



SHEET 7 OF 8

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: J. Liles							
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS						GROUND WATER (ft)							
BORING NO.: B-3128		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND							
GROUND SURFACE ELEV.: 79.4 ft (NAVD88)		NORTHING: 13,412,354		US ft (NAD83)		EASTING: 2,600,019 US ft (NAD83)							
24 HR. ND													
TOTAL DEPTH: 402.4 ft		DRILL MACHINE: CME 550		DRILLER: R. White (MILLER)		HAMMER (ID): 140 lb. Auto (353)							
DATE STARTED: 1/26/09		COMPLETED: 2/8/09		CASING DEPTH: 3.5 ft		BITS USED: 3 1/2" 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		
-257.3					Continued from previous page								
-261.5	340.8												FAT CLAY (CH), brown (7.5YR 5/4) mottled light gray (2.5Y 7/2), hard, moist, trace fine grained sand, weak HCl reaction on clay, trace calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules (continued)
		13	18	24									
-271.5	350.8												
		31	42	50/0.2									
-281.6	360.9												
		9	13	21									
-291.7	371.0												
		7	13	17									
-301.7	381.0												
		7	10	19									
-311.6	390.9												
		8	13	22									

FAT CLAY (CH), brown (7.5YR 5/4) mottled light gray (2.5Y 7/2), hard, moist, trace fine grained sand, weak HCl reaction on clay, trace calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules (continued)

CLAYEY SAND (SC), olive yellow (2.5Y 6/6), very dense, moist, fine grained, little fines, strong HCl reaction

FAT CLAY (CH), light gray (2.5Y 7/2) mottled reddish brown (5YR 5/4), hard, moist, weak HCl reaction

371.0 ft: very stiff, no HCl reaction, black staining

381.0 ft: weak HCl reaction, brown staining

390.9 ft: hard, black staining

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



SHEET 8 OF 8

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: J. Liles							
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)						
BORING NO.: B-3128		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND							
GROUND SURFACE ELEV.: 79.4 ft (NAVD88)		NORTHING: 13,412,354		US ft (NAD83)		EASTING: 2,600,019 US ft (NAD83)							
TOTAL DEPTH: 402.4 ft		DRILL MACHINE: CME 550		DRILLER: R. White (MILLER)		HAMMER (ID): 140 lb. Auto (353)							
DATE STARTED: 1/26/09		COMPLETED: 2/8/09		CASING DEPTH: 3.5 ft		BITS USED: 3 1/2" 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			
-313.4					Continued from previous page								
-321.6	400.9									SS-54		FAT CLAY (CH), light gray (2.5Y 7/2) mottled reddish brown (5YR 5/4), hard, moist, weak HCl reaction (continued) 394.0 ft: hard drilling	
		16	18	24									
													402.4
Boring Terminated at Elevation -323.1 ft													

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



GEOTECHNICAL BORING LOG

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

SHEET 1 OF 3

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: B. Mabie							
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)						
BORING NO.: B-3129		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND							
GROUND SURFACE ELEV.: 79.8 ft (NAVD83)		NORTHING: 13,411,995 US ft (NAD83)		EASTING: 2,599,817 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: 1/9/09		COMPLETED: 1/10/09		CASING DEPTH: 5.0 ft		BITS USED: 2 15/16" Drag Bit							
ELEV.	DEPTH	BLOW COUNT			BLOWS PER FOOT					SAMP.	LOG	SOIL AND ROCK DESCRIPTION	
(ft)	(ft)	0.5ft	0.5ft	0.5ft	0	20	40	60	80	100			NO.
79.8					Ground Surface								
79.8	0.0	3	3	4	7					SS-1		79.8	LEAN CLAY (CL), black (10YR 2/1), firm, moist, fine grained sand, no HCl reaction, organics - roots and grass
76.3	3.5				7					SS-2			3.5 ft: dark gray (10YR 4/1), weak HCl reaction, calcium carbonate nodules and wood fragments
73.8	6.0	4	3	4	18					SS-3		73.8	FAT CLAY (CH), light brownish gray (10YR 6/2), stiff, moist, fine grained sand, weak HCl reaction, calcium carbonate nodules, black and orange staining
71.3	8.5	3	5	5	17					SS-4			8.5 ft: very stiff
68.8	11.0	5	7	10	23					SS-5		68.8	LEAN CLAY (CL), light brownish gray (10YR 6/2), very stiff, moist, fine grained sand, weak HCl reaction, calcium carbonate nodules, black and orange staining
66.3	13.5	6	11	12	16					SS-6			
		5	7	9									
61.3	18.5				15					SS-7		61.3	FAT CLAY (CH), light brownish gray (10YR 6/2), stiff, moist, fine grained sand, weak HCl reaction, calcium carbonate nodules, black and orange staining
		5	8	7									
56.3	23.5				12					SS-8			23.5 ft: mottled reddish yellow (5YR 6/8)
		4	5	7									
51.3	28.5				16					SS-9			28.5 ft: very stiff
		5	6	10									
46.3	33.5				17					SS-10			33.5 ft: few organic matter
		5	7	10									
41.3	38.5				13					SS-11			38.5 ft: stiff
		4	6	7									
36.3	43.5				15					SS-12			43.5 ft: light yellowish brown (10YR 6/4), no HCl reaction, no calcium carbonate nodules observed
		5	7	8									
31.3	48.5				17					SS-13			48.5 ft: very stiff, weak HCl reaction, calcium carbonate nodules
		6	7	10									
26.3	53.5				15					SS-14			53.5 ft: light gray (10YR 7/2), stiff
		6	6	9									

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

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

GEOTECHNICAL BORING LOG

Prepared By RAU Date 8/10/09

Checked By KA W Date 8-10-09

SHEET 1 OF 3

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-3130		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND							
GROUND SURFACE ELEV.: 79.7 ft (NAVD88)		NORTHING: 13,412,171		US ft (NAD83)		EASTING: 2,599,965 US ft (NAD83)							
24 HR. ND													
TOTAL DEPTH: 150.3 ft		DRILL MACHINE: CME 75 Truck		DRILLER: J. Cook (MILLER)		HAMMER (ID): 140 lb. Auto (100)							
DATE STARTED: 1/9/09		COMPLETED: 1/11/09		CASING DEPTH: 3.5 ft		BITS USED: 2 15/16" Wing 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.
79.7					Ground Surface							79.7	0.0
79.7	0.0	6	4	6	10					SS-1		FAT CLAY (CH), dark gray (5Y 4/1), stiff, moist, little fine grained sand, no HCl reaction	
76.2	3.5	3	7	7	14					SS-2		76.2	3.5
73.7	6.0	1	4	6	10					SS-3		73.7	6.0
71.2	8.5	3	5	6	11					SS-4			
68.7	11.0	4	7	8	15					SS-5			
66.2	13.5	4	5	7	12					SS-6		66.2	13.5
61.3	18.4	3	5	8	13					SS-7			
56.2	23.5	4	5	6	11					SS-8			
51.5	28.2	2	4	6	10					SS-9			
46.2	33.5	5	7	10	17					SS-10			
41.4	38.3	8	15	19	34					SS-11		41.7	38.0
36.3	43.4	6	12	13	25					SS-12		36.3	43.4
31.3	48.4	5	9	12	21					SS-13			
26.4	53.3	6	6	7	13					SS-14			

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



SHEET 2 OF 3

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-3130		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND						
GROUND SURFACE ELEV.: 79.7 ft (NAVD88)		NORTHING: 13,412,171		US ft (NAD83)		EASTING: 2,599,965 US ft (NAD83)						
24 HR. ND												
TOTAL DEPTH: 150.3 ft		DRILL MACHINE: CME 75 Truck		DRILLER: J. Cook (MILLER)		HAMMER (ID): 140 lb. Auto (100)						
DATE STARTED: 1/9/09		COMPLETED: 1/11/09		CASING DEPTH: 3.5 ft		BITS USED: 2 15/16" Wing 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		
23.6					Continued from previous page							
21.4	58.3	9	13	15							SS-15	SILTY SAND (SM), greenish gray (10Y 6/1) and strong brown (7.5YR 5/6), very firm, moist, fine grained, some fines, no HCl reaction (continued) 58.3 ft: light gray (2.5Y 7/2), wet, weak HCl reaction
16.4	63.3	5	9	9							SS-16	63.3 ft: brownish yellow (10YR 6/6), firm, no HCl reaction
11.3	68.4	7	7	12							SS-17A/B	68.4 ft: light gray (5Y 7/2)
6.2	73.5	13	30	29							SS-18	73.5 ft: FAT CLAY (CH), greenish gray (10Y 6/1), very stiff, moist, few calcium carbonate nodules, strong HCl reaction
1.2	78.5	4	5	6							SS-19	78.5 ft: SILTY SAND (SM), light gray (5Y 7/1), very dense, moist, fine grained, some fines, no HCl reaction
-3.7	83.4	6	7	8							SS-20	83.4 ft: CLAYEY SAND (SC), light gray (5Y 7/1), firm, moist, fine grained, some fines, no HCl reaction
-8.6	88.3	12	28	40							SS-21A/B	88.3 ft: FAT CLAY (CH), light gray (5Y 7/2) and brown (7.5Y 5/4), stiff, few fine grained sand, few calcium carbonate nodules, weak HCl reaction
-13.6	93.3	20	33	34							SS-22	93.3 ft: POORLY GRADED SAND with silt (SP-SM), light gray (10YR 7/2), very dense, wet, fine grained, few fines, no HCl reaction
-18.8	98.5	49	55	60/0.5							SS-23	98.5 ft: FAT CLAY with sand (CH), white (5Y 8/1) and light gray (5Y 7/2), hard, moist, little fine grained sand, few calcium carbonate nodules, weak HCl reaction
												93.3 ft: strong HCl reaction
												98.5 ft: POORLY GRADED SAND with silt (SP-SM), pinkish white (5YR 3/2), very dense, wet, fine to coarse grained, few fines, few gravel, no HCl reaction
-28.8	108.5	3	7	9							SS-24	105.0 ft: FAT CLAY (CH), light brown (7.5YR 6/4) and light greenish gray (10Y 8/1), very stiff, moist, no HCl reaction, trace black staining

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



SHEET 3 OF 3

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-3130		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR.	ND					
GROUND SURFACE ELEV.: 79.7 ft (NAVD88)		NORTHING: 13,412,171		US ft (NAD83)		EASTING: 2,599,965 US ft (NAD83)		24 HR.	ND				
TOTAL DEPTH: 150.3 ft		DRILL MACHINE: CME 75 Truck		DRILLER: J. Cook (MILLER)			HAMMER (ID): 140 lb. Auto (100)						
DATE STARTED: 1/9/09		COMPLETED: 1/11/09		CASING DEPTH: 3.5 ft			BITS USED: 2 15/16" 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			
-32.5					Continued from previous page								
-38.8	118.5	5	10	11	21					SS-25			FAT CLAY (CH), light brown (7.5YR 6/4) and light greenish gray (10Y 8/1), very stiff, moist, no HCl reaction, trace black staining (continued)
-48.6	128.3	8	16	20	38					SS-26			118.5 ft: light greenish gray (10Y 7/1), few gravel, weak HCl reaction
-58.9	138.6	3	10	14	24					SS-27			128.3 ft: hard, few fine sand, strong HCl reaction, calcium carbonate nodules
-69.1	148.8	11	11	14	25					SS-28A/B			138.6 ft: SILTY SAND (SM), light gray (5Y 7/1) and yellowish red (5YR 4/6), very firm, wet, fine grained, some fines, weak HCl reaction
													148.8 ft: yellowish brown (10YR 5/6), no HCl reaction
													150.0 ft: FAT CLAY (CH), light gray (10YR 7/2), very stiff, moist, weak HCl reaction
													Boring Terminated at Elevation -70.6 ft

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

GEOTECHNICAL BORING LOG

Prepared By RAM Date 8/10/09

Checked By KAW Date 9.10.09

SHEET 1 OF 8

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-3131		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR.	ND						
GROUND SURFACE ELEV.: 78.9 ft (NAVD88)		NORTHING: 13,412,262		US ft (NAD83)		EASTING: 2,600,045 US ft (NAD83)		24 HR.	ND					
TOTAL DEPTH: 406.8 ft		DRILL MACHINE: CME 75 Truck		DRILLER: J. Cook (MILLER)			HAMMER (ID): 140 lb. Auto (100)							
DATE STARTED: 1/14/09		COMPLETED: 1/27/09		CASING DEPTH: 3.6 ft			BITS USED: 3 7/8" Wing 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
78.9					Ground Surface									
78.9	0.0	2	1	4	●5					SS-1		78.9	FAT CLAY (CH), dark gray (2.5Y 4/1), firm, moist, few fine grained sand, no HCl reaction	0.0
76.0	2.9	4	6	8	●14					SS-2		2.9	stiff, few calcium carbonate nodules, weak HCl reaction	
72.9	6.0	3	4	6	●10					SS-3		72.9	FAT CLAY with sand (CH), olive gray (5Y 5/2), stiff, moist, little fine grained sand, few calcium carbonate nodules, weak HCl reaction	6.0
70.5	8.4	4	9	10	●19					SS-4		8.4	light olive gray (5Y 6/2), very stiff, few gravel, no calcium carbonate nodules	
67.9	11.0	6	10	11	●21					SS-5		11.0	light gray (5Y 7/2), strong HCl reaction, few calcium carbonate nodules	
65.5	13.4	3	6	6	●12					SS-6		65.5	FAT CLAY (CH), light olive gray (5Y 6/2), stiff, moist, few calcium carbonate nodules, weak HCl reaction	13.4
60.0	18.9	4	5	7	●12					SS-7		18.9	light greenish gray (10Y 7/1) and yellowish brown (10YR 5/6), few fine grained sand	
55.1	23.8	3	5	6	●11					SS-8				
50.4	28.5	6	7	10	●17					SS-9		28.5	strong brown (7.5YR 5/6) and greenish gray (10Y 7/1), very stiff, slickensides, no calcium carbonate nodules observed	
45.4	33.5	4	8	11	●19					SS-10		45.4	FAT CLAY with sand (CH), strong brown (7.5YR 5/6) and greenish gray (10Y 7/1), very stiff, moist, little fine grained sand, few calcium carbonate nodules, weak HCl reaction	33.5
40.1	38.8	4	6	8	●14					SS-11		40.1	SILTY SAND (SM), yellowish brown (10YR 5/6), firm, moist, fine grained, some fines, weak HCl reaction	38.8
35.2	43.7	11	16	19	●35					SS-12A/B		43.7	brown (10YR 5/3), dense, strong HCl reaction	44.7
30.2	48.7	10	14	18	●32					SS-13		30.2	FAT CLAY (CH), brown (10YR 5/3) and greenish gray (10Y 7/1), hard, moist, few calcium carbonate nodules, strong HCl reaction	48.7
25.3	53.6	16	12	21	●33					SS-14		53.6	SILTY SAND (SM), brown (10YR 5/3), dense, moist, fine grained, some fines, few calcium carbonate nodules, no HCl reaction on sand	
													light greenish gray (10Y 7/1) and strong brown (7.5YR 5/6), fine to medium grained, weak HCl reaction, no calcium carbonate nodules observed	

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



SHEET 2 OF 8

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-3131		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND						
GROUND SURFACE ELEV.: 78.9 ft (NAVD88)		NORTHING: 13,412,262 US ft (NAD83)		EASTING: 2,600,045 US ft (NAD83)		24 HR. ND						
TOTAL DEPTH: 406.8 ft		DRILL MACHINE: CME 75 Truck		DRILLER: J. Cook (MILLER)		HAMMER (ID): 140 lb. Auto (100)						
DATE STARTED: 1/14/09		COMPLETED: 1/27/09		CASING DEPTH: 3.6 ft		BITS USED: 3 7/8" Wing Bit						
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	SOIL AND ROCK DESCRIPTION
		0.5ft	0.5ft	0.5ft	0	20	40	60	80			
22.8					Continued from previous page							
20.4	58.5	4	6	20								SILTY SAND (SM), brown (10YR 5/3), dense, moist, fine grained, some fines, few calcium carbonate nodules, no HCl reaction on sand (continued)
												SANDY FAT CLAY (CH), brown (7.5YR 5/4), very stiff, moist, some fine grained sand, no HCl reaction
												FAT CLAY (CH), brown (7.5YR 5/4), very stiff, moist, few fine grained sand, weak HCl reaction
15.4	63.5	5	8	12								POORLY GRADED SAND (SP-SM), pale brown (10YR 6/3), very firm, moist, fine grained, no HCl reaction
												FAT CLAY (CH), gray (5Y 6/1) and brown (7.5YR 5/4), very stiff, moist, few calcium carbonate nodules, few fine grained sand, strong HCl reaction
10.3	68.6	6	11	13								SILTY SAND (SM), light gray (5Y 7/2), very firm, moist, fine grained, some fines, few calcium carbonate nodules, strong HCl reaction
5.3	73.6	6	8	13								CLAYEY SAND (SC), pinkish white (7.5YR 8/2), very firm, moist, fine to medium grained, little fines, no HCl reaction
0.4	78.5	6	11	17								SILTY SAND (SM), light gray (5Y 7/1), very firm, moist, fine to medium grained, some fines, few calcium carbonate nodules, weak HCl reaction
												81.0 - 83.0 ft: hard drilling
-4.7	83.6	6	9	11								83.6 ft: No recovery
-6.3	85.2	4	16	15								FAT CLAY (CH), strong brown (7.5YR 5/6) to light gray (5Y 7/2), hard, moist, few calcium carbonate nodules, weak HCl reaction, few shell fragments
-9.7	88.6	20	41	50								FAT CLAY with sand (CH), white (5Y 8/1), hard, dry, few gravel, few fine grained sand, strong HCl reaction, caliche
-14.7	93.6	8	17	25								POORLY GRADED SAND (SP), very pale brown (10YR 7/3), dense, wet, fine to medium grained, few fines, no HCl reaction
-19.7	98.6	55	80	50/0.5								98.6 ft: very dense, medium to coarse grained, few fine gravel
-24.1	103.0											FAT CLAY (CH), light greenish gray (10Y 7/1) and yellowish brown (10YR 5/6), very stiff, moist, few fine grained sand, few calcium carbonate nodules, weak HCl reaction
-29.6	108.5	6	8	12								

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: A. Mwembeshi			
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS									GROUND WATER (ft)			
BORING NO.: B-3131			DRILL METHOD: Mud Rotary			SAMPLE METHODS: SPT			0 HR.	ND		
GROUND SURFACE ELEV.: 78.9 ft (NAVD88)			NORTHING: 13,412,262			US ft (NAD83)			EASTING: 2,600,045 US ft (NAD83)			
24 HR.			ND									
TOTAL DEPTH: 406.8 ft			DRILL MACHINE: CME 75 Truck			DRILLER: J. Cook (MILLER)			HAMMER (ID): 140 lb. Auto (100)			
DATE STARTED: 1/14/09			COMPLETED: 1/27/09			CASING DEPTH: 3.6 ft			BITS USED: 3 7/8" Wing 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		
-89.4					Continued from previous page							
-89.7	188.6	33	41	50						91	SS-31	POORLY GRADED SAND (SP), very pale brown (10YR 8/2), very dense, wet, fine to coarse grained, few fine gravel, weak HCl reaction (continued)

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: A. Mwembeshi						
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)					
BORING NO.: B-3131		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND						
GROUND SURFACE ELEV.: 78.9 ft (NAVD88)		NORTHING: 13,412,262		US ft (NAD83)		EASTING: 2,600,045 US ft (NAD83)						
TOTAL DEPTH: 406.8 ft		DRILL MACHINE: CME 75 Truck		DRILLER: J. Cook (MILLER)		HAMMER (ID): 140 lb. Auto (100)						
DATE STARTED: 1/14/09		COMPLETED: 1/27/09		CASING DEPTH: 3.6 ft		BITS USED: 3 7/8" Wing Bit						
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	SOIL AND ROCK DESCRIPTION
		0.5ft	0.5ft	0.5ft	0	20	40	60	80	100		
-145.5					Continued from previous page							
-149.7	228.6	7	12	17						SS-37		CLAYEY SAND (SC), light gray (5Y 7/1) with yellowish brown (10YR 5/6), very dense, moist, fine to medium grained, some fines, no HCl reaction (continued)
-159.7	238.6	12	21	24						SS-38		FAT CLAY with sand (CH), light gray (5Y 7/1) and brown (7.5YR 5/4), very stiff, moist, little fine grained sand, weak HCl reaction, few calcium carbonate nodules, trace black staining
-169.7	248.6	38	29	34						SS-39		SANDY FAT CLAY (CH), gray (5Y 6/1), hard, moist, fine to medium grained sand, strong HCl reaction, few shell fragments
-179.7	258.6	19	24	25						SS-40		SILTY SAND (SM), light gray (7.5YR 7/1), very dense, moist, fine to medium grained, strong HCl reaction, trace shell fragments
-189.6	268.5	5	9	14						SS-41		POORLY GRADED SAND (SP), very pale brown (10YR 8/2), dense, wet, fine to medium grained, weak HCl reaction
-199.7	278.6	31	50/0.4							SS-42		FAT CLAY (CH), greenish gray (10Y 6/1), very stiff, moist, few fine grained sand, no HCl reaction, trace black staining
												SILTY SAND (SM), gray (10YR 6/1), very dense, wet, fine grained, little fines, no HCl reaction

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

[illegible]

BORING NO.: B-3131	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR.	ND
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GROUND SURFACE ELEV.: 78.9 ft (NAVD88)	NORTHING: 13,412,262 US ft (NAD83)	EASTING: 2,600,045 US ft (NAD83)	24 HR.	ND
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TOTAL DEPTH: 406.8 ft	DRILL MACHINE: CME 75 Truck	DRILLER: J. Cook (MILLER)	HAMMER (ID): 140 lb. Auto (100)
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DATE STARTED: 1/14/09	COMPLETED: 1/27/09	CASING DEPTH: 3.6 ft	BITS USED: 3 7/8" Wing Bit
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ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION
		0.5ft	0.5ft	0.5ft					
-257.7									Continued from previous page
-259.5	338.4	7	16	24	40	SS-49			FAT CLAY (CH), reddish brown (5YR 5/3) and light gray (5Y 7/2), hard, moist, weak HCl reaction, trace black staining (continued)
-269.4	348.3	40	47	50	97	SS-50			SILTY SAND (SM), yellowish brown (10YR 5/6) to light gray (10YR 7/2), very dense, wet, fine grained, weak HCl reaction
-279.6	358.5	10	19	29	48	SS-51			FAT CLAY (CH), pinkish gray (7.5YR 7/2), hard, moist, few fine sand, weak HCl reaction, trace calcium carbonate nodules
-289.7	368.6	17	22	32	54	SS-52			368.6 ft: light greenish gray (10Y 7/1) and strong brown (7.5YR 5/6)
-299.6	378.5	19	24	24	48	SS-53			378.5 ft: light greenish gray (10Y 7/1), no calcium carbonate nodules observed
-309.7	388.6	15	20	27	47	SS-54			388.6 ft: light greenish gray (10Y 8/1), trace black staining

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



SHEET 8 OF 8

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-3131		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND							
GROUND SURFACE ELEV.: 78.9 ft (NAVD88)		NORTHING: 13,412,262		US ft (NAD83)		EASTING: 2,600,045 US ft (NAD83)							
TOTAL DEPTH: 406.8 ft		DRILL MACHINE: CME 75 Truck		DRILLER: J. Cook (MILLER)		HAMMER (ID): 140 lb. Auto (100)							
DATE STARTED: 1/14/09		COMPLETED: 1/27/09		CASING DEPTH: 3.6 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				
-313.8					Continued from previous page								
-319.7	398.6												FAT CLAY (CH), pinkish gray (7.5YR 7/2), hard, moist, few fine sand, weak HCl reaction, trace calcium carbonate nodules (continued)
-321.7	400.6	9	15	25						SS-55			398.6 ft: trace calcium carbonate nodules
		9	15	23						SS-56			400.6 ft: No recovery
-326.4	405.3	16	17	25						SS-57			405.3 ft: light gray (5Y 7/1), strong HCl reaction
													-327.9
													406.8
													Boring Terminated at Elevation -327.9 ft

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



GEOTECHNICAL BORING LOG

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

SHEET 1 OF 8

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: J. Liles					
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS						GROUND WATER (ft)					
BORING NO.: B-3132		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND					
GROUND SURFACE ELEV.: 79.3 ft (NAVD88)		NORTHING: 13,412,156 US ft (NAD83)		EASTING: 2,600,020 US ft (NAD83)		24 HR. ND					
TOTAL DEPTH: 401.6 ft		DRILL MACHINE: CME 550		DRILLER: R. White (MILLER)		HAMMER (ID): 140 lb. Auto (353)					
DATE STARTED: 1/20/09		COMPLETED: 1/25/09		CASING DEPTH: 3.3 ft		BITS USED: 3 1/2" Drag Bit					
ELEV. (ft)	DEPTH (ft)	BLOW COUNT 0.5ft 0.5ft 0.5ft			BLOWS PER FOOT 0 20 40 60 80 100			SAMP. NO.	LOG MOI	SOIL AND ROCK DESCRIPTION	
79.3					Ground Surface					79.3	0.0
Drill without sampling from 0.0 - 150.0 feet.											

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

SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS	GROUND WATER (ft)
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BORING NO.: B-3132	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR.	ND
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GROUND SURFACE ELEV.: 79.3 ft (NAVD88)	NORTHING: 13,412,156 US ft (NAD83)	EASTING: 2,600,020 US ft (NAD83)	24 HR.	ND
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TOTAL DEPTH: 401.6 ft	DRILL MACHINE: CME 550	DRILLER: R. White (MILLER)	HAMMER (ID): 140 lb. Auto (353)
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DATE STARTED: 1/20/09	COMPLETED: 1/25/09	CASING DEPTH: 3.3 ft	BITS USED: 3 1/2" Drag Bit
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23.2					Continued from previous page			
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Drill without sampling from 0.0 - 150.0 feet.
(continued)

77.0 ft: hard drilling

86.0 ft: hard drilling

95.0 ft: bit chatter

101.0 ft: hard drilling



BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: J. Liles						
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)					
BORING NO.: B-3132		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR.	ND				
GROUND SURFACE ELEV.: 79.3 ft (NAVD88)		NORTHING: 13,412,156		US ft (NAD83)		EASTING: 2,600,020	US ft (NAD83)	24 HR.	ND			
TOTAL DEPTH: 401.6 ft		DRILL MACHINE: CME 550		DRILLER: R. White (MILLER)			HAMMER (ID): 140 lb. Auto (353)					
DATE STARTED: 1/20/09		COMPLETED: 1/25/09		CASING DEPTH: 3.3 ft			BITS USED: 3 1/2" 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		
-89.0					Continued from previous page							
-91.4	170.7	17	36	32						SS-3		POORLY GRADED SAND (SP), light gray (2.5Y 7/2), dense, wet, fine grained, few fines, weak HCl reaction (continued)
												170.7 ft: light brownish gray (2.5Y 6/2), very dense, fine to medium grained, trace fine gravel
												174.0 ft: hard drilling
												178.5 ft: hard drilling, bit chatter
-101.4	180.7	142	50/0.1							SS-4		180.7 ft: pale yellow (2.5Y 8/2), strong HCl reaction
-111.4	190.7	40	35	23						SS-5		190.7 ft: pale yellow (2.5Y 7/4), weak HCl reaction
-121.7	201.0	10	13	50/0.2						SS-6		CLAYEY SAND (SC), light yellowish brown (2.5Y 6/4), very dense, wet, fine to medium grained, some fines, weak HCl reaction
												208.0 ft: bit chatter
-131.4	210.7	19	18	14						SS-7A/B		POORLY GRADED SAND (SP), light yellowish brown (2.5Y 6/4), dense, wet, fine grained, weak HCl reaction
												FAT CLAY (CH), strong brown (7.5YR 5/6) mottled light gray (2.5Y 7/2), hard, moist, weak HCl reaction, trace calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
-141.5	220.8	8	16	22						SS-8		CLAYEY SAND (SC), light gray (2.5Y 7/2), dense, moist, fine grained, some fines, no HCl reaction on sand, trace calcium carbonate nodules, strong HCl reaction on 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: J. Liles									
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)								
BORING NO.: B-3132		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND									
GROUND SURFACE ELEV.: 79.3 ft (NAVD88)		NORTHING: 13,412,156		US ft (NAD83)		EASTING: 2,600,020 US ft (NAD83)									
TOTAL DEPTH: 401.6 ft		DRILL MACHINE: CME 550		DRILLER: R. White (MILLER)		HAMMER (ID): 140 lb. Auto (353)									
DATE STARTED: 1/20/09		COMPLETED: 1/25/09		CASING DEPTH: 3.3 ft		BITS USED: 3 1/2" 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					
-145.1					Continued from previous page										
-151.6	230.9	6	11	18								-146.7	226.0	FAT CLAY (CH), light brownish gray (2.5Y 6/2), very stiff, moist, trace orange staining, weak HCl reaction on sand, trace calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules	
														230.9 ft: light brownish gray (2.5Y 6/2)	
-161.4	240.7	21	29	28										240.7 ft: mottled yellowish brown (10YR 5/6), hard	
-171.5	250.8	18	21	36									-171.5	250.8	CLAYEY SAND (SC), light gray (2.5Y 7/2), very dense, moist, fine grained, some fines, strong HCl reaction, little orange staining 253.0 ft: hard drilling
-181.5	260.8	16	15	17									-178.7	258.0	POORLY GRADED SAND (SP), light gray (2.5Y 7/2), dense, wet, fine grained, no HCl reaction
-191.5	270.8	18	23	38									-187.7	267.0	POORLY GRADED SAND with clay (SP-SC), light gray (2.5Y 7/2), very dense, moist, fine grained, little fines, no HCl reaction, little orange staining

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



SHEET 6 OF 8

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: J. Liles						
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)					
BORING NO.: B-3132		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR.	ND				
GROUND SURFACE ELEV.: 79.3 ft (NAVD88)		NORTHING: 13,412,156		US ft (NAD83)		EASTING: 2,600,020 US ft (NAD83)		24 HR.	ND			
TOTAL DEPTH: 401.6 ft		DRILL MACHINE: CME 550		DRILLER: R. White (MILLER)			HAMMER (ID): 140 lb. Auto (353)					
DATE STARTED: 1/20/09		COMPLETED: 1/25/09		CASING DEPTH: 3.3 ft			BITS USED: 3 1/2" 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	
-201.2					Continued from previous page							
-201.5	280.8	33	50	50						SS-14		POORLY GRADED SAND (SP), light gray (2.5Y 7/1), very dense, wet, fine grained, low fines, no HCl reaction
-211.5	290.8	8	13	19						SS-15		FAT CLAY (CH), light gray (2.5Y 7/2) mottled brown (7.5YR 5/4), hard, moist, few fine sand, strong HCl reaction on calcium carbonate nodules
-221.5	300.8	8	13	25						SS-16		300.8 ft: weak HCl reaction
-231.5	310.8	6	11	15						SS-17		310.8 ft: very stiff, weak HCl reaction on clay, trace calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules, trace orange staining
-241.5	320.8	45	78	50/0.4						SS-18		POORLY GRADED SAND (SP), light yellowish brown (2.5Y 6/3), very dense, wet, fine grained, trace fines, weak HCl reaction
-251.1	330.4	9	13	17						SS-19		FAT CLAY (CH), light gray (2.5Y 7/2) mottled yellowish brown (10YR 5/6), very stiff, moist, weak HCl reaction

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



SHEET 7 OF 8

BECHTEL NO.: 25352			MACTEC NO.: 6468-07-1777			COUNTY: Victoria, TX			GEOLOGIST: J. Liles			
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS									GROUND WATER (ft) 0 HR. ND 24 HR. ND			
BORING NO.: B-3132			DRILL METHOD: Mud Rotary			SAMPLE METHODS: SPT						
GROUND SURFACE ELEV.: 79.3 ft (NAVD88)			NORTHING: 13,412,156			US ft (NAD83)			EASTING: 2,600,020 US ft (NAD83)			
TOTAL DEPTH: 401.6 ft			DRILL MACHINE: CME 550			DRILLER: R. White (MILLER)			HAMMER (ID): 140 lb. Auto (353)			
DATE STARTED: 1/20/09			COMPLETED: 1/25/09			CASING DEPTH: 3.3 ft			BITS USED: 3 1/2" 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			
-257.3					Continued from previous page							
-261.6	340.9	11	18	20	38					SS-20		FAT CLAY (CH), light gray (2.5Y 7/2) mottled yellowish brown (10YR 5/6), very stiff, moist, weak HCl reaction (continued) 340.9 ft: hard, trace calcium carbonate nodules, strong to weak HCl reaction
-271.6	350.9	39	115	50/0.1	165/0.6					SS-21		POORLY GRADED SAND with clay (SP-SC), pale yellow (2.5Y 7/3), very dense, moist, fine grained, few fines, weak HCl reaction
-281.5	360.8	6	13	14	27					SS-22		FAT CLAY (CH), light gray (2.5Y 7/2) mottled yellowish brown (10YR 5/4), hard, moist, no HCl reaction, trace black staining 360.8 ft: No recovery
-291.1	370.4	12	14	21	35					SS-23		
-301.6	380.9	7	12	17	29					SS-24		380.9 ft: light gray (2.5Y 7/2), very stiff, brown staining
-311.6	390.9	9	14	20	34					SS-25		390.9 ft: hard

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

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



GEOTECHNICAL BORING LOG

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

SHEET 1 OF 8

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-3133		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND							
GROUND SURFACE ELEV.: 78.4 ft (NAVD88)		NORTHING: 13,412,232		US ft (NAD83)		EASTING: 2,600,081 US ft (NAD83)							
TOTAL DEPTH: 400.0 ft		DRILL MACHINE: CME 75 Truck		DRILLER: J. Cook (MILLER)		HAMMER (ID): 140 lb. Auto (100)							
DATE STARTED: 1/28/09		COMPLETED: 2/8/09		CASING DEPTH: 3.4 ft		BITS USED: 3 7/8" Wing Bit							
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT			SAMP. NO.	LOG MOI	SOIL AND ROCK DESCRIPTION			
		0.5ft	0.5ft	0.5ft	0	20	40	60	80		100		
78.4					Ground Surface							78.4	0.0
Drill without sampling from 0.0 - 198.5 feet.													

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

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

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



SHEET 4 OF 8

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-3133		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND							
GROUND SURFACE ELEV.: 78.4 ft (NAVD88)		NORTHING: 13,412,232		US ft (NAD83)		EASTING: 2,600,081 US ft (NAD83)							
TOTAL DEPTH: 400.0 ft		DRILL MACHINE: CME 75 Truck		DRILLER: J. Cook (MILLER)		HAMMER (ID): 140 lb. Auto (100)							
DATE STARTED: 1/28/09		COMPLETED: 2/8/09		CASING DEPTH: 3.4 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			
-89.9					Continued from previous page								
													Drill without sampling from 0.0 - 198.5 feet. (continued)
-120.1	198.5	17	50	0.3						670.8	SS-1		POORLY GRADED SAND with silt (SP-SM), yellowish brown (10YR 5/6) to pale yellow (2.5Y 8/2), very dense, wet, fine to medium grained, few fines, weak HCl reaction
-130.0	208.4	6	10	16						26	SS-2		FAT CLAY (CH), light greenish gray (10Y 7/1) and strong brown (7.5YR 5/6), very stiff, moist, weak HCl reaction
-140.2	218.6	23	29	46						75	SS-3		POORLY GRADED SAND (SP), light gray (10YR 7/1), very dense, wet, fine to medium grained, few fines, no HCl reaction
													LEAN CLAY with sand (CL), light gray (5Y 7/1) and yellowish brown (10YR 5/6), hard, moist, little fine grained sand, strong HCl reaction, trace calcium carbonate fragments, black staining

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



SHEET 5 OF 8

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-3133		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND						
GROUND SURFACE ELEV.: 78.4 ft (NAVD88)		NORTHING: 13,412,232		US ft (NAD83)		EASTING: 2,600,081 US ft (NAD83)						
24 HR. ND												
TOTAL DEPTH: 400.0 ft		DRILL MACHINE: CME 75 Truck		DRILLER: J. Cook (MILLER)		HAMMER (ID): 140 lb. Auto (100)						
DATE STARTED: 1/28/09		COMPLETED: 2/8/09		CASING DEPTH: 3.4 ft		BITS USED: 3 7/8" Wing 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		
-146.0					Continued from previous page							
-150.2	228.6	9	17	23						SS-4		LEAN CLAY with sand (CL), light gray (5Y 7/1) and yellowish brown (10YR 5/6), hard, moist, little fine grained sand, strong HCl reaction, trace calcium carbonate fragments, black staining (continued)
-160.0	238.4	15	24	28						SS-5		
-170.1	248.5	17	22	28						SS-6		248.5 ft: dense, no HCl reaction on sand, trace calcium carbonate nodules, strong HCl reaction
-180.1	258.5	16	20	25						SS-7		258.5 ft: No recovery
-190.0	268.4	7	11	14						SS-8		FAT CLAY with sand (CH), light greenish gray (10Y 7/1), very stiff, moist, few fine to medium grained sand, weak HCl reaction, few calcium carbonate fragments
-200.1	278.5	48	50/0.4							SS-9		POORLY GRADED SAND (SP), very pale brown (10YR 8/2), very dense, wet, fine to medium grained, few fines, no HCl reaction

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



SHEET 6 OF 8

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-3133			DRILL METHOD: Mud Rotary			SAMPLE METHODS: SPT			0 HR. ND			
GROUND SURFACE ELEV.: 78.4 ft (NAVD88)			NORTHING: 13,412,232			US ft (NAD83)			EASTING: 2,600,081 US ft (NAD83)			
TOTAL DEPTH: 400.0 ft			DRILL MACHINE: CME 75 Truck			DRILLER: J. Cook (MILLER)			HAMMER (ID): 140 lb. Auto (100)			
DATE STARTED: 1/28/09			COMPLETED: 2/8/09			CASING DEPTH: 3.4 ft			BITS USED: 3 7/8" Wing Bit			
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	SOIL AND ROCK DESCRIPTION
		0.5ft	0.5ft	0.5ft	0	20	40	60	80	100		
-202.1					Continued from previous page							

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

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



SHEET 8 OF 8

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-3133		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND							
GROUND SURFACE ELEV.: 78.4 ft (NAVD88)		NORTHING: 13,412,232		US ft (NAD83)		EASTING: 2,600,081 US ft (NAD83)							
TOTAL DEPTH: 400.0 ft		DRILL MACHINE: CME 75 Truck		DRILLER: J. Cook (MILLER)		HAMMER (ID): 140 lb. Auto (100)							
DATE STARTED: 1/28/09		COMPLETED: 2/8/09		CASING DEPTH: 3.4 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			
-314.3					Continued from previous page								
-320.1	398.5												FAT CLAY (CH), light greenish gray (10Y 7/1) and reddish brown (2.5YR 4/4), very stiff, moist, weak HCl reaction, trace calcium carbonate fragments (continued)
		16	21	20									
													400.0

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

GEOTECHNICAL BORING LOG

Prepared By WBC Date 11-10-09

Checked By PSA Date 11/10/09

SHEET 1 OF 8

[illegible]

EXELON COL BORE VICTORIA PHASE III GPJ EXELON COL GDT 102009

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: J. Moore				
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS						GROUND WATER (ft) 0 HR. ND 24 HR. ND				
BORING NO.: B-3134		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT						
GROUND SURFACE ELEV.: 79.7 ft (NAVD88)		NORTHING: 13,412,308		US ft (NAD83)		EASTING: 2,600,145 US ft (NAD83)				
TOTAL DEPTH: 401.5 ft		DRILL MACHINE: CME 750		DRILLER: G. Bilbrey (MILLER)		HAMMER (ID): 140 lb. Auto (07)				
DATE STARTED: 2/11/09		COMPLETED: 2/23/09		CASING DEPTH: 4.0 ft		BITS USED: 3 7/8" Step Drag Bit				
ELEV. (ft)	DEPTH (ft)	BLOW COUNT 0.5ft 0.5ft 0.5ft			BLOWS PER FOOT 0 20 40 60 80 100		SAMP. NO.	▼ MOI	L O G	SOIL AND ROCK DESCRIPTION
23.6					Continued from previous page					
										Drill without sampling from 0.0 - 150.0 feet. (continued)
										83.5 to 86.0 ft: rig chatter
										88.0 to 93.0 ft: rig chatter

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



SHEET 4 OF 8

BECHTEL NO.: 25352			MACTEC NO.: 6468-07-1777			COUNTY: Victoria, TX			GEOLOGIST: J. Moore				
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS									GROUND WATER (ft)				
BORING NO.: B-3134			DRILL METHOD: Mud Rotary			SAMPLE METHODS: SPT							
GROUND SURFACE ELEV.: 79.7 ft (NAVD88)			NORTHING: 13,412,308			US ft (NAD83)			EASTING: 2,600,145 US ft (NAD83)				
TOTAL DEPTH: 401.5 ft			DRILL MACHINE: CME 750			DRILLER: G. Bilbrey (MILLER)			HAMMER (ID): 140 lb. Auto (07)				
DATE STARTED: 2/11/09			COMPLETED: 2/23/09			CASING DEPTH: 4.0 ft			BITS USED: 3 7/8" Step 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			
-88.6					Continued from previous page								
-90.3	170.0	20	38	38						76	SS-3		WELL GRADED SAND (SW), very pale brown (10YR 7/3), very dense, wet, fine to medium grained, few fines, strong HCl reaction (continued)
-100.3	180.0	100/0.5								100/0.5	SS-4		180.0 ft: fine to coarse grained, weak HCl reaction, some calcium carbonate nodules
-110.3	190.0	16	34	50						84	SS-5		POORLY GRADED SAND (SP), very pale brown (10YR 8/3), very dense, wet, fine grained, trace fines, weak HCl reaction, trace calcium carbonate nodules
-120.3	200.0	19	27	50/0.2						77/0.7	SS-6		200.0 ft: few fines, 0.1-ft thick clayey sand layer
-130.3	210.0	6	10	15						25	SS-7		FAT CLAY (CH), reddish yellow (7.5YR 8/8) mottled very pale brown (10YR 8/3), very stiff, moist, trace fine grained sand, strong HCl reaction, trace calcium carbonate nodules
-140.8	220.5	15	9	12						21	SS-8		SANDY FAT CLAY (CH), very pale brown (10YR 8/3) mottled yellow (10YR 7/8), very stiff, moist, some fine grained sand, trace calcium carbonate nodules, black staining

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



BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: J. Moore							
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)						
BORING NO.: B-3134		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR.	ND					
GROUND SURFACE ELEV.: 79.7 ft (NAVD88)		NORTHING: 13,412,308		US ft (NAD83)		EASTING: 2,600,145	US ft (NAD83)	24 HR.	ND				
TOTAL DEPTH: 401.5 ft		DRILL MACHINE: CME 750		DRILLER: G. Bilbrey (MILLER)			HAMMER (ID): 140 lb. Auto (07)						
DATE STARTED: 2/11/09		COMPLETED: 2/23/09		CASING DEPTH: 4.0 ft			BITS USED: 3 7/8" Step 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.
-144.7					Continued from previous page								
-150.3	230.0	8	10	16							SS-9		SANDY FAT CLAY (CH), very pale brown (10YR 8/3) mottled yellow (10YR 7/8), very stiff, moist, some fine grained sand, trace calcium carbonate nodules, black staining (continued)
-160.3	240.0	11	15	21							SS-10		FAT CLAY (CH), very pale brown (10YR 8/3) mottled yellow (10YR 7/8), very stiff, moist, few fine grained sand, strong HCl reaction, some calcium carbonate nodules
-170.3	250.0	20	28	33							SS-11		240.0 ft: hard, trace fine grained sand, caliche
-180.3	260.0	19	37	31							SS-12		POORLY GRADED SAND with clay (SP-SC), very pale brown (10YR 8/3), very dense, wet, fine grained, few fines, weak HCl reaction, caliche
-190.3	270.0	12	20	26							SS-13		FAT CLAY with sand (CH), light gray (10YR 7/1) mottled yellow (10YR 7/8), hard, moist, few fine grained sand, strong HCl reaction, some calcium carbonate nodules
-200.3	280.0												CLAYEY SAND (SC), very pale brown (10YR 8/2), dense, wet, fine grained, little fines, no HCl reaction, yellow staining

EXELON COL BORE VICTORIA PHASE III QP3 EXELON COL.GDT 10/20/09



SHEET 6 OF 8

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: J. Moore							
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)						
BORING NO.: B-3134		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND							
GROUND SURFACE ELEV.: 79.7 ft (NAVD88)		NORTHING: 13,412,308		US ft (NAD83)		EASTING: 2,600,145 US ft (NAD83)							
TOTAL DEPTH: 401.5 ft		DRILL MACHINE: CME 750		DRILLER: G. Bilbrey (MILLER)		HAMMER (ID): 140 lb. Auto (07)							
DATE STARTED: 2/11/09		COMPLETED: 2/23/09		CASING DEPTH: 4.0 ft		BITS USED: 3 7/8" Step 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			
-200.8					Continued from previous page								
		34	38	49						SS-14		POORLY GRADED SAND with clay (SP-SC), very pale brown (10YR 8/2), very dense, wet, fine grained, few fines, no HCl reaction (continued)	
-210.3	290.0	9	12	14						SS-15		FAT CLAY (CH), very pale brown (10YR 8/3), very stiff, moist, trace fine grained sand, weak HCl reaction, trace calcium carbonate nodules, yellow and black staining	
-220.3	300.0	9	14	17						SS-16		300.0 ft: light gray (10YR 7/2) mottled reddish yellow (7.5YR 6/8), hard, strong HCl reaction	
-230.3	310.0	7	13	15						SS-17		310.0 ft: very pale brown (10YR 8/2) mottled with reddish yellow (7.5YR 6/8), very stiff, weak HCl reaction	
-240.3	320.0	8	13	21						SS-18		SANDY FAT CLAY (CH), very pale brown (10YR 8/2) mottled brownish yellow (10YR 6/6), hard, moist, some fine grained sand, strong HCl reaction, trace calcium carbonate nodules, clayey sand layers	
-250.3	330.0	22	50/0.4							SS-19		POORLY GRADED SAND (SP), very pale brown (10YR 8/4), very dense, wet, fine grained, few fines, weak HCl reaction	



SHEET 7 OF 8

BECHTEL NO.: 25352			MACTEC NO.: 6468-07-1777			COUNTY: Victoria, TX			GEOLOGIST: J. Moore				
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS									GROUND WATER (ft)				
BORING NO.: B-3134			DRILL METHOD: Mud Rotary			SAMPLE METHODS: SPT							
GROUND SURFACE ELEV.: 79.7 ft (NAVD88)			NORTHING: 13,412,308			US ft (NAD83)			EASTING: 2,600,145 US ft (NAD83)			0 HR.	ND
TOTAL DEPTH: 401.5 ft			DRILL MACHINE: CME 750			DRILLER: G. Bilbrey (MILLER)			HAMMER (ID): 140 lb. Auto (07)			24 HR.	ND
DATE STARTED: 2/11/09			COMPLETED: 2/23/09			CASING DEPTH: 4.0 ft			BITS USED: 3 7/8" Step 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			
-256.9					Continued from previous page								
-260.3	340.0	6	10	16							SS-20		POORLY GRADED SAND (SP), very pale brown (10YR 8/4), very dense, wet, fine grained, few fines, weak HCl reaction (continued)
-270.3	350.0	9	12	21									SS-21
-280.3	360.0	5	13	14			SS-22	360.0 ft: very stiff, no recovery					
-290.3	370.0	7	10	16			SS-23	370.0 ft: no recovery					
-291.8	371.5	7	10	14			SS-24	371.5 ft: weak HCl reaction, black staining					
-300.3	380.0	4	9	15			SS-25	380.0 ft: very pale brown (10YR 8/2), no HCl reaction					
-310.3	390.0	7	11	16			SS-26						

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

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: B. Mable							
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)						
BORING NO.: B-3150		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR. ND						
GROUND SURFACE ELEV.: 80.1 ft (NAVD88)		NORTHING: 13,412,364		US ft (NAD83)		EASTING: 2,599,708 US ft (NAD83)		24 HR. ND					
TOTAL DEPTH: 200.0 ft		DRILL MACHINE: CME 550		DRILLER: L. Carter (MACTEC ATL)			HAMMER (ID): 140 lb. Auto (CME-08)						
DATE STARTED: 1/13/09		COMPLETED: 1/14/09		CASING DEPTH: 5.0 ft			BITS USED: 2 15/16" Drag Bit						
ELEV.	DEPTH	BLOW COUNT			BLOWS PER FOOT					SAMP.	LOG	SOIL AND ROCK DESCRIPTION	
(ft)	(ft)	0.5ft	0.5ft	0.5ft	0	20	40	60	80	100			NO.
80.1					Ground Surface							80.1	0.0
80.1	0.0	3	4	5						SS-1		LEAN CLAY (CL), very dark brown (10YR 2/2), stiff, moist, few fine grained sand, no HCl reaction, trace organics, roots and grass	
76.6	3.5											76.6	3.5
		5	6	8						SS-2		FAT CLAY (CH), gray (10YR 5/1), stiff, moist, few fine grained sand, weak HCl reaction, calcium carbonate nodules, black staining	
74.1	6.0												
		6	5	9						SS-3		6.0 ft: very pale brown (10YR 7/3), black and orange staining	
71.6	8.5												
		6	10	12						SS-4		8.5 ft: very stiff	
69.1	11.0												
		8	12	15						SS-5		11.0 ft: strong HCl reaction	
66.6	13.5												
		5	8	9						SS-6		13.5 ft: light gray (10YR 7/2), weak HCl reaction	
61.6	18.5												
		5	8	10						SS-7		18.5 ft: strong HCl reaction	
56.6	23.5												
		5	6	9						SS-8		23.5 ft: light gray (10YR 7/2) mottled reddish yellow (7.5YR 6/6), stiff, weak HCl reaction, black staining	
51.6	28.5												
		4	6	8						SS-9		28.5 ft: trace calcium carbonate nodules, slickensides	
46.6	33.5												
		5	6	10						SS-10		33.5 ft: very stiff	
41.6	38.5												
		4	6	8						SS-11		38.5 ft: reddish yellow (7.5YR 6/6), stiff	
36.6	43.5												
		5	6	9						SS-12		43.5 ft: no calcium carbonate nodules observed	
31.6	48.5												
		6	7	10						SS-13		48.5 ft: pale brown (10YR 6/3), very stiff, black and orange staining, trace calcium carbonate nodules	
26.6	53.5												
		8	12	12						SS-14		FAT CLAY with sand (CH), light gray (10YR 7/2), very stiff, moist, little fine grained sand, no HCl reaction, orange staining	

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: B. Mable							
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)						
BORING NO.: B-3150		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR.	ND					
GROUND SURFACE ELEV.: 80.1 ft (NAVD88)		NORTHING: 13,412,364		US ft (NAD83)		EASTING: 2,599,708 US ft (NAD83)	24 HR.	ND					
TOTAL DEPTH: 200.0 ft		DRILL MACHINE: CME 550		DRILLER: L. Carter (MACTEC ATL)			HAMMER (ID): 140 lb. Auto (CME-08)						
DATE STARTED: 1/13/09		COMPLETED: 1/14/09		CASING DEPTH: 5.0 ft			BITS USED: 2 15/16" Drag Bit						
ELEV.	DEPTH	BLOW COUNT			BLOWS PER FOOT					SAMP.	LOG	SOIL AND ROCK DESCRIPTION	
(ft)	(ft)	0.5ft	0.5ft	0.5ft	0	20	40	60	80	100			NO.
24.0					Continued from previous page								
21.6	58.5												FAT CLAY with sand (CH), light gray (10YR 7/2), very stiff, moist, little fine grained sand, no HCl reaction, orange staining (continued)
		10	13	14							SS-15		POORLY GRADED SAND with silt (SP-SM), very pale brown (10YR 8/2), very firm, wet, fine grained, few fines, no HCl reaction
16.6	63.5	9	8	11									FAT CLAY with sand (CH), light gray (10YR 7/2) mottled reddish yellow (7.5YR 6/6), very stiff, moist, little fine grained sand, calcium carbonate nodules, weak HCl reaction
											SS-16		
11.6	68.5	6	6	11									FAT CLAY (CH), light gray (10YR 7/2) mottled reddish yellow (7.5YR 6/6), very stiff, moist, weak HCl reaction, trace calcium carbonate nodules, orange staining
											SS-17		
6.6	73.5	5	6	8									73.5 ft: light gray (10YR 7/2), stiff, strong HCl reaction, trace black staining
											SS-18		
1.6	78.5	6	8	13									78.5 ft: very stiff, trace fine grained sand, weak HCl reaction, no calcium carbonate nodules observed
											SS-19		
-3.4	83.5	8	9	14									POORLY GRADED SAND with silt (SP-SM), very pale brown (10YR 7/3), very firm, wet, fine grained, few fines, no HCl reaction
											SS-20		
-8.4	88.5	50/0.4											FAT CLAY with sand (CH), light gray (10YR 7/2), hard, wet, low fine grained sand, strong HCl reaction, caliche
											SS-21		
-13.4	93.5	80/0.4											POORLY GRADED SAND (SP), very pale brown (10YR 8/3), very dense, wet, fine to medium grained, no HCl reaction
											SS-22		96.0 - 98.0 ft: hard drilling
-18.4	98.5	50/0.5											98.5 ft: very pale brown (10YR 8/2), dry, cemented
											SS-23		
-28.4	108.5	6	7	10									FAT CLAY (CH), light gray (10YR 7/2) and reddish yellow (7.5YR 6/6), very stiff, moist, weak HCl reaction, trace calcium carbonate nodules, black staining
											SS-24		

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: B. Mabie						
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)					
BORING NO.: B-3150		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND						
GROUND SURFACE ELEV.: 80.1 ft (NAVD88)		NORTHING: 13,412,364		US ft (NAD83)		EASTING: 2,599,708 US ft (NAD83)						
TOTAL DEPTH: 200.0 ft		DRILL MACHINE: CME 550		DRILLER: L. Carter (MACTEC ATL)		HAMMER (ID): 140 lb. Auto (CME-08)						
DATE STARTED: 1/13/09		COMPLETED: 1/14/09		CASING DEPTH: 5.0 ft		BITS USED: 2 15/16" Drag Bit						
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	SOIL AND ROCK DESCRIPTION
		0.5ft	0.5ft	0.5ft	0	20	40	60	80	100		
-32.1					Continued from previous page							
-38.4	118.5	6	8	10	18					SS-26		FAT CLAY (CH), light gray (10YR 7/2) and reddish yellow (7.5YR 6/6), very stiff, moist, weak HCl reaction, trace calcium carbonate nodules, black staining (continued)
-48.4	128.5	15	19	22	41					SS-26		118.5 ft: light gray (10YR 7/2), some calcium carbonate nodules, black and orange staining, weak HCl reaction on clay
-58.4	138.5	7	11	14	25					SS-27		POORLY GRADED SAND (SP), light gray (10YR 7/2), dense, wet, fine grained, no HCl reaction
-68.4	148.5	10	16	20	36					SS-28		138.5 ft: very firm, fine to medium grained
-78.4	158.5	5	10	10	20					SS-29		POORLY GRADED SAND with silt (SP-SM), light gray (10YR 7/2), dense, wet, fine grained, low fines, no HCl reaction
												FAT CLAY (CH), very pale brown (10YR 8/2), very stiff, moist, weak HCl reaction, calcium carbonate nodules, trace black staining

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: B. Mabie						
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)					
BORING NO.: B-3150		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND						
GROUND SURFACE ELEV.: 80.1 ft (NAVD88)		NORTHING: 13,412,364		US ft (NAD83)		EASTING: 2,599,708 US ft (NAD83)						
TOTAL DEPTH: 200.0 ft		DRILL MACHINE: CME 550		DRILLER: L. Carter (MACTEC ATL)		HAMMER (ID): 140 lb. Auto (CME-08)						
DATE STARTED: 1/13/09		COMPLETED: 1/14/09		CASING DEPTH: 5.0 ft		BITS USED: 2 15/16" Drag Bit						
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	SOIL AND ROCK DESCRIPTION
		0.5ft	0.5ft	0.5ft	0	20	40	60	80	100		
-88.2					Continued from previous page							
-88.4	188.5	22	30	31						SS-30		POORLY GRADED SAND (SP), very pale brown (10YR 7/3), very dense, wet, fine to coarse grained, weak HCl reaction
-98.4	178.5	18	25	49						SS-31		
-108.4	188.5	44	68	50/0.4						SS-32		183.0 - 184.0 ft: hard drilling
-118.4	198.5	13	18	28						SS-33		188.5 ft: fine to medium grained, few fines
												198.5 ft: dense, fine to coarse grained
												Boring Terminated at Elevation -119.9 ft

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



GEOTECHNICAL BORING LOG

Prepared By PAU 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: B. Mable							
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)						
BORING NO.: B-3151		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR.	ND					
GROUND SURFACE ELEV.: 78.6 ft (NAVD88)		NORTHING: 13,412,602		US ft (NAD83)		EASTING: 2,599,908 US ft (NAD83)		24 HR.	ND				
TOTAL DEPTH: 200.0 ft		DRILL MACHINE: CME 550			DRILLER: L. Carter (MACTEC ATL)		HAMMER (ID): 140 lb. Auto (CME-08)						
DATE STARTED: 1/20/09		COMPLETED: 1/21/09		CASING DEPTH: 5.0 ft			BITS USED: 2 15/16" Drag Bit						
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	SOIL AND ROCK DESCRIPTION	
		0.5ft	0.5ft	0.5ft	0	20	40	60	80	100			
78.6					Ground Surface							78.6	0.0
78.6	0.0	3	3	4						SS-1		FAT CLAY (CH), black (10YR 2/1), firm, moist, few fine grained sand, weak HCl reaction, trace organics, roots and grass	
75.1	3.5	3	6	8						SS-2		3.5 ft: light brownish gray (10YR 6/2), stiff, calcium carbonate nodules, black staining	
72.6	6.0	7	7	10						SS-3		6.0 ft: light gray (10YR 7/2), very stiff, black and orange staining	
70.1	8.5	10	12	15						SS-4		8.5 ft: light gray (10YR 7/2) mottled reddish yellow (7.5YR 6/6), strong HCl reaction	
67.6	11.0	10	12	18						SS-5		11.0 ft: light gray (10YR 7/2)	
65.1	13.5	6	7	10						SS-6		13.5 ft: weak HCl reaction	
60.1	18.5	5	6	7						SS-7		18.5 ft: mottled with reddish yellow (7.5YR 6/6), stiff, slickensides	
55.1	23.5	4	6	8						SS-8			
50.1	28.5	5	6	9						SS-9			
45.1	33.5	4	5	8						SS-10			
40.1	38.5	5	9	16						SS-11		40.1 ft: POORLY GRADED SAND with clay (SP-SC), light gray (10YR 7/2), very firm, moist, fine grained, few fines, no HCl reaction, orange staining	
35.1	43.5	11	14	21						SS-12		43.5 ft: dense, weak HCl reaction, calcium carbonate nodules	
30.1	48.5	12	20	33						SS-13		48.5 ft: light gray (10YR 7/2) mottled reddish yellow (7.5YR 6/6), very dense, moist to wet	
25.1	53.5	6	10	14						SS-14		53.5 ft: FAT CLAY (CH), light gray (10YR 7/2), very stiff, moist, few fine grained sand, weak HCl reaction, trace calcium carbonate nodules, orange staining	

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: B. Mable						
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)					
BORING NO.: B-3151		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR.	ND				
GROUND SURFACE ELEV.: 78.6 ft (NAVD88)		NORTHING: 13,412,602		US ft (NAD83)	EASTING: 2,599,908		24 HR.	ND				
TOTAL DEPTH: 200.0 ft		DRILL MACHINE: CME 550		DRILLER: L. Carter (MACTEC ATL)		HAMMER (ID): 140 lb. Auto (CME-08)						
DATE STARTED: 1/20/09		COMPLETED: 1/21/09		CASING DEPTH: 5.0 ft			BITS USED: 2 15/16" Drag Bit					
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	SOIL AND ROCK DESCRIPTION
		0.5ft	0.5ft	0.5ft	0	20	40	60	80			
22.4					Continued from previous page							
20.1	58.5	7	11	14								FAT CLAY (CH), light gray (10YR 7/2), very stiff, moist, few fine grained sand, weak HCl reaction, trace calcium carbonate nodules, orange staining (continued) 58.5 ft: strong HCl reaction
15.1	63.5	7	8	13								
10.1	68.5	9	15	17								68.5 ft: hard
5.1	73.5	8	9	12								73.5 ft: very stiff, weak HCl reaction
0.0	78.5	7	10	12								0.0
-5.0	83.5	11	18	12								-5.0
												-5.9
-10.0	88.5	8	9	10								-10.0
												-15.0
-15.0	93.5	29	34	46								-15.0
												-28.5
-20.0	98.5	38	51	53/0.5								-20.0
												-28.5
-30.0	108.5	6	7	11								-30.0

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: B. Mable							
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)						
BORING NO.: B-3151		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR.	ND					
GROUND SURFACE ELEV.: 78.6 ft (NAVD88)		NORTHING: 13,412,602		US ft (NAD83)		EASTING: 2,599,908	US ft (NAD83)	24 HR.	ND				
TOTAL DEPTH: 200.0 ft		DRILL MACHINE: CME 550		DRILLER: L. Carter (MACTEC ATL)			HAMMER (ID): 140 lb. Auto (CME-08)						
DATE STARTED: 1/20/09		COMPLETED: 1/21/09		CASING DEPTH: 5.0 ft			BITS USED: 2 15/16" Drag Bit						
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	SOIL AND ROCK DESCRIPTION	
		0.5ft	0.5ft	0.5ft	0	20	40	60	80	100			
-33.7					Continued from previous page								
-40.0	118.5	6	8	20						SS-25		FAT CLAY (CH), light gray (10YR 7/2) mottled reddish yellow (7.5YR 6/6), very stiff, moist, weak HCl reaction, trace calcium carbonate nodules, black staining (continued)	
-50.0	128.5	14	26	23						SS-26		118.5 ft: light gray (10YR 7/2), black and orange staining	
-60.0	138.5	23	46	50/0.2						SS-27		POORLY GRADED SAND (SP), very pale brown (10YR 7/4), dense, wet, fine to coarse grained, weak HCl reaction	
-70.0	148.5	5	5	11						SS-28		138.5 ft: very dense, fine to medium grained, strong HCl reaction	
-80.0	158.5	11	11	21						SS-29		FAT CLAY (CH), light gray (10YR 7/2), very stiff, moist, few fine grained sand, weak HCl reaction, trace calcium carbonate nodules, orange staining	
												158.5 ft: hard, strong HCl reaction, little calcium carbonate nodules, black staining	
												POORLY GRADED SAND (SP), very pale brown (10YR 7/3), very dense, wet, fine to coarse grained, trace fine gravel, strong HCl reaction	

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: B. Mable								
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)							
BORING NO.: B-3151		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND								
GROUND SURFACE ELEV.: 78.6 ft (NAVD88)		NORTHING: 13,412,602		US ft (NAD83)		EASTING: 2,599,908 US ft (NAD83)								
TOTAL DEPTH: 200.0 ft		DRILL MACHINE: CME 550		DRILLER: L. Carter (MACTEC ATL)		HAMMER (ID): 140 lb. Auto (CME-08)								
DATE STARTED: 1/20/09		COMPLETED: 1/21/09		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				
-89.8					Continued from previous page									
-91.1	168.5	23	25	40						SS-30		POORLY GRADED SAND (SP), very pale brown (10YR 7/3), very dense, wet, fine to coarse grained, trace fine gravel, strong HCl reaction (continued)		
-100.0	178.5	22	30	24						SS-31		178.5 ft: weak HCl reaction		
-110.0	188.5	35	60/0.3							SS-32		188.5 ft: fine to medium grained		
-120.0	198.5	30	42	50/0.4						SS-33		198.5 ft: fine grained		
												-121.5	200.0	Boring Terminated at Elevation -121.5 ft

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



GEOTECHNICAL BORING LOG

Prepared By PSU 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: B. Mable						
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)					
BORING NO.: B-3152		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR.	ND				
GROUND SURFACE ELEV.: 79.7 ft (NAVD88)		NORTHING: 13,412,667		US ft (NAD83)		EASTING: 2,599,964 US ft (NAD83)	24 HR.	ND				
TOTAL DEPTH: 200.0 ft		DRILL MACHINE: CME 550		DRILLER: L. Carter (MACTEC ATL)			HAMMER (ID): 140 lb. Auto (CME-08)					
DATE STARTED: 1/22/09		COMPLETED: 1/23/09		CASING DEPTH: 5.0 ft			BITS USED: 2 15/16" Drag Bit					
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	SOIL AND ROCK DESCRIPTION
		0.5ft	0.5ft	0.5ft	0	20	40	60	80			
79.7					Ground Surface							79.7 0.0
79.7	0.0	2	3	4						SS-1		FAT CLAY (CH), black (10YR 2/1), firm, moist, no HCl reaction, trace organics, roots and grass
76.2	3.5	3	5	4						SS-2		3.5 ft: dark gray (2.5Y 4/1), stiff, weak HCl reaction, trace calcium carbonate nodules
73.7	6.0	5	7	6						SS-3		6.0 ft: light gray (10YR 7/2), black and orange staining
71.2	8.5	7	9	13						SS-4		8.5 ft: light gray (10YR 7/2) mottled reddish yellow (7.5YR 6/6), very stiff, few fine grained sand, strong HCl reaction
68.7	11.0	9	8	11						SS-5		
66.2	13.5	6	8	11						SS-6		13.5 ft: light gray (10YR 7/2)
61.2	18.5	4	6	9						SS-7		18.5 ft: light gray (10YR 7/2) mottled reddish yellow (7.5YR 6/6), stiff, weak HCl reaction
56.2	23.5	4	5	8						SS-8		23.5 ft: slickensides, black staining
51.2	28.5	5	7	11						SS-9		28.5 ft: very stiff
46.2	33.5	3	5	7						SS-10		33.5 ft: stiff
41.2	38.5	6	8	12						SS-11		38.5 ft: light gray (10YR 7/2), very stiff, strong HCl reaction, black and orange staining
36.2	43.5	11	15	18						SS-12		43.5 ft: FAT CLAY with sand (CH), light gray (10YR 7/2) mottled reddish yellow (7.5YR 6/6), hard, moist, little fine grained sand, strong HCl reaction, calcium carbonate nodules
31.2	48.5	9	14	18						SS-13		48.5 ft: POORLY GRADED SAND with clay (SP-SC), yellow (10YR 7/6), dense, wet, fine grained, few fines, strong HCl reaction
26.2	53.5	13	10	15						SS-14A/B		53.5 ft: POORLY GRADED SAND (SP), very pale brown (10YR 7/4), very firm, wet, fine grained, no HCl reaction

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: B. Mabie							
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)						
BORING NO.: B-3152		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR.	ND					
GROUND SURFACE ELEV.: 79.7 ft (NAVD88)		NORTHING: 13,412,667		US ft (NAD83)		EASTING: 2,599,964		US ft (NAD83)	24 HR.	ND			
TOTAL DEPTH: 200.0 ft		DRILL MACHINE: CME 550		DRILLER: L. Carter (MACTEC ATL)			HAMMER (ID): 140 lb. Auto (CME-08)						
DATE STARTED: 1/22/09		COMPLETED: 1/23/09		CASING DEPTH: 5.0 ft			BITS USED: 2 15/16" Drag Bit						
ELEV.	DEPTH	BLOW COUNT			BLOWS PER FOOT					SAMP.	LOG	SOIL AND ROCK DESCRIPTION	
(ft)	(ft)	0.5ft	0.5ft	0.5ft	0	20	40	60	80	100			NO.
23.6					Continued from previous page								
21.2	58.5												FAT CLAY (CH), light gray (10YR 7/2), very stiff, moist, few fine grained sand, strong HCl reaction, calcium carbonate nodules, caliche (continued) 58.5 ft: hard, black and orange staining
		10	25	18							SS-15		
16.2	63.5												
		11	12	13							SS-16		63.5 ft: very stiff
11.2	68.5												
		12	19	32							SS-17A/B		68.5 ft: hard, few fine grained sand, no caliche observed
6.2	73.5												
		6	7	12							SS-18		68.9
													POORLY GRADED SAND (SP), very pale brown (10YR 7/3), very dense, wet, fine grained, weak HCl reaction

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