

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 WBD Date 11-10-09Checked By PAN Date 11/10/09

SHEET 1 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.: B3234UD		DRILL METHOD: Mud Rotary		SAMPLE METHODS: Shelby Tube/Pitcher Barrel		0 HR. ND					
GROUND SURFACE ELEV.: 80.6 ft (NAVD88)		NORTHING: 13,413,081 US ft (NAD83)		EASTING: 2,600,781 US ft (NAD83)		24 HR. ND					
TOTAL DEPTH: 394.8 ft		DRILL MACHINE: CME 750		DRILLER: G. Bilbrey (MILLER)		HAMMER (ID): NA					
DATE STARTED: 1/27/09		COMPLETED: 2/10/09		CASING DEPTH: 14.0 ft		BITS USED: 5 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	LOG	SOIL AND ROCK DESCRIPTION
80.6					Ground Surface						80.6 0.0
											Drilling without SPT sampling for collection of undisturbed samples
60.6	20.0							UD-1			Begin sampling with Shelby Tube Sampler 20.0 ft: FAT CLAY (CH), very pale brown (10YR 7/4), moist, trace fine grained sand, strong HCl reaction, recovery=1.5 ft
45.6	35.0							UD-2			35.0 ft: SANDY LEAN CLAY (CL), very pale brown (10YR 7/3), moist, fine grained sand, weak HCl reaction, calcium carbonate nodules, bottom of tube slightly bent to egg-shape, recovery=1.55 ft
30.6	50.0							UD-3			50.0 ft: FAT CLAY (CH), light gray (10YR 7/2) mottled brownish yellow (10YR 6/6), moist, few fine grained sand, strong HCl reaction, bottom of sample not recovered, recovery=0.85 ft
26.8	53.8							UD-4			53.8 ft: FAT CLAY (CH), light gray (10YR 7/2) mottled brownish yellow (10YR 6/6), moist, fine grained sand, strong HCl reaction, recovery=1.6 ft

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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.: B3234UD			DRILL METHOD: Mud Rotary			SAMPLE METHODS: Shelby Tube/Pitcher Barrel			0 HR. ND			
GROUND SURFACE ELEV.: 80.6 ft (NAVD88)			NORTHING: 13,413,081			US ft (NAD83)			EASTING: 2,600,781 US ft (NAD83)			
TOTAL DEPTH: 394.8 ft			DRILL MACHINE: CME 750			DRILLER: G. Bilbrey (MILLER)			HAMMER (ID): NA			
DATE STARTED: 1/27/09			COMPLETED: 2/10/09			CASING DEPTH: 14.0 ft			BITS USED: 5 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	MOI	
24.5					Continued from previous page							
10.6	70.0									UD-5		70.0 ft: FAT CLAY (CH), light gray (10YR 7/2) mottled brownish yellow (10YR 6/6), moist, fine grained sand, weak HCl reaction, recovery=1.6 ft
-9.4	90.0									UD-6		87.0-90.0 ft: rig chatter Changed sample method to Pitcher Barrel Sampler
-24.4	105.0									UD-7		105.0 ft: POORLY GRADED SAND (SP), very pale brown (10YR 7/4), wet, fine grained, few fines, strong HCl reaction, recovery=2.2 ft

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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.: B3234UD		DRILL METHOD: Mud Rotary		SAMPLE METHODS: Shelby Tube/Pitcher Barrel		0 HR. ND									
GROUND SURFACE ELEV.: 80.6 ft (NAVD88)		NORTHING: 13,413,081		US ft (NAD83)		EASTING: 2,600,781 US ft (NAD83)									
TOTAL DEPTH: 394.8 ft		DRILL MACHINE: CME 750		DRILLER: G. Bilbrey (MILLER)		HAMMER (ID): NA									
DATE STARTED: 1/27/09		COMPLETED: 2/10/09		CASING DEPTH: 14.0 ft		BITS USED: 5 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					
-31.6					Continued from previous page										
-44.4	125.0											UD-8		Changed sample method to Shelby Tube Sampler 125.0 ft: FAT CLAY (CH), light gray (5Y 7/2), brownish yellow (10YR 6/6), moist, fine grained sand, fine gravel, strong HCl reaction, recovery=1.6 ft	
-69.4	150.0											UD-9		139.0-148.0 ft: hard drilling, rig chatter	
-82.4	163.0											UD-10		150.0 ft: FAT CLAY (CH), light gray (5Y 7/1) mottled brownish yellow (10YR 6/6), moist, fine grained sand, strong HCl reaction, trace calcium carbonate, recovery=1.6 ft	
														Changed sample method to Pitcher Barrel Sampler 163.0 ft: WELL GRADED SAND (SW), very pale brown (10YR 7/3), wet, fine to medium grained, few fines, strong HCl reaction, few carbonate nodules, recovery=1.2 ft	

EXELON COL BORE VICTORIA PHASE III(GP) 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.: B3234UD		DRILL METHOD: Mud Rotary		SAMPLE METHODS: Shelby Tube/Pitcher Barrel		0 HR. ND							
GROUND SURFACE ELEV.: 80.6 ft (NAVD88)		NORTHING: 13,413,081		US ft (NAD83)		EASTING: 2,600,781 US ft (NAD83)							
TOTAL DEPTH: 394.8 ft		DRILL MACHINE: CME 750		DRILLER: G. Bilbrey (MILLER)		HAMMER (ID): NA							
DATE STARTED: 1/27/09		COMPLETED: 2/10/09		CASING DEPTH: 14.0 ft		BITS USED: 5 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	MOI		
-87.7					Continued from previous page								
-88.2	168.8									UD-11			168.8 ft: POORLY GRADED SAND with silt and gravel (SP-SM), very pale brown (10YR 7/3), wet, fine to coarse grained, fine to coarse gravel, strong HCl reaction, recovery=1.5 ft
-99.4	180.0									UD-12			180.0 ft: FAT CLAY (CH), light gray (5Y 7/2)mottled brownish yellow (10YR 6/6), moist, few fine grained sand, strong HCl reaction, bottom 0.1 ft of tube bent on calcium carbonate nodule, recovery=1.8 ft
													202.0-204.3 ft: hard drilling, rig chatter
-132.4	213.0									UD-13			213.0 ft: POORLY GRADED SAND (SP), very pale brown (10YR 7/3), wet, fine grained, trace fines, strong HCl reaction, recovery=1.2 ft
-136.2	216.8									UD-14			216.8 ft: SILTY SAND (SM), very pale brown (10YR 7/3), wet, fine to medium grained, fine gravel, strong HCl reaction, recovery=1.95 ft

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

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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.: B3234UD		DRILL METHOD: Mud Rotary		SAMPLE METHODS: Shelby Tube/Pitcher Barrel		0 HR. ND				
GROUND SURFACE ELEV.: 80.6 ft (NAVD88)		NORTHING: 13,413,081 US ft (NAD83)		EASTING: 2,600,781 US ft (NAD83)		24 HR. ND				
TOTAL DEPTH: 394.8 ft		DRILL MACHINE: CME 750		DRILLER: G. Bilbrey (MILLER)		HAMMER (ID): NA				
DATE STARTED: 1/27/09		COMPLETED: 2/10/09		CASING DEPTH: 14.0 ft		BITS USED: 5 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.	LOG MOI	SOIL AND ROCK DESCRIPTION
-199.9					Continued from previous page					
-224.4	305.0							UD-16		305.0 ft: FAT CLAY (CH), very pale brown (10YR 8/2) mottled brownish yellow (10YR 6/6), moist, fine grained sand, strong HCl reaction, recovery=2.3 ft

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



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.: B3234UD		DRILL METHOD: Mud Rotary		SAMPLE METHODS: Shelby Tube/Pitcher Barrel		0 HR. ND				
GROUND SURFACE ELEV.: 80.6 ft (NAVD88)		NORTHING: 13,413,081 US ft (NAD83)		EASTING: 2,600,781 US ft (NAD83)		24 HR. ND				
TOTAL DEPTH: 394.8 ft		DRILL MACHINE: CME 750		DRILLER: G. Bilbrey (MILLER)		HAMMER (ID): NA				
DATE STARTED: 1/27/09		COMPLETED: 2/10/09		CASING DEPTH: 14.0 ft		BITS USED: 5 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.	LOG	SOIL AND ROCK DESCRIPTION
-256.0		Continued from previous page								
-262.4	343.0							UD-17		343.0 ft: FAT CLAY (CH), very pale brown (10YR 8/2) mottled brownish yellow (10YR 6/6), moist, few fine grained sand, strong HCl reaction, recovery=0.95 ft 345.0 ft: FAT CLAY (CH), very pale brown (10YR 8/2) mottled brownish yellow (10YR 6/6), moist, few fine grained sand, strong HCl reaction, recovery=2.3 ft
-265.2	345.8							UD-18		

EXELON COL BORE VICTORIA PHASE III.GPJ EXELON COL.GDT 10/2009



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.: B3234UD		DRILL METHOD: Mud Rotary		SAMPLE METHODS: Shelby Tube/Pitcher Barrel		0 HR. ND						
GROUND SURFACE ELEV.: 80.6 ft (NAVD88)		NORTHING: 13,413,081 US ft (NAD83)		EASTING: 2,600,781 US ft (NAD83)		24 HR. ND						
TOTAL DEPTH: 394.8 ft		DRILL MACHINE: CME 750		DRILLER: G. Bilbrey (MILLER)		HAMMER (ID): NA						
DATE STARTED: 1/27/09		COMPLETED: 2/10/09		CASING DEPTH: 14.0 ft		BITS USED: 5 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		
-312.1					Continued from previous page							
-312.4	-394.8										UD-19	
												Changed sample method to Shelby Tube Sampler 393.0 ft: FAT CLAY (CH), pale yellow (5Y 8/2), moist, fine grained sand, strong HCl reaction, recovery=1.75 ft Boring Terminated at Elevation -314.2 ft
												394.8

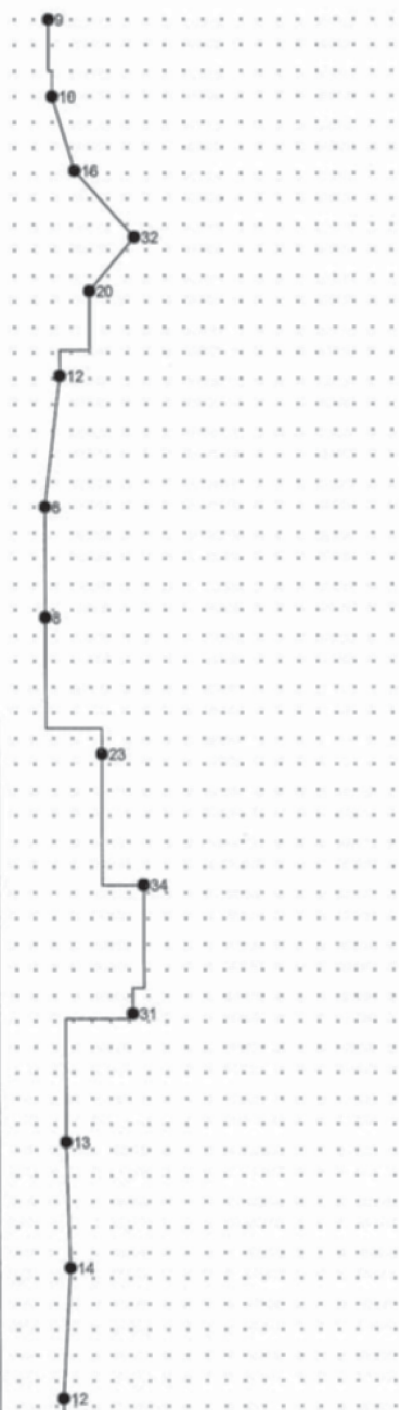
EXELON COL BORE VICTORIA PHASE III.GPJ EXELON COL.GDT 10/20/09

GEOTECHNICAL BORING LOG

Prepared By RAH Date 9/10/09

Checked By KAW Date 8-10-09

SHEET 1 OF 4

BECHTEL NO.: 25352		MACTEC NO.: 6468-07-1777		COUNTY: Victoria, TX		GEOLOGIST: D. Haug / G. Pillappa									
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)								
BORING NO.: B-3250		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR. ND								
GROUND SURFACE ELEV.: 80.1 ft (NAVD88)		NORTHING: 13,413,130		US ft (NAD83)		EASTING: 2,600,352 US ft (NAD83)		24 HR. ND							
TOTAL DEPTH: 200.2 ft		DRILL MACHINE: CME 45 C Track		DRILLER: D. Rhodes (MACTEC RAL)			HAMMER (ID): 140 lb. Auto (MEC 12)								
DATE STARTED: 1/13/09		COMPLETED: 1/21/09		CASING DEPTH: 3.0 ft			BITS USED: 2 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	
80.1					Ground Surface								80.1		
80.1	0.0	3	3	6							SS-1		80.1	FAT CLAY (CH), black (10YR 2/1), stiff, dry, trace fine grained sand, no HCl reaction	0.0
77.1	3.0		3	5							SS-2		77.1	FAT CLAY with sand (CH), black (10YR 2/1) to gray (2.5Y 5/1), stiff, moist, little fine grained sand, no HCl reaction on clay, few calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules	3.0
74.2	5.9		4	6							SS-3			5.9 ft: light olive gray (5Y 6/2), very stiff	
71.6	8.5		9	13							SS-4			8.5 ft: pale brown (10YR 6/3) and white (10YR 8/1), hard, weak HCl reaction on clay	
69.5	10.6		8	10							SS-5			10.6 ft: light yellowish brown (10YR 6/4) and white (10YR 8/1), very stiff, strong HCl reaction on calcium carbonate nodules	
66.2	13.9		4	5							SS-6		66.2	FAT CLAY (CH), reddish yellow (7.5YR 6/6) mottled light greenish gray (10Y 8/1), stiff, moist, trace fine grained sand, weak HCl reaction, black staining, slickensides	13.9
61.1	19.0		2	4							SS-7			19.0 ft: firm, slickensides	
56.8	23.3		2	3							SS-8			23.3 ft: no HCl reaction, no slickensides observed	
51.5	28.6		7	11							SS-9		51.5	SANDY FAT CLAY (CH), pale yellow (2.5Y 7/3) mottled reddish yellow (7.5YR 6/6), very stiff, moist, some fine grained sand, no HCl reaction, black staining	28.6
46.4	33.7		7	12							SS-10AB		46.4	33.7 ft: hard	33.7
41.4	38.7		12	20							SS-11AB		41.4	CLAYEY SAND (SC), pale yellow (2.5Y 7/3), dense, moist, fine grained, little fines, no HCl reaction	38.7
36.4	43.7		3	5							SS-12		40.2	SILTY SAND (SM), pale yellow (5Y 8/2), dense, wet, fine grained, little fines, no HCl reaction	39.9
31.5	48.6		4	6							SS-13		36.4	SANDY FAT CLAY (CH), pale yellow (5Y 7/3), hard, moist, some fine grained sand, weak HCl reaction, trace calcium carbonate nodules	43.7
26.4	53.7		4	5							SS-14			FAT CLAY (CH), pinkish gray (7.5YR 6/2) mottled light greenish gray (10Y 8/1), stiff, moist, trace fine grained sand, no HCl reaction, trace black staining, slickensides	
														48.6 ft: reddish yellow (7.5YR 6/6) mottled light greenish gray (10Y 8/1), weak HCl reaction, no slickensides observed	



SHEET 3 OF 4

BECHTEL NO.: 25352			MACTEC NO.: 6468-07-1777			COUNTY: Victoria, TX			GEOLOGIST: D. Haug / G. Pillappa			
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS									GROUND WATER (ft)			
BORING NO.: B-3250			DRILL METHOD: Mud Rotary			SAMPLE METHODS: SPT			0 HR. ND			
GROUND SURFACE ELEV.: 80.1 ft (NAVD88)			NORTHING: 13,413,130			US ft (NAD83)			EASTING: 2,600,352 US ft (NAD83)			
TOTAL DEPTH: 200.2 ft			DRILL MACHINE: CME 45 C Track			DRILLER: D. Rhodes (MACTEC RAL)			HAMMER (ID): 140 lb. Auto (MEC 12)			
DATE STARTED: 1/13/09			COMPLETED: 1/21/09			CASING DEPTH: 3.0 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		
-32.1					Continued from previous page							

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: D. Haug / G. Pillappa							
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)						
BORING NO.: B-3250		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND							
GROUND SURFACE ELEV.: 80.1 ft (NAVD88)		NORTHING: 13,413,130		US ft (NAD83)		EASTING: 2,600,352 US ft (NAD83)							
TOTAL DEPTH: 200.2 ft		DRILL MACHINE: CME 45 C Track		DRILLER: D. Rhodes (MACTEC RAL)		HAMMER (ID): 140 lb. Auto (MEC 12)							
DATE STARTED: 1/13/09		COMPLETED: 1/21/09		CASING DEPTH: 3.0 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				
-88.2					Continued from previous page								
-88.6	168.7	20	34	27						SS-30			POORLY GRADED SAND with clay (SP-SC), light gray (2.5Y 7/2), very dense, moist, fine grained, few fines, no HCl reaction on sand, sandy clay seam (continued) 168.7 ft: pale yellow (2.5Y 7/3), trace calcium carbonate nodules
-98.6	178.7	25	42	50						SS-31			178.7 ft: weak HCl reaction, no calcium carbonate nodules observed
-108.6	188.7	50/0.3								SS-32			188.7 ft: light gray (10YR 7/2)
-118.6	198.7	18	24	20						SS-33			198.7 ft: very pale brown (10YR 7/3), dense, wet, trace calcium carbonate nodules, strong HCl reaction
													Boring Terminated at Elevation -120.1 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 PAK 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-3251		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND									
GROUND SURFACE ELEV.: 80.3 ft (NAVD88)		NORTHING: 13,413,368		US ft (NAD83)		EASTING: 2,600,553 US ft (NAD83)									
TOTAL DEPTH: 200.9 ft		DRILL MACHINE: CME 550 X		DRILLER: R. Landeros (MACTEC ATL)		HAMMER (ID): 140 lb. Auto (MEC 22)									
DATE STARTED: 1/21/09		COMPLETED: 1/22/09		CASING DEPTH: 9.0 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		
80.3					Ground Surface							80.3	0.0		
80.3	0.0	3	5	5						SS-1		80.3	FAT CLAY (CH), gray (7.5Y 5/1), stiff, dry, low fine grained sand, no HCl reaction, organics		
77.8	2.5	6	8	8						SS-2			2.5 ft: light brownish gray (10YR 6/2) and gray (7.5YR 5/1), very stiff, calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules, no HCl reaction on clay		
75.1	5.2	3	5	6						SS-3			5.0 ft: light gray (2.5Y 7.2), stiff, moist		
72.8	7.5	6	8	9						SS-4			7.5 ft: and yellow (10YR 8/6), very stiff, weak HCl reaction, no calcium carbonate nodules observed		
70.1	10.2	4	7	8						SS-5			10.0 ft: stiff, some black staining		
67.7	12.6	5	7	8						SS-6			12.5 ft: no HCl reaction		
60.6	19.7	2	5	6						SS-7			19.7 ft: brownish yellow (10YR 6/6) and light gray (2.5Y 7/2), trace calcium carbonate nodules, weak HCl reaction on calcium carbonate nodules, no HCl reaction on clay		
55.7	24.6	3	9	11						SS-8A/B			24.6 ft: very stiff, no HCl reaction, no calcium carbonate nodules observed	25.6	
50.7	29.6	11	17	15						SS-9			53.3	SANDY FAT CLAY (CH), very pale brown (10YR 7/3), very stiff, moist, some fine grained sand, no HCl reaction on clay, trace calcium carbonate nodules, weak HCl reaction on calcium carbonate nodules	27.0
45.7	34.6	5	12	13						SS-10			45.7	SANDY FAT CLAY (CH), light gray (5Y 7/2) and brownish yellow (10YR 6/6), very stiff, moist, some fine grained sand, no HCl reaction	34.6
40.7	39.6	5	5	9						SS-11			40.7	FAT CLAY (CH), light gray (2.5Y 7/2) with brownish yellow (10YR 6/6), stiff, moist, few fine grained sand, calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules, no HCl reaction on clay	39.6
35.7	44.6	5	6	9						SS-12				44.6 ft: little fine grained sand, some calcium carbonate nodules	
30.7	49.6	5	6	8						SS-13			30.7	CLAYEY SAND (SC), light gray (5Y 7/2), firm, moist, fine grained, some fines, weak HCl reaction	49.6
25.7	54.6	6	7	9						SS-14				54.6 ft: pale yellow (2.5Y 7/3), wet, little fines, no 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) 0 HR. ND 24 HR. ND			
BORING NO.: B-3251			DRILL METHOD: Mud Rotary			SAMPLE METHODS: SPT						
GROUND SURFACE ELEV.: 80.3 ft (NAVD88)			NORTHING: 13,413,368			US ft (NAD83) EASTING: 2,600,553 US ft (NAD83)						
TOTAL DEPTH: 200.9 ft			DRILL MACHINE: CME 550 X			DRILLER: R. Landeros (MACTEC ATL)			HAMMER (ID): 140 lb. Auto (MEC 22)			
DATE STARTED: 1/21/09			COMPLETED: 1/22/09			CASING DEPTH: 9.0 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		
-31.9					Continued from previous page							
												POORLY GRADED SAND with silt (SP-SM), very pale brown (10YR 7/3), very dense, wet, fine to medium grained, few fines, no HCl reaction (continued)
-39.2	119.5	21	22	19								CLAYEY SAND (SC), pale yellow (2.5Y 7/3), dense, moist, fine to medium grained, little fines, no HCl reaction on sand, calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
-49.3	129.6	9	15	22								FAT CLAY (CH), light gray (2.5Y 7/2), hard, moist, few fine grained sand, weak HCl reaction
												POORLY GRADED SAND with silt (SP-SM), pale yellow (2.5Y 7/3), very dense, wet, fine to medium grained, few fines, weak HCl reaction
-59.3	139.6	50	57/0.5									
-69.3	149.6	5	8	11								FAT CLAY (CH), pale yellow (2.5Y 7/3), very stiff, moist, few fine grained sand, no HCl reaction on clay, calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
-79.2	159.5	7	32	45								CLAYEY SAND (SC), pale yellow (2.5Y 7/3), very dense, wet, fine to medium grained, some fines, no HCl reaction
												POORLY GRADED SAND with silt (SP-SM), light gray (10YR 7/2), very dense, wet, fine to medium grained, few fines, no HCl reaction

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 WBD Date 11-10-09Checked By PAU 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-3252		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND						
GROUND SURFACE ELEV.: 80.3 ft (NAVD88)		NORTHING: 13,413,433		US ft (NAD83)		EASTING: 2,600,606 US ft (NAD83)						
24 HR. ND												
TOTAL DEPTH: 199.8 ft		DRILL MACHINE: CME 550 X		DRILLER: R. Landeros (MACTEC ATL)		HAMMER (ID): 140 lb. Auto (MEC 22)						
DATE STARTED: 1/22/09		COMPLETED: 1/25/09		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		
80.3					Ground Surface							80.3
80.3	0.0	3	5	4						SS-1		FAT CLAY (CH), dark gray (2.5Y 4/1), stiff, dry, low fine grained sand, no HCl reaction on clay, few organics
77.8	2.5	4	5	6						SS-2		2.5 ft: calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
75.3	5.0	7	8	9						SS-3		5.0 ft: light gray (2.5Y 7/2), very stiff
72.8	7.5	3	5	4						SS-4		7.5 ft: stiff, moist
70.3	10.0	4	5	8						SS-5		10.0 ft: and yellow (2.5Y 7/8)
67.8	12.5	5	8	9						SS-6		12.5 ft: and pale yellow (2.5Y 7/3), very stiff, weak HCl reaction, black staining
60.8	19.5	5	7	7						SS-7		19.5 ft: very pale brown (10YR 7/4), stiff, no HCl reaction on clay, calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
55.8	24.5	5	7	9						SS-8		24.5 ft: light gray (10YR 7/2) and brownish yellow (10YR 6/8), very stiff, no HCl reaction, no calcium carbonate nodules observed
50.8	29.5	5	9	10						SS-9		29.5 ft: pale yellow (2.5Y 7/3), brownish yellow and black staining, few calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules, no HCl reaction on clay
45.8	34.5	6	9	13						SS-10		34.5 ft: and brownish yellow (10YR 6/8), weak HCl reaction on clay
40.8	39.5	5	7	8						SS-11		39.5 ft: stiff, no HCl reaction on clay
35.8	44.5	3	6	7						SS-12		35.8
30.8	49.5	5	5	6						SS-13		SANDY FAT CLAY (CH), pale yellow (2.5Y 7/3), stiff, moist, some fine grained sand, no HCl reaction
25.8	54.5	7	8	10						SS-14		30.8
												CLAYEY SAND (SC), light gray (10YR 7/2), firm, wet, fine grained, some fines, no HCl reaction
												54.5 ft: pale yellow (2.5Y 7/4), moist

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-3252		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR.	ND				
GROUND SURFACE ELEV.: 80.3 ft (NAVD88)		NORTHING: 13,413,433		US ft (NAD83)		EASTING: 2,600,606	US ft (NAD83)	24 HR.	ND			
TOTAL DEPTH: 199.8 ft		DRILL MACHINE: CME 550 X		DRILLER: R. Landeros (MACTEC ATL)			HAMMER (ID): 140 lb. Auto (MEC 22)					
DATE STARTED: 1/22/09		COMPLETED: 1/25/09		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		
24.2					Continued from previous page							
20.8	59.5	12	42	50/0.3							SS-15	CLAYEY SAND (SC), light gray (10YR 7/2), firm, wet, fine grained, some fines, no HCl reaction (continued)
												59.5 ft: light gray (10YR 7/2), very dense, wet, fine to coarse grained, calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules, no HCl reaction on sand
15.8	64.5	4	6	7							SS-16	FAT CLAY (CH), light gray (2.5Y 7/2) and yellow (2.5Y 7/8), stiff, moist, few fine grained sand, no HCl reaction on clay, few calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
10.8	69.5	5	7	9							SS-17	69.5 ft: grayish brown (2.5Y 5/2), very stiff
5.8	74.5	7	8	11							SS-18	74.5 ft: light gray (10YR 7/2) and brownish yellow (10YR 6/8), weak HCl reaction on clay
0.8	79.5	6	9	11							SS-19	FAT CLAY with sand (CH), light gray (2.5Y 7/2) and yellowish brown (10YR 5/6), very stiff, moist, little fine grained sand, no HCl reaction on clay, few calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
-4.2	84.5	11	22	15							SS-20	84.5 ft: CLAYEY SAND (SC), light gray (2.5Y 7/2), dense, wet, fine grained, some fines, weak HCl reaction on sand, calcium carbonate lense, strong HCl reaction on calcium carbonate lense
-9.2	89.5	9	18	18							SS-21	89.5 ft: SANDY FAT CLAY (CH), light gray (10YR 7/2), hard, moist, some fine grained sand, no HCl reaction on clay, calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
-14.2	94.5	11	14	21							SS-22	94.5 ft: FAT CLAY with sand (CH), light gray (2.5Y 7/2), yellowish brown (10YR 5/8), hard, moist, little fine to medium grained sand, no HCl reaction on clay, calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
-19.2	99.5	8	18	50/0.4							SS-23	99.5 ft: FAT CLAY (CH), light gray (2.5Y 7/2), yellowish brown (10YR 5/8), hard, moist, few fine grained sand, no HCl reaction on clay, calcium carbonate lense (caliche) and nodules, strong HCl reaction on calcium carbonate lense and nodules
-29.2	109.5	24	42	46							SS-24	109.5 ft: POORLY GRADED SAND with silt (SP-SM), very pale brown (10YR 7/4), very dense, wet, medium grained, few fines, weak HCl reaction

EXELON COL BORE VICTORIA PHASE III CPJ 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-3252			DRILL METHOD: Mud Rotary			SAMPLE METHODS: SPT			0 HR. ND			
GROUND SURFACE ELEV.: 80.3 ft (NAVD88)			NORTHING: 13,413,433 US ft (NAD83)			EASTING: 2,600,606 US ft (NAD83)			24 HR. ND			
TOTAL DEPTH: 199.8 ft			DRILL MACHINE: CME 550 X			DRILLER: R. Landeros (MACTEC ATL)			HAMMER (ID): 140 lb. Auto (MEC 22)			
DATE STARTED: 1/22/09			COMPLETED: 1/25/09			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.	
-31.9					Continued from previous page							
-39.2	119.5	6	20	11	31					SS-25		POORLY GRADED SAND with silt (SP-SM), very pale brown (10YR 7/4), very dense, wet, medium grained, few fines, weak HCl reaction (continued)
-49.3	129.6	22	34	41	75					SS-26		119.5 ft: pale yellow (2.5Y 7/4), dense, medium to coarse grained, no HCl reaction
-59.2	139.5	41	48	29	77					SS-27		SANDY FAT CLAY (CH), very pale brown (10YR 8/2), hard, moist, some fine grained sand, no HCl reaction
-69.5	149.8	6	10	16	26					SS-28		POORLY GRADED SAND with silt (SP-SM), pale yellow (2.5Y 8/3), very dense, wet, fine to medium grained, few fines, weak HCl reaction
-79.2	159.5	33	34	34	58					SS-29		FAT CLAY with sand (CH), pale yellow (2.5Y 7/3), very stiff, moist, little fine grained sand, no HCl reaction on clay, few calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules, yellowish brown staining

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-3252		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND						
GROUND SURFACE ELEV.: 80.3 ft (NAVD88)		NORTHING: 13,413,433		US ft (NAD83)		EASTING: 2,600,606 US ft (NAD83)						
						24 HR. ND						
TOTAL DEPTH: 199.8 ft		DRILL MACHINE: CME 550 X		DRILLER: R. Landeros (MACTEC ATL)		HAMMER (ID): 140 lb. Auto (MEC 22)						
DATE STARTED: 1/22/09		COMPLETED: 1/25/09		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			
-88.0					Continued from previous page							
-89.2	169.5	14	50/0.5							SS-30A/B		-89.2 169.5 CLAYEY SAND (SC), light gray (2.5Y 7/2), very dense, wet, fine to medium grained, some fines, weak HCl reaction POORLY GRADED SAND with silt (SP-SM), pale yellow (2.5Y 8/2), very dense, wet, medium grained, few fines, weak HCl reaction
-99.2	179.5	17	25	30						SS-31		179.5 ft: medium to coarse grained, no HCl reaction on sand, calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
-109.2	189.5	21	25	33						SS-32		-109.2 189.5 SILTY SAND (SM), pale yellow (2.5Y 7/3), very dense, moist, fine grained, some fines, no HCl reaction on sand
-119.2	199.5	75/0.3			75/0.3					SS-33		-119.5 199.5 ft: no recovery Boring Terminated at Elevation -119.5 ft

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: J. Liles						
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS								GROUND WATER (ft)				
BORING NO.: B-3270A		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR.		ND				
GROUND SURFACE ELEV.: 80.6 ft (NAVD88)		NORTHING: 13,413,806		US ft (NAD83)		EASTING: 2,600,963		US ft (NAD83)				
24 HR.								ND				
TOTAL DEPTH: 300.8 ft		DRILL MACHINE: CME 550		DRILLER: J. Cook (MILLER)		HAMMER (ID): 140 lb. Auto (353)						
DATE STARTED: 2/23/09		COMPLETED: 3/5/09		CASING DEPTH: 4.0 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		
80.6					Ground Surface							
80.6	0.0	WOH	2	4						SS-1		80.6 SANDY LEAN CLAY (CL), dark gray (10YR 4/1), firm, moist, fine grained sand, no HCl reaction, trace small roots
76.7	3.9		5	7						SS-2		3.9 ft: light yellowish brown (2.5Y 6/3), stiff, fine to medium grained sand, strong HCl reaction, calcareous
74.3	6.3		4	4						SS-3		74.3 LEAN CLAY with sand (CL), light yellowish brown (2.5Y 6/4), stiff, moist, fine to medium grained sand, weak HCl reaction on clay, few calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
71.6	9.0		3	4						SS-4		71.6 FAT CLAY with sand (CH), light gray (2.5Y 7/2) mottled brownish yellow (10YR 6/6), stiff, moist, fine grained sand, strong HCl reaction, calcium carbonate nodules
69.2	11.4		4	5						SS-5		69.2 LEAN CLAY (CL), light yellowish brown (10YR 6/4), stiff, moist, fine to medium grained sand, strong HCl reaction, calcareous
66.8	13.8		4	9						SS-6		13.8 ft: very stiff, fine grained sand
61.8	18.8		5	5						SS-7		61.8 SANDY LEAN CLAY (CL), brownish yellow (10YR 6/6), stiff, moist, fine to medium grained sand, weak HCl reaction on clay, trace calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules, trace black staining
56.9	23.7		5	6						SS-8		23.7 ft: mottled light gray (2.5Y 7/2)
51.8	28.8		5	4						SS-9		51.8 FAT CLAY (CH), light gray (2.5Y 7/2) mottled brownish yellow (10YR 6/6), stiff, moist, fine grained sand, no HCl reaction
46.9	33.7		8	10						SS-10		46.9 FAT CLAY with sand (CH), brownish yellow (10YR 6/6) mottled light gray (2.5Y 7/2), very stiff, moist, fine to medium grained sand, weak HCl reaction on clay, calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules, trace black staining
41.8	38.8		5	5						SS-11		41.8 FAT CLAY (CH), brownish yellow (10YR 6/6) mottled light gray (2.5Y 7/2), stiff, moist, no HCl reaction, trace black staining
36.7	43.9		4	7						SS-12		43.9 ft: very stiff
31.8	48.8		4	8						SS-13		31.8 SANDY LEAN CLAY (CL), light gray (2.5Y 7/2), very stiff, moist, fine to medium grained sand, no HCl reaction on clay, trace calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules, orange staining
26.8	53.8		6	7						SS-14		

EXELON COL BORE VICTORIA PHASE III.GP7 EXELON COL.GDT 8/10/09



SHEET 2 OF 6

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-3270A		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR.	ND																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
GROUND SURFACE ELEV.: 80.6 ft (NAVD88)		NORTHING: 13,413,806		US ft (NAD83)		EASTING: 2,600,963	24 HR.	ND																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
TOTAL DEPTH: 300.8 ft		DRILL MACHINE: CME 550		DRILLER: J. Cook (MILLER)			HAMMER (ID): 140 lb. Auto (353)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
DATE STARTED: 2/23/09		COMPLETED: 3/5/09		CASING DEPTH: 4.0 ft			BITS USED: 3 7/8" Drag Bit																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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EXELON COL BORE VICTORIA PHASE III.GPJ EXELON COL.GDT 8/10/09



SHEET 3 OF 6

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-3270A		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR. ND						
GROUND SURFACE ELEV.: 80.6 ft (NAVD88)		NORTHING: 13,413,806		US ft (NAD83)		EASTING: 2,600,963		US ft (NAD83)					
24 HR. ND													
TOTAL DEPTH: 300.8 ft		DRILL MACHINE: CME 550		DRILLER: J. Cook (MILLER)			HAMMER (ID): 140 lb. Auto (353)						
DATE STARTED: 2/23/09		COMPLETED: 3/5/09		CASING DEPTH: 4.0 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.
-31.6					Continued from previous page								
													FAT CLAY with sand (CH), light gray (2.5Y 7/2), very stiff, moist, fine to medium grained sand, trace fine gravel, no HCl reaction on clay, calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules, little orange and black staining (continued)
-38.7	119.3	5	8	14							SS-25		
-48.6	129.2	11	17	22							SS-26		LEAN CLAY with sand (CL), light gray (2.5Y 7/2), hard, moist, fine grained sand, weak HCl reaction
-58.6	139.2	23	26	26							SS-27		POORLY GRADED SAND (SP), light gray (2.5Y 7/2), very dense, wet, mostly fine grained, trace fines, strong HCl reaction
-68.7	149.3	4	6	9							SS-28		FAT CLAY (CH), yellowish brown (10YR 5/4) mottled light gray (2.5Y 7/2), stiff, moist, fine grained sand, no HCl reaction on clay, trace calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules, trace black staining
-78.7	159.3	14	23	27							SS-29		SILTY SAND (SM), light gray (2.5Y 7/2) mottled light yellowish brown (2.5Y 6/4), dense, wet, fine to medium grained

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-3270A		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND						
GROUND SURFACE ELEV.: 80.6 ft (NAVD88)		NORTHING: 13,413,806		US ft (NAD83)		EASTING: 2,600,963 US ft (NAD83)						
24 HR. ND												
TOTAL DEPTH: 300.8 ft		DRILL MACHINE: CME 550		DRILLER: J. Cook (MILLER)		HAMMER (ID): 140 lb. Auto (353)						
DATE STARTED: 2/23/09		COMPLETED: 3/5/09		CASING DEPTH: 4.0 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	
-87.7					Continued from previous page							
-88.7	169.3	25	31	25						SS-30		SILTY SAND (SM), light gray (2.5Y 7/2) mottled light yellowish brown (2.5Y 6/4), dense, wet, fine to medium grained (continued) 169.3 ft: no recovery 171.0 to 172.5 ft: rig chatter
-98.7	179.3	36	47	49						SS-31		179.3 ft: light yellowish brown (2.5Y 6/4), strong HCl reaction
-108.7	189.3	86	103	102						SS-32		189.3 ft: light gray (2.5Y 7/2)
-118.6	199.2	36	33	49						SS-33		199.2 ft: pale yellow (2.5Y 7/3)
-128.6	209.2	34	32	41						SS-34		208.0 ft: rig chatter 209.2 ft: no HCl reaction
-138.6	219.2	33	34	46						SS-35		SILTY, CLAYEY SAND (SC-SM), light gray (2.5Y 7/2), very dense, wet, fine to medium 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: J. Liles								
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)							
BORING NO.: B-3270A		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR.	ND						
GROUND SURFACE ELEV.: 80.6 ft (NAVD88)		NORTHING: 13,413,806		US ft (NAD83)		EASTING: 2,600,963		US ft (NAD83)	24 HR.	ND				
TOTAL DEPTH: 300.8 ft		DRILL MACHINE: CME 550			DRILLER: J. Cook (MILLER)			HAMMER (ID): 140 lb. Auto (353)						
DATE STARTED: 2/23/09		COMPLETED: 3/5/09		CASING DEPTH: 4.0 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
-143.8					Continued from previous page									
-148.6	229.2													SILTY, CLAYEY SAND (SC-SM), light gray (2.5Y 7/2), very dense, wet, fine to medium grained, no HCl reaction (continued)
		38	56	52/0.5							SS-36			229.2 ft: trace fine gravel

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 WBD 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-3271		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND								
GROUND SURFACE ELEV.: 80.2 ft (NAVD88)		NORTHING: 13,413,662 US ft (NAD83)		EASTING: 2,601,056 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: 2/10/09		COMPLETED: 2/11/09		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					100
80.2					Ground Surface									
80.2	0.0	1	2	3						SS-1		80.2	FAT CLAY (CH), dark gray (10YR 4/1), firm, moist, few fine grained sand, no HCl reaction	0.0
77.7	2.5	5	8	9						SS-2		77.7	FAT CLAY with sand (CH), gray (10YR 5/1) and light gray (2.5Y 7/2), very stiff, moist, little fine grained sand, no HCl reaction	2.5
75.2	5.0	5	8	8						SS-3		75.2	FAT CLAY (CH), light gray (2.5Y 7/2), very stiff, moist, few fine grained sand, no HCl reaction on clay, little calcium carbonate, strong HCl reaction on calcium carbonate	5.0
72.7	7.5	3	4	4						SS-4		72.7	FAT CLAY with sand (CH), light gray (2.5Y 7/2) and brownish yellow (10YR 6/6), firm, moist, little fine grained sand, strong HCl reaction, few calcium carbonate nodules	7.5
70.2	10.0	8	10	13						SS-5			10.0 ft: very stiff	
67.7	12.5	4	9	10						SS-6				
60.7	19.5	6	8	11						SS-7		60.7	FAT CLAY (CH), very pale brown (10YR 7/4), very stiff, moist, few fine grained sand, no HCl reaction on clay, trace calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules	19.5
55.7	24.5	4	6	7						SS-8			24.5 ft: brownish yellow (10YR 6/6) and light gray (2.5Y 7/2), stiff, trace black staining	
50.7	29.5	5	8	13						SS-9			29.5 ft: very pale brown (10YR 7/4) and light gray (2.5Y 7/2), very stiff, weak HCl reaction on clay	
45.7	34.5	5	7	10						SS-10			34.5 ft: brownish yellow (10YR 6/6) and light gray (2.5Y 7/2)	
40.7	39.5	5	7	8						SS-11			39.5 ft: stiff, no calcium carbonate nodules observed	
35.7	44.5	4	5	8						SS-12			44.5 ft: very pale brown (10YR 7/4)	
30.7	49.5	5	7	11						SS-13			49.5 ft: light yellowish brown (2.5Y 6/3), very stiff, no HCl reaction on clay, few calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules	
25.7	54.5	5	5	7						SS-14		25.7		54.5

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-3271		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND							
GROUND SURFACE ELEV.: 80.2 ft (NAVD88)		NORTHING: 13,413,662		US ft (NAD83)		EASTING: 2,601,056 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: 2/10/09		COMPLETED: 2/11/09		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	5	6	8									SANDY FAT CLAY (CH), pale yellow (2.5Y 7/3), stiff, moist, some fine grained sand, weak HCl reaction, few calcium carbonate nodules (continued)
15.7	64.5	8	11	10									CLAYEY SAND (SC), light yellowish brown (2.5Y 6/3), firm, moist, fine grained, little fines, no HCl reaction
10.7	69.5	4	6	7									64.5 ft: pale yellow (2.5Y 7/3), very firm, weak HCl reaction
5.7	74.5	5	8	9									FAT CLAY (CH), light brownish gray (2.5Y 6/2), stiff, moist, no HCl reaction on clay, trace calcium carbonate nodules, weak HCl reaction on calcium carbonate nodules
0.7	79.5	7	9	12									74.5 ft: light olive gray (5Y 6/2) and brownish yellow (10YR 6/6), very stiff, few fine grained sand, no calcium carbonate nodules observed, no HCl reaction
-4.3	84.5	14	28	30									SANDY FAT CLAY (CH), light gray (5Y 7/2), very stiff, moist, some fine grained sand, no HCl reaction on clay, trace calcium carbonate, strong HCl reaction on calcium carbonate nodules
-9.3	89.5	4	9	13									SILTY SAND (SM), very pale brown (10YR 7/3), very dense, wet, fine grained, little fines, no HCl reaction in sand, calcium carbonate lense, strong HCl reaction on calcium carbonate lense
-14.3	94.5	13	21	19									FAT CLAY with sand (CH), light gray (2.5Y 7/2), very stiff, moist, little fine grained sand, no HCl reaction
-19.3	99.5	9	23	25									SANDY FAT CLAY (CH), light gray (2.5Y 7/2), hard, moist, some fine grained sand, no HCl reaction on clay, few calcium carbonate nodules, strong HCl reaction
-29.3	109.5	75/0.2											SILTY SAND (SM), very pale brown (10YR 7/3), dense, wet, fine grained, little fines, no HCl reaction
													109.5 ft: very dense, no recovery

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-3271		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND						
GROUND SURFACE ELEV.: 80.2 ft (NAVD88)		NORTHING: 13,413,662		US ft (NAD83)		EASTING: 2,601,056 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: 2/10/09		COMPLETED: 2/11/09		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		
-32.0					Continued from previous page							
-39.4	119.6	6	10	17						SS-25		SILTY SAND (SM), very pale brown (10YR 7/3), dense, wet, fine grained, little fines, no HCl reaction (continued)
-49.3	129.5	8	13	18						SS-26		129.5 ft: pale yellow (2.5Y 7/4), hard, strong HCl reaction, no calcium carbonate nodules observed
-59.3	139.5	25	38	50/0.4						SS-27		SILTY SAND (SM), pale yellow (2.5Y 7/4), very dense, wet, fine grained, little fines, strong HCl reaction
-69.3	149.5	9	11	12						SS-28		FAT CLAY (CH), light gray (5Y 7/2), very stiff, moist, few fine grained sand, no HCl reaction on clay, trace calcium carbonate, weak HCl reaction on calcium carbonate, trace black staining
-79.3	159.5	36	53/0.4							SS-29		POORLY GRADED SAND with silt (SP-SM), light gray (10YR 7/2), very dense, wet, fine to medium grained, few fines, no HCl reaction

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 RAI 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: G. Pillappa / R. Clark							
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)						
BORING NO.: B-3272		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR.	ND					
GROUND SURFACE ELEV.: 80.3 ft (NAVD88)		NORTHING: 13,413,581		US ft (NAD83)		EASTING: 2,600,954 US ft (NAD83)	24 HR.	ND					
TOTAL DEPTH: 180.0 ft		DRILL MACHINE: CME 45 C Track		DRILLER: D. Rhodes (MACTEC RAL)			HAMMER (ID): 140 lb. Auto (MEC 12)						
DATE STARTED: 2/11/09		COMPLETED: 2/19/09		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	1	1	2						SS-1		80.3	FAT CLAY (CH), black (N 2.5/), soft, dry to moist, few fine grained sand, no HCl reaction, trace roots and organics
76.8	3.5	4	5	7						SS-2		76.8	SANDY FAT CLAY (CH), light gray (2.5Y 7/2), stiff, moist, some fine grained sand, no HCl reaction
74.3	6.0	3	5	6						SS-3		74.3	FAT CLAY (CH), olive gray (5Y 5/2), stiff, moist, few fine grained sand, no HCl reaction on clay, trace calcium carbonate nodules
72.0	8.3	2	2	4						SS-4			8.3 ft: pale olive (5Y 6/3), firm
69.8	10.5	3	5	7						SS-5			10.5 ft: stiff, strong HCl reaction
66.8	13.5	5	7	11						SS-6		66.8	SANDY FAT CLAY (CH), light yellowish brown (2.5Y 6/4), very stiff, moist, some fine grained sand, strong HCl reaction, trace calcium carbonate nodules and black staining
61.8	18.5	4	5	6						SS-7		61.8	FAT CLAY (CH), brownish yellow (10YR 6/6) mottled light gray (5Y 7/2), stiff, moist, few fine grained sand, weak HCl reaction, trace calcium carbonate nodules and black staining
56.8	23.5	4	5	8						SS-8			
51.8	28.5	3	3	5						SS-9		28.5 ft: firm, strong HCl reaction, no calcium carbonate nodules observed	
46.8	33.5	3	4	6						SS-10		33.5 ft: stiff, weak HCl reaction	
41.8	38.5	9	12	17						SS-11		41.8	SANDY FAT CLAY (CH), yellowish brown (10YR 5/6) mottled light gray (5Y 7/2), very stiff, moist, some fine grained sand, strong HCl reaction, trace calcium carbonate nodules
36.8	43.5	4	5	8						SS-12		36.8	FAT CLAY (CH), yellowish brown (10YR 5/6) mottled pale olive (5Y 6/3), stiff, moist, few fine grained sand, weak HCl reaction, trace black staining
31.8	48.5	4	6	10						SS-13		48.5 ft: light yellowish brown (2.5Y 6/4), very stiff, no HCl reaction on clay, trace calcium carbonate nodules	
26.8	53.5	5	7	10						SS-14		27.8	SILTY SAND (SM), very pale brown (10YR 7/4), firm, moist, fine grained, some fines, weak 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: G. Pillappa / R. Clark						
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)					
BORING NO.: B-3272		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR.	ND				
GROUND SURFACE ELEV.: 80.3 ft (NAVD88)		NORTHING: 13,413,581		US ft (NAD83)		EASTING: 2,600,954	US ft (NAD83)	24 HR.	ND			
TOTAL DEPTH: 180.0 ft		DRILL MACHINE: CME 45 C Track		DRILLER: D. Rhodes (MACTEC RAL)			HAMMER (ID): 140 lb. Auto (MEC 12)					
DATE STARTED: 2/11/09		COMPLETED: 2/19/09		CASING DEPTH: 10.0 ft			BITS USED: 2 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		
24.2					Continued from previous page							
21.8	58.5	8	14	13							SS-15	SILTY SAND (SM), very pale brown (10YR 7/4), firm, moist, fine grained, some fines, weak HCl reaction (continued) 58.5 ft: very firm, wet, laminations
16.8	63.5	13	14	12							SS-16	19.3 FAT CLAY with sand (CH), pale brown (10YR 6/3), very stiff, moist, little fine grained sand, trace laminations, weak HCl reaction, trace calcium carbonate nodules 61.0
11.8	68.5	3	5	8							SS-17	68.5 ft: light brownish gray (10YR 6/2), stiff
6.8	73.5	4	8	13							SS-18	6.8 SANDY FAT CLAY (CH), light yellowish brown (10YR 6/4), very stiff, moist, some fine grained sand, weak to strong HCl reaction, trace calcium carbonate nodules 73.5
1.8	78.5	7	8	9							SS-19	78.5 ft: light gray (10YR 7/2), weak HCl reaction
-3.2	83.5	18	18	25							SS-20	-1.7 82.0 ft: bit chatter SILTY SAND (SM), very pale brown (10YR 7/3), dense, wet, fine grained, some fines, weak HCl reaction in sand, little calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules 82.0
-8.2	88.5	23	28	16							SS-21A/B	-9.2 88.5 ft: pale yellow (2.5Y 7/3), weak HCl reaction, trace laminations SANDY FAT CLAY (CH), pale yellow (2.5Y 7/3), hard, moist, some fine grained sand 89.5
-13.2	93.5	5	14	28							SS-22A/B	-13.2 FAT CLAY with sand (CH), pale yellow (2.5Y 7/3), hard, moist, little fine grained sand, weak HCl reaction, trace calcium carbonate nodules 93.5
-18.2	98.5	14	20	30							SS-23A/B	-14.2 SILTY SAND (SM), pale yellow (2.5Y 7/3), dense, wet, fine to medium grained, some fines, weak to strong HCl reaction 94.5
												-16.7 SANDY FAT CLAY (CH), very pale brown (10YR 8/2), hard, moist, some fine grained sand, few angular gravel and calcium carbonate nodules, strong HCl reaction 97.0
												-19.4 SILTY SAND (SM), very pale brown (10YR 7/4), dense, wet, fine grained, some fines, weak HCl reaction 99.7
-28.2	108.5	20	50/0.2								SS-24	108.5 ft: very pale brown (10YR 7/3), very dense, fine to coarse grained, little fines, trace to few subangular gravel

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: G. Pillappa / R. Clark			
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS									GROUND WATER (ft)			
BORING NO.: B-3272			DRILL METHOD: Mud Rotary			SAMPLE METHODS: SPT			0 HR.	ND		
GROUND SURFACE ELEV.: 80.3 ft (NAVD88)			NORTHING: 13,413,581			US ft (NAD83)			EASTING: 2,600,954	US ft (NAD83)		
TOTAL DEPTH: 180.0 ft			DRILL MACHINE: CME 45 C Track			DRILLER: D. Rhodes (MACTEC RAL)			HAMMER (ID): 140 lb. Auto (MEC 12)			
DATE STARTED: 2/11/09			COMPLETED: 2/19/09			CASING DEPTH: 10.0 ft			BITS USED: 2 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		
-31.9					Continued from previous page							

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-3272	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR.	ND
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GROUND SURFACE ELEV.: 80.3 ft (NAVD88)	NORTHING: 13,413,581 US ft (NAD83)	EASTING: 2,600,954 US ft (NAD83)	24 HR.	ND
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TOTAL DEPTH: 180.0 ft	DRILL MACHINE: CME 45 C Track	DRILLER: D. Rhodes (MACTEC RAL)	HAMMER (ID): 140 lb. Auto (MEC 12)
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DATE STARTED: 2/11/09	COMPLETED: 2/19/09	CASING DEPTH: 10.0 ft	BITS USED: 2 7/8" Drag Bit
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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			
-88.0					Continued from previous page								
-88.2	164.5	19	35	35							SS-30		SILTY SAND (SM), pale yellow (2.5Y 8/3), very dense, wet, fine to coarse grained, little fines, weak HCl reaction, trace angular gravel 173.5 ft: no recovery 173.5 - 176.5 ft: hard drilling 176.5 ft: very pale brown (10YR 8/3), dense
-93.2	173.5	50/0.1									SS-31		
-96.2	178.5	13	18	21							SS-32		

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



GEOTECHNICAL BORING LOG

Prepared By WSD Date 11/10/09Checked By PAW 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-3273		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR.	ND					
GROUND SURFACE ELEV.: 80.3 ft (NAVD88)		NORTHING: 13,413,727		US ft (NAD83)		EASTING: 2,601,029 US ft (NAD83)	24 HR.	ND					
TOTAL DEPTH: 176.0 ft		DRILL MACHINE: CME 550 X		DRILLER: R. Landeros (MACTEC ATL)		HAMMER (ID): 140 lb. Auto (MEC 22)							
DATE STARTED: 2/17/09		COMPLETED: 2/18/09		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
80.3					Ground Surface							80.3	0.0
80.3	0.0	2	3	5						SS-1		FAT CLAY (CH), gray (10YR 5/1), firm, dry, few fine grained sand, no HCl reaction, some root matter	
77.8	2.5	7	10	9						SS-2		2.5 ft: and light gray (10YR 7/2), very stiff, no HCl reaction on clay, trace calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules	
75.3	5.0	5	8	8						SS-3		75.3	5.0
72.8	7.5	4	6	8						SS-4		FAT CLAY with sand (CH), grayish brown (2.5Y 5/2), very stiff, dry, little fine grained sand, strong HCl reaction, few calcium carbonate nodules	
70.3	10.0	4	6	10						SS-5		72.8	7.5
67.8	12.5	4	7	10						SS-6		FAT CLAY (CH), pale brown (10YR 6/3), stiff, moist, few fine grained sand, strong HCl reaction, some calcium carbonate nodules, black staining	
												10.0 ft: light brownish gray (2.5Y 6/2), very stiff	
60.8	19.5	4	6	9						SS-7		67.8	12.5
												SANDY FAT CLAY (CH), light yellowish brown (2.5Y 6/3), very stiff, moist, some fine grained sand, weak HCl reaction, few calcium carbonate nodules	
55.8	24.5	4	4	6						SS-8		60.8	19.5
												FAT CLAY (CH), light gray (2.5Y 7/1), brownish yellow (10YR 6/8), stiff, moist, few sand, weak HCl reaction, trace calcium carbonate nodules	
50.8	29.5	5	6	11						SS-9		24.5 ft: no calcium carbonate nodules observed	
												29.5 ft: and yellow (10YR 7/6), very stiff, trace calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules	
45.8	34.5	6	7	11						SS-10		34.5 ft: and yellowish brown (10YR 5/6), weak HCl reaction	
40.8	39.5	3	5	7						SS-11		39.5 ft: brownish yellow (10YR 6/6) and light gray (2.5Y 7/2), stiff, no calcium carbonate nodules observed	
35.8	44.5	5	5	11						SS-12		44.5 ft: very stiff	
30.8	49.5	5	11	14						SS-13		49.5 ft: and light brownish gray (2.5Y 6/2) and yellowish brown (10YR 5/8), few fine grained sand, no HCl reaction on clay, calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules	
25.8	54.5	3	6	7						SS-14		25.8	54.5
												SANDY FAT CLAY (CH), light gray (10YR 7/2), stiff, moist, some fine grained sand, 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-3273		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND							
GROUND SURFACE ELEV.: 80.3 ft (NAVD88)		NORTHING: 13,413,727		US ft (NAD83)		EASTING: 2,601,029 US ft (NAD83)							
TOTAL DEPTH: 176.0 ft		DRILL MACHINE: CME 550 X		DRILLER: R. Landeros (MACTEC ATL)		HAMMER (ID): 140 lb. Auto (MEC 22)							
DATE STARTED: 2/17/09		COMPLETED: 2/18/09		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			
24.2					Continued from previous page								
20.8	59.5	10	13	23							SS-15		SANDY FAT CLAY (CH), light gray (10YR 7/2), stiff, moist, some fine grained sand, no HCl reaction (continued)
15.8	64.5	10	7	9							SS-16		CLAYEY SAND (SC), light gray (10YR 7/2), dense, wet, fine grained, little fines, no HCl reaction
10.8	69.5	4	6	8							SS-17		FAT CLAY (CH), light olive gray (5Y 6/2), very stiff, moist, few fine grained sand, weak HCl reaction
5.8	74.5	5	10	9							SS-18		69.5 ft: grayish brown (2.5Y 5/2), stiff, no HCl reaction on clay, few calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
0.8	79.5	5	8	11							SS-19		74.5 ft: light gray (2.5Y 7/2), very stiff, no HCl reaction, no calcium carbonate nodules observed
-4.2	84.5	9	9	10							SS-20		79.5 ft: few black and reddish yellow staining, trace calcium carbonate nodules
-9.2	89.5	11	9	9							SS-21		CLAYEY SAND (SC), light gray (2.5Y 7/2), firm, wet, fine grained, little fines, no HCl reaction
-14.2	94.5	8	11	13							SS-22		FAT CLAY (CH), light gray (2.5Y 7/2) and brownish yellow (10YR 6/6), very stiff, moist, no HCl reaction on clay, black and white calcium carbonate
-19.2	99.5	4	11	12							SS-23		FAT CLAY with sand (CH), light gray (2.5Y 7/2), brownish yellow (10YR 6/6), very stiff, moist, little sand, no HCl reaction on clay, calcium carbonate, strong HCl reaction on calcium carbonate
-24.7	105.0												FAT CLAY (CH), light gray (2.5Y 7/2), brownish yellow (10YR 6/6), very stiff, moist, few fine grained sand, no HCl reaction on clay, calcium carbonate, strong HCl reaction on calcium carbonate
-29.2	109.5	23	31	20							SS-24A/B		POORLY GRADED SAND with silt (SP-SM), very pale brown (10YR 7/4), very dense, wet, medium to coarse grained, few fines, no HCl reaction

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-3273			DRILL METHOD: Mud Rotary			SAMPLE METHODS: SPT			0 HR.	ND		
GROUND SURFACE ELEV.: 80.3 ft (NAVD88)			NORTHING: 13,413,727			US ft (NAD83)			EASTING: 2,601,029	US ft (NAD83)	24 HR.	ND
TOTAL DEPTH: 176.0 ft			DRILL MACHINE: CME 550 X			DRILLER: R. Landeros (MACTEC ATL)			HAMMER (ID): 140 lb. Auto (MEC 22)			
DATE STARTED: 2/17/09			COMPLETED: 2/18/09			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		
-31.9					Continued from previous page							
												SANDY FAT CLAY (CH), light gray (2.5Y 7/2), hard, moist, some fine grained sand, no HCl reaction on clay, some calcium carbonate, strong HCl reaction on calcium carbonate (continued)
-39.2	119.5	9	9	9							SS-35	-39.2 119.5 FAT CLAY (CH), light gray (5Y 7/2), very stiff, moist, few fine grained sand, no HCl reaction on clay, little calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
-49.2	129.5	7	11	13							SS-36	129.5 ft: and brownish yellow (10YR 6/6), strong HCl reaction, no calcium carbonate nodules
-59.2	139.5	34	53/0.1								SS-37	-59.2 139.5 POORLY GRADED SAND with silt (SP-SM), very pale brown (10YR 7/4), very dense, moist, fine grained, few fines, strong HCl reaction
-69.4	149.7	6	9	11							SS-38	-69.4 149.7 FAT CLAY (CH), light gray (5Y 7/2), very stiff, moist, strong HCl reaction, trace calcium carbonate nodules
-79.2	159.5	13	22	16							SS-39A/B	-79.2 159.5 FAT CLAY with sand (CH), light gray (2.5Y 7/2), hard, moist, little fine grained sand, no HCl reaction CLAYEY SAND (SC), light gray (2.5Y 7/2), dense, moist, fine to coarse grained, little fines, no HCl reaction

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-3273		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND						
GROUND SURFACE ELEV.: 80.3 ft (NAVD88)		NORTHING: 13,413,727		US ft (NAD83)		EASTING: 2,601,029 US ft (NAD83)						
TOTAL DEPTH: 176.0 ft		DRILL MACHINE: CME 550 X		DRILLER: R. Landeros (MACTEC ATL)		HAMMER (ID): 140 lb. Auto (MEC 22)						
DATE STARTED: 2/17/09		COMPLETED: 2/18/09		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			
-88.0					Continued from previous page							
-89.2	169.5	14	22	19	●41.....					SS-30		CLAYEY SAND (SC), light gray (2.5Y 7/2), dense, moist, fine to coarse grained, little fines, no HCl reaction (continued) 169.5 ft: fine grained, some fines, strong HCl reaction
-94.2	174.5	14	20	12	●32.....					SS-31		-94.2 -95.7 POORLY GRADED SAND with clay (SP-SC), very pale brown (10YR 7/3), dense, wet, medium to coarse grained, strong HCl reaction Boring Terminated at Elevation -95.7 ft
												174.5 176.0

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



GEOTECHNICAL BORING LOG

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

SHEET 1 OF 6

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-3274		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR.	ND				
GROUND SURFACE ELEV.: 80.1 ft (NAVD88)		NORTHING: 13,413,659		US ft (NAD83)		EASTING: 2,600,813	US ft (NAD83)	24 HR.	ND			
TOTAL DEPTH: 300.0 ft		DRILL MACHINE: CME 550		DRILLER: L. Carter (MACTEC ATL)			HAMMER (ID): 140 lb. Auto (CME-08)					
DATE STARTED: 2/17/09		COMPLETED: 2/20/09		CASING DEPTH: 5.0 ft			BITS USED: 4" 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		
80.1					Ground Surface							
80.1	0.0	2	3	5						SS-1		FAT CLAY (CH), very dark gray (10YR 3/1), firm, moist, strong HCl reaction, organics
76.6	3.5	5	9	8						SS-2		SANDY FAT CLAY (CH), light gray (10YR 7/2), very stiff, moist, some fine grained sand, no HCl reaction, black staining, orange staining
74.1	6.0	4	6	7						SS-3		6.0 ft: stiff
71.6	8.5	3	6	7						SS-4		FAT CLAY (CH), light gray (10YR 7/2), stiff, moist, strong HCl reaction, calcium carbonate nodules, caliche, black and orange staining
69.1	11.0	5	7	11						SS-5		SANDY FAT CLAY (CH), very pale brown (10YR 7/3), very stiff, moist, some fine grained sand, weak HCl reaction, calcium carbonate nodules, some caliche, black and orange staining
66.6	13.5	5	7	10						SS-6		13.5 ft: strong HCl reaction, trace caliche
61.6	18.5	3	5	7						SS-7		FAT CLAY (CH), light gray (10YR 7/2) and reddish yellow (7.5YR 6/6), stiff, moist, weak HCl reaction, black staining
56.6	23.5	5	9	12						SS-8		23.5 ft: very pale brown (10YR 7/3), very stiff, low fine grained sand, strong HCl reaction, calcium carbonate nodules, black and orange staining
51.6	28.5	8	16	20						SS-9		28.5 ft: light gray (10YR 7/2), hard
46.6	33.5	6	13	16						SS-10		FAT CLAY with sand (CH), light gray (10YR 7/2) and reddish yellow (7.5YR 6/6), very stiff, moist, little fine grained sand, strong HCl reaction, calcium carbonate nodules, some caliche, black and orange staining
41.6	38.5	6	7	11						SS-11		FAT CLAY (CH), light gray (10YR 7/2) and reddish yellow (7.5YR 6/6), very stiff, moist, strong HCl reaction, calcium carbonate nodules, caliche, black staining
36.6	43.5	8	13	15						SS-12		CLAYEY SAND (SC), light gray (10YR 7/2), very firm, moist, fine grained, little fines, strong HCl reaction, calcium carbonate nodules, black and orange staining
31.6	48.5	5	6	10						SS-13		48.5 ft: very pale brown (10YR 7/3), firm, weak HCl reaction, some calcium carbonate nodules, light orange staining
26.6	53.5	6	9	11						SS-14		SILTY SAND (SM), very pale brown (10YR 7/3), firm, wet, fine grained, little fines, weak HCl reaction, calcium carbonate nodules

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



SHEET 3 OF 6

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-3274		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND									
GROUND SURFACE ELEV.: 80.1 ft (NAVD88)		NORTHING: 13,413,659		US ft (NAD83)		EASTING: 2,600,813 US ft (NAD83)									
TOTAL DEPTH: 300.0 ft		DRILL MACHINE: CME 550		DRILLER: L. Carter (MACTEC ATL)		HAMMER (ID): 140 lb. Auto (CME-08)									
DATE STARTED: 2/17/09		COMPLETED: 2/20/09		CASING DEPTH: 5.0 ft		BITS USED: 4" 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					
-32.1					Continued from previous page										
-38.4	118.5	8	19	23						42	SS-25		POORLY GRADED SAND (SP), very pale brown (10YR 7/3), very dense, wet, fine to coarse grained, strong HCl reaction (continued)		
-48.4	128.5	11	21	32						53	SS-26		FAT CLAY (CH), light gray (10YR 7/2), hard, moist, strong HCl reaction, calcium carbonate nodules, some caliche, black and orange staining		
-58.4	138.5	23	42	49						91	SS-27		SANDY SILT (ML), very pale brown (10YR 7/3), hard, moist, some fine grained sand, weak HCl reaction, orange staining		
-68.4	148.5	8	10	15						25	SS-28		POORLY GRADED SAND (SP), very pale brown (10YR 8/3), very dense, wet, fine to coarse grained, weak HCl reaction		
-78.4	158.5	15	17	32						49	SS-29		145.0-145.5 ft: hard drilling, bit chatter		
													FAT CLAY (CH), very pale brown (10YR 7/3), very stiff, moist, strong HCl reaction, calcium carbonate nodules, black staining, orange staining		
													POORLY GRADED SAND (SP), very pale brown (10YR 7/3), dense, wet, fine to medium grained, no HCl reaction		

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: B. Mable							
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS							GROUND WATER (ft)						
BORING NO.: B-3274		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT		0 HR. ND							
GROUND SURFACE ELEV.: 80.1 ft (NAVD88)		NORTHING: 13,413,659		US ft (NAD83)		EASTING: 2,600,813 US ft (NAD83)							
TOTAL DEPTH: 300.0 ft		DRILL MACHINE: CME 550		DRILLER: L. Carter (MACTEC ATL)		HAMMER (ID): 140 lb. Auto (CME-08)							
DATE STARTED: 2/17/09		COMPLETED: 2/20/09		CASING DEPTH: 5.0 ft		BITS USED: 4" 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			
-88.2					Continued from previous page								
-88.4	168.5	29	44	48						92	SS-30		POORLY GRADED SAND (SP), very pale brown (10YR 7/3), dense, wet, fine to medium grained, no HCl reaction (continued) 168.5 ft: very dense, weak HCl reaction
-98.4	178.5	72	50/0.1							122/0.6	SS-31		178.5 ft: fine to coarse grained, strong HCl reaction
-108.4	188.5	8	27	37						64	SS-32		187.0-188.5 ft: softer drilling FAT CLAY (CH), light gray (10YR 7/2), hard, moist, strong HCl reaction, calcium carbonate nodules, caliche, orange staining, black staining
-118.4	198.5	70/0.1								70/0.1	SS-33		POORLY GRADED SAND (SP), white (10YR 8/1), very dense, moist, fine to medium grained, strong HCl reaction, cemented sands 198.6-205.0 ft: hard drilling, bit chatter
-128.4	208.5	19	28	42						70	SS-34		POORLY GRADED SAND with silt (SP-SM), very pale brown (10YR 7/3), very dense, wet, fine grained, little fines, strong HCl reaction
-138.4	218.5	WOH	WOH	7						7	SS-35		FAT CLAY (CH), light gray (10YR 7/2), firm, moist, weak HCl reaction, trace calcium carbonate nodules, orange staining, trace black staining
-143.4	223.5	10	9	16							SS-36		

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



SHEET 5 OF 6

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-3274		DRILL METHOD: Mud Rotary		SAMPLE METHODS: SPT			0 HR.	ND					
GROUND SURFACE ELEV.: 80.1 ft (NAVD88)		NORTHING: 13,413,659		US ft (NAD83)		EASTING: 2,600,813 US ft (NAD83)		24 HR.	ND				
TOTAL DEPTH: 300.0 ft		DRILL MACHINE: CME 550		DRILLER: L. Carter (MACTEC ATL)			HAMMER (ID): 140 lb. Auto (CME-08)						
DATE STARTED: 2/17/09		COMPLETED: 2/20/09		CASING DEPTH: 5.0 ft			BITS USED: 4" Drag Bit						
ELEV. (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION
		0.5ft	0.5ft	0.5ft	0	20	40	60	80	100			
-144.3					Continued from previous page								
-148.4	228.5	11	13	16							SS-37		SANDY FAT CLAY (CH), very pale brown (10YR 7/3), very stiff, moist, some fine grained sand, no HCl reaction, orange staining (continued)
-158.4	238.5	50/0.1									SS-38		POORLY GRADED SAND (SP), very pale brown (10YR 7/3), very firm, wet, fine to coarse grained, weak HCl reaction, trace calcium carbonate nodules
													238.5 ft: very dense, no recovery
-168.4	248.5	7	10	30							SS-39		FAT CLAY (CH), light gray (10YR 7/3), hard, moist, weak HCl reaction, trace calcium carbonate nodules, black and orange staining
-178.4	258.5	23	28	53							SS-40		POORLY GRADED SAND with clay (SP-SC), very dense, moist, fine to medium grained, few fines, weak HCl reaction, trace orange staining
-188.4	268.5	14	12	14							SS-41		268.5 ft: very firm, no recovery
-198.4	278.5	25	35	37							SS-42		278.5 ft: very dense, orange staining

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

EXELON COLBORE VICTORIA PHASE III GPJ EXELON COLGDT 8/10/09



GEOTECHNICAL BORING LOG

Prepared By WSD Date 11-10-09Checked By RAM 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-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 0.5ft 0.5ft 0.5ft			BLOWS PER FOOT 0 20 40 60 80 100			SAMP. NO.	LOG MOI	SOIL AND ROCK DESCRIPTION	
80.7					Ground Surface					80.7	0.0
80.7	0.0	6	4	5				SS-1		FAT CLAY (CH), dark gray (10YR 4/1), stiff, dry, few fine grained sand, no HCl reaction, little organic root matter	
78.2	2.5	4	7	10				SS-2		2.5 ft: and light gray (10YR 7/2), very stiff, few calcium carbonate nodules, strong HCl reaction	
75.7	5.0	6	8	8				SS-3		5.0 ft: no HCl reaction on clay	
73.2	7.5	5	6	8				SS-4		7.5 ft: yellow (10YR 7/6), stiff, little calcium carbonate, strong HCl reaction	
70.7	10.0	3	4	3				SS-5		10.0 ft: firm, moist, strong HCl reaction, some calcium carbonate	
68.2	12.5	1	5	6				SS-6		12.5 ft: light yellowish brown (2.5Y 6/3), stiff, no HCl reaction on clay, little calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules	
61.2	19.5	3	5	6				SS-7		19.5 ft: brownish yellow (10YR 6/6) and light gray (5Y 7/2), trace calcium carbonate nodules, strong HCl reaction	
56.2	24.5	2	5	7				SS-8		24.5 ft: no HCl reaction, no calcium carbonate nodules observed	
51.2	29.5	4	6	9				SS-9		29.5 ft: light gray (5Y 7/2), trace calcium carbonate nodules, weak HCl reaction	
46.2	34.5	4	7	8				SS-10		34.5 ft: and brownish yellow (10YR 6/6), no HCl reaction on clay, strong HCl reaction on calcium carbonate nodules	
41.2	39.5	5	7	9				SS-11		39.5 ft: very stiff, weak HCl reaction	
36.2	44.5	4	6	7				SS-12		44.5 ft: stiff, no HCl reaction on clay, trace calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules	
31.2	49.5	6	7	12				SS-13		31.2	49.5
26.2	54.5	6	7	7				SS-14		26.2	54.5

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-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)	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: 2/19/09		COMPLETED: 2/20/09		CASING DEPTH: 5.0 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	NO.		MOI
24.6					Continued from previous page								
21.2	59.5	6	9	11							SS-15		CLAYEY SAND (SC), very pale brown (10YR 7/3), firm, wet, mostly fine grained, little fines, no HCl reaction (continued)
16.2	64.5	6	9	9							SS-16A/B	15.2	64.5 ft: light gray (2.5Y 7/2), moist, medium grained, some fines
11.2	69.5	4	5	8							SS-17		FAT CLAY (CH), light olive gray (5Y 6/2), very stiff, moist, no HCl reaction on clay, trace calcium carbonate nodules
6.2	74.5	6	9	10							SS-18		69.5 ft: brownish yellow (10YR 6/6), stiff, strong HCl reaction
1.2	79.5	5	8	11							SS-19		74.5 ft: light gray (10YR 7/2), very stiff, few fine grained sand
-3.8	84.5	9	11	10							SS-20	-3.8	79.5 ft: no HCl reaction, calcium carbonate nodules not observed, brownish yellow and black staining
-8.8	89.5	19	28	31							SS-21	-8.8	84.5 ft: POORLY GRADED SAND with clay (SP-SC), light gray (10YR 7/2), very firm, wet, fine grained, few fines, no HCl reaction
-13.8	94.5	12	21	27							SS-22		89.5 ft: CLAYEY SAND (SC), very pale brown (10YR 7/3), very dense, moist, fine grained, some fines, no HCl reaction on sand, few calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
-18.8	99.5	8	17	30							SS-23		94.5 ft: light gray (5Y 7/2), dense, strong HCl reaction, little calcium carbonate nodules
-28.8	109.5	86/0.5									SS-24	-28.8	99.5 ft: pale yellow (2.5Y 7/4), wet, little fines, no HCl reaction on sand, few calcium carbonate nodules

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