



BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST H. Lyatuu					
SITE DESCRIPTION Exelon COL Project (Victoria Site)						MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft)			
BORING NO. B-2174A		DRILL METHOD: Mud Rotary				SAMPLE METHODS: SPT				0 HR. ND			
GROUND SURFACE ELEV. 80.1 ft (NAVD88)		NORTHING 13,412,299		US ft (NAD83)		EASTING 2,600,001		US ft (NAD83)		24 HR. ND			
TOTAL DEPTH 601.0 ft		DRILL MACHINE CME-75				DRILLER: T. Warren/N. Skoglund		HAMMER (ID) 140 lb. Auto (MEC 09)					
DATE STARTED 12/11/07		COMPLETED 1/6/08				CASING DEPTH: N/A		BITS USED: 3 7/8" 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
-424.8					Continued from previous page								
												FAT CLAY (CH), light yellowish brown (10YR6/4), mottled light gray (2.5Y7/2), hard, moist, trace sand, strong HCl reaction (continued)	
-438.6	518.7	25	24	41						SS-49A/B		FAT CLAY with sand (CH), brownish yellow (10YR6/3), trace carbonate nodules 519.7ft: split sample: SS-49A from 518.7-519.7ft and SS-49B from 519.7-520.2ft	
													POORLY GRADED SAND (SP), light olive brown (2.5Y5/6), very dense, moist, fine sand, trace fines, no HCl reaction
-458.6	538.7	18	23	29						SS-50		538.7ft: no recovery	
-463.6	543.7	17	23	35						SS-51			
-477.9	558.0	50/0.4								SS-52			Silty SAND (SM), light gray (10YR7/1), very dense, moist, fine grained sand, trace fines, strong HCl reaction

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



BECHTEL PROJECT NO.: 25352			COUNTY Victoria			GEOLOGIST H. Lyatuu											
SITE DESCRIPTION Exelon COL Project (Victoria Site)						MACTEC PROJECT NO.: 6468-07-1777			GROUND WATER (ft)								
BORING NO. B-2174A		DRILL METHOD: Mud Rotary			SAMPLE METHODS: SPT			0 HR. ND									
GROUND SURFACE ELEV. 80.1 ft (NAVD88)			NORTHING 13,412,299 US ft (NAD83)		EASTING 2,600,001 US ft (NAD83)		24 HR. ND										
TOTAL DEPTH 601.0 ft		DRILL MACHINE CME-75			DRILLER: T. Warren/N. Skoglund		HAMMER (ID) 140 lb. Auto (MEC 09)										
DATE STARTED 12/11/07		COMPLETED 1/6/08			CASING DEPTH: N/A		BITS USED: 3 7/8" 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							
-480.9					Continued from previous page												
-498.6	578.7	13	14	32											SS-53	578.7ft: pale yellow (5Y8/2), moist, weak HCl reaction	
-520.6	600.7															SS-54	600.7ft: light yellowish brown (2.5Y6/4), few sand
		50/0.3															-520.9
																	601.0
													Note: Strata adapted from B-2174UD and B-2174UDR Boring Terminated at Elevation -520.9 ft				

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



GEOTECHNICAL BORING LOG

Prepared By J.P.P. Date 6-12-08

Checked By KAW Date 7-10-08

SHEET 1 OF 6

BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST A. Osorio					
SITE DESCRIPTION Exelon COL Project (Victoria Site)						MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft)			
BORING NO. B-2174UD		DRILL METHOD: Mud Rotary				SAMPLE METHODS: UD				0 HR.	ND		
GROUND SURFACE ELEV. 79.6 ft (NAVD88)		NORTHING 13,412,277 US ft (NAD83)		EASTING 2,600,006 US ft (NAD83)		24 HR.		ND					
TOTAL DEPTH 305.0 ft		DRILL MACHINE CME-75				DRILLER: D. Nalls/B. Turner/T. Ellerson		HAMMER (ID) NA					
DATE STARTED 1/16/08		COMPLETED 1/31/08		CASING DEPTH: N/A				BITS USED: 6" 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
79.6					Ground Surface							79.6	0.0
69.6	10.0										UD-1		10.0ft: Sandy LEAN CLAY (CL), light greenish gray (10YR7/1), moist, carbonate nodules, black and yellow staining, strong HCl reaction - 1.8ft recovery
49.6	30.0										UD-2		30.0ft: FAT CLAY (CH), light greenish gray (10YR7/1), mottled yellowish brown (10YR5/8), moist, carbonate nodules, strong HCl reaction - 1.7ft recovery

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



BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST A. Osorio				
SITE DESCRIPTION Exelon COL Project (Victoria Site)						MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft)		
BORING NO. B-2174UD		DRILL METHOD: Mud Rotary				SAMPLE METHODS: UD				0 HR.	ND	
GROUND SURFACE ELEV. 79.6 ft (NAVD88)		NORTHING 13,412,277 US ft (NAD83)		EASTING 2,600,006 US ft (NAD83)		24 HR.		ND				
TOTAL DEPTH 305.0 ft		DRILL MACHINE CME-75				DRILLER: D. Nalls/B. Turner/T. Ellerson		HAMMER (ID) NA				
DATE STARTED 1/16/08		COMPLETED 1/31/08		CASING DEPTH: N/A				BITS USED: 6" 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			
23.5					Continued from previous page							
4.6	75.0										UD-3	75.0ft: Sandy LEAN CLAY (CL), light greenish gray (10YR7/1), moist, carbonate nodules, yellowish brown staining, weak HCl reaction - 1.3ft recovery
-10.4	90.0										UD-4	90.0ft: Sandy LEAN CLAY (CL), light greenish gray (10YR7/1), mottled yellowish brown (10YR5/8), moist, weak HCl reaction - 0.8ft recovery
-12.4	92.0										UD-5	92.0ft: Sandy LEAN CLAY (CL), light greenish gray (10YR7/1), moist, carbonate nodules, black staining, strong HCl reaction - 1.4ft recovery
-15.4	95.0										UD-6	95.0ft: POORLY GRADED SAND with clay (SP-SC), light greenish gray (10YR7/1), to light brownish gray (10YR6/2), moist, carbonate nodules, black staining, strong to no HCl reaction - 1.2ft recovery

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



BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST A. Osorio				
SITE DESCRIPTION Exelon COL Project (Victoria Site)						MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft)		
BORING NO. B-2174UD		DRILL METHOD: Mud Rotary				SAMPLE METHODS: UD				0 HR. ND		
GROUND SURFACE ELEV. 79.6 ft (NAVD88)		NORTHING 13,412,277		US ft (NAD83)		EASTING 2,600,006		US ft (NAD83)		24 HR. ND		
TOTAL DEPTH 305.0 ft		DRILL MACHINE CME-75				DRILLER: D. Nalls/B. Turner/T. Ellerson				HAMMER (ID) NA		
DATE STARTED 1/16/08		COMPLETED 1/31/08				CASING DEPTH: N/A				BITS USED: 6" 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			
-32.6					Continued from previous page							
-35.4	115.0										UD-7	115.0ft: FAT CLAY with sand (CH), light greenish gray (10YR6/1), moist, trace sand, carbonate nodules, yellowish brown staining, no HCl reaction - 1.4ft recovery
-65.4	145.0										UD-8	145.0ft: Silty SAND (SM), light yellowish brown (10YR6/4), moist, fine grained sand, little fines, strong HCl reaction - 0.7ft recovery

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



BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST A. Osorio							
SITE DESCRIPTION Exelon COL Project (Victoria Site)						MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft)					
BORING NO. B-2174UD		DRILL METHOD: Mud Rotary				SAMPLE METHODS: UD				0 HR. ND					
GROUND SURFACE ELEV. 79.6 ft (NAVD88)		NORTHING 13,412,277 US ft (NAD83)		EASTING 2,600,006 US ft (NAD83)		24 HR. ND									
TOTAL DEPTH 305.0 ft		DRILL MACHINE CME-75				DRILLER: D. Nalls/B. Turner/T. Ellerson		HAMMER (ID) NA							
DATE STARTED 1/16/08		COMPLETED 1/31/08		CASING DEPTH: N/A				BITS USED: 6" 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					
-88.7					Continued from previous page										
-100.4	180.0														
-103.4	183.0										UD-9			180.0ft: Silty SAND (SM), light brownish gray (10YR6/2), moist, fine grained sand, trace fines, carbonate nodules, strong HCl reaction - 0.4ft recovery	
											UD-10			183.0ft: Silty SAND (SM), light gray (10YR7/1), moist, medium grained sand, trace fines, carbonate nodules, strong HCl reaction	
-126.4	206.0														
-130.4	210.0														
											UD-11			206.0ft: Silty SAND (SM), very pale brown (10YR7/3), moist, fine grained sand, trace fines, strong HCl reaction - 0.3ft recovery	
											UD-12			210.0ft: Silty SAND (SM), light gray (10YR7/1), moist, fine grained sand, trace fines, strong HCl reaction - 0.2ft recovery	

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



BECHTEL PROJECT NO.: 25352					COUNTY Victoria					GEOLOGIST A. Osorio					
SITE DESCRIPTION Exelon COL Project (Victoria Site)					MACTEC PROJECT NO.: 6468-07-1777					GROUND WATER (ft)					
BORING NO. B-2174UD			DRILL METHOD: Mud Rotary			SAMPLE METHODS: UD					0 HR. ND		24 HR. ND		
GROUND SURFACE ELEV. 79.6 ft (NAVD88)			NORTHING 13,412,277 US ft (NAD83)		EASTING 2,600,006 US ft (NAD83)										
TOTAL DEPTH 305.0 ft			DRILL MACHINE CME-75			DRILLER: D. Nalls/B. Turner/T. Ellerson			HAMMER (ID) NA						
DATE STARTED 1/16/08			COMPLETED 1/31/08			CASING DEPTH: N/A			BITS USED: 6" 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					
-144.8					Continued from previous page										
-165.4	245.0														
-166.2	245.8										UD-13				245.0ft: FAT CLAY (CH), white (10YR8/1), moist, no sand, carbonate nodules, strong HCl reaction - 0.6ft recovery
											UD-14				245.6ft: few sand 245.8ft: FAT CLAY (CH), white (10YR8/1), moist, no sand, carbonate nodules, strong HCl reaction - 0.4ft recovery
															248.3ft: FAT CLAY with sand (CH), white (10YR8/1), moist, little sand, weak HCl reaction
-185.4	265.0														265.0ft: Clayey SAND (SC), greenish gray (10YR6/1), moist, some fines, weak HCl reaction - 1.8ft recovery
											UD-15				

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BORING NO. B-2174UD		DRILL METHOD: Mud Rotary				SAMPLE METHODS: UD				0 HR. ND				
GROUND SURFACE ELEV. 79.6 ft (NAVD88)		NORTHING 13,412,277		US ft (NAD83)		EASTING 2,600,006		US ft (NAD83)		24 HR. ND				
TOTAL DEPTH 305.0 ft		DRILL MACHINE CME-75				DRILLER: D. Nalls/B. Turner/T. Ellerson		HAMMER (ID) NA						
DATE STARTED 1/16/08		COMPLETED 1/31/08		CASING DEPTH: N/A				BITS USED: 6" 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
-200.9					Continued from previous page									
-220.4	300.0										UD-16			300.0ft: FAT CLAY (CH), pale brown (10YR6/3), moist, trace sand, carbonate nodules, black staining, strong HCl reaction - 1.4ft recovery
														305ft: Bit lost in hole and grouted in place on 1-31-08. Sampling resumed at 320ft in offset boring location, B-2174UDR
														Boring Terminated at Elevation -225.4 ft

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



GEOTECHNICAL BORING LOG

Prepared By ADD Date 6-12-08

Checked By KAW Date 7-10-08

SHEET 1 OF 11

BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST J. Liles							
SITE DESCRIPTION Exelon COL Project (Victoria Site)						MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft)					
BORING NO. B-2174UDR		DRILL METHOD: Mud Rotary				SAMPLE METHODS: UD				0 HR. ND					
GROUND SURFACE ELEV. 79.0 ft (NAVD88)		NORTHING 13,412,303 US ft (NAD83)		EASTING 2,600,012 US ft (NAD83)		24 HR. ND									
TOTAL DEPTH 593.0 ft		DRILL MACHINE CME-75				DRILLER: D. Nalls/B. Turner		HAMMER (ID) NA							
DATE STARTED 2/1/08		COMPLETED 2/16/08		CASING DEPTH: N/A				BITS USED: 5 7/8" Tricone							
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					
79.0					Ground Surface								79.0	0.0	
															Drilled down to 319.3ft and resumed sampling. Refer to B-2174UD for sample information from 0-300ft.

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



BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST J. Liles							
SITE DESCRIPTION Exelon COL Project (Victoria Site)						MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft)					
BORING NO. B-2174UDR		DRILL METHOD: Mud Rotary				SAMPLE METHODS: UD				0 HR. ND					
GROUND SURFACE ELEV. 79.0 ft (NAVD88)		NORTHING 13,412,303 US ft (NAD83)		EASTING 2,600,012 US ft (NAD83)		24 HR. ND									
TOTAL DEPTH 593.0 ft		DRILL MACHINE CME-75				DRILLER: D. Nalls/B. Turner		HAMMER (ID) NA							
DATE STARTED 2/1/08		COMPLETED 2/16/08		CASING DEPTH: N/A				BITS USED: 5 7/8" Tricone							
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					
22.9					Continued from previous page										

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



BECHTEL PROJECT NO.: 25352					COUNTY Victoria					GEOLOGIST J. Liles									
SITE DESCRIPTION Exelon COL Project (Victoria Site)										MACTEC PROJECT NO.: 6468-07-1777					GROUND WATER (ft)				
BORING NO. B-2174UDR					DRILL METHOD: Mud Rotary					SAMPLE METHODS: UD					0 HR. ND				
GROUND SURFACE ELEV. 79.0 ft (NAVD88)					NORTHING 13,412,303 US ft (NAD83)					EASTING 2,600,012 US ft (NAD83)					24 HR. ND				
TOTAL DEPTH 593.0 ft					DRILL MACHINE CME-75					DRILLER: D. Nalls/B. Turner					HAMMER (ID) NA				
DATE STARTED 2/1/08					COMPLETED 2/16/08					CASING DEPTH: N/A					BITS USED: 5 7/8" Tricone				
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					
-33.2					Continued from previous page														

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



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SITE DESCRIPTION Exelon COL Project (Victoria Site)						MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft)			
BORING NO. B-2174UDR		DRILL METHOD: Mud Rotary				SAMPLE METHODS: UD				0 HR. ND			
GROUND SURFACE ELEV. 79.0 ft (NAVD88)		NORTHING 13,412,303 US ft (NAD83)		EASTING 2,600,012 US ft (NAD83)		24 HR. ND							
TOTAL DEPTH 593.0 ft		DRILL MACHINE CME-75				DRILLER: D. Nalls/B. Turner				HAMMER (ID) NA			
DATE STARTED 2/1/08		COMPLETED 2/16/08				CASING DEPTH: N/A				BITS USED: 5 7/8" Tricone			
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			
-89.3					Continued from previous page								

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



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SITE DESCRIPTION Exelon COL Project (Victoria Site)						MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft)						
BORING NO. B-2174UDR		DRILL METHOD: Mud Rotary				SAMPLE METHODS: UD				0 HR. ND						
GROUND SURFACE ELEV. 79.0 ft (NAVD88)		NORTHING 13,412,303		US ft (NAD83)		EASTING 2,600,012		US ft (NAD83)		24 HR. ND						
TOTAL DEPTH 593.0 ft		DRILL MACHINE CME-75				DRILLER: D. Nalls/B. Turner				HAMMER (ID) NA						
DATE STARTED 2/1/08		COMPLETED 2/16/08				CASING DEPTH: N/A				BITS USED: 5 7/8" Tricone						
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						
-201.5					Continued from previous page											
-240.3	319.3															
-245.8	324.8											UD-17				319.3ft: FAT CLAY (CH), light yellowish brown (2.5Y6/3), moist, trace sand, carbonate nodules, strong HCl reaction - 1.0ft recovery
																321.8ft: POORLY GRADED SAND (SP), light gray (2.5Y7/2), wet, few fines, fine grained sand, strong HCl reaction
												UD-18				324.8ft: POORLY GRADED SAND (SP), light yellowish brown (2.5Y6/3), wet, fine grained sand, strong HCl reaction - 0.3ft recovery
-255.9	334.9															
												UD-19				334.9ft: FAT CLAY (CH), light yellowish brown (10YR6/4), moist, strong HCl reaction, carbonate

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BORING NO. B-2174UDR		DRILL METHOD: Mud Rotary				SAMPLE METHODS: UD				0 HR. ND		
GROUND SURFACE ELEV. 79.0 ft (NAVD88)		NORTHING 13,412,303		US ft (NAD83)		EASTING 2,600,012		US ft (NAD83)		24 HR. ND		
TOTAL DEPTH 593.0 ft		DRILL MACHINE CME-75				DRILLER: D. Nalls/B. Turner				HAMMER (ID) NA		
DATE STARTED 2/1/08		COMPLETED 2/16/08				CASING DEPTH: N/A				BITS USED: 5 7/8" Tricone		
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			
-313.7					Continued from previous page							
-318.7	397.7										UD-21	397.7ft: FAT CLAY (CH), light yellowish brown (10YR6/4), moist, trace sand, strong HCl reaction - 1.6ft recovery
-330.6	409.6										UD-22	409.6ft: FAT CLAY (CH), light gray (2.5Y7/2), moist, few sand, carbonate nodules, strong HCl reaction - 1.4ft recovery
-340.5	419.5										UD-23	419.5ft: LEAN CLAY (CL), light gray (2.5Y7/2), moist, fine grained sand, strong HCl reaction - 0.6ft recovery
-346.0	425.0										UD-24	425.0ft: no recovery
-363.0	442.0										UD-25	442.0ft: no recovery
-366.0	445.0										UD-26	445.0ft: FAT CLAY (CH), mottled pale yellow (2.5Y8/2), and light gray (2.5Y7/1), moist, no sand, strong HCl reaction - 1.0ft recovery

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



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BORING NO. B-2174UDR		DRILL METHOD: Mud Rotary				SAMPLE METHODS: UD				0 HR. ND		
GROUND SURFACE ELEV. 79.0 ft (NAVD88)		NORTHING 13,412,303		US ft (NAD83)		EASTING 2,600,012		US ft (NAD83)		24 HR. ND		
TOTAL DEPTH 593.0 ft		DRILL MACHINE CME-75				DRILLER: D. Nalls/B. Turner				HAMMER (ID) NA		
DATE STARTED 2/1/08		COMPLETED 2/16/08				CASING DEPTH: N/A				BITS USED: 5 7/8" Tricone		
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			
-369.8					Continued from previous page							
-411.0	490.0											
										UD-27		490.0ft: FAT CLAY (CH), mottled pale yellow (2.5Y8/2), and light gray (2.5Y7/1), moist, no sand, weak HCl reaction - 2.5ft recovery

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BORING NO. B-2174UDR		DRILL METHOD: Mud Rotary				SAMPLE METHODS: UD				0 HR.	ND		
GROUND SURFACE ELEV. 79.0 ft (NAVD88)		NORTHING 13,412,303		US ft (NAD83)		EASTING 2,600,012		US ft (NAD83)		24 HR.	ND		
TOTAL DEPTH 593.0 ft		DRILL MACHINE CME-75				DRILLER: D. Nalls/B. Turner				HAMMER (ID) NA			
DATE STARTED 2/1/08		COMPLETED 2/16/08				CASING DEPTH: N/A				BITS USED: 5 7/8" Tricone			
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT						SAMP. NO.	LOG MOI G	SOIL AND ROCK DESCRIPTION
		0.5ft	0.5ft	0.5ft	0	20	40	60	80	100			
-425.9					Continued from previous page								
-446.0	525.0										UD-28		525.0ft: Clayey SAND (SC), light olive brown (2.5Y5/6), moist, little fines, fine grained sand, weak HCl reaction - 2.5ft recovery
													527.0ft: Silty SAND (SM), light olive brown (2.5Y5/6), moist, some fines, fine grained sand, weak HCl reaction
-471.0	550.0										UD-29		550.0ft: FAT CLAY (CH), mottled pale yellow (2.5Y8/3), and light gray (2.5Y7/1), moist, trace sand, weak HCl reaction - 1.5ft recovery

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



BECHTEL PROJECT NO.: 25352				COUNTY Victoria				GEOLOGIST J. Liles				
SITE DESCRIPTION Exelon COL Project (Victoria Site)						MACTEC PROJECT NO.: 6468-07-1777				GROUND WATER (ft)		
BORING NO. B-2174UDR		DRILL METHOD: Mud Rotary				SAMPLE METHODS: UD				0 HR. ND		
GROUND SURFACE ELEV. 79.0 ft (NAVD88)		NORTHING 13,412,303 US ft (NAD83)		EASTING 2,600,012 US ft (NAD83)				24 HR. ND				
TOTAL DEPTH 593.0 ft		DRILL MACHINE CME-75				DRILLER: D. Nalls/B. Turner				HAMMER (ID) NA		
DATE STARTED 2/1/08		COMPLETED 2/16/08				CASING DEPTH: N/A				BITS USED: 5 7/8" Tricone		
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			
-482.0					Continued from previous page							
-491.0	570.0										UD-30	570.0ft: Sandy FAT CLAY (CH), pale yellow (5Y8/2), mottled light gray (5Y7/2), and yellowish brown (10YR5/6), moist, trace sand, weak to strong HCl reaction - 1.5ft recovery
-511.5	590.5										UD-31	590.5ft: Sandy LEAN CLAY (CL), pale yellow (5Y8/2), moist, weak HCl reaction - 2.3ft recovery
												-514.0 593.0ft: Silty SAND (SM), white (2.5Y8/1), moist, some fines, weak HCl reaction Boring Terminated at Elevation -514.0 ft 593.0

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



GEOTECHNICAL BORING LOG

Prepared By J.P.Z. Date 6-12-08

Checked By KAW Date 7-10-08

SHEET 1 OF 4

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-2175			DRILL METHOD: Mud Rotary			SAMPLE METHODS: SPT					0 HR. ND			
GROUND SURFACE ELEV. 80.1 ft (NAVD88)			NORTHING 13,412,370 US ft (NAD83)			EASTING 2,600,063 US ft (NAD83)			24 HR. ND					
TOTAL DEPTH 200.0 ft			DRILL MACHINE CME-55 LC			DRILLER: D. White/O. Smith			HAMMER (ID) 140 lb. Auto (MEC 02)					
DATE STARTED 11/28/07			COMPLETED 11/29/07			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	
80.1	0.0	4	8	9	Ground Surface					SS-1		FAT CLAY with sand (CH), dark gray (10YR4/1), very stiff, moist, little sand, trace roots, no HCl reaction		
76.6	3.5	9	9	10						SS-2		3.5ft: very dark gray (2.5Y3/1), weak HCl reaction		
74.1	6.0	5	8	10						SS-3		6.0ft: light brownish gray (10YR6/2), mottled black, trace carbonate nodules, trace ferrous staining, strong HCl reaction		
71.6	8.5	7	9	10						SS-4		8.5ft: very pale brown (10YR7/4)		
69.1	11.0	8	10	12						SS-5				
66.6	13.5	7	8	7						SS-6		13.5ft: light gray (10YR7/2), stiff, few sand, trace organics		
61.6	18.5	6	6	8						SS-7		18.5ft: very pale brown (10YR7/3), little sand		
56.6	23.5	5	6	9						SS-8		23.5ft: yellow (10YR7/8, mottled white (10Y8/1), few sand		
51.6	28.5	5	4	6						SS-9				
46.6	33.5	6	7	9						SS-10		33.5ft: very stiff		
41.6	38.5	9	15	17						SS-11		38.5ft: very pale brown (10YR7/3), hard, little carbonate nodules		
36.6	43.5	7	7	12						SS-12		37.1 Clayey SAND (SC), yellow (10YR7/6, 10YR7/8), firm to dense, moist to wet, little to some fines, trace carbonate nodules, no to strong HCl reaction		
31.6	48.5	6	13	20						SS-13				
26.6	53.5	12	12	12						SS-14		27.1 POORLY GRADED SAND (SP), brownish yellow (10YR6/8) and reddish yellow (7.5YR6/8), very firm, wet, few fines, no HCl reaction		

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



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-2175	DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND
GROUND SURFACE ELEV. 80.1 ft (NAVD88)	NORTHING 13,412,370 US ft (NAD83)	EASTING 2,600,063 US ft (NAD83)			24 HR. ND
TOTAL DEPTH 200.0 ft	DRILL MACHINE CME-55 LC		DRILLER: D. White/O. Smith		HAMMER (ID) 140 lb. Auto (MEC 02)
DATE STARTED 11/28/07		COMPLETED 11/29/07		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			
24.0					Continued from previous page							
21.6	58.5	8	11	12							SS-15	21.6 - 58.5 POORLY GRADED SAND (SP), brownish yellow (10YR6/8) and reddish yellow (7.5YR6/8), very firm, wet, few fines, no HCl reaction (continued)
16.6	63.5	6	7	11							SS-16	16.6 - 63.5 Sandy FAT CLAY (CH), very pale brown (10YR8/3), very stiff, moist, some sand, trace carbonate nodules, weak HCl reaction
11.6	68.5	5	7	12							SS-17	11.6 - 68.5 63.5ft: mottled light yellowish brown (10YR6/4), few sand, trace organics, strong HCl reaction
6.6	73.5	5	6	12							SS-18A/B	6.6 - 73.5 12.1 - 68.0 Clayey SAND (SC), very pale brown (10YR8/2, 10YR7/3), firm, moist to wet, some fines, trace carbonate nodules, trace organics, trace ferrous staining, strong HCl reaction
1.6	78.5	6	8	11							SS-19	1.6 - 78.5 5.8 - 74.3 FAT CLAY with sand (CH), very pale brown (10YR7/4), mottled brownish yellow (10YR6/8), very stiff, moist, little sand, trace carbonate nodules, trace organics, ferrous staining, strong HCl reaction
-3.4	83.5	10	9	10							SS-20	-3.4 - 83.5 1.6 - 78.5 Clayey SAND (SC), very pale brown (10YR7/3), firm, wet, some fines, trace carbonate nodules, ferrous staining, no HCl reaction
-8.4	88.5	11	50/0.5								SS-21	-8.4 - 88.5 -2.4 - 82.5 FAT CLAY with sand (CH), very pale brown (10YR8/2), very stiff, moist, little sand, trace carbonate nodules, few organics, trace ferrous staining, weak to strong HCl reaction
-13.4	93.5	50/0.2									SS-22	-13.4 - 93.5 88.5ft: hard
-14.9	95.0	50/0.2									SS-23	-14.9 - 95.0 -11.9 - 92.0 Clayey SAND (SC), very pale brown (10YR7/3), very dense, wet, medium to coarse grained sand, little fines, trace carbonate nodules, trace organics, weak HCl reaction
-18.4	98.5	50/0.2									SS-24	-18.4 - 98.5
-28.4	108.5	7	8	11							SS-25	-28.4 - 108.5 -23.9 - 104.0 FAT CLAY (CH), very pale brown (10YR7/3), mottled brownish yellow (10YR6/8), very stiff, moist, few sand, trace carbonate nodules, trace organics, weak HCl reaction

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



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-2175		DRILL METHOD: Mud Rotary				SAMPLE METHODS: SPT				0 HR.	ND	
GROUND SURFACE ELEV. 80.1 ft (NAVD88)		NORTHING 13,412,370		US ft (NAD83)		EASTING 2,600,063		US ft (NAD83)		24 HR.	ND	
TOTAL DEPTH 200.0 ft		DRILL MACHINE CME-55 LC				DRILLER: D. White/O. Smith				HAMMER (ID) 140 lb. Auto (MEC 02)		
DATE STARTED 11/28/07		COMPLETED 11/29/07				CASING DEPTH: N/A				BITS USED: 2 7/8" Wing 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			
-32.1					Continued from previous page							
-38.4	118.5	7	9	12								FAT CLAY (CH), very pale brown (10YR7/3), mottled brownish yellow (10YR6/8), very stiff, moist, few sand, trace carbonate nodules, trace organics, weak HCl reaction (continued)
-48.4	128.5	12	11	16						SS-26		FAT CLAY with sand (CH), very pale brown (10YR8/3), very stiff, moist, little sand, weak HCl reaction, carbonate nodules, organics, trace ferrous staining
-58.4	138.5	8	8	10						SS-27		128.5ft: very pale brown (10YR7/3), strong HCl reaction
-68.4	148.5	6	7	9						SS-28		138.5ft: very pale brown (10YR8/2), few sand
-78.4	158.5	29	14	17						SS-29		148.5ft: mottled yellow (10YR7/8), little sand
										SS-30		Clayey SAND (SC), very pale brown (10YR8/2), dense, moist, little fines, trace organics, strong HCl reaction

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



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-2175		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT				0 HR. ND
GROUND SURFACE ELEV. 80.1 ft (NAVD88)		NORTHING 13,412,370		US ft (NAD83)		EASTING 2,600,063		24 HR. ND
TOTAL DEPTH 200.0 ft		DRILL MACHINE CME-55 LC		DRILLER: D. White/O. Smith			HAMMER (ID) 140 lb. Auto (MEC 02)	
DATE STARTED 11/28/07		COMPLETED 11/29/07		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			
-88.2					Continued from previous page							
-88.4	168.5	29	39	45						SS-31		POORLY GRADED SAND (SP), very pale brown (10YR7/3, 10YR8/3), very dense, wet, medium to coarse sand, few fines, trace rounded to sub-rounded fine gravel, strong HCl reaction
-98.4	178.5	23	25	31						SS-32		
-108.4	188.5	50/0.4								SS-33		
-118.4	198.5	18	29	29						SS-34		POORLY GRADED SAND with clay (SP-SC), very pale brown (10YR8/2, 10YR8/4), very dense, wet, few fines, trace fine gravel, strong HCl reaction
												Boring Terminated at Elevation -119.9 ft

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



GEOTECHNICAL BORING LOG

Prepared By JPX Date 6-12-08

Checked By KAW Date 7-10-08

SHEET 1 OF 4

BECHTEL PROJECT NO.: 25352					COUNTY Victoria					GEOLOGIST C. Gandy									
SITE DESCRIPTION Exelon COL Project										MACTEC PROJECT NO.: 6468-07-1777					GROUND WATER (ft)				
BORING NO. B-2176A					DRILL METHOD: Mud Rotary					SAMPLE METHODS: SPT					0 HR. ND				
GROUND SURFACE ELEV. 79.8 ft (NAVD88)					NORTHING 13,412,512 US ft (NAD83)					EASTING 2,600,175 US ft (NAD83)					24 HR. ND				
TOTAL DEPTH 200.0 ft					DRILL MACHINE CME-55 LC					DRILLER: D. White/O. Smith					HAMMER (ID) 140 lb. Auto (MEC 02)				
DATE STARTED 12/1/07					COMPLETED 12/3/07					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						
79.8					Ground Surface														
79.8	0.0	2	3	5								79.8	0.0	FAT CLAY with sand (CH), very dark gray (10YR3/1), firm, moist, little sand, no HCl reaction, organics, thinly laminated					
76.3	3.5	3	4	6										3.5ft: gray (10YR5/1), stiff					
73.8	6.0	6	7	10								73.8	6.0	LEAN CLAY (CL), very pale brown (10YR7/3), very stiff, moist, little sand, strong HCl reaction, ferrous staining, trace carbonate nodules, organics, thinly laminated					
71.3	8.5	9	10	11															
68.8	11.0	9	10	12															
66.3	13.5	7	6	7										13.5ft: stiff					
61.3	18.5	5	6	8										18.5ft: few sand, weak HCl reaction, some organics and ferrous staining					
56.3	23.5	5	4	5								56.3	23.5	FAT CLAY (CH), very pale brown (10YR7/4), mottled brownish yellow (10YR6/6), stiff, moist, few sand, strong HCl reaction, organics, trace carbonate nodules					
51.3	28.5	5	5	8										28.5ft: yellow (10YR7/8), mottled very pale brown (10YR7/3)					
46.3	33.5	5	5	6										33.5ft: brownish yellow (10YR6/6), mottled light greenish gray (10YR8/1)					
41.3	38.5	5	5	10										38.5ft: light gray (10YR7/2), mottled, brownish yellow (10YR6/6), little sand, weak HCl reaction					
36.3	43.5	9	12	15										43.5ft: yellow (10YR7/8), very stiff, strong HCl reaction					
31.3	48.5	6	7	10										48.5ft: light yellowish brown (10YR6/4), mottled light greenish gray (10Y8/1), few sand					
26.3	53.5	6	10	11										53.5ft: light gray (10YR7/2), little sand, weak to no HCl reaction					

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