel (visual) (continued)
-97.7	178.5	27	27	34						SS-31		178ft: fine to coarse grained sand, fine gravel, carbonate nodules (visual)
-107.7	188.5	27	36	50/0.4						SS-32		-107.7 Clayey SAND (SC), very pale brown (10YR7/3), very dense, fine to medium grained sand, carbonate nodules, strong HCl reaction (visual) 188.5
-117.7	198.5	54	50/0.2							SS-33		
-127.7	208.5	25	26	29						SS-34		-127.7 Silty SAND (SM), very pale brown (10YR7/3), very dense, fine to coarse grained sand, fine gravel (visual) 208.5
												-129.2 Boring Terminated at Elevation -129.2 ft 210.0

EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08



GEOTECHNICAL BORING LOG

Prepared By DPH Date 6-12-08Checked By KAW Date 7-10-08

SHEET 1 OF 3

BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST L. Bisson				
SITE DESCRIPTION Exelon COL Project (Victoria Site)				MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft)				
BORING NO. B-2252		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT				0 HR.		ND		
GROUND SURFACE ELEV. 80.7 ft (NAVD88)		NORTHING 13,413,478		US ft (NAD83)		EASTING 2,600,361		US ft (NAD83)		24 HR. ND		
TOTAL DEPTH 153.4 ft		DRILL MACHINE CME-550		DRILLER: L. Carter/D. Juhan				HAMMER (ID) 140 lb. Auto (MEC 03)				
DATE STARTED 11/7/07		COMPLETED 11/8/07		CASING DEPTH: N/A				BITS USED: 2 15/16" Drag Bit				
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	SOIL AND ROCK DESCRIPTION
		0.5ft	0.5ft	0.5ft	0	20	40	60	80			
80.7					Ground Surface							80.7 0.0
80.7	0.0	4	3	3						SS-1		Silty SAND (SM), grayish brown (10YR5/2), loose, moist, some fines, trace organics
77.2	3.5	10	17	13						SS-2A/B		FAT CLAY with sand (CH), dark gray (5YR4/1), very stiff, moist, little sand, trace carbonate nodules
74.7	6.0	4	7	13						SS-3		4.0-5.0ft: gray (7.5YR5/1), very stiff, dry, some sand, trace carbonate nodules
72.2	8.5	5	11	13						SS-4		6.0ft: light brownish gray (2.5YR6/2), very stiff, moist, little sand, trace carbonate and manganese nodules
69.7	11.0	7	14	17						SS-5		8.5ft: mottled light brownish gray (2.5YR6/2), to olive yellow (2.5YR6/6), wet to moist, few sand
67.2	13.5	5	7	10						SS-6		LEAN CLAY (CL), pale yellow (2.5Y7/3), mottled olive yellow (2.5Y6/8), hard, moist, few fine sand, trace carbonate nodules
61.0	19.7	4	5	6						SS-7		19.7ft: stiff
56.0	24.7	4	11	13						SS-8		56.0
51.0	29.7	3	5	7						SS-9		POORLY GRADED SAND with silt (SP-SM), light gray (10YR7/2), very firm, wet, fine grained, no HCl reaction
46.0	34.7	9	11	17						SS-10		51.0
41.0	39.7	6	8	9						SS-11		Sandy FAT CLAY (CH), color not determined, stiff, moist, some fine sand
36.0	44.7	6	12	14						SS-12		46.0
31.0	49.7	7	10	9						SS-13		LEAN CLAY with sand (CL), light greenish gray (10Y7/1), mottled strong brown (7.5YR5/8), very stiff, wet, some sand
26.0	54.7	6	12	22						SS-14		39.7ft: gray (10Y6/1), moist, trace black staining, few sand
												36.0
												Clayey SAND (SC), light greenish gray (10Y7/1), very firm, moist, fine grained, some fines, trace carbonate nodules
												31.0
												POORLY GRADED SAND with silt (SP-SM), light gray (10YR7/2), firm, wet, fine grained, few fines, trace black staining
												26.0

EXELON COL BORE EXELON-2.GPJ EXELON COL.CDT 6/12/08



SHEET 2 OF 3

BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST L. Bisson								
SITE DESCRIPTION Exelon COL Project (Victoria Site)				MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft)								
BORING NO. B-2252		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT				0 HR.		ND						
GROUND SURFACE ELEV. 80.7 ft (NAVD88)		NORTHING 13,413,478		US ft (NAD83)		EASTING 2,600,361		US ft (NAD83)		24 HR. ND						
TOTAL DEPTH 153.4 ft		DRILL MACHINE CME-550		DRILLER: L. Carter/D. Juhan				HAMMER (ID) 140 lb. Auto (MEC 03)								
DATE STARTED 11/7/07		COMPLETED 11/8/07		CASING DEPTH: N/A				BITS USED: 2 15/16" Drag Bit								
ELEV.	DEPTH	BLOW COUNT			BLOWS PER FOOT					SAMP.	LOG	SOIL AND ROCK DESCRIPTION				
(ft)	(ft)	0.5ft	0.5ft	0.5ft	0	20	40	60	80	100			NO.	MOI		
24.6					Continued from previous page											
21.0	59.7											Sandy LEAN CLAY (CL), light brownish gray (2.5YR6/2), hard, wet, some fine sand, trace iron staining (continued)				
		50/0.2								50/0.2	SS-15	59.7ft: no recovery				
16.0	64.7		5	5	9								16.0	FAT CLAY (CH), greenish gray (10Y6/1), stiff, moist, trace iron staining, trace carbonate nodules	64.7	
11.0	69.7		5	6	8											
6.0	74.7		4	5	8									74.7ft: firm, little sand		
1.0	79.7		8	9	11									79.7ft: very stiff, some sand		
-4.0	84.7		7	17	17									-4.0	POORLY GRADED SAND (SP), light brownish gray (10YR6/2), dense, wet, trace fines, trace carbonate nodules	84.7
-9.1	89.8		30	35	46									-9.1	POORLY GRADED SAND with silt (SP-SM), pale brown (10YR6/3), very dense, wet, few fines, trace carbonate nodules, trace black speckles	89.8
-14.1	94.8		15	35	50									-14.1	FAT CLAY (CH), light greenish gray (10YR7/1), hard, moist, trace carbonate nodules, few sand	94.8
														-14.9	POORLY GRADED SAND with silt (SP-SM), light gray (10YR7/2), very dense, wet, few fines, trace carbonate nodules and black specks	95.6
-19.1	99.8		22	48	60/0.1									-19.1	POORLY GRADED SAND with clay (SP-SC), very pale brown (10YR8/3), very dense, wet, few fines, increasing clay with depth, trace feldspar and carbonate nodules	99.8
-29.1	109.8		30	35	21									-29.1	POORLY GRADED SAND (SP), very pale brown (10YR7/4), very dense, wet, trace fines, trace feldspar grains, trace black grains	109.8

EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08



SHEET 3 OF 3

BECHTEL PROJECT NO.: 25352					COUNTY Victoria					GEOLOGIST L. Bisson						
SITE DESCRIPTION Exelon COL Project (Victoria Site)										MACTEC PROJECT NO.: 6468-07-1777					GROUND WATER (ft)	
BORING NO. B-2252			DRILL METHOD: Mud Rotary					SAMPLE METHODS: SPT					0 HR.	ND		
GROUND SURFACE ELEV. 80.7 ft (NAVD88)					NORTHING 13,413,478		US ft (NAD83)		EASTING 2,600,361		US ft (NAD83)		24 HR.	ND		
TOTAL DEPTH 153.4 ft			DRILL MACHINE CME-550					DRILLER: L. Carter/D. Juhan					HAMMER (ID) 140 lb. Auto (MEC 03)			
DATE STARTED 11/7/07			COMPLETED 11/8/07					CASING DEPTH: N/A					BITS USED: 2 15/16" Drag Bit			
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION				
		0.5ft	0.5ft	0.5ft	0	20	40	60	80	100						
-31.5					Continued from previous page											
													POORLY GRADED SAND (SP), very pale brown (10YR7/4), very dense, wet, trace fines, trace feldspar grains, trace black grains (continued)			
-39.1	119.8	10	8	15							SS-25		FAT CLAY (CH), light gray (2.5Y7/2), very stiff, moist, trace carbonate nodules			
-49.1	129.8	11	17	22							SS-26		POORLY GRADED SAND with silt (SP-SM), light gray (10YR7/2), dense, wet, few fines, weak HCl reaction, trace carbonate nodules			
-59.1	139.8	50/0.5									SS-27		139.8ft: no recovery, very dense			
-64.1	144.8	5	7	9							SS-28		FAT CLAY (CH), light yellowish brown (10YR6/4), very stiff, moist, trace carbonate and manganese nodules			
-69.1	149.8	5	7	9							SS-29		149.8ft: no recovery due to broken catcher. Driller assumes clay as bit was plugged up.			
-71.2	151.9	5	7	12							SS30		151.9ft: weak HCl reaction			
													Boring Terminated at Elevation -72.7 ft			

EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08



GEOTECHNICAL BORING LOG

Prepared By 2227 Date 6-12-08Checked By KAW Date 7-10-08

SHEET 1 OF 3

BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST C. Gandy					
SITE DESCRIPTION Exelon COL Project (Victoria Site)				MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft)					
BORING NO. B-2253		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT				0 HR. ND					
GROUND SURFACE ELEV. 80.9 ft (NAVD88)		NORTHING 13,413,588		US ft (NAD83)		EASTING 2,600,485		US ft (NAD83)		24 HR. ND			
TOTAL DEPTH 150.0 ft		DRILL MACHINE CME-55 LC		DRILLER: D. White/O. Smith				HAMMER (ID) 140 lb. Auto (MEC 02)					
DATE STARTED 11/7/07		COMPLETED 11/8/07		CASING DEPTH: N/A				BITS USED: 2 7/8" Wing Bit					
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	
		0.5ft	0.5ft	0.5ft	0	20	40	60	80	100			
80.9					Ground Surface								80.9
80.9	0.0	3	3	4	●7					SS-1		LEAN CLAY with sand (CL), dark gray (2.5Y4/1), firm, moist, little sands, organics	0.0
77.4	3.5	3	3	4	●7					SS-2		3.5ft: gray (2.5Y5/1), trace roots, strong HCl reaction, carbonate nodules	
74.9	6.0	4	5	7	●12					SS-3		6.0ft: light gray (5Y7/2), stiff, little sand, carbonate nodules	
72.4	8.5	4	8	8	●16					SS-4		8.5ft: light yellowish brown (10YR6/4), very stiff, trace lignite	
69.9	11.0	9	12	14	●26					SS-5		11.0ft: mottled, thinly laminated	
67.4	13.5	7	7	7	●14					SS-6		13.5ft: brownish yellow (10YR6/6), mottled light greenish gray (10Y7/1), stiff	
62.4	18.5	4	4	7	●11					SS-7		18.5ft: FAT CLAY (CH), brownish yellow (10YR6/6), mottled pale yellow (5Y8/2), stiff, moist, few sands, strong HCl reaction, trace organics	18.5
57.4	23.5	4	5	8	●13					SS-8		23.5ft: light yellowish brown (10YR6/4),	
52.4	28.5	5	7	10	●17					SS-9		28.5ft: very stiff, little sand, pale brown (10YR7/3)	
47.4	33.5	6	8	10	●18					SS-10		33.5ft: brownish yellow (10YR6/6),	
42.4	38.5	4	5	8	●13					SS-11		38.5ft: stiff, organics	
37.4	43.5	6	8	10	●18					SS-12		43.5ft: very pale brown (10YR 7/3), very stiff, some sand, carbonate nodules	
32.4	48.5	9	15	10	●25					SS-13		48.5ft: iron staining, 0.2'-thick lense of coarse sand and gravel	
27.4	53.5	7	10	12	●22					SS-14		53.5ft: Clayey SAND (SC), light gray (10YR7/2), very firm, moist, some fines, weak HCl reaction	53.5

EXELON COL BORE EXELON-2.GPJ EXELON COL.GDT 6/12/08