



BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: S. Woodham							
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)						
BORING NO.: B-3275		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND							
GROUND SURFACE ELEV.: 80.7 ft (NAVD88)		NORTHING: 13,413,717		US ft (NAD83)		EASTING: 2,600,944 US ft (NAD83)							
TOTAL DEPTH: 175.0 ft		DRILL MACHINE: CME 550 X		DRILLER: R. Landeros (MACTEC ATL)		HAMMER (ID): 140 lb. Auto (MEC 22)							
DATE STARTED: 2/19/09		COMPLETED: 2/20/09		CASING DEPTH: 5.0 ft		BITS USED: 2 15/16" Roller Cone 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		
-31.5					Continued from previous page								
-38.8	119.5	4	6	8	14					SS-25		POORLY GRADED SAND with silt (SP-SM), pale yellow (2.5Y 7/4), very dense, wet, medium to coarse grained, few fines, strong HCl reaction, few calcium carbonate nodules (continued)	
-48.8	129.5	14	17	25	42					SS-26		FAT CLAY (CH), light gray (2.5Y 7/2), stiff, moist, few fine grained sand, no HCl reaction on clay, few calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules, possible caliche, brownish yellow and black staining	
-58.8	139.5	13	28	53	31					SS-27		139.5 ft: light gray (2.5Y 7/2), very dense, little fines, strong HCl reaction	
-68.8	149.5	5	6	9	15					SS-28		64.3	FAT CLAY (CH), light gray (5Y 7/2), brownish yellow (10YR 6/6), stiff, moist, no HCl reaction on clay, trace calcium carbonate, strong HCl reaction on calcium carbonate nodules
-78.8	159.5	19	18	26	44					SS-29		-78.8	POORLY GRADED SAND with silt (SP-SM), pale yellow (2.5Y 8/3), dense, wet, medium to coarse grained, few fines, no HCl reaction on sand, trace clay pockets, trace calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
												-87.3	

EXELON COL BORE VICTORIA PHASE III.GPJ EXELON COL.GDT 10/20/09

EXELON COL BORE VICTORIA PHASE III.GPJ EXELON COL.GDT 10/20/09



GEOTECHNICAL BORING LOG

Prepared By PAW Date 8/10/09Checked By KAW Date 8-10-09

SHEET 1 OF 4

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: R. Clark									
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)								
BORING NO.: B-3276		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR.	ND							
GROUND SURFACE ELEV.: 80.5 ft (NAVD88)		NORTHING: 13,413,655		US ft (NAD83)		EASTING: 2,600,722 US ft (NAD83)	24 HR.	ND							
TOTAL DEPTH: 175.0 ft		DRILL MACHINE: CME 45 C Track		DRILLER: D. Rhodes (MACTEC RAL)			HAMMER (ID): 140 lb. Auto (MEC 12)								
DATE STARTED: 2/19/09		COMPLETED: 2/21/09		CASING DEPTH: 5.0 ft			BITS USED: 2 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					100	
80.5					Ground Surface								80.5		
80.5	0.0	3	4	5						SS-1			80.5	FAT CLAY (CH), very dark grayish brown (10YR 3/2), stiff, dry to moist, few fine grained sand, trace organics, no HCl reaction	
76.9	3.6	4	5	7						SS-2			76.9	FAT CLAY with sand (CH), very dark grayish brown (10YR 3/2), stiff, moist, little fine grained sand, trace organics, no HCl reaction	
74.4	6.1	4	5	9						SS-3			74.4	FAT CLAY (CH), light yellowish brown (2.5Y 6/3), stiff, moist, few fine grained sand, no HCl reaction on clay, trace calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules, trace ferrous staining, trace organics and black streaks	
72.0	8.5	4	6	8						SS-4			69.5	FAT CLAY with sand (CH), pale yellow (2.5Y 7/3), very stiff, moist, little fine grained sand, weak HCl reaction, trace carbonate nodules	
69.5	11.0	6	10	16						SS-5			62.0	FAT CLAY (CH), light brown (7.5YR 6/4) mottled light gray (5Y 7/2), stiff, moist, few fine grained sand, no HCl reaction on clay, trace calcium carbonate nodules	
67.0	13.5	4	9	12						SS-6				28.5 ft: very stiff, weak HCl reaction	
62.0	18.5	4	5	9						SS-7				33.5 ft: reddish yellow (7.5Y 6/6) mottled light gray (5Y 7/2), no calcium carbonate nodules observed	
57.0	23.5	3	5	8						SS-8				38.5 ft: stiff	
52.0	28.5	4	7	9						SS-9				37.0	SANDY FAT CLAY (CH), pale yellow (2.5Y 7/4), very stiff, moist, some fine grained sand, weak HCl reaction
47.0	33.5	5	7	10						SS-10				45.0	SILTY SAND (SM), pale yellow (2.5Y 7/4), firm, wet, fine grained, little fines, no HCl reaction
42.0	38.5	4	5	8						SS-11					53.5 ft: weak HCl reaction
37.0	43.5	6	9	10						SS-12					
32.0	48.5	6	8	9						SS-13					
27.0	53.5	5	7	12						SS-14					

EXELON COL BORE, VICTORIA PHASE III GP, EXELON COL GDT 8/10/09



SHEET 2 OF 4

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: R. Clark									
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS						GROUND WATER (ft)									
BORING NO.: B-3276		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND									
GROUND SURFACE ELEV.: 80.5 ft (NAVD88)		NORTHING: 13,413,655		US ft (NAD83)		EASTING: 2,600,722 US ft (NAD83)									
24 HR. ND															
TOTAL DEPTH: 175.0 ft		DRILL MACHINE: CME 45 C Track		DRILLER: D. Rhodes (MACTEC RAL)		HAMMER (ID): 140 lb. Auto (MEC 12)									
DATE STARTED: 2/19/09		COMPLETED: 2/21/09		CASING DEPTH: 5.0 ft		BITS USED: 2 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	MOI				
24.4					Continued from previous page										
22.0	58.5	9	15	12								SS-15	22.0	58.5	SILTY SAND (SM), pale yellow (2.5Y 7/4), firm, wet, fine grained, little fines, no HCl reaction (continued)
17.0	63.5	4	6	9									19.0	61.5	CLAYEY SAND (SC), pale yellow (2.5Y 7/4), very firm, moist, fine grained, little fines, weak HCl reaction 61.5 ft: softer drilling
12.0	68.5	4	5	7								SS-16			FAT CLAY (CH), light gray (2.5Y 7/2) mottled brownish yellow (10YR 6/6), stiff, moist, few fine grained sand, trace caliche, weak HCl reaction
7.0	73.5	4	7	8								SS-17			68.5 ft: brown (10YR 5/3) mottled light gray (10YR 7/2)
2.0	78.5	5	7	7								SS-18			73.5 ft: light brownish gray (10YR 6/2) mottled brownish yellow (10YR 6/6), no trace caliche
-3.0	83.5	7	10	7								SS-19			82.5 ft: harder drilling
-8.0	88.5	7	8	7								SS-20	-2.0	82.5	SILTY SAND (SM), pale yellow (2.5Y 7/3), firm, wet, fine grained, some fines, no HCl reaction
-13.0	93.5	16	22	48								SS-21	-8.0	88.5	SANDY FAT CLAY (CH), pale yellow (2.5Y 7/3), stiff, wet, some fine grained sand, no HCl reaction
-18.0	98.5	18	29	37								SS-22A/B	-13.5	93.5	93.5 ft: hard, moist, weak HCl reaction
												SS-23A/B	-16.5	97.0	SILTY SAND (SM), very pale brown (10YR 7/3), very dense, wet, fine grained, weak HCl reaction, trace calcium carbonate nodules
													-19.2	99.7	FAT CLAY (CH), pale yellow (2.5Y 7/4), hard, moist, strong HCl reaction, few gravel/calcium carbonate nodules
															98.5 ft: slightly cemented
															SILTY SAND (SM), pale yellow (2.5Y 7/4), very dense, wet, fine grained, little fines, no HCl reaction
															106.0 - 108.0 ft: drill chatter
-28.0	108.5	40	48	50/0.3								SS-24			108.5 ft: very pale brown (10YR 7/3), fine to coarse grained, weak HCl reaction

EXELON COL BORE VICTORIA PHASE III.GPJ EXELON COL.GDT 8/10/09



SHEET 3 OF 4

BECHTEL NO.: 25352				MACTEC NO.: 6468-07-1777				COUNTY: Victoria, TX				GEOLOGIST: R. Clark							
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS												GROUND WATER (ft)							
BORING NO.: B-3276				DRILL METHOD: Mud Rotary				SAMPLE METHODS: SPT				0 HR. ND							
GROUND SURFACE ELEV.: 80.5 ft (NAVD88)				NORTHING: 13,413,655				US ft (NAD83)				EASTING: 2,600,722 US ft (NAD83)				24 HR. ND			
TOTAL DEPTH: 175.0 ft				DRILL MACHINE: CME 45 C Track				DRILLER: D. Rhodes (MACTEC RAL)				HAMMER (ID): 140 lb. Auto (MEC 12)							
DATE STARTED: 2/19/09				COMPLETED: 2/21/09				CASING DEPTH: 5.0 ft				BITS USED: 2 7/8" Drag Bit							
ELEV.	DEPTH	BLOW COUNT			BLOWS PER FOOT					SAMP.	MOI	LOG	SOIL AND ROCK DESCRIPTION						
(ft)	(ft)	0.5ft	0.5ft	0.5ft	0	20	40	60	80	100				NO.					
-31.7					Continued from previous page														
													SILTY SAND (SM), pale yellow (2.5Y 7/4), very dense, wet, fine grained, little fines, no HCl reaction (continued)						
													115.0						
-38.0	118.5	8	9	13						SS-25			FAT CLAY (CH), light yellowish brown (2.5Y 6/3), very stiff, moist, trace fine grained sand, no HCl reaction on clay, trace organics, trace calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules						
													126.0						
-48.0	128.5	25	37	27						SS-26			SILTY SAND (SM), very pale brown (10YR 8/2), very dense, wet, fine grained, little fines, weak HCl reaction						
													141.0						
-58.0	138.5	20	30	31						SS-27			138.5 ft: pale yellow (2.5Y 7/3), trace calcium carbonate nodules						
													141.0 ft: softer drilling						
-68.0	148.5	4	7	8						SS-28			FAT CLAY (CH), pale yellow (2.5Y 7/3), stiff, moist, few fine grained sand, weak HCl reaction, trace calcium carbonate nodules						
													157.0						
-78.0	158.5	20	28	50/0.4						SS-29			157.0 ft: drill chatter						
													SILTY SAND (SM), light gray (10YR 7/2), very dense, wet, fine grained, little fines, weak HCl reaction						
													161.0 162.0 ft: bit chatter						

EXELON COL BORE VICTORIA PHASE III.GPJ EXELON COL.GDT 8/10/09



SHEET 4 OF 4

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: R. Clark							
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft) 0 HR. ND 24 HR. ND						
BORING NO.: B-3276		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT									
GROUND SURFACE ELEV.: 80.5 ft (NAVD88)		NORTHING: 13,413,655 US ft (NAD83)		EASTING: 2,600,722 US ft (NAD83)									
TOTAL DEPTH: 175.0 ft		DRILL MACHINE: CME 45 C Track		DRILLER: D. Rhodes (MACTEC RAL)		HAMMER (ID): 140 lb. Auto (MEC 12)							
DATE STARTED: 2/19/09		COMPLETED: 2/21/09		CASING DEPTH: 5.0 ft		BITS USED: 2 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				
-87.8					Continued from previous page								
-88.0	168.5	24	35	38						SS-30		SILTY SAND (SM), light gray (10YR 7/2), very dense, wet, fine grained, little fines, weak HCl reaction <i>(continued)</i> 168.5 ft: very pale brown (10YR 7/4), fine to coarse grained 173.5 ft: very pale brown (10YR 7/3)	
-93.0	173.5	28	30	34							SS-31		
													175.0
													Boring Terminated at Elevation -94.5 ft

EXELON COL BORE VICTORIA PHASE III.GPJ EXELON COL.GDT 8/10/09



GEOTECHNICAL BORING LOG

Prepared By RAK Date 8/10/09Checked By KAU Date 8-10-09

SHEET 1 OF 6

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: A. Mwembeshi								
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)							
BORING NO.: B-3277		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR. ND							
GROUND SURFACE ELEV.: 80.2 ft (NAVD88)		NORTHING: 13,413,665		US ft (NAD83)		EASTING: 2,601,131		US ft (NAD83)		24 HR. ND				
TOTAL DEPTH: 300.7 ft		DRILL MACHINE: CME 75 Truck			DRILLER: J. Cook (MILLER)			HAMMER (ID): 140 lb. Auto (100)						
DATE STARTED: 2/17/09		COMPLETED: 2/24/09			CASING DEPTH: 3.5 ft			BITS USED: 3 7/8" Wing 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				
80.2					Ground Surface								80.2	0.0
80.2	0.0	1	1	3						SS-1		80.2	FAT CLAY with sand (CH), dark gray (10YR 4/1), soft, moist, little fine grained sand, no HCl reaction, trace roots	
76.5	3.7	4	8	12						SS-2		76.5	SANDY FAT CLAY (CH), light olive gray (5Y 6/2), very stiff, moist, some fine to medium grained sand, strong HCl reaction, few calcium carbonate nodules	3.7
74.2	6.0	4	6	8	SS-3	74.2	FAT CLAY with sand (CH), light yellowish brown (2.5Y 6/8), stiff, moist, little fine to medium grained sand, strong HCl reaction, little calcium carbonate nodules	6.0						
71.5	8.7	6	7	9	SS-4	71.5	FAT CLAY (CH), light yellowish brown (10YR 6/4), very stiff, moist, few fine grained sand, strong HCl reaction, few calcium carbonate nodules	8.7						
68.9	11.3	5	8	11	SS-5	68.9	FAT CLAY with sand (CH), light yellowish brown (10YR 6/4), very stiff, moist, little fine grained sand, strong HCl reaction, few calcium carbonate nodules	11.3						
66.6	13.6	3	5	8	SS-6		13.6 ft: strong brown (7.5YR 5/6), stiff, little fine to medium grained sand, trace calcium carbonate nodules, few black staining							
61.0	19.2	3	5	7	SS-7	61.0	FAT CLAY (CH), yellowish brown (10YR 5/6) and light greenish gray (10Y 7/1), stiff, moist, few fine grained sand, weak HCl reaction, trace calcium carbonate nodules, black staining	19.2						
56.0	24.2	3	5	6	SS-8		24.2 ft: trace black staining, no calcium carbonate nodules observed							
50.9	29.3	4	7	9	SS-9	50.9	FAT CLAY with sand (CH), brownish yellow (10YR 6/6) and light greenish gray (10Y 8/1), very stiff, moist, little fine grained sand, weak HCl reaction, trace calcium carbonate nodules, black staining	29.3						
46.0	34.2	7	9	10	SS-10	46.0	FAT CLAY (CH), yellowish red (5YR 4/6) and light greenish gray (10Y 8/1), very stiff, moist, weak HCl reaction, trace black staining	34.2						
40.9	39.3	4	5	7	SS-11		39.3 ft: strong brown (7.5YR 5/6), stiff, black staining, slickensides							
36.0	44.2	3	5	7	SS-12		44.2 ft: no HCl reaction							
31.0	49.2	3	8	8	SS-13A/B		49.2 ft: very stiff, trace calcium carbonate nodules, trace shell fragments	49.9						
25.9	54.3	7	9	10	SS-14		CLAYEY SAND (SC), light greenish gray (10Y 7/1) and strong brown (7.5YR 5/6), firm, moist, fine to medium grained, some fines, no HCl reaction	54.3						

EXELON COL BORE VICTORIA PHASE III.GPJ EXELON COL.GDT 8/10/09



SHEET 2 OF 6

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: A. Mwembeshi							
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)						
BORING NO.: B-3277		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR.	ND					
GROUND SURFACE ELEV.: 80.2 ft (NAVD88)		NORTHING: 13,413,665		US ft (NAD83)	EASTING: 2,601,131		US ft (NAD83)	24 HR.	ND				
TOTAL DEPTH: 300.7 ft		DRILL MACHINE: CME 75 Truck		DRILLER: J. Cook (MILLER)			HAMMER (ID): 140 lb. Auto (100)						
DATE STARTED: 2/17/09		COMPLETED: 2/24/09		CASING DEPTH: 3.5 ft			BITS USED: 3 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			
24.1					Continued from previous page								
21.0	59.2												SILTY SAND (SM), light greenish gray (10Y 7/1), firm, wet, fine to medium grained, some fines, no HCl reaction on sand, few calcium carbonate fragments, weak HCl reaction on calcium carbonate fragments, trace black staining (continued) 59.2 ft: light gray (5YR 7/1), dense, little fines, orange staining
15.9	64.3	12	20	21							SS-15		
		5	20	23							SS-16		64.3 ft: brown (10YR 5/3)
11.0	69.2												
		4	5	7							SS-17		FAT CLAY (CH), dark gray (5YR 4/1), stiff, moist, no HCl reaction on clay, trace calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
6.0	74.2												
		4	7	10							SS-18		SANDY FAT CLAY (CH), light greenish gray (10Y 7/1), very stiff, moist, some fine to medium grained sand, weak HCl reaction, few calcium carbonate nodules, trace orange staining
0.9	79.3												
		7	9	10							SS-19		FAT CLAY with sand (CH), light greenish gray (10Y 7/1), very stiff, moist, little fine to medium grained sand, weak HCl reaction, trace calcium carbonate nodules
-4.0	84.2												
		16	25	32							SS-20		SILTY SAND (SM), light brownish gray (10YR 6/2), very dense, wet, fine to medium grained, little fines, no HCl reaction on sand, trace calcium carbonate fragments
-9.0	89.2												
		5	10	16							SS-21		FAT CLAY with sand (CH), greenish gray (10Y 6/1), very stiff, moist, little fine to medium grained sand, weak HCl reaction, few calcium carbonate fragments
-14.1	94.3												
		8	11	13							SS-22		94.3 ft: greenish gray (10Y 6/1) and strong brown (7.5YR 4/6), trace calcium carbonate fragments
-19.0	99.2												
		16	17	23							SS-23A/B		99.2 ft: hard
-29.0	109.2												

EXELON COL BORE VICTORIA PHASE III.GPJ EXELON COL.GDT 8/10/09



SHEET 4 OF 6

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: A. Mwembeshi																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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TOTAL DEPTH: 300.7 ft		DRILL MACHINE: CME 75 Truck		DRILLER: J. Cook (MILLER)		HAMMER (ID): 140 lb. Auto (100)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
DATE STARTED: 2/17/09		COMPLETED: 2/24/09		CASING DEPTH: 3.5 ft		BITS USED: 3 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																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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-89.0	169.2	13	8	18																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										

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POORLY GRADED SAND (SP), very pale brown (10YR 7/3), very firm, wet, fine to coarse grained, few fines, weak HCl reaction, few calcium carbonate nodules

FAT CLAY (CH), light greenish gray (10Y 7/1), very stiff, moist, no HCl reaction, few orange staining

SILTY SAND (SM), light gray (10YR 7/1), very firm, wet, fine to medium grained, some fines, weak HCl reaction

POORLY GRADED SAND (SP), very pale brown (10YR 7/3), very dense, wet, fine to coarse grained, few fines, weak HCl reaction, trace calcium carbonate nodules

183.0 to 184.0 ft: hard drilling and rig chatter

SILTY SAND (SM), very pale brown (10YR 7/3), very dense, wet, fine grained, some fines, weak HCl reaction

199.3 ft: very pale brown (10YR 8/2), fine to medium grained, little fines, few calcium carbonate nodules

200.0 - 202.0 ft: hard drilling

209.3 ft: pale brown (10YR 6/3), trace calcium carbonate nodules

219.3 ft: light yellowish brown (10YR 6/4) to light gray (10YR 7/2), fine to coarse grained, no HCl reaction on sand, some calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules

EXELON COL BORE VICTORIA PHASE III.GP? EXELON COL.GDT 8/10/09



SHEET 6 OF 6

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: A. Mwembeshi							
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)						
BORING NO.: B-3277		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND							
GROUND SURFACE ELEV.: 80.2 ft (NAVD88)		NORTHING: 13,413,665		US ft (NAD83)		EASTING: 2,601,131 US ft (NAD83)							
TOTAL DEPTH: 300.7 ft		DRILL MACHINE: CME 75 Truck		DRILLER: J. Cook (MILLER)		HAMMER (ID): 140 lb. Auto (100)							
DATE STARTED: 2/17/09		COMPLETED: 2/24/09		CASING DEPTH: 3.5 ft		BITS USED: 3 7/8" Wing 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				
-200.3					Continued from previous page								
-209.1	289.3	20	50/0.3		70/0.8					SS-42			POORLY GRADED SAND with clay (SP-SC), light greenish gray (10Y 7/1), dense, moist, fine to coarse grained, few fines, no HCl reaction, orange staining (continued)
-219.0	299.2	9	12	21	33					SS-43			POORLY GRADED SAND with silt (SP-SM), light greenish gray (10Y 7/1), very dense, wet, fine to medium grained, few fines, no HCl reaction
													FAT CLAY (CH), light greenish gray (10Y 7/1) and light brown (7.5YR 6/3), hard, moist, few fine to medium grained sand, weak HCl reaction, few calcium carbonate nodules
													Boring Terminated at Elevation -220.5 ft

EXELON COL BORE VICTORIA PHASE III.GPJ EXELON COL.GDT 8/10/09



GEOTECHNICAL BORING LOG

Prepared By WSD Date 11-10-09Checked By PAN Date 11/10/09

SHEET 1 OF 4

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: S. Woodham							
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)						
BORING NO.: B-3278		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR.	ND					
GROUND SURFACE ELEV.: 80.2 ft (NAVD88)		NORTHING: 13,413,659		US ft (NAD83)		EASTING: 2,600,844 US ft (NAD83)	24 HR.	ND					
TOTAL DEPTH: 175.0 ft		DRILL MACHINE: CME 550 X		DRILLER: R. Landeros (MACTEC ATL)		HAMMER (ID): 140 lb. Auto (MEC 22)							
DATE STARTED: 2/21/09		COMPLETED: 2/22/09		CASING DEPTH: N/A			BITS USED: 2 15/16" Roller Cone 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.
80.2					Ground Surface							80.2	0.0
80.2	0.0	3	5	6						SS-1		80.2	FAT CLAY (CH), dark gray (10YR 4/1), stiff, dry, few fine grained sand, no HCl reaction
77.3	2.9	1	3	2						SS-2		77.3	2.9 ft: to light gray (10YR 7/2), firm, moist
75.0	5.2	4	6	6						SS-3		75.0	5.2 ft: light olive gray (5Y 6/2), stiff
72.6	7.6	5	7	5						SS-4		72.6	7.6 ft: light gray (5Y 7/2), no HCl reaction on clay, trace calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules, trace black staining
70.1	10.1	8	10	10						SS-5		70.1	10.1 ft: light gray (5Y 7/2) and brownish yellow (10YR 6/6), very stiff, strong HCl reaction, little calcium carbonate nodules
67.7	12.5	6	8	11						SS-6		67.7	FAT CLAY with sand (CH), light gray (2.5Y 7/2), very stiff, moist, little fine grained sand, strong HCl reaction, trace calcium carbonate nodules
60.7	19.5	3	5	6						SS-7		60.7	FAT CLAY (CH), light yellowish brown (10YR 6/4), stiff, moist, weak HCl reaction
55.7	24.5	5	9	10						SS-8		55.7	FAT CLAY with sand (CH), pale yellow (2.5Y 7/3), very stiff, moist, little fine grained sand, weak HCl reaction on clay, few calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
50.7	29.5	9	13	19						SS-9		50.7	FAT CLAY (CH), light gray (2.5Y 7/2) and yellow (10YR 7/6), hard, moist, few fine grained sand, weak HCl reaction, some calcium carbonate nodules
45.7	34.5	15	17	20						SS-10		45.7	CLAYEY SAND (SC), pale yellow (2.5Y 8/2), dense, moist, fine grained, little fines, strong HCl reaction, few calcium carbonate nodules
40.7	39.5	21	18	31						SS-11A/B		40.7	39.5 ft: wet
35.7	44.5	5	9	11						SS-12		35.7	FAT CLAY (CH), light gray (5Y 7/2) and brownish yellow (10YR 6/6), hard, moist, few fine grained sand, weak HCl reaction
30.7	49.5	5	6	8						SS-13		30.7	44.5 ft: light gray (2.5Y 7/2) and light yellowish brown (10YR 6/4), very stiff, few calcium carbonate nodules, strong HCl reaction
25.7	54.5	5	8	6						SS-14		25.7	SILTY SAND (SM), pale yellow (2.5Y 7/3), firm, wet, fine grained, little fines, no HCl reaction

EXELON COL BORE VICTORIA PHASE III.GPJ EXELON COL.GDT 10/20/09



SHEET 2 OF 4

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: S. Woodham								
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)							
BORING NO.: B-3278		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND								
GROUND SURFACE ELEV.: 80.2 ft (NAVD88)		NORTHING: 13,413,659 US ft (NAD83)		EASTING: 2,600,844 US ft (NAD83)		24 HR. ND								
TOTAL DEPTH: 175.0 ft		DRILL MACHINE: CME 550 X		DRILLER: R. Landeros (MACTEC ATL)		HAMMER (ID): 140 lb. Auto (MEC 22)								
DATE STARTED: 2/21/09		COMPLETED: 2/22/09		CASING DEPTH: N/A		BITS USED: 2 15/16" Roller Cone 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				
24.1					Continued from previous page									
20.7	59.5	4	7	16							SS-15		SILTY SAND (SM), pale yellow (2.5Y 7/3), firm, wet, fine grained, little fines, no HCl reaction (continued)	
15.7	64.5	10	17	20							SS-16		59.5 ft: light gray (2.5Y 7/2), very firm, moist, weak HCl reaction	
10.7	69.5	4	5	7							SS-17		64.5 ft: pale yellow (2.5Y 7/3), dense	
5.7	74.5	7	8	9							SS-18		10.7 ft: FAT CLAY (CH), light brownish gray (2.5Y 6/2), stiff, moist, no HCl reaction on clay, trace calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules	
0.7	79.5	8	11	14							SS-19		74.5 ft: light olive gray (5Y 6/2), very stiff, few fine grained sand	
-4.3	84.5	12	17	18							SS-20		79.5 ft: light gray (2.5Y 7/2), few calcium carbonate nodules	
-9.3	89.5	18	16	20							SS-21		-4.3 ft: POORLY GRADED SAND with silt (SP-SM), pale yellow (2.5Y 8/3), dense, wet, fine grained, few fines, no HCl reaction	
-14.3	94.5	13	24	23							SS-22A/B		-6.8 ft: 87.0 ft: bit chatter CLAYEY SAND (SC), light gray (5Y 7/2), dense, wet, fine grained, little fines, no HCl reaction on sand, little calcium carbonate lens, strong HCl reaction on calcium carbonate lens	
-19.3	99.5	28	43	53							SS-23		94.5 ft: light gray (2.5Y 7/2), moist, some fines, weak HCl reaction, trace calcium carbonate nodules	
-29.3	109.5	23	45	47							SS-24		-15.0 ft: FAT CLAY (CH), light gray (2.5Y 7/2), hard, moist, few fine grained sand, strong HCl reaction	
													-19.3 ft: POORLY GRADED SAND with silt (SP-SM), pale yellow (2.5Y 8/4), very dense, wet, medium to coarse grained, few fines, strong HCl reaction, little calcium carbonate nodules	
													109.5 ft: yellow (2.5Y 7/8), moist, no HCl reaction on sand, few calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules	

EXELON COL BORE VICTORIA PHASE III GPJ EXELON COL GDT 10/20/09



SHEET 3 OF 4

BECHTEL NO.: 25352			MACTEC NO.: 6468-07-1777			COUNTY: Victoria, TX			GEOLOGIST: S. Woodham			
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS									GROUND WATER (ft)			
BORING NO.: B-3278			DRILL METHOD: Mud Rotary			SAMPLE METHODS: SPT			0 HR. ND			
GROUND SURFACE ELEV.: 80.2 ft (NAVD88)			NORTHING: 13,413,659			US ft (NAD83)			EASTING: 2,600,844 US ft (NAD83)			
TOTAL DEPTH: 175.0 ft			DRILL MACHINE: CME 550 X			DRILLER: R. Landeros (MACTEC ATL)			HAMMER (ID): 140 lb. Auto (MEC 22)			
DATE STARTED: 2/21/09			COMPLETED: 2/22/09			CASING DEPTH: N/A			BITS USED: 2 15/16" Roller Cone 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		
-32.0					Continued from previous page							
						</						

EXELON COL BORE VICTORIA PHASE III GPJ EXELON COL GDT 10/20/09

EXELON COL BORE VICTORIA PHASE III.GPJ EXELON COL.GDT 10/20/09

GEOTECHNICAL BORING LOG

Prepared By RAR Date 8/10/09

Checked By KAW Date 8-10-07

SHEET 1 OF 3

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: B. Mable							
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)						
BORING NO.: B-3279		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR. ND						
GROUND SURFACE ELEV.: 79.7 ft (NAVD88)		NORTHING: 13,413,518		US ft (NAD83)		EASTING: 2,600,997 US ft (NAD83)		24 HR. ND					
TOTAL DEPTH: 150.0 ft		DRILL MACHINE: CME 550		DRILLER: L. Carter (MACTEC ATL)			HAMMER (ID): 140 lb. Auto (CME-08)						
DATE STARTED: 2/10/09		COMPLETED: 2/11/09		CASING DEPTH: 5.0 ft			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
79.7					Ground Surface							79.7	0.0
79.7	0.0	2	2	2						SS-1		FAT CLAY (CH), black (10YR 2/1), soft, moist, no HCl reaction, organics, roots and grass	
76.2	3.5	3	3	5						SS-2		3.5 ft: dark gray (10YR 4/1), firm, weak HCl reaction, trace calcium carbonate nodules, black staining	
73.7	6.0	2	3	3						SS-3		6.0 ft: light gray (10YR 7/2), black and orange staining	
71.2	8.5	4	5	8						SS-4		8.5 ft: stiff, some caliche, strong HCl reaction	
68.7	11.0	5	6	8						SS-5		11.0 ft: few fine grained sand, caliche not observed	
66.2	13.5	6	6	11						SS-6		13.5 ft: mottled reddish yellow (7.5YR 6/6), very stiff	
61.2	18.5	3	6	9						SS-7		18.5 ft: stiff, weak HCl reaction	
56.2	23.5	4	8	9						SS-8		23.5 ft: light gray (10YR 7/2), very stiff, few fine grained sand, trace black nodules, no calcium carbonate nodules observed	
51.2	28.5	5	7	9						SS-9		28.5 ft: trace calcium carbonate nodules	
46.2	33.5	5	5	9						SS-10		33.5 ft: light gray (10YR 7/2) mottled reddish yellow (7.5YR 6/6), stiff	
41.2	38.5	4	7	10						SS-11		38.5 ft: very stiff	
36.2	43.5	3	6	8						SS-12		43.5 ft: stiff	
31.2	48.5	4	7	10						SS-13		48.5 ft: very stiff, strong HCl reaction, no calcium carbonate nodules observed, caliche	
26.2	53.5	6	8	7						SS-14		53.5 ft: SILTY SAND (SM), very pale brown (10YR 7/4), firm, wet, fine grained, little fines, weak HCl reaction	



BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: B. Mable							
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, including UHS							GROUND WATER (ft)						
BORING NO.: B-3279		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND							
GROUND SURFACE ELEV.: 79.7 ft (NAVD88)		NORTHING: 13,413,518		US ft (NAD83)		EASTING: 2,600,997 US ft (NAD83)							
TOTAL DEPTH: 150.0 ft		DRILL MACHINE: CME 550		DRILLER: L. Carter (MACTEC ATL)		HAMMER (ID): 140 lb. Auto (CME-08)							
DATE STARTED: 2/10/09		COMPLETED: 2/11/09		CASING DEPTH: 5.0 ft		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			
23.6					Continued from previous page								
21.2	58.5	9	13	14	27					SS-15		SILTY SAND (SM), very pale brown (10YR 7/4), firm, wet, fine grained, little fines, weak HCl reaction (continued) 58.5 ft: very firm	
16.2	63.5	8	9	6	15					SS-16		16.2	FAT CLAY (CH), light gray (10YR 7/2), stiff, moist, strong HCl reaction, calcium carbonate nodules, some caliche, orange staining
11.2	68.5	5	6	7	13					SS-17		68.5 ft: black and orange staining	
6.2	73.5	6	9	9	18					SS-18		73.5 ft: very pale brown (10YR 7/3), very stiff, weak HCl reaction, caliche not observed	
1.2	78.5	6	9	15	24					SS-19		78.5 ft: caliche, strong HCl reaction 81.0 - 82.0 ft: hard drilling and bit chatter	
-3.8	83.5	13	19	21	40					SS-20		-1.3	POORLY GRADED SAND (SP), very pale brown (10YR 7/3), dense, wet, fine grained, weak HCl reaction, trace calcium carbonate nodules
-8.8	88.5	8	9	10	19					SS-21		-7.8	FAT CLAY (CH), light gray (10YR 7/2), very stiff, moist, strong HCl reaction, calcium carbonate nodules, caliche, orange staining
-13.8	93.5	23	42	47	89					SS-22		-13.8	POORLY GRADED SAND (SP), white (10YR 8/1), very dense, moist, fine grained, few fines, strong HCl reaction, caliche, calcium carbonate fragments
-18.8	98.5	5	7	19	26					SS-23		-18.8	FAT CLAY (CH), light gray (10YR 7/2), very stiff, moist, strong HCl reaction, calcium carbonate nodules, black and orange staining
-28.8	108.5	25	43	57/0.5	100/1.0					SS-24		-28.8	POORLY GRADED SAND (SP), yellow (10YR 7/6), very dense, wet, fine to coarse grained, strong HCl reaction, calcium carbonate nodules



SHEET 3 OF 3

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: B. Mable							
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS						GROUND WATER (ft)							
BORING NO.: B-3279		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND							
GROUND SURFACE ELEV.: 79.7 ft (NAVD88)		NORTHING: 13,413,518		US ft (NAD83)		EASTING: 2,600,997 US ft (NAD83)							
TOTAL DEPTH: 150.0 ft		DRILL MACHINE: CME 550		DRILLER: L. Carter (MACTEC ATL)		HAMMER (ID): 140 lb. Auto (CME-08)							
DATE STARTED: 2/10/09		COMPLETED: 2/11/09		CASING DEPTH: 5.0 ft		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		
-32.5					Continued from previous page								
-38.8	118.5												POORLY GRADED SAND (SP), yellow (10YR 7/6), very dense, wet, fine to coarse grained, strong HCl reaction, calcium carbonate nodules (continued)
-48.8	128.5	9	12	11						SS-25			FAT CLAY (CH), light gray (10YR 7/2), very stiff, moist, strong HCl reaction, calcium carbonate nodules, caliche, black and orange staining
-58.8	138.5	11	17	35						SS-26			CLAYEY SAND (SC), very pale brown (10YR 7/3), very dense, moist, fine grained, little fines, strong HCl reaction
-68.8	148.5	31	41	41						SS-27			POORLY GRADED SAND (SP), very pale brown (10YR 7/3), very dense, wet, fine grained, strong HCl reaction
-70.3		6	7	8						SS-28			FAT CLAY (CH), light gray (10YR 7/2), stiff, moist, weak HCl reaction, trace black and orange staining
													Boring Terminated at Elevation -70.3 ft

EXELON COL BORE VICTORIA PHASE III.GPJ EXELON COL.GDT 8/10/09



GEOTECHNICAL BORING LOG

Prepared By RAK Date 8/10/09Checked By KAW Date 8.10.09

SHEET 1 OF 4

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: R. Clark								
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)							
BORING NO.: B-3280		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR. ND							
GROUND SURFACE ELEV.: 80.5 ft (NAVD88)		NORTHING: 13,413,800		US ft (NAD83)		EASTING: 2,600,844 US ft (NAD83)		24 HR. ND						
TOTAL DEPTH: 175.0 ft		DRILL MACHINE: CME 45 C Track		DRILLER: D. Rhodes (MACTEC RAL)		HAMMER (ID): 140 lb. Auto (MEC 12)								
DATE STARTED: 2/22/09		COMPLETED: 2/24/09		CASING DEPTH: 10.0 ft			BITS USED: 2 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				
80.5					Ground Surface							80.5	0.0	
80.5	0.0	3	4	5						SS-1		80.5	FAT CLAY with sand (CH), dark gray (10YR 4/1), stiff, moist, little fine grained sand, no HCl reaction, little organics	
77.2	3.3	7	9	12						SS-2		77.2	3.3 ft: light yellowish brown (2.5Y 6/3), very stiff, strong to weak HCl reaction, few calcium carbonate nodules	
74.5	6.0	8	9	13						SS-3		74.5	6.0 ft: pale yellow (2.5Y 7/3)	
72.1	8.4	4	5	8						SS-4		72.1	FAT CLAY (CH), pale yellow (2.5Y 7/3) mottled brownish yellow (10YR 6/6), stiff, moist, few fine grained sand, weak HCl reaction, little calcium carbonate nodules	
69.7	10.8	4	6	9						SS-5A/B		69.7	SANDY FAT CLAY (CH), pale yellow (2.5Y 7/3), stiff, moist, some fine grained sand	
67.0	13.5	5	6	10						SS-6		67.0	CLAYEY SAND (SC), pale yellow (2.5Y 7/3), firm, moist, fine grained, some fines, weak HCl reaction, trace calcium carbonate nodules	
												65.5	SANDY LEAN CLAY (CL), pale yellow (2.5Y 7/4), very stiff, moist, some fine grained sand, weak HCl reaction	
62.0	18.5	4	6	9						SS-7		62.0	FAT CLAY (CH), brownish yellow (10YR 6/6), stiff, moist, few fine grained sand, weak HCl reaction	
57.0	23.5	3	5	7						SS-8		57.0	23.5 ft: mottled pale yellow (5Y 7/3)	
52.0	28.5	4	6	8						SS-9		52.0	28.5 ft: no HCl reaction, trace organics	
47.0	33.5	12	15	32						SS-10		47.0	CLAYEY SAND (SC), brownish yellow (10YR 6/6), dense, moist, fine grained quartz, little fines, strong HCl reaction, trace calcium carbonate nodules	
42.0	38.5	24	52	47						SS-11		42.0	SILTY SAND (SM), pale yellow (2.5Y 7/3), very dense, wet, fine grained, little fines, weak HCl reaction	
37.0	43.5	5	7	12						SS-12		37.0	FAT CLAY (CH), light yellowish brown (10YR 6/4), very stiff, moist, few fine grained sand, no HCl reaction on clay	
32.0	48.5	6	6	7						SS-13		32.0	48.5 ft: pale yellow (2.5Y 7/3), stiff, trace calcium carbonate nodules	
27.0	53.5	8	10	12						SS-14		27.0	CLAYEY SAND (SC), pale yellow (2.5Y 7/3), very firm, wet, fine grained, little fines, no HCl reaction	

EXELON COL BORE VICTORIA PHASE III GP1 EXELON COL.GDT 8/10/09



SHEET 2 OF 4

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: R. Clark								
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS						GROUND WATER (ft)								
BORING NO.: B-3280		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND								
GROUND SURFACE ELEV.: 80.5 ft (NAVD88)		NORTHING: 13,413,800 US ft (NAD83)		EASTING: 2,600,844 US ft (NAD83)		24 HR. ND								
TOTAL DEPTH: 175.0 ft		DRILL MACHINE: CME 45 C Track		DRILLER: D. Rhodes (MACTEC RAL)		HAMMER (ID): 140 lb. Auto (MEC 12)								
DATE STARTED: 2/22/09		COMPLETED: 2/24/09		CASING DEPTH: 10.0 ft		BITS USED: 2 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	MOI			
24.4					Continued from previous page									
22.0	58.5	11	11	12								22.0	CLAYEY SAND (SC), pale yellow (2.5Y 7/3), very firm, wet, fine grained, little fines, no HCl reaction (continued)	58.5
											SS-15		SILTY SAND (SM), pale yellow (2.5Y 7/3), very firm, wet, fine grained, little fines, no HCl reaction	
17.0	63.5	6	7	10								16.5	FAT CLAY (CH), pale yellow (2.5Y 7/3), very stiff, moist, few fine grained sand, weak HCl reaction	62.0
													62.0 ft: bit chatter	
12.0	68.5	4	6	8							SS-16			
7.0	73.5	7	11	11							SS-17		68.5 ft: light yellowish brown (2.5Y 6/3) mottled light gray (2.5Y 7/2), stiff, no HCl reaction on clay, trace calcium carbonate nodules	
2.0	78.5	7	9	15							SS-18		73.5 ft: pale yellow (10YR 6/6) and brownish yellow (10YR 6/6), very stiff, weak to no HCl reaction	
-3.0	83.5	8	11	12							SS-19	2.0	FAT CLAY with sand (CH), light gray (2.5Y 7/2), very stiff, moist, little fine grained sand, weak HCl reaction	78.5
-8.0	88.5	13	18	19							SS-20	-3.0	SANDY FAT CLAY (CH), pale yellow (2.5Y 7/2), very stiff, moist, some fine grained sand, weak HCl reaction, trace calcium carbonate nodules	83.5
-13.0	93.5	25	46	50/0.4							SS-21	-8.0	SILTY SAND (SM), pale yellow (2.5Y 7/3), dense, wet, fine grained, little fines, weak HCl reaction	88.5
													90.0 to 93.5 ft: hard drilling	
-18.0	98.5	21	38	43							SS-22		93.5 ft: yellow (10YR 7/6), very dense, few calcium carbonate nodules, strong HCl reaction	
											SS-23		98.5 ft: very pale brown (10YR 7/3), weak HCl reaction, no calcium carbonate nodules observed	
-28.0	108.5	38	50/0.3								SS-24		108.5 ft: fine to coarse grained quartz sand, trace calcium carbonate nodules	

EXELON COL BORE VICTORIA PHASE III.GPJ EXELON COL.GDT 8/10/09



BECHTEL NO.: 25352			MACTEC NO.: 6468-07-1777			COUNTY: Victoria, TX			GEOLOGIST: R. Clark																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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BORING NO.: B-3280			DRILL METHOD: Mud Rotary			SAMPLE METHODS: SPT			0 HR. ND																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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TOTAL DEPTH: 175.0 ft			DRILL MACHINE: CME 45 C Track			DRILLER: D. Rhodes (MACTEC RAL)			HAMMER (ID): 140 lb. Auto (MEC 12)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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EXELON COL BORE VICTORIA PHASE III.GPJ EXELON COL.GDT 8/10/09



SHEET 4 OF 4

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: R. Clark							
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)						
BORING NO.: B-3280		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND							
GROUND SURFACE ELEV.: 80.5 ft (NAVD88)		NORTHING: 13,413,800 US ft (NAD83)		EASTING: 2,600,844 US ft (NAD83)		24 HR. ND							
TOTAL DEPTH: 175.0 ft		DRILL MACHINE: CME 45 C Track		DRILLER: D. Rhodes (MACTEC RAL)		HAMMER (ID): 140 lb. Auto (MEC 12)							
DATE STARTED: 2/22/09		COMPLETED: 2/24/09		CASING DEPTH: 10.0 ft		BITS USED: 2 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				
-87.8					Continued from previous page								
-88.0	168.5	10	7	7						SS-30			SILTY SAND (SM), pale yellow (2.5Y 7/3), very dense, wet, fine to coarse grained, some fines, weak HCl reaction (continued)
													168.5 ft: light yellowish brown (10YR 6/4), firm, fine grained quartz sand, little fines
-93.0	173.5	15	12	11						SS-31			FAT CLAY (CH), brownish yellow (10YR 6/6), very stiff, moist, few fine grained sand, weak HCl reaction, trace calcium carbonate nodules
													172.0
													-94.5
													175.0
													Boring Terminated at Elevation -94.5 ft

EXELON COL BORE VICTORIA PHASE III.GPJ EXELON COL.GDT 8/10/09



GEOTECHNICAL BORING LOG

Prepared By WFO Date 11-10-09Checked By RAA Date 11/10/09

SHEET 1 OF 4

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: S. Woodham						
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)					
BORING NO.: B-3281		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR.	ND				
GROUND SURFACE ELEV.: 80.0 ft (NAVD88)		NORTHING: 13,413,569		US ft (NAD83)		EASTING: 2,600,822 US ft (NAD83)	24 HR.	ND				
TOTAL DEPTH: 175.0 ft		DRILL MACHINE: CME 550 X		DRILLER: R. Landeros (MACTEC ATL)		HAMMER (ID): 140 lb. Auto (MEC 22)						
DATE STARTED: 2/24/09		COMPLETED: 2/25/09		CASING DEPTH: 10.0 ft			BITS USED: 2 15/16" Roller Cone 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		
80.0					Ground Surface							
80.0	0.0	2	4	4						SS-1		FAT CLAY (CH), dark gray (10YR 4/1), firm, dry, few fine grained sand, no HCl reaction, little root matter
77.2	2.8	3	6	9						SS-2		2.5 ft: gray (2.5Y 6/1), stiff, moist
74.9	5.1	1	2	3						SS-3		5.1 ft: light gray (5Y 7/2), firm, trace calcium carbonate nodules, strong HCl reaction, no HCl reaction on clay
72.5	7.5	6	7	7						SS-4		7.5 ft: stiff, strong HCl reaction, little calcium carbonate nodules
69.9	10.1	4	6	5						SS-5		
67.4	12.6	4	7	9						SS-6		12.5 ft: very stiff, few fine grained sand, no HCl reaction on clay, few calcium carbonate, strong HCl reaction on calcium carbonate
60.5	19.5	3	4	6						SS-7		19.5 ft: and brownish yellow (10YR 6/6), stiff, no HCl reaction on clay, trace calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
55.5	24.5	6	11	12						SS-8		FAT CLAY with sand (CH), light gray (2.5Y 7/2), very stiff, moist, little fine grained sand, no HCl reaction on clay, few calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
50.5	29.5	11	19	22						SS-9		29.5 ft: hard, strong HCl reaction, some calcium carbonate nodules
45.5	34.5	8	11	13						SS-10		FAT CLAY (CH), light gray (2.5Y 7/2) and brownish yellow (10YR 6/6), very stiff, moist, few fine grained sand, strong HCl reaction, few calcium carbonate nodules
40.5	39.5	2	5	6						SS-11		39.5 ft: stiff, no HCl reaction, no calcium carbonate nodules observed
35.5	44.5	3	6	7						SS-12		44.5 ft: no HCl reaction on clay, trace calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
30.5	49.5	6	7	5						SS-13		CLAYEY SAND (SC), pale yellow (2.5Y 7/3), firm, wet, fine grained, little fines, no HCl reaction
25.5	54.5	5	7	7						SS-14		54.5 ft: light gray (5Y 7/2)

EXELON COL BORE VICTORIA PHASE III.GPJ EXELON COL.GDT 10/20/09



SHEET 2 OF 4

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: S. Woodham						
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS						GROUND WATER (ft)						
BORING NO.: B-3281		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND						
GROUND SURFACE ELEV.: 80.0 ft (NAVD88)		NORTHING: 13,413,569 US ft (NAD83)		EASTING: 2,600,822 US ft (NAD83)		24 HR. ND						
TOTAL DEPTH: 175.0 ft		DRILL MACHINE: CME 550 X		DRILLER: R. Landeros (MACTEC ATL)		HAMMER (ID): 140 lb. Auto (MEC 22)						
DATE STARTED: 2/24/09		COMPLETED: 2/25/09		CASING DEPTH: 10.0 ft		BITS USED: 2 15/16" Roller Cone 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			
23.9					Continued from previous page							
20.5	59.5	9	10	12						SS-15		CLAYEY SAND (SC), pale yellow (2.5Y 7/3), firm, wet, fine grained, little fines, no HCl reaction (continued)
15.5	64.5	10	8	9						SS-16		POORLY GRADED SAND with silt (SP-SM), light gray (10YR 7/2), very firm, wet, fine grained, few fines, no HCl reaction
10.5	69.5	7	11	24						SS-17		CLAYEY SAND (SC), light gray (5Y 7/2), firm, wet, fine grained, little fines, no HCl reaction
5.5	74.5	6	9	11						SS-18		SANDY FAT CLAY (CH), light gray (5Y 7/2), hard, moist, some fine grained sand, weak HCl reaction
0.5	79.5	6	6	9						SS-19		FAT CLAY with sand (CH), light gray (2.5Y 7/2), very stiff, moist, little fine grained sand, no HCl reaction
-4.5	84.5	17	22	28						SS-20		79.5 ft: stiff, black staining, no HCl reaction on clay, few calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
-9.5	89.5	4	7	9						SS-21		POORLY GRADED SAND with silt (SP-SM), light gray (10YR 7/2), dense, wet, fine to medium grained, few fines, no HCl reaction
-14.5	94.5	11	24	32						SS-22		FAT CLAY (CH), light gray (5Y 7/2) and brownish yellow (10YR 6/6), very stiff, moist, few fine grained sand, weak HCl reaction on clay, little calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
-19.5	99.5	10	23	42						SS-23		POORLY GRADED SAND with silt (SP-SM), light gray (10YR 7/2) and brownish yellow (10YR 6/8), very dense, wet, fine to medium grained, few fines, no HCl reaction in sand
-29.5	109.5	38	60/0.3							SS-24		99.5 ft: pale yellow (2.5Y 7/4), strong HCl reaction, trace calcium carbonate lenses
												109.5 ft: very pale brown (10YR 8/4), fine to coarse grained, little calcium carbonate nodules, possible caliche

EXELON COL BORE VICTORIA PHASE III.GPJ EXELON COL.GDT 10/20/09



BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: S. Woodham						
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)					
BORING NO.: B-3281		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND						
GROUND SURFACE ELEV.: 80.0 ft (NAVD88)		NORTHING: 13,413,569		US ft (NAD83)		EASTING: 2,600,822 US ft (NAD83)						
TOTAL DEPTH: 175.0 ft		DRILL MACHINE: CME 550 X		DRILLER: R. Landeros (MACTEC ATL)		HAMMER (ID): 140 lb. Auto (MEC 22)						
DATE STARTED: 2/24/09		COMPLETED: 2/25/09		CASING DEPTH: 10.0 ft		BITS USED: 2 15/16" Roller Cone 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		
-32.2					Continued from previous page							
-39.5	119.5	5	8	7	15					SS-25		POORLY GRADED SAND with silt (SP-SM), light gray (10YR 7/2) and brownish yellow (10YR 6/6), very dense, wet, fine to medium grained, few fines, no HCl reaction in sand (continued)
-49.5	129.5	10	20	23	43					SS-26		FAT CLAY (CH), light gray (5Y 7/2) and brownish yellow (10YR 6/6), stiff, moist, few fine grained sand, no HCl reaction on clay, trace calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
-59.5	139.5	18	18	43	81					SS-27		FAT CLAY with sand (CH), light gray (2.5Y 7/2), hard, moist, little fine grained sand, weak HCl reaction on clay, few calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
-69.5	149.5	7	11	13	24					SS-28		CLAYEY SAND (SC), very pale brown (10YR 7/3), very dense, wet, fine grained, little fines, strong HCl reaction
-79.5	159.5	33	55/0.5		88/1.0					SS-29		149.5 ft: light gray (5Y 7/2), very firm, moist, some fines, no HCl reaction on sand, few calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
												POORLY GRADED SAND with silt (SP-SM), light gray (2.5Y 7/2), very dense, wet, medium to coarse grained, few fines, strong HCl reaction, trace calcium carbonate nodules

EXELON COL BORE VICTORIA PHASE III.GPJ EXELON COL.GDT 10/20/09



SHEET 4 OF 4

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: S. Woodham							
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)						
BORING NO.: B-3281		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND							
GROUND SURFACE ELEV.: 80.0 ft (NAVD88)		NORTHING: 13,413,569		US ft (NAD83)		EASTING: 2,600,822 US ft (NAD83)							
TOTAL DEPTH: 175.0 ft		DRILL MACHINE: CME 550 X		DRILLER: R. Landeros (MACTEC ATL)		HAMMER (ID): 140 lb. Auto (MEC 22)							
DATE STARTED: 2/24/09		COMPLETED: 2/25/09		CASING DEPTH: 10.0 ft		BITS USED: 2 15/16" Roller Cone 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			
-88.3					Continued from previous page								
-89.5	169.5	14	31	30						SS-30		POORLY GRADED SAND with silt (SP-SM), light gray (2.5Y 7/2), very dense, wet, medium to coarse grained, few fines, strong HCl reaction, trace calcium carbonate nodules (continued) 169.5 ft: and brownish yellow (10YR 6/8), no calcium carbonate nodules 173.5 ft: light gray (2.5Y 7/2), few calcium carbonate nodules	
-93.5	173.5	23	33	40						SS-31			
												-95.0	175.0
Boring Terminated at Elevation -95.0 ft													

EXELON COL BORE VICTORIA PHASE III.GPJ EXELON COL.GDT 10/26/09



GEOTECHNICAL BORING LOG

Prepared By PAK Date 8/10/09Checked By KAW Date 8-10-09

SHEET 1 OF 5

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: D. Elks								
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)							
BORING NO.: B-3282		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR.	ND						
GROUND SURFACE ELEV.: 80.2 ft (NAVD88)		NORTHING: 13,413,585		US ft (NAD83)		EASTING: 2,601,103	US ft (NAD83)	24 HR. ND						
TOTAL DEPTH: 249.9 ft		DRILL MACHINE: CME 55 LC Track		DRILLER: D. White (MACTEC RAL)			HAMMER (ID): 140 lb. Auto (MEC 02)							
DATE STARTED: 3/6/09		COMPLETED: 3/9/09		CASING DEPTH: 3.3 ft			BITS USED: 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	100				
80.2					Ground Surface								80.2	0.0
80.2	0.0	2	2	2						SS-1			FAT CLAY (CH), dark gray (10YR 4/1), soft, dry, few fine grained sand, no HCl reaction, organics, roots and grass	
76.7	3.5	10	11	12						SS-2			3.5 ft: very pale brown (10YR 8/2) mottled yellow (10YR 7/8), very stiff, few fine grained sand, weak HCl reaction	
74.2	6.0	2	7	7						SS-3			5.0 ft: and light gray (10YR 7/2), stiff, strong HCl reaction, trace calcium carbonate nodules	
71.7	8.5	3	5	8						SS-4			8.5 ft: very pale brown (10YR 8/2) mottled yellow (10YR 7/8), some calcium carbonate nodules	
69.2	11.0	7	7	12						SS-5			11.0 ft: very stiff, calcium carbonate nodules not observed	
66.7	13.5	5	6	7						SS-6			13.5 ft: stiff, black staining	
61.7	18.5	5	10	12						SS-7			18.5 ft: very stiff, trace calcium carbonate nodules	
56.7	23.5	6	5	6						SS-8			23.5 ft: light gray (10YR 7/2) mottled yellow (10YR 7/8), stiff, trace fine grained sand, weak HCl reaction, calcium carbonate nodules not observed	
51.7	28.5	5	7	9						SS-9			28.5 ft: very stiff, moist, trace calcium carbonate nodules	
46.7	33.5	6	7	9						SS-10			33.5 ft: and very pale brown (10YR 8/2), few fine grained sand, calcium carbonate nodules not observed, black staining	
41.7	38.5	4	5	5						SS-11			38.5 ft: stiff	
36.7	43.5	5	5	6						SS-12			43.5 ft: trace calcium carbonate nodules	
31.7	48.5	8	8	9						SS-13			CLAYEY SAND (SC), very pale brown (10YR 8/3), firm, wet, fine grained, some fines, weak HCl reaction	
26.7	53.5	11	12	8						SS-14			POORLY GRADED SAND (SP), light gray (10YR 7/2), firm, wet, fine grained, few fines, no HCl reaction, clayey sand layers	

EXELON COL BORE VICTORIA PHASE III.GPJ EXELON COL.GDT 8/10/09



SHEET 2 OF 5

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: D. Elks								
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)							
BORING NO.: B-3282		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND								
GROUND SURFACE ELEV.: 80.2 ft (NAVD88)		NORTHING: 13,413,585		US ft (NAD83)		EASTING: 2,601,103 US ft (NAD83)								
TOTAL DEPTH: 249.9 ft		DRILL MACHINE: CME 55 LC Track		DRILLER: D. White (MACTEC RAL)		HAMMER (ID): 140 lb. Auto (MEC 02)								
DATE STARTED: 3/6/09		COMPLETED: 3/9/09		CASING DEPTH: 3.3 ft		BITS USED: 3 7/8" 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
24.1					Continued from previous page									
21.7	58.5												POORLY GRADED SAND (SP), light gray (10YR 7/2), firm, wet, fine grained, few fines, no HCl reaction, clayey sand layers (continued)	
		26	24	18									58.5 ft: very pale brown (10YR 8/2), dense, weak HCl reaction, clay layers, trace calcium carbonate nodules	
16.7	63.5													
		6	8	9									16.7	FAT CLAY (CH), light gray (10YR 7/2) and yellow (10YR 7/8), very stiff, moist, few fine grained sand, no HCl reaction on clay, trace calcium carbonate nodules
11.7	68.5													
		4	7	10									68.5 ft:	and light brownish gray (10YR 6/2), trace fine grained sand, weak HCl reaction
6.7	73.5													
		8	12	14									73.5 ft:	light gray (10YR 7/2) mottled yellow (10YR 7/8), few fine grained sand, some calcium carbonate nodules, black staining
1.7	78.5													
		11	18	13									78.5 ft:	hard, calcium carbonate nodules not observed, caliche lens
-3.3	83.5													
		10	23	29									-3.3	CLAYEY SAND (SC), very pale brown (10YR 8/2), very dense, wet, fine grained, little fines, no HCl reaction on sand, trace calcium carbonate nodules, lean clay layers
-8.3	88.5													
		5	7	10									-8.3	FAT CLAY (CH), very pale brown (10YR 8/2) mottled yellow (10YR 7/8), very stiff, moist, few fine grained sand, strong HCl reaction, some calcium carbonate nodules, caliche lens, trace black staining
-13.3	93.5													
		13	24	28									-13.3	POORLY GRADED SAND (SP), very pale brown (10YR 8/2), very dense, wet, fine grained, trace fines, no HCl reaction on sand, caliche lens
-18.3	98.5													
		10	13	14									-18.3	POORLY GRADED SAND with clay (SP-SC), very pale brown (10YR 8/2), very firm, wet, fine grained, few fines, no HCl reaction on sand, caliche lens
-28.3	108.5													
		48	17	14									-28.3	POORLY GRADED SAND (SP), very pale brown (10YR 8/2), dense, wet, fine to coarse grained, trace fines, weak HCl reaction
													-109.0	

EXELON COL BORE VICTORIA PHASE III.GPJ EXELON COL.GDT 8/10/09



SHEET 4 OF 5

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: D. Elks							
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)						
BORING NO.: B-3282		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND							
GROUND SURFACE ELEV.: 80.2 ft (NAVD88)		NORTHING: 13,413,585		US ft (NAD83)		EASTING: 2,601,103 US ft (NAD83)							
TOTAL DEPTH: 249.9 ft		DRILL MACHINE: CME 55 LC Track		DRILLER: D. White (MACTEC RAL)		HAMMER (ID): 140 lb. Auto (MEC 02)							
DATE STARTED: 3/6/09		COMPLETED: 3/9/09		CASING DEPTH: 3.3 ft		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	MOI		
-88.1					Continued from previous page								
-88.3	188.5	28	47	50/0.4						97/0.5	SS-30		CLAYEY SAND (SC), very pale brown (10YR 8/2), very dense, wet, fine grained, little fines, weak HCl reaction, well graded sand layer
-98.3	178.5	21	22	20						42	SS-31		SANDY FAT CLAY (CH), very pale brown (10YR 8/2) mottled yellow (10YR 7/8), hard, moist, some fine to medium grained sand, weak HCl reaction, trace calcium carbonate nodules, poorly graded sand layer
-108.3	188.5	11	14	21						35	SS-32		FAT CLAY (CH), very pale brown (10YR 7/2) mottled yellow (10YR 7/8), hard, moist, few fine grained sand, weak HCl reaction, clayey sand layer
-118.3	198.5	60/0.5								60/0.5	SS-33		CLAYEY SAND (SC), very pale brown (10YR 8/2), very dense, wet, fine grained, little fines, weak HCl reaction, some calcium carbonate nodules
-128.3	208.5	23	34	30						64	SS-34		POORLY GRADED SAND (SP), very pale brown (10YR 7/4), very dense, wet, fine grained, trace fines, weak HCl reaction
-138.3	218.5	37	48	49						97	SS-35		218.5 ft: very pale brown (10YR 8/2), fine to coarse grained, few fines, caliche and clay layers

EXELON COL BORE VICTORIA PHASE III GP1 EXELON COL GDT 8/10/09



GEOTECHNICAL BORING LOG

Prepared By DAL Date 8/10/09Checked By KAW Date 8-10-09

SHEET 1 OF 4

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: R. Clark							
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)						
BORING NO.: B-3283		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR. ND						
GROUND SURFACE ELEV.: 80.3 ft (NAVD88)		NORTHING: 13,413,436		US ft (NAD83)		EASTING: 2,600,979 US ft (NAD83)		24 HR. ND					
TOTAL DEPTH: 175.0 ft		DRILL MACHINE: CME 45 C Track		DRILLER: D. Rhodes (MACTEC RAL)			HAMMER (ID): 140 lb. Auto (MEC 12)						
DATE STARTED: 2/25/09		COMPLETED: 3/3/09		CASING DEPTH: 5.0 ft			BITS USED: 2 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			
80.3					Ground Surface								
80.3	0.0	2	2	2						SS-1		80.3	FAT CLAY with sand (CH), olive gray (5Y 4/2), soft, moist, little fine grained sand, no HCl reaction, few organics
76.9	3.4									SS-2			3.4 ft: light brownish gray (2.5Y 6/2), stiff, weak to strong HCl reaction, few calcium carbonate nodules
74.4	5.9									SS-3		74.4	SANDY FAT CLAY (CH), light brownish gray (2.5Y 6/2), stiff, moist, some fine grained sand, no HCl reaction on clay, trace calcium carbonate nodules
71.8	8.5									SS-4		71.8	FAT CLAY (CH), brownish yellow (10YR 6/6) and light gray (2.5Y 7/2), firm, moist, few fine grained sand, weak HCl reaction, trace organics
69.4	10.9									SS-5		69.4	FAT CLAY with sand (CH), very pale brown (10YR 7/4), very stiff, moist, little fine grained sand, weak HCl reaction, trace calcium carbonate nodules, trace organics
66.8	13.5									SS-6		66.8	FAT CLAY (CH), brownish yellow (10YR 6/6) mottled light gray (2.5Y 7/2), very stiff, moist, few fine grained sand, weak HCl reaction, trace calcium carbonate nodules, trace organics
61.8	18.5									SS-7			18.5 ft: light yellowish brown (10YR 6/4), stiff
56.8	23.5									SS-8			23.5 ft: no calcium carbonate nodules observed
51.8	28.5									SS-9			28.5 ft: ferrous staining
46.8	33.5									SS-10			33.5 ft: brownish yellow (10YR 6/6) mottled light gray (5Y 7/2)
41.8	38.5									SS-11		42.3	38.0 ft: hard drilling SILTY SAND (SM), light yellowish brown (10YR 6/4), dense, wet, fine grained, little fines, strong HCl reaction
36.8	43.5									SS-12		37.3	FAT CLAY (CH), brownish yellow (10YR 6/6) and light gray (5Y 7/2), stiff, moist, few fine grained sand, none to weak HCl reaction, trace calcium carbonate nodules
31.8	48.5									SS-13			48.5 ft: very stiff, weak HCl reaction
26.8	53.5									SS-14		26.8	SILTY SAND (SM), pale yellow (2.5Y 7/4), firm, wet, fine grained, little fines, weak HCl reaction

EXELON COL BORE VICTORIA PHASE II (GP) EXELON COL GDT 8/10/09



SHEET 3 OF 4

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: R. Clark							
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS						GROUND WATER (ft)							
BORING NO.: B-3283		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND							
GROUND SURFACE ELEV.: 80.3 ft (NAVD88)		NORTHING: 13,413,436		US ft (NAD83)		24 HR. ND							
TOTAL DEPTH: 175.0 ft		DRILL MACHINE: CME 45 C Track		DRILLER: D. Rhodes (MACTEC RAL)		HAMMER (ID): 140 lb. Auto (MEC 12)							
DATE STARTED: 2/25/09		COMPLETED: 3/3/09		CASING DEPTH: 5.0 ft		BITS USED: 2 7/8" Drag Bit							
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	MOI	L O G	SOIL AND ROCK DESCRIPTION
		0.5ft	0.5ft	0.5ft	0	20	40	60	80	100			
-31.9					Continued from previous page								
													SILTY SAND (SM), pale yellow (2.5Y 7/3), very dense, wet, fine grained, little fines, weak HCl reaction (continued)
													115.0
-38.2	118.5	4	8	10						SS-25			FAT CLAY (CH), light gray (2.5Y 7/2) and brownish yellow (10YR 6/5), very stiff, moist, few fine grained sand, weak HCl reaction, trace calcium carbonate nodules, trace organics
													123.0
													123.0-128.5 ft: bit chatter
-48.2	128.5	16	22	33						SS-26			
													136.0 ft: bit chatter
													138.5 ft: moist to wet
-58.2	138.5	41	32	50						SS-27			141.0-144.0 ft: bit chatter
													145.0
-68.2	148.5	5	6	7						SS-28			FAT CLAY (CH), light yellowish brown (10YR 6/4) mottled light gray (2.5Y 7/2), stiff, moist, few fine grained sand, weak HCl reaction, trace calcium carbonate nodules
													151.0
													SILTY SAND (SM), pale yellow (2.5Y 7/3), very dense, wet, fine grained, little fines, weak HCl reaction
-78.2	158.5	16	22	36						SS-29			

EXELON COL BORSE VICTORIA PHASE III.GPJ EXELON COL.GDT 8/10/09



SHEET 4 OF 4

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: R. Clark									
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)								
BORING NO.: B-3283		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR. ND								
GROUND SURFACE ELEV.: 80.3 ft (NAVD88)		NORTHING: 13,413,436		US ft (NAD83)		EASTING: 2,600,979 US ft (NAD83)									
TOTAL DEPTH: 175.0 ft		DRILL MACHINE: CME 45 C Track		DRILLER: D. Rhodes (MACTEC RAL)		HAMMER (ID): 140 lb. Auto (MEC 12)									
DATE STARTED: 2/25/09		COMPLETED: 3/3/09		CASING DEPTH: 5.0 ft		BITS USED: 2 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					100	
-88.0					Continued from previous page										
-88.2	168.5	22	49	50/0.3	 99/0.5					SS-30			SILTY SAND (SM), pale yellow (2.5Y 7/3), very dense, wet, fine grained, little fines, weak HCl reaction (continued) 168.5 ft: fine to coarse grained		
-93.2	173.5				 68					SS-31					
		32	34	34											
													-94.7	175.0	Boring Terminated at Elevation -94.7 ft

EXELON COL BORE VICTORIA PHASE III.GPJ EXELON COL.GDT 8/10/09



GEOTECHNICAL BORING LOG

Prepared By: KAW Date: 8/10/09Checked By: KAW Date: 8-10-09

SHEET 1 OF 5

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: A. Mwembeshi													
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)												
BORING NO.: B-3285A		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR.	ND											
GROUND SURFACE ELEV.: 80.1 ft (NAVD88)		NORTHING: 13,413,442		US ft (NAD83)		EASTING: 2,601,072 US ft (NAD83)	24 HR.	ND											
TOTAL DEPTH: 250.1 ft		DRILL MACHINE: CME 55 D Truck		DRILLER: P. Pitts (MACTEC ATL)			HAMMER (ID): 140 lb. Auto (MEC 20)												
DATE STARTED: 3/6/09		COMPLETED: 3/9/09		CASING DEPTH: 3.5 ft			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						
80.1					Ground Surface							80.1							
80.1	0.0	2	2	3								80.1	FAT CLAY (CH), very dark gray (10YR 3/1), firm, moist, few fine grained sand, no HCl reaction, trace fine roots						
76.7	3.4	2	5	7								76.7	3.4	FAT CLAY with sand (CH), light gray (5Y 7/2), stiff, moist, little fine to medium grained sand, no HCl reaction					
74.1	6.0	4	5	7								74.1							
71.5	8.6	3	5	6								71.5	8.6	FAT CLAY (CH), greenish gray (10Y 6/1) to strong brown (7.5YR 4/6), stiff, moist, few fine grained sand, no HCl reaction on clay, trace calcium carbonate fragments, strong HCl reaction on calcium carbonate fragments					
69.1	11.0	4	6	8										11.0 ft: few fine to medium grained sand, strong HCl reaction, no calcium carbonate nodules observed					
66.6	13.5	4	7	10										13.5 ft: brown (7.5YR 5/3), very stiff, few fine grained sand, trace black staining, trace calcium carbonate nodules					
61.5	18.6	3	6	8										18.6 ft: stiff, weak HCl reaction, slickensides, no calcium carbonate nodules observed					
56.5	23.6	3	6	9										56.5	23.6	FAT CLAY with sand (CH), brown (7.5YR 5/4) and light greenish gray (10Y 7/1), stiff, moist, little fine to medium grained sand, weak HCl reaction, trace calcium carbonate nodules, trace black staining			
51.5	28.6	5	7	12										51.5	28.6	FAT CLAY (CH), light greenish gray (10Y 7/1) and brown (7.5YR 5/4), very stiff, moist, few fine grained sand, no HCl reaction on clay, trace calcium carbonate nodules, weak HCl reaction on calcium carbonate nodules			
46.6	33.5	9	7	12												33.5 ft: light greenish gray (10Y 7/1) and yellowish brown (10YR 5/8), few fine to medium grained sand, strong HCl reaction			
41.6	38.5	4	5	9												38.5 ft: brown (7.5YR 5/4) and light greenish gray (10Y 7/1), stiff, weak HCl reaction, trace black staining, no calcium carbonate nodules observed			
36.5	43.6	4	6	9															
31.5	48.6	9	12	17												31.5	48.6	FAT CLAY with sand (CH), brown (7.5YR 5/4), very stiff, moist, little fine to medium grained sand, weak HCl reaction, trace calcium carbonate fragments	
26.5	53.6	5	10	14													26.5	53.6	CLAYEY SAND (SC), brown (7.5YR 5/4), very firm, moist, fine to medium grained, some fines, no HCl reaction
																			SILTY SAND (SM), pale brown (10YR 6/3), very firm, wet, fine to medium grained, some fines, no HCl reaction

EXELON COL BORE VICTORIA PHASE III.GPJ EXELON COL.GDT 8/10/09



SHEET 2 OF 5

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: A. Mwembeshi							
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)						
BORING NO.: B-3285A		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND							
GROUND SURFACE ELEV.: 80.1 ft (NAVD88)		NORTHING: 13,413,442		US ft (NAD83)		EASTING: 2,601,072 US ft (NAD83)							
TOTAL DEPTH: 250.1 ft		DRILL MACHINE: CME 55 D Truck		DRILLER: P. Pitts (MACTEC ATL)		HAMMER (ID): 140 lb. Auto (MEC 20)							
DATE STARTED: 3/6/09		COMPLETED: 3/9/09		CASING DEPTH: 3.5 ft		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			
24.0					Continued from previous page								
21.5	58.6	5	26	26									SILTY SAND (SM), pale brown (10YR 6/3), very firm, wet, fine to medium grained, some fines, no HCl reaction (continued)
													58.6 ft: pinkish gray (7.5YR 7/2), very dense, little fines, weak HCl reaction
16.4	63.7	8	19	13									
													63.7 ft: light gray (10YR 7/2), dense, no HCl reaction
11.5	68.6	5	8	11									FAT CLAY with sand (CH), light greenish gray (10Y 7/1), hard, moist, little fine to medium grained sand, weak HCl reaction, few calcium carbonate fragments
													11.5 ft: FAT CLAY (CH), dark gray (5YR 4/1), very stiff, moist, no HCl reaction on clay, few calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
6.6	73.5	9	12	15									
													6.6 ft: SANDY FAT CLAY (CH), pinkish gray (5YR 6/2), very stiff, moist, some fine to medium grained sand, weak HCl reaction, few calcium carbonate fragments
1.5	78.6	11	10	12									
													1.5 ft: FAT CLAY (CH), light greenish gray (10Y 7/1), very stiff, moist, few fine grained sand, no HCl reaction on clay, few calcium carbonate nodules
-3.5	83.6	13	27	24									
													-3.5 ft: SANDY FAT CLAY (CH), greenish gray (10Y 6/1), hard, moist, some fine to medium grained sand, strong HCl reaction, few calcium carbonate fragments
-8.5	88.6	12	17	18									
													-7.4 ft: SILTY SAND (SM), light gray (10YR 7/2), very dense, wet, fine to medium grained, little fines, no HCl reaction
													FAT CLAY (CH), greenish gray (10Y 6/1), yellowish brown (10YR 5/4), hard, moist, weak HCl reaction, few calcium carbonate nodules
													92.0 ft: strong HCl reaction, little calcium carbonate fragments
-13.5	93.6	6	15	21									
													-14.5 ft: SILTY SAND (SM), light gray (10YR 7/2), dense, wet, fine to medium grained, little fines, weak HCl reaction
-18.4	98.5	20	28	33									
													-18.4 ft: POORLY GRADED SAND (SP), yellowish brown (10YR 5/4), very dense, wet, fine to coarse grained, few fines, weak HCl reaction
-28.3	108.4	50/0.3											
													108.4 ft: light yellowish brown (10YR 6/4), few calcium carbonate nodules

EXELON COL BORE VICTORIA PHASE III.GPJ EXELON COL.GDT 8/10/09



SHEET 3 OF 5

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: A. Mwembeshi						
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)					
BORING NO.: B-3285A		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND						
GROUND SURFACE ELEV.: 80.1 ft (NAVD88)		NORTHING: 13,413,442 US ft (NAD83)		EASTING: 2,601,072 US ft (NAD83)		24 HR. ND						
TOTAL DEPTH: 250.1 ft		DRILL MACHINE: CME 55 D Truck		DRILLER: P. Pitts (MACTEC ATL)		HAMMER (ID): 140 lb. Auto (MEC 20)						
DATE STARTED: 3/6/09		COMPLETED: 3/9/09		CASING DEPTH: 3.5 ft		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			
-32.1					Continued from previous page							
-38.4	118.5	7	13	13						SS-25		FAT CLAY (CH), light greenish gray (10Y 7/1) and strong brown (7.5YR 4/6), very stiff, moist, no HCl reaction on clay, few calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules, some black staining
-48.2	128.3	5	10	13						SS-26		128.3 ft: weak HCl reaction, trace orange staining
-58.4	138.5	28	43	50/0.4						SS-27		POORLY GRADED SAND (SP), pale brown (10YR 6/3), very dense, wet, fine to medium grained, few fines, weak HCl reaction
-68.4	148.5	5	8	12						SS-28		SANDY FAT CLAY (CH), greenish gray (10Y 6/1), very stiff, moist, some fine to medium grained sand, no HCl reaction on clay, few calcium carbonate fragments
-78.5	158.6	15	27	25						SS-29		SILTY SAND (SM), very pale brown (10YR 8/2), very dense, wet, fine to coarse grained, little fines, no HCl reaction

EXELON COL BORE VICTORIA PHASE III.GPJ EXELON COL.GDT 8/10/09



SHEET 4 OF 5

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: A. Mwembeshi							
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)						
BORING NO.: B-3285A		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR.	ND					
GROUND SURFACE ELEV.: 80.1 ft (NAVD88)		NORTHING: 13,413,442		US ft (NAD83)		EASTING: 2,601,072 US ft (NAD83)		24 HR.	ND				
TOTAL DEPTH: 250.1 ft		DRILL MACHINE: CME 55 D Truck		DRILLER: P. Pitts (MACTEC ATL)			HAMMER (ID): 140 lb. Auto (MEC 20)						
DATE STARTED: 3/6/09		COMPLETED: 3/9/09		CASING DEPTH: 3.5 ft			BITS USED: 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				
-88.2					Continued from previous page								
-88.4	168.5	18	50/0.5							SS-30			SILTY SAND (SM), very pale brown (10YR 8/2), very dense, wet, fine to coarse grained, little fines, no HCl reaction (continued) 168.5 ft: strong brown (7.5YR 4/6), weak HCl reaction
-98.4	178.5	7	11	16						SS-31			FAT CLAY (CH), yellowish brown (10YR 5/4) and light greenish gray (10Y 7/1), very stiff, moist, weak HCl reaction, trace black staining
-108.5	188.6	21	32	31						SS-32			SILTY SAND (SM), pinkish gray (7.5YR 7/2), very dense, wet, fine to medium grained, little fines, no HCl reaction
-118.4	198.5	45	39	50/0.4						SS-33			198.5 ft: weak HCl reaction, trace calcium carbonate fragments
-128.4	208.5	7	23	50/0.4						SS-34			208.5 ft: yellowish brown (10YR 5/6), no HCl reaction, no calcium carbonate nodules observed
-138.5	218.6	5	5	11						SS-35			CLAYEY SAND (SC), light greenish gray (10Y 7/1), firm, moist, fine to medium grained, some fines, weak HCl reaction

EXELON COL BORE VICTORIA PHASE III (GP) EXELON COL GDT 8/10/09

EXELON COL BORE VICTORIA PHASE III GPJ EXELON COL GDT 8/10/09



GEOTECHNICAL BORING LOG

Prepared By WBD Date 11-10-09Checked By AAA Date 11/10/09

SHEET 1 OF 4

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: S. Woodham							
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)						
BORING NO.: B-3286		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND							
GROUND SURFACE ELEV.: 80.1 ft (NAVD88)		NORTHING: 13,413,499		US ft (NAD83)		EASTING: 2,601,204 US ft (NAD83)							
24 HR. ND													
TOTAL DEPTH: 174.5 ft		DRILL MACHINE: CME 550 X		DRILLER: R. Landeros (MACTEC ATL)		HAMMER (ID): 140 lb. Auto (MEC 22)							
DATE STARTED: 3/3/09		COMPLETED: 3/4/09		CASING DEPTH: N/A		BITS USED: 2 15/16" Roller Cone Bit							
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	MOI	L O G	SOIL AND ROCK DESCRIPTION
		0.5ft	0.5ft	0.5ft	0	20	40	60	80	100			
80.1					Ground Surface								80.1
80.1	0.0	3	4	4						SS-1			FAT CLAY with sand (CH), gray (10YR 5/1), firm, dry, little fine grained sand, no HCl reaction, some organics
77.4	2.7	3	4	6						SS-2			77.6
75.1	5.0	6	9	11						SS-3			FAT CLAY (CH), very dark gray (10YR 3/1) to light brownish gray (10YR 6/2), stiff, moist, few fine grained sand, no HCl reaction on clay, few calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
72.6	7.5	5	7	9						SS-4			72.6
70.1	10.0	6	10	12						SS-5			FAT CLAY with sand (CH), light gray (2.5Y 7/2) and brownish yellow (10YR 6/6), very stiff, moist, little fine grained sand, no HCl reaction
67.6	12.5	8	9	12						SS-6			70.1
													FAT CLAY (CH), light gray (5Y 7/2) and brownish yellow (10YR 6/6), very stiff, moist, few fine grained sand, weak HCl reaction on clay, few calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
60.6	19.5	6	10	13						SS-7			19.5 ft: light gray (10YR 7/1) and very pale brown (10YR 7/4), trace calcium carbonate nodules
55.6	24.5	4	7	9						SS-8			24.5 ft: and brownish yellow (10YR 6/8), calcium carbonate nodules not observed
50.6	29.5	9	11	14						SS-9			29.5 ft: few calcium carbonate nodules
45.6	34.5	5	7	8						SS-10			34.5 ft: and reddish yellow (7.5YR 6/6), stiff, weak HCl reaction on clay, trace calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
40.6	39.5	4	5	7						SS-11			39.5 ft: brownish yellow (10YR 6/6) with light gray (5Y 7/2), no HCl reaction, calcium carbonate nodules not observed
35.6	44.5	4	9	12						SS-12			44.5 ft: very stiff, few fine grained sand, little calcium carbonate nodules, strong HCl reaction
30.6	49.5	6	10	11						SS-13			30.6
													CLAYEY SAND (SC), pale yellow (2.5Y 7/4), very firm, wet, fine grained, little fines, no HCl reaction, trace calcium carbonate nodules
25.6	54.5	9	10	12						SS-14			25.6

EXELON COL BORE VICTORIA PHASE III GPJ EXELON COL.GDT 10/20/09



SHEET 2 OF 4

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: S. Woodham							
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)						
BORING NO.: B-3286		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR.	ND					
GROUND SURFACE ELEV.: 80.1 ft (NAVD88)		NORTHING: 13,413,499		US ft (NAD83)		EASTING: 2,601,204 US ft (NAD83)		24 HR.	ND				
TOTAL DEPTH: 174.5 ft		DRILL MACHINE: CME 550 X		DRILLER: R. Landeros (MACTEC ATL)			HAMMER (ID): 140 lb. Auto (MEC 22)						
DATE STARTED: 3/3/09		COMPLETED: 3/4/09		CASING DEPTH: N/A			BITS USED: 2 15/16" Roller Cone 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.
24.0					Continued from previous page								
20.6	59.5	47	37	32							SS-15		SANDY FAT CLAY (CH), light gray (2.5Y 7/2), very stiff, moist, some fine grained sand, strong HCl reaction, few calcium carbonate lenses (continued)
													POORLY GRADED SAND with silt (SP-SM), brownish yellow (10YR 6/6) and light gray (10YR 7/2), very dense, wet, fine grained, strong HCl reaction
15.6	64.5	5	5	8							SS-16		FAT CLAY (CH), light gray (5Y 7/2) and light olive gray (5Y 6/2), stiff, moist, no HCl reaction on clay, trace calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
10.6	69.5	4	6	8							SS-17		69.5 ft: dark gray (5Y 4/1), few fine grained sand, weak HCl reaction on clay
5.6	74.5	6	9	9							SS-18		74.5 ft: very stiff, no recovery
0.6	79.5	11	14	14							SS-19		79.5 ft: light gray (5Y 7/2), strong HCl reaction, some calcium carbonate nodules
-4.4	84.5	13	27	29							SS-20		CLAYEY SAND (SC), pale yellow (2.5Y 7/4), very dense, wet, fine grained, little fines, no HCl reaction on sand, some calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
-9.4	89.5	4	9	12							SS-21		SANDY FAT CLAY (CH), light gray (5Y 7/2) and brownish yellow (10YR 6/6), very stiff, moist, some fine grained sand, weak HCl reaction on clay, little calcium carbonate, strong HCl reaction on calcium carbonate
-14.4	94.5	13	28	65							SS-22		POORLY GRADED SAND with clay (SP-SC), pale yellow (2.5Y 7/3), very dense, wet, fine grained, few fines, no HCl reaction on sand, some calcium carbonate, strong HCl reaction on calcium carbonate
-19.4	99.5	27	39	54							SS-23A/B		POORLY GRADED SAND with silt (SP-SM), very pale brown (10YR 7/4), very dense, wet, fine grained, few fines, no HCl reaction
-29.4	109.5	100/0.5									SS-24		SANDY FAT CLAY (CH), light gray (2.5Y 7/2), hard, moist, some fine grained sand, strong HCl reaction, some calcium carbonate nodules
													POORLY GRADED SAND (SP), very pale brown (10YR 7/4), very dense, wet, fine to medium grained, few fines, strong HCl reaction

EXELON COL BORE VICTORIA PHASE III GPJ EXELON COL GDT 10/20/09



BECHTEL NO.: 25352			MACTEC NO.: 6468-07-1777			COUNTY: Victoria, TX			GEOLOGIST: S. Woodham			
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS									GROUND WATER (ft)			
BORING NO.: B-3286			DRILL METHOD: Mud Rotary			SAMPLE METHODS: SPT			0 HR.	ND		
GROUND SURFACE ELEV.: 80.1 ft (NAVD88)			NORTHING: 13,413,499			US ft (NAD83)			EASTING: 2,601,204 US ft (NAD83)			
TOTAL DEPTH: 174.5 ft			DRILL MACHINE: CME 550 X			DRILLER: R. Landeros (MACTEC ATL)			HAMMER (ID): 140 lb. Auto (MEC 22)			
DATE STARTED: 3/3/09			COMPLETED: 3/4/09			CASING DEPTH: N/A			BITS USED: 2 15/16" Roller Cone 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		
-32.1					Continued from previous page							
												POORLY GRADED SAND (SP), very pale brown (10YR 7/4), very dense, wet, fine to medium grained, few fines, strong HCl reaction (continued)
-39.4	119.5	5	8	11						SS-25		FAT CLAY (CH), light gray (5Y 7/2), very stiff, moist, few fine grained sand, no HCl reaction on clay, few calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
-49.4	129.5	8	12	12						SS-26		129.5 ft: light gray (5Y 7/2) and brownish yellow (10YR 6/6), trace calcium carbonate nodules, strong HCl reaction
-59.4	139.5	25	35	39						SS-27		POORLY GRADED SAND with silt (SP-SM), very pale brown (10YR 7/4), very dense, wet, fine grained, few fines, strong HCl reaction
-69.6	149.7	8	12	12						SS-28		FAT CLAY (CH), brownish yellow (10YR 6/6) and light gray (5Y 7/2), very stiff, moist, weak HCl reaction on clay, trace calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
-79.4	159.5	10	10	11						SS-29A/B		POORLY GRADED SAND with silt (SP-SM), very pale brown (10YR 7/3), very firm, wet, medium to coarse grained, few fines, no HCl reaction
												SANDY FAT CLAY (CH), light gray (5Y 7/2), very stiff, moist, some fine grained sand, strong HCl reaction, some calcium carbonate nodules
												SILTY SAND (SM), light gray (10YR 7/2), very dense, wet, medium to coarse grained, little fines, strong HCl reaction, few calcium carbonate nodules

EXELON COL BORE VICTORIA PHASE III GPJ EXELON COL.GDT 10/20/09



SHEET 4 OF 4

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: S. Woodham							
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)						
BORING NO.: B-3286		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND							
GROUND SURFACE ELEV.: 80.1 ft (NAVD88)		NORTHING: 13,413,499		US ft (NAD83)		EASTING: 2,601,204 US ft (NAD83)							
TOTAL DEPTH: 174.5 ft		DRILL MACHINE: CME 550 X		DRILLER: R. Landeros (MACTEC ATL)		HAMMER (ID): 140 lb. Auto (MEC 22)							
DATE STARTED: 3/3/09		COMPLETED: 3/4/09		CASING DEPTH: N/A		BITS USED: 2 15/16" Roller Cone 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				
-88.2					Continued from previous page								
-89.4	169.5	26	50	47						SS-30			SILTY SAND (SM), light gray (10YR 7/2), very dense, wet, medium to coarse grained, little fines, strong HCl reaction, few calcium carbonate nodules (continued)
-93.4	173.5	28	68/0.5							SS-31			173.5 ft: pale yellow (2.5Y 8/3)
													174.5
													Boring Terminated at Elevation -94.4 ft

EXELON COL BORE VICTORIA PHASE III.GPJ EXELON COL.GDT 10/20/09



GEOTECHNICAL BORING LOG

Prepared By DRK Date 8/10/09Checked By KAW Date 8-10-09

SHEET 1 OF 3

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: R. Clark								
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)							
BORING NO.: B-3287		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR.	ND						
GROUND SURFACE ELEV.: 80.3 ft (NAVD88)		NORTHING: 13,413,394		US ft (NAD83)		EASTING: 2,600,912 US ft (NAD83)	24 HR.	ND						
TOTAL DEPTH: 150.0 ft		DRILL MACHINE: CME 45 C Track		DRILLER: D. Rhodes (MACTEC RAL)			HAMMER (ID): 140 lb. Auto (MEC 12)							
DATE STARTED: 3/4/09		COMPLETED: 3/5/09		CASING DEPTH: 10.0 ft			BITS USED: 2 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	
80.3					Ground Surface							80.3	0.0	
80.3	0.0	2	3	2						SS-1		80.3	FAT CLAY with sand (CH), very dark gray (10YR 3/1), firm, dry to moist, little fine grained sand, weak HCl reaction, little organics	0.0
76.9	3.4	6	8	13						SS-2		76.9	3.4	SANDY FAT CLAY (CH), pale yellow (2.5Y 7/3), very stiff, moist, some fine grained sand, weak HCl reaction, trace organics, brownish yellow staining
74.2	6.1	5	9	9	SS-3	74.2	6.1							
71.8	8.5	2	6	8	SS-4	71.8	8.5	FAT CLAY (CH), brownish yellow (10YR 6/6) mottled light gray (2.5Y 7/2), stiff, moist, few fine grained sand, weak HCl reaction	8.5					
69.3	11.0	5	8	12	SS-5			11.0 ft: pale yellow (2.5Y 7/3), very stiff, trace calcium carbonate nodules						
66.8	13.5	8	10	11	SS-6			13.5 ft: light gray (2.5Y 7/2) and brownish yellow (10YR 6/6), trace organics						
61.8	18.5	3	6	7	SS-7			18.5 ft: light yellowish brown (10YR 6/4), stiff						
56.8	23.5	4	5	6	SS-8			23.5 ft: light gray (2.5Y 7/2) mottling, no calcium carbonate nodules observed						
51.8	28.5	3	6	9	SS-9	51.8	28.5	FAT CLAY with sand (CH), pale yellow (2.5Y 7/3), stiff, moist, little fine grained sand, weak HCl reaction, trace calcium carbonate nodules, trace brownish yellow staining	28.5					
46.8	33.5	8	6	9	SS-10	46.8	33.5	33.0 ft: hard drilling	33.5					
41.8	38.5	4	5	7	SS-11			SANDY FAT CLAY (CH), pale yellow (2.5Y 7/3), stiff, moist, some fine grained sand, weak HCl reaction						
36.8	43.5	4	6	8	SS-12	41.8	38.5	FAT CLAY (CH), brownish yellow (10YR 6/6) mottled light gray (2.5Y 7/2), stiff, moist, few fine grained sand, weak HCl reaction, trace calcium carbonate nodules	38.5					
31.8	48.5	4	5	7	SS-13			43.5 ft: light yellowish brown (10YR 6/4) mottled light gray (2.5Y 7/2)						
26.8	53.5	10	10	10	SS-14	26.8	53.5	SANDY FAT CLAY (CH), very pale brown (2.5Y 7/3), very stiff, moist, some fine grained sand, weak HCl reaction	53.5					
										24.3	56.0			

EXELON COL BORE VICTORIA PHASE III (GP) EXELON COL GDT 8/10/09



BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: R. Clark							
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS						GROUND WATER (ft)							
BORING NO.: B-3287		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND							
GROUND SURFACE ELEV.: 80.3 ft (NAVD88)		NORTHING: 13,413,394		US ft (NAD83)		EASTING: 2,600,912 US ft (NAD83)							
TOTAL DEPTH: 150.0 ft		DRILL MACHINE: CME 45 C Track		DRILLER: D. Rhodes (MACTEC RAL)		HAMMER (ID): 140 lb. Auto (MEC 12)							
DATE STARTED: 3/4/09		COMPLETED: 3/5/09		CASING DEPTH: 10.0 ft		BITS USED: 2 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			
-31.9					Continued from previous page								
-38.2	118.5	9	9	15						SS-25		FAT CLAY (CH), light brownish gray (2.5Y 6/2), very stiff, moist, few fine grained sand, weak to strong HCl reaction, few calcium carbonate nodules, caliche (continued) 118.0 ft: drill chatter 119.5 - 122.0 ft: drill chatter	
-48.2	128.5	12	15	32						SS-26		-41.7	CLAYEY SAND (SC), pale yellow (2.5Y 7/3), dense, wet to moist, fine grained, some fines, strong HCl reaction, trace calcium carbonate nodules
-58.2	138.5	25	30	43						SS-27		-51.7	132.0 - 133.0 ft: drill chatter SILTY SAND (SM), pale yellow (2.5Y 7/3), very dense, wet, fine grained, little fines, strong to weak HCl reaction, trace calcium carbonate nodules
-68.2	148.5	9	11	17						SS-28		-64.7	SANDY FAT CLAY (CH), light gray (2.5Y 7/2), very stiff, moist, some fine grained sand, weak HCl reaction, trace calcium carbonate nodules
												-69.7	Boring Terminated at Elevation -69.7 ft

GEOTECHNICAL BORING LOG

Prepared By WBD Date 11-19-09

Checked By RAK Date 1/10/09

SHEET 1 OF 3

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: S. Woodham							
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, including UHS							GROUND WATER (ft)						
BORING NO.: B-3288		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR.	ND					
GROUND SURFACE ELEV.: 80.2 ft (NAVD88)		NORTHING: 13,413,286		US ft (NAD83)		EASTING: 2,601,039 US ft (NAD83)		24 HR.	ND				
TOTAL DEPTH: 151.0 ft		DRILL MACHINE: CME 550 X		DRILLER: R. Landeros (MACTEC ATL)			HAMMER (ID): 140 lb. Auto (MEC 22)						
DATE STARTED: 3/7/09		COMPLETED: 3/8/09		CASING DEPTH: N/A			BITS USED: 2 15/16" Roller Cone 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			
80.2					Ground Surface							80.2	0.0
80.2	0.0	3	4	5						SS-1		FAT CLAY (CH), dark gray (10YR 4/1), stiff, dry, few fine grained sand, no HCl reaction, little organics	0.0
77.7	2.5	1	2	4						SS-2		FAT CLAY with sand (CH), dark gray (10YR 4/1) to light gray (10YR 7/2), firm, moist, little fine grained sand, strong HCl reaction, few calcium carbonate nodules	2.5
75.2	5.0	5	6	6						SS-3		5.0 ft: stiff, weak HCl reaction, no calcium carbonate nodules observed	5.0
72.7	7.5	3	3	5						SS-4		FAT CLAY (CH), light gray (2.5Y 7/2), firm, moist, few fine grained sand, no HCl reaction on clay, trace calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules	7.5
70.2	10.0	3	6	6						SS-5		10.0 ft: brownish yellow (10YR 6/6) and light gray (5Y 7/2), stiff, weak HCl reaction on clay, few calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules	10.0
67.7	12.5	4	6	5						SS-6		12.5 ft: little black staining	12.5
60.7	19.5	3	4	6						SS-7		19.5 ft: very pale brown (10YR 7/4), no HCl reaction on clay, trace calcium carbonate nodules	19.5
55.7	24.5	3	5	7						SS-8		24.5 ft: very pale brown (10YR 7/4) and light gray (2.5Y 7/2), HCl reaction weak on clay	24.5
50.7	29.5	6	11	10						SS-9		SANDY FAT CLAY (CH), light gray (10YR 7/2), very stiff, moist, some fine grained sand, no HCl reaction	29.5
45.7	34.5	6	8	11						SS-10		34.5 ft: light gray (2.5Y 7/2), no HCl reaction on clay, few calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules	34.5
40.7	39.5	10	12	13						SS-11		39.5 ft: light gray (5Y 7/2), some calcium carbonate nodules, strong HCl reaction	39.5
35.7	44.5	4	5	6						SS-12		FAT CLAY (CH), brownish yellow (10YR 6/6) and light gray (5Y 7/2), stiff, moist, no HCl reaction on clay, trace calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules	44.5
30.7	49.5	4	6	8						SS-13		49.5 ft: light gray (2.5Y 7/2) and very pale brown (10YR 7/4), few fine grained sand	49.5
25.7	54.5	6	9	12						SS-14		54.5 ft: light gray (5Y 7/2) and brownish yellow (10Y 6/6), very stiff, weak HCl reaction on clay, few	54.5

