MACTEC

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. (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
-32.5					Continued from previous page				
									FAT CLAY (CH), light gray (10YR 7/2), very stiff, moist, weak HCl reaction, trace calcium carbonate nodules, black and orange staining, caliche *(continued)*
-38.8	118.5	8	9	10	19	SS-25			118.5 ft: strong HCl reaction
-48.8	128.5	31	62	50/0.3	112/0.3	SS-26			POORLY GRADED SAND (SP), very pale brown (10YR 8/3), very dense, wet, fine grained, strong HCl reaction
-58.8	138.5	19	27	33	60	SS-27			138.5 ft: fine to medium grained, weak HCl reaction
-68.8	148.5	14	10	11	21	SS-28			FAT CLAY (CH), very pale brown (10YR 8/3), very stiff, wet, strong HCl reaction, mostly caliche, orange staining
-78.8	158.5	27	35	42	77	SS-29			POORLY GRADED SAND (SP), very pale brown (10YR 8/3), very dense, wet, fine to coarse grained, no HCl reaction, few fine gravel
									165.0 - 168.0 ft: hard drilling

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

MACTEC

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-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 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 20 40 60 80 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION
-88.6					Continued from previous page				
-88.8	168.5	32	50/0.3		82/0.3	SS-30			POORLY GRADED SAND (SP), very pale brown (10YR 8/3), very dense, wet, fine to coarse grained, no HCl reaction, few fine gravel *(continued)* 168.5 ft: strong HCl reaction
-98.8	178.5	31	35	41	76	SS-31			
-108.8	188.5	39	61	50/0.2	111/0.7	SS-32			188.5 ft: fine to medium grained, weak HCl reaction 195.0 - 196.0 ft: hard drilling
-118.8	198.5	18	16	27	43	SS-33			198.5 ft: dense, strong HCl reaction on calcium carbonate nodules in clay lenses
-120.3	200.0								Boring Terminated at Elevation -120.3 ft

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

MACTEC

GEOTECHNICAL BORING LOG

Prepared By KAW Date 8/10/09

Checked By KAW Date 8-10-09

SHEET 1 OF 6

BECHTEL NO.: 25352	MACTEC NO.: 6468-07-1777	COUNTY: Victoria, TX	GEOLOGIST: J. Moore / D. Elks
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS			GROUND WATER (ft)
BORING NO.: B-3170A	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.2 ft (NAVD88)	NORTHING: 13,411,920 US ft (NAD83)	EASTING: 2,599,279 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 300.5 ft	DRILL MACHINE: CME 55 LC Track	DRILLER: D. White (MACTEC RAL)	HAMMER (ID): 140 lb. Auto (MEC 02)
DATE STARTED: 2/24/09	COMPLETED: 3/6/09	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	LOG	SOIL AND ROCK DESCRIPTION
80.2					Ground Surface				
80.2	0.0	2	4	5	9	SS-1			FAT CLAY (CH), dark gray (10YR 4/1), stiff, moist, few fine grained sand, weak HCl reaction
76.7	3.5								80.2 0.0 / 76.7 3.5
74.2	6.0	2	3	4	7	SS-2			FAT CLAY with sand (CH), gray (10YR 6/1), firm, moist, fine to medium grained sand, weak HCl reaction
71.7	8.5	2	4	5	9	SS-3			6.0 ft: light gray (5Y 7/2), stiff, strong HCl reaction, trace calcium carbonate nodules
69.2	11.0	4	6	7	13	SS-4			8.5 ft: trace black streaks
66.7	13.5	6	6	7	13	SS-5			69.2 11.0 / SANDY LEAN CLAY (CL), light gray (5Y 7/2), stiff, moist, fine to medium grained sand, strong HCl reaction, trace calcium carbonate nodules, trace of black streaks / 66.7 13.5
61.2	19.0	4	5	8	13	SS-6			FAT CLAY (CH), light gray (5Y 7/2) mottled brownish yellow (10YR 6/6), stiff, moist, fine grained sand, strong HCl reaction, trace black streaks
56.2	24.0	4	6	7	13	SS-7			61.2 19.0 / FAT CLAY (CH), light gray (5Y 7/2) mottled brownish yellow (10YR 6/6), stiff, moist, fine grained sand, trace black streaks
51.2	29.0	4	6	7	13	SS-8			24.0 ft: mottled yellow (10YR 7/6), strong HCl reaction
46.2	34.0	7	9	11	20	SS-9			29.0 ft: very pale brown (10YR 8/2) mottled yellow (10YR 7/8), very stiff, weak HCl reaction, trace calcium carbonate nodules, trace black staining
41.2	39.0	5	7	8	15	SS-10			34.0 ft: mottled very pale brown (10YR 8/2), stiff
36.2	44.0	7	8	11	19	SS-11			39.0 ft. yellow (10YR 7/8), very stiff, moist, fine grained sand, weak HCl reaction
31.2	49.0	7	8	10	18	SS-12			44.0 ft. mottled light gray (10YR 7/1), slickensides
26.2	54.0	6	7	12	19	SS-13			31.2 49.0 / FAT CLAY with sand (CH), very pale brown (10YR 8/2) mottled yellow (10YR 7/8), very stiff, moist, fine grained sand, weak HCl reaction, trace calcium carbonate nodules, trace black staining
		10	12	18	30	SS-14			26.2 54.0 / SANDY LEAN CLAY (CL), very pale brown (10YR 8/2), very stiff, moist, some fine to medium grained sand, weak HCl reaction, calcium carbonate nodules

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

MACTEC

BECHTEL NO.: 25352	MACTEC NO.: 6468-07-1777	COUNTY: Victoria, TX	GEOLOGIST: J. Moore / D. Elks
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS			GROUND WATER (ft)
BORING NO.: B-3170A	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.2 ft (NAVD88)	NORTHING: 13,411,920 US ft (NAD83)	EASTING: 2,599,279 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 300.5 ft	DRILL MACHINE: CME 55 LC Track	DRILLER: D. White (MACTEC RAL)	HAMMER (ID): 140 lb. Auto (MEC 02)
DATE STARTED: 2/24/09	COMPLETED: 3/6/09	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	LOG	SOIL AND ROCK DESCRIPTION
24.1					Continued from previous page				
21.2	59.0								SANDY LEAN CLAY (CL), very pale brown (10YR 8/2), very stiff, moist, some fine to medium grained sand, weak HCl reaction, calcium carbonate nodules *(continued)*
		11	12	15	27	SS-15			FAT CLAY (CH), very pale brown (10YR 8/3) mottled yellow (10YR 7/6), very stiff, moist, fine grained sand, weak HCl reaction, calcium carbonate nodules, trace black staining
16.2	64.0								LEAN CLAY with sand (CL), very pale brown (10YR 8/2) mottled yellow (10YR 7/8), very stiff, moist, fine grained sand, weak HCl reaction
		10	9	13	22	SS-16			
11.2	69.0								SILTY SAND (SM), very pale brown (10YR 8/3), dense, wet, fine grained, weak HCl reaction
		15	15	16	31	SS-17			
6.2	74.0								SANDY LEAN CLAY (CL), very pale brown (10YR 8/2) mottled yellow (10YR 7/8), very stiff, moist, fine grained sand, weak HCl reaction, trace calcium carbonate nodules
		7	12	17	29	SS-18			
1.2	79.0								CLAYEY SAND (SC), very pale brown (10YR 8/2), very firm, wet, fine grained, no HCl reaction, yellow staining
		7	12	13	25	SS-19			
-3.8	84.0								SILTY, CLAYEY SAND (SC-SM), very pale brown (10YR 8/2), very dense, wet, fine to coarse grained, trace fine to coarse gravel, weak HCl reaction, trace calcium carbonate nodules
		15	30	37	67	SS-20			
-8.8	89.0								FAT CLAY with sand (CH), very pale brown (10YR 8/2) mottled yellow (10YR 7/8), very stiff, moist, fine to medium grained sand, weak HCl reaction, trace calcium carbonate nodules, black staining
		6	9	12	21	SS-21			
-13.8	94.0								LEAN CLAY with sand (CL), very pale brown (10YR 8/2) mottled yellow (10YR 7/8), hard, moist, fine to medium grained sand, weak HCl reaction, calcium carbonate nodules
		11	14	22	36	SS-22			
-18.8	99.0								POORLY GRADED SAND (SP), very pale brown (10YR 8/2), very dense, wet, fine to coarse grained, trace fines, no HCl reaction, subangular quartz
		13	50/0.2		63/0.7	SS-23			
-28.8	109.0								FAT CLAY (CH), very pale brown (10YR 8/2) mottled yellow (10YR 7/8), hard, moist, fine grained sand, weak HCl reaction, calcium carbonate nodules, caliche lenses
		13	16	15	31	SS-24			

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

MACTEC

BECHTEL NO.: 25352	MACTEC NO.: 6468-07-1777	COUNTY: Victoria, TX	GEOLOGIST: J. Moore / D. Elks
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS			GROUND WATER (ft)
BORING NO.: B-3170A	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.2 ft (NAVD88)	NORTHING: 13,411,920 US ft (NAD83)	EASTING: 2,599,279 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 300.5 ft	DRILL MACHINE: CME 55 LC Track	DRILLER: D. White (MACTEC RAL)	HAMMER (ID): 140 lb. Auto (MEC 02)
DATE STARTED: 2/24/09	COMPLETED: 3/6/09	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	LOG	SOIL AND ROCK DESCRIPTION
-32.0					Continued from previous page				
									FAT CLAY (CH), very pale brown (10YR 8/2) mottled yellow (10YR 7/8), hard, moist, fine grained sand, weak HCl reaction, calcium carbonate nodules, caliche lenses *(continued)*
-38.8	119.0								-38.8 119.0
		20	24	19	43	SS-25			POORLY GRADED SAND with silt (SP-SM), very pale brown (10YR 7/3), dense, wet, fine grained, no HCl reaction 120.4 to 120.5 ft: fat clay layer
-48.8	129.0								
		23	42	50/0.4	92/0.9	SS-26			129.0 ft: light gray (10YR 7/2), very dense
-58.8	139.0								-58.8 139.0
		10	12	18	30	SS-27			FAT CLAY (CH), yellow (10YR 7/8) mottled light gray (10YR 7/2), very stiff, moist, fine to medium grained sand, trace fine gravel, strong HCl reaction, caliche lens
-68.8	149.0								-68.8 149.0
		13	19	26	45	SS-28			SANDY LEAN CLAY (CL), light gray (10YR 7/2), hard moist, fine grained sand, weak HCl reaction
-78.8	159.0								-78.8 159.0
		12	18	16	34	SS-29			FAT CLAY (CH), very pale brown (10YR 8/2) mottled yellow (10YR 7/8), hard, moist, fine grained sand, strong HCl reaction, some calcium carbonate nodules

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

MACTEC

BECHTEL NO.: 25352	MACTEC NO.: 6468-07-1777	COUNTY: Victoria, TX	GEOLOGIST: J. Moore / D. Elks
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS			GROUND WATER (ft)
BORING NO.: B-3170A	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.2 ft (NAVD88)	NORTHING: 13,411,920 US ft (NAD83)	EASTING: 2,599,279 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 300.5 ft	DRILL MACHINE: CME 55 LC Track	DRILLER: D. White (MACTEC RAL)	HAMMER (ID): 140 lb. Auto (MEC 02)
DATE STARTED: 2/24/09	COMPLETED: 3/6/09	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	LOG	SOIL AND ROCK DESCRIPTION
-88.1					Continued from previous page				
-88.8	169.0	19	25	28	53	SS-30			WELL GRADED SAND (SW), very pale brown (10YR 8/2), very dense, wet, fine to coarse grained, subrounded quartz, trace fines, no HCl reaction on sand, trace calcium carbonate nodules
-98.8	179.0	22	31	48	79	SS-31			SILTY SAND (SM), very pale brown (10YR 8/2), very dense, wet, fine grained, weak HCl reaction 180.3 to 180.5 ft: caliche layer
-108.8	189.0	41	44	49	93	SS-32			POORLY GRADED SAND with silt (SP-SM), very pale brown (10YR 8/2), very dense, wet, fine to medium grained, no HCl reaction
-118.8	199.0	190/0.5			190/0.5	SS-33			199.0 ft.: fine to coarse grained, weak HCl reaction, trace fine gravel
-128.8	209.0	26	24	31	55	SS-34			FAT CLAY with sand (CH), light gray (10YR 7/2), hard, moist, little fine grained sand, strong HCl reaction, calcium carbonate nodules, 0.2-ft thick sand layer
-138.8	219.0	20	40	50/0.3	90/0.3	SS-35A/B			219.0 ft: mottled yellow (10YR 7/8) CLAYEY SAND (SC), very pale brown (10YR 8/2), very dense, wet, fine grained, little fines, strong HCl reaction, trace calcium carbonate nodules

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

MACTEC

BECHTEL NO.: 25352	MACTEC NO.: 6468-07-1777	COUNTY: Victoria, TX	GEOLOGIST: J. Moore / D. Elks
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS			GROUND WATER (ft)
BORING NO.: B-3170A	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.2 ft (NAVD88)	NORTHING: 13,411,920 US ft (NAD83)	EASTING: 2,599,279 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 300.5 ft	DRILL MACHINE: CME 55 LC Track	DRILLER: D. White (MACTEC RAL)	HAMMER (ID): 140 lb. Auto (MEC 02)
DATE STARTED: 2/24/09	COMPLETED: 3/6/09	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	LOG	SOIL AND ROCK DESCRIPTION
-144.2					Continued from previous page				
									CLAYEY SAND (SC), very pale brown (10YR 8/2), very dense, wet, fine grained, little fines, strong HCl reaction, trace calcium carbonate nodules *(continued)*
-148.8	229.0								-148.8 229.0
		11	14	20	34	SS-36			FAT CLAY (CH), very pale brown (10YR 8/2) mottled yellow (10YR 7/8), hard, moist, fine grained sand, weak HCl reaction, trace calcium carbonate nodules, black staining 229.2 to 229.4 ft: caliche layer
-158.8	239.0								236.0 ft: hard drilling
		200/0.2			200/0.2	SS-37			239.0 ft: no recovery
-168.8	249.0								-168.8 249.0
		27	48	50/0.3	98/0.8	SS-38			CLAYEY SAND (SC), light gray (10YR 7/1), very dense, wet, fine grained, little fines, no HCl reaction on sand, calcium carbonate nodules 249.2 to 250.1 ft: caliche layer
-178.8	259.0								-178.8 259.0
		24	50/0.4		74/0.9	SS-39			POORLY GRADED SAND with clay (SP-SC), brownish yellow (10YR 6/8), very dense, wet, fine to medium grained, few fines, strong HCl reaction, trace calcium carbonate nodules
-188.8	269.0								-188.8 269.0
		12	20	21	41	SS-40			FAT CLAY with sand (CH), very pale brown (10YR 8/2) mottled yellow (10YR 7/8), hard, moist, fine grained sand, weak HCl reaction
-198.8	279.0								-198.8 279.0
		16	48	42	99	SS-41A/B			-199.7 279.9 SANDY LEAN CLAY (CL), light gray (10YR 7/2), hard, moist, fine grained sand, weak HCl reaction.

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

MACTEC

SHEET 6 OF 6

BECHTEL NO.: 25352	MACTEC NO.: 6468-07-1777	COUNTY: Victoria, TX	GEOLOGIST: J. Moore / D. Elks
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS			GROUND WATER (ft)
BORING NO.: B-3170A	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.2 ft (NAVD88)	NORTHING: 13,411,920 US ft (NAD83)	EASTING: 2,599,279 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 300.5 ft	DRILL MACHINE: CME 55 LC Track	DRILLER: D. White (MACTEC RAL)	HAMMER (ID): 140 lb. Auto (MEC 02)
DATE STARTED: 2/24/09	COMPLETED: 3/6/09	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	LOG	SOIL AND ROCK DESCRIPTION
-200.3					Continued from previous page				
									yellow staining CLAYEY SAND (SC), very pale brown (10YR 8/2), very dense, wet, fine grained, little fines, no HCl reaction *(continued)*
-208.8	289.0	19	25	26	51	SS-42			FAT CLAY (CH), light gray (10YR 7/2) mottled yellow (10YR 7/8), hard, moist, fine grained sand, weak HCl reaction, trace calcium carbonate nodules
-218.8	299.0	15	22	30	52	SS-43			299.0 ft: very pale brown (10YR 8/2), slickensides
-220.3	300.5								Boring Terminated at Elevation -220.3 ft

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

MACTEC

GEOTECHNICAL BORING LOG

Prepared By PAR Date 8/10/09

Checked By KAW Date 8.10.09

SHEET 1 OF 4

BECHTEL NO.: 25352	MACTEC NO.: 6468-07-1777	COUNTY: Victoria, TX	GEOLOGIST: A. Taylor
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS			GROUND WATER (ft)
BORING NO.: B-3171	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 79.9 ft (NAVD88)	NORTHING: 13,411,944 US ft (NAD83)	EASTING: 2,599,565 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 175.0 ft	DRILL MACHINE: CME 45 C Track	DRILLER: D. Rhodes (MACTEC RAL)	HAMMER (ID): 140 lb. Auto (MEC 12)
DATE STARTED: 2/3/09	COMPLETED: 2/5/09	CASING DEPTH: N/A	BITS USED: 2 7/8" 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
79.9					Ground Surface				79.9 0.0
79.9	0.0	1	2	2	4	SS-1			FAT CLAY (CH), very dark gray (5Y 3/1), soft, moist, no HCl reaction
76.5	3.4	1	1	2	3	SS-2			3.4 ft: few fine grained sand
74.0	5.9	1	2	5	7	SS-3			5.9 ft: pale yellow (5Y 8/3), firm, little fine grained sand, weak HCl reaction
71.4	8.5	4	5	7	12	SS-4			71.4 8.5 SANDY FAT CLAY (CH), light yellowish brown (2.5Y 6/3), stiff, moist, some fine grained sand, weak HCl reaction
68.8	11.1	4	4	7	11	SS-5			11.1 ft: pale olive (5Y 6/3), calcium carbonate nodules, strong HCl reaction
66.5	13.4	4	4	6	10	SS-6			66.5 13.4 FAT CLAY (CH), pale yellow (5Y 7/4), stiff, moist, few fine grained sand, weak HCl reaction, black and brown staining
61.3	18.6	4	5	7	12	SS-7			
56.4	23.5	3	4	7	11	SS-8			23.5 ft: mottled olive yellow (2.5Y 6/6)
51.4	28.5	6	10	13	23	SS-9			51.4 28.5 SANDY SILT (ML), pale yellow (5Y 8/2), yellow (5Y 7/8), very stiff, moist, some fine grained sand, weak HCl reaction
46.4	33.5	4	5	9	14	SS-10			46.4 33.5 FAT CLAY (CH), pale yellow (5Y 8/3 and 5Y 8/2) mottled light olive brown (2.5Y 5/6), stiff, moist, weak HCl reaction
41.4	38.5	6	7	11	18	SS-11			38.5 ft: very stiff
36.4	43.5	6	8	11	19	SS-12			
31.4	48.5	5	7	11	18	SS-13			48.5 ft: few fine grained sand, calcium carbonate nodules, strong HCl reaction
26.4	53.5	7	8	15	23	SS-14			26.4 53.5

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

MACTEC

BECHTEL NO.: 25352	MACTEC NO.: 6468-07-1777	COUNTY: Victoria, TX	GEOLOGIST: A. Taylor
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS			GROUND WATER (ft)
BORING NO.: B-3171	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 79.9 ft (NAVD88)	NORTHING: 13,411,944 US ft (NAD83)	EASTING: 2,599,565 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 175.0 ft	DRILL MACHINE: CME 45 C Track	DRILLER: D. Rhodes (MACTEC RAL)	HAMMER (ID): 140 lb. Auto (MEC 12)
DATE STARTED: 2/3/09	COMPLETED: 2/5/09	CASING DEPTH: N/A	BITS USED: 2 7/8" 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
23.8					Continued from previous page				
21.4	58.5	11	11	12	23	SS-15			FAT CLAY with sand (CH), light gray (2.5Y 7/2), very stiff, moist, few fine grained sand, weak HCl reaction on clay, calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules, black staining (continued)
16.4	63.5	6	7	13	20	SS-16			FAT CLAY (CH), pale yellow (5Y 7/3), very stiff, moist, few fine grained sand, weak HCl reaction on clay, trace caliche 63.5 ft: pale olive (5Y 6/3), calcium carbonate nodules, strong HCl reaction
11.4	68.5	11	13	13	26	SS-17			SILTY SAND (SM), pale yellow (5Y 8/3), very firm, moist, fine grained, some fines, no HCl reaction
6.4	73.5	12	16	17	33	SS-18			73.5 ft: pale yellow (2.5Y 7/4), dense, weak HCl reaction
1.4	78.5	8	11	14	25	SS-19			78.5 ft: very firm, no HCl reaction
-3.6	83.5	35	50/0.5		85/1.0	SS-20			POORLY GRADED SAND with clay (SP-SC), pale yellow (5Y 8/2), very dense, moist, fine grained, few fines, weak HCl reaction, thin cemented layers
-8.6	88.5	14	19	21	40	SS-21			88.5 ft: dense
-13.6	93.5	29	30	21	51	SS-22			POORLY GRADED SAND (SP), yellow (5Y 7/6), very dense, moist, medium grained, few fines, weak HCl reaction
-18.6	98.5	50/0.2			50/0.2	SS-23			98.5 ft: no recovery
-28.6	108.5	6	7	13	20	SS-24			FAT CLAY (CH), light gray (5Y 7/2) mottled, light olive brown (2.5Y 5/6), very stiff, moist, few fine grained sand, weak HCl reaction on clay, calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules, black staining

21.4 — 58.5
11.4 — 68.5
-3.6 — 83.5
-13.6 — 93.5
-25.1 — 105.0

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

MACTEC

BECHTEL NO.: 25352	MACTEC NO.: 6468-07-1777	COUNTY: Victoria, TX	GEOLOGIST: A. Taylor
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS			GROUND WATER (ft)
BORING NO.: B-3171	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 79.9 ft (NAVD88)	NORTHING: 13,411,944 US ft (NAD83)	EASTING: 2,599,565 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 175.0 ft	DRILL MACHINE: CME 45 C Track	DRILLER: D. Rhodes (MACTEC RAL)	HAMMER (ID): 140 lb. Auto (MEC 12)
DATE STARTED: 2/3/09	COMPLETED: 2/5/09	CASING DEPTH: N/A	BITS USED: 2 7/8" 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
-32.3					Continued from previous page				
-38.6	118.5	9	10	12	22	SS-25			FAT CLAY (CH), light gray (5Y 7/2) mottled, light olive brown (2.5Y 5/6), very stiff, moist, few fine grained sand, weak HCl reaction on clay, calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules, black staining *(continued)* -38.6 118.5 FAT CLAY with sand (CH), light gray (2.5Y 7/2), very stiff, moist, few fine grained sand, strong HCl reaction, calcium carbonate nodules, black staining
-43.1	123.0								SILTY SAND (SM), pale yellow (5Y 8/2), dense, moist, fine grained, some fines, no HCl reaction
-48.6	128.5	11	16	22	38	SS-26			133.0-134.0 ft: bit chatter
-58.6	138.5	11	13	20	33	SS-27			137.0-138.0 ft: bit chatter -58.6 138.5 POORLY GRADED SAND (SP), pale yellow (2.5Y 7/3), dense, moist, medium grained, no HCl reaction
-64.1	144.0								143.0 to 144.0 ft: bit chatter SANDY FAT CLAY (CH), pale yellow (2.5Y 8/2), hard, moist, some fine grained sand, strong HCl reaction
-68.6	148.5	15	18	17	35	SS-28			
-78.6	158.5	12	13	17	30	SS-29			-78.6 158.5 FAT CLAY (CH), pale yellow (5Y 8/2) mottled olive yellow (2.5Y 6/6), very stiff, moist, few fine grained sand, strong HCl reaction, calcium carbonate nodules

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

MACTEC

BECHTEL NO.: 25352	MACTEC NO.: 6468-07-1777	COUNTY: Victoria, TX	GEOLOGIST: A. Taylor
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS			GROUND WATER (ft)
BORING NO.: B-3171	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 79.9 ft (NAVD88)	NORTHING: 13,411,944 US ft (NAD83)	EASTING: 2,599,565 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 175.0 ft	DRILL MACHINE: CME 45 C Track	DRILLER: D. Rhodes (MACTEC RAL)	HAMMER (ID): 140 lb. Auto (MEC 12)
DATE STARTED: 2/3/09	COMPLETED: 2/5/09	CASING DEPTH: N/A	BITS USED: 2 7/8" 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
-88.4					Continued from previous page				
-88.6	168.5	28	30	50/0.5	80/1.0	SS-30			-88.6 168.5 CLAYEY SAND (SC), pale yellow (5Y 8/2), very dense, moist, fine grained, some fines, strong HCl reaction
-93.6	173.5	50/0.4			50/0.4	SS-31			-93.6 173.5 POORLY GRADED SAND (SP), pale yellow (2.5Y 7/3), very dense, moist, fine to medium grained, no HCl reaction -95.1 175.0 Boring Terminated at Elevation -95.1 ft

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

MACTEC

GEOTECHNICAL BORING LOG

Prepared By WBD Date 11-10-09

Checked By PAH 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-3172	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 79.9 ft (NAVD88)	NORTHING: 13,411,886 US ft (NAD83)	EASTING: 2,599,616 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: 2/6/09	COMPLETED: 2/8/09	CASING DEPTH: N/A	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.	MOI	LOG	SOIL AND ROCK DESCRIPTION
79.9					Ground Surface				79.9 0.0
79.9	0.0	3	3	4	7	SS-1			FAT CLAY (CH), gray (10YR 5/1), firm, dry, few fine grained sand, no HCl reaction
77.4	2.5	4	4	5	9	SS-2			2.5 ft: dark gray (10YR 4/1), stiff, moist
74.9	5.0	4	5	5	10	SS-3			5.0 ft: and light gray (10YR 7/2), few calcium carbonate nodules, strong HCl reaction
72.4	7.5	4	7	6	13	SS-4			7.5 ft: light gray (2.5Y 7/2) and brownish yellow (10YR 6/6)
69.9	10.0	3	6	7	13	SS-5			10.0 ft: light gray (2.5Y 7/2)
67.4	12.5	4	5	6	11	SS-6			12.5 ft: trace calcium carbonate nodules, black staining
60.4	19.5	3	3	5	6	SS-7			19.5 ft: firm
55.4	24.5	4	5	7	12	SS-8			24.5 ft: stiff, no HCl reaction, no calcium carbonate nodules observed
50.4	29.5	6	8	13	21	SS-9			50.4 29.5 CLAYEY SAND (SC), pale yellow (2.5Y 7/4), very firm, wet, fine grained, some fines, weak HCl reaction
45.4	34.5	5	7	10	17	SS-10			45.4 34.5 FAT CLAY (CH), brownish yellow (10YR 6/6), very stiff, moist, no HCl reaction on clay, trace calcium carbonate nodules, weak HCl reaction on calcium carbonate nodules
40.3	39.6	8	9	11	20	SS-11			39.6 ft: few fine grained sand, weak HCl reaction, no calcium carbonate nodules observed
35.4	44.5	5	6	9	15	SS-12			44.5 ft: stiff, no HCl reaction on clay, black staining, trace calcium carbonate nodules
30.4	49.5	5	7	8	15	SS-13			49.5 ft: gray (2.5Y 5/1), weak HCl reaction
25.4	54.5	6	9	9	18	SS-14			54.5 ft: light brownish gray (2.5Y 6/2), very stiff, no HCl reaction on clay

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

MACTEC

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-3172	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 79.9 ft (NAVD88)	NORTHING: 13,411,886 US ft (NAD83)	EASTING: 2,599,616 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: 2/6/09	COMPLETED: 2/8/09	CASING DEPTH: N/A	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.	MOI	LOG	SOIL AND ROCK DESCRIPTION
23.8					Continued from previous page				
20.4	59.5	5	6	8	14	SS-15			FAT CLAY (CH), brownish yellow (10YR 6/6), very stiff, moist, no HCl reaction on clay, trace calcium carbonate nodules, weak HCl reaction on calcium carbonate nodules *(continued)* 59.5 ft: stiff
15.4	64.5	10	20	19	39	SS-16			64.5 ft: hard, strong HCl reaction
10.4	69.5	10	19	20	39	SS-17			SILTY SAND (SM), light gray (2.5Y 7/2), dense, moist, fine grained, little fines, strong HCl reaction, few calcium carbonate nodules
5.4	74.5	9	13	17	30	SS-18			74.5 ft: very pale brown (10YR 7/3), very firm, wet
0.4	79.5	6	10	9	19	SS-19			CLAYEY SAND (SC), light gray (2.5Y 7/2), firm, moist, fine grained, little fines, no HCl reaction on sand, trace calcium carbonate nodules
-4.6	84.5	14	17	13	30	SS-20			FAT CLAY with sand (CH), light gray (2.5Y 7/2), very stiff, moist, little fine grained sand, no HCl reaction on clay, calcium carbonate layers, strong HCl reaction on calcium carbonate layers
-9.6	89.5	9	14	16	30	SS-21			SANDY FAT CLAY (CH), light gray (2.5Y 7/2), very stiff, moist, some fine grained sand, strong HCl reaction, few calcium carbonate nodules
-14.6	94.5	15	48	50	98	SS-22			POORLY GRADED SAND with silt (SP-SM), very pale brown (10YR 7/4), very dense, wet, medium grained, few fines, strong HCl reaction
-19.6	99.5	60	50/0.4		110/0.9	SS-23A/B			99.5 ft: medium to coarse grained SANDY FAT CLAY (CH), light gray (2.5Y 7/2), hard, moist, some fine grained sand, strong HCl reaction
-29.6	109.5	5	13	14	27	SS-24			

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

MACTEC

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-3172	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 79.9 ft (NAVD88)	NORTHING: 13,411,886 US ft (NAD83)	EASTING: 2,599,616 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: 2/6/09	COMPLETED: 2/8/09	CASING DEPTH: N/A	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.	MOI	LOG	SOIL AND ROCK DESCRIPTION
-32.3					Continued from previous page				
									FAT CLAY (CH), brownish yellow (10YR 6/6) and light gray (2.5Y 7/2), very stiff, moist, few fine grained sand, strong HCl reaction, few calcium carbonate nodules *(continued)*
-39.6	119.5	6	9	10	19	SS-25			119.5 ft: light brownish gray (10YR 6/2), no HCl reaction on clay, trace calcium carbonate nodules, strong HCl reaction
-49.6	129.5	8	23	30	53	SS-26			-49.6 129.5 POORLY GRADED SAND with silt (SP-SM), light gray (10YR 7/2), very dense, wet, fine grained, few fines, no HCl reaction
-59.6	139.5	10	17	24	41	SS-27A/B			-59.6 139.5 -60.3 140.2 POORLY GRADED SAND with clay (SP-SC), very pale brown (10YR 7/3), dense, wet, medium to coarse grained, few fines, strong HCl reaction, little calcium carbonate pieces
-69.6	149.5	8	6	13	19	SS-28			FAT CLAY with sand (CH), light gray (2.5Y 7/2) and brownish yellow (10YR 6/8), hard, moist, little fine grained sand, no HCl reaction on clay, little calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
									149.5 ft: very stiff, few calcium carbonate nodules
-79.6	159.5	28	40	50	90	SS-29			-72.1 152.0 POORLY GRADED SAND with silt (SP-SM), pale yellow (2.5Y 7/3), very dense, wet, medium to coarse grained, few fines, weak HCl reaction

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

MACTEC

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-3172	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 79.9 ft (NAVD88)	NORTHING: 13,411,886 US ft (NAD83)	EASTING: 2,599,616 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: 2/6/09	COMPLETED: 2/8/09	CASING DEPTH: N/A	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.	MOI	LOG	SOIL AND ROCK DESCRIPTION
-88.4					Continued from previous page				
-89.6	169.5	17	24	19	43	SS-30			SILTY SAND (SM), very pale brown (10YR 7/3), dense, wet, medium grained, little fines, weak HCl reaction
-93.6	173.5	21	46	44	90	SS-31			173.5 ft: very dense, medium to coarse grained, trace calcium carbonate nodules
-95.1	175.0								Boring Terminated at Elevation -95.1 ft

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

MACTEC

GEOTECHNICAL BORING LOG

Prepared By WGD Date 11-10-09

Checked By PAM 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-3173	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.2 ft (NAVD88)	NORTHING: 13,411,880 US ft (NAD83)	EASTING: 2,599,377 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: 1/28/09	COMPLETED: 2/5/09	CASING DEPTH: 9.0 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.	MOI	LOG	SOIL AND ROCK DESCRIPTION
80.2					Ground Surface				80.2 0.0
80.2	0.0	2	4	4	8	SS-1			FAT CLAY (CH), dark gray (2.5Y 4/1), firm, dry, few fine grained sand, no HCl reaction on clay
77.7	2.5	5	6	9	15	SS-2			2.5 ft: stiff, moist
75.2	5.0	4	5	6	11	SS-3			5.0 ft: light gray (2.5Y 7/2) and gray (2.5Y 5/1), few calcium carbonate nodules, strong HCl reaction
72.7	7.5	5	8	8	16	SS-4			7.5 ft: very stiff, mottled with brownish yellow (10YR 6/2) staining
70.2	10.0	5	8	10	18	SS-5			10.0 ft: mottled with very dark gray (2.5Y 3/1)
67.7	12.5	4	6	8	14	SS-6			12.5 ft: light brownish gray (2.5Y 6/2), stiff
60.7	19.5	3	4	5	9	SS-7			19.5 ft: light gray (5Y 7/2) with brownish yellow (10YR 6/8), no calcium carbonate nodules observed
55.6	24.6	4	7	8	15	SS-8			24.6 ft: brownish yellow (10YR 6/6) and light gray (2.5Y 7/2), trace calcium carbonate nodules
50.7	29.5	7	9	10	19	SS-9A/B			50.7 29.5 50.1 30.1 CLAYEY SAND (SC), light gray (2.5Y 7/2), yellow (2.5Y 7/8), firm, moist, fine grained, some fines, weak HCl reaction FAT CLAY (CH), brownish yellow (10YR 6/8) and light gray (2.5Y 7/2), very stiff, moist, few fine grained sand, trace calcium carbonate nodules, strong HCl reaction, no HCl reaction on clay
45.7	34.5	4	6	11	17	SS-10			34.5 ft: weak HCl reaction, no calcium carbonate nodules observed
40.7	39.5	5	9	9	18	SS-11			39.5 ft: trace calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules, no HCl reaction on clay
35.7	44.5	5	7	9	16	SS-12			
30.7	49.5	5	8	11	19	SS-13			30.7 49.5 FAT CLAY with sand (CH), light brownish gray (10YR 6/2), very stiff, moist, little fine grained sand, calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules, no HCl reaction on clay
25.7	54.5	7	11	11	22	SS-14			54.5 ft: light olive gray (5Y 6/2)

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

MACTEC

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-3173	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.2 ft (NAVD88)	NORTHING: 13,411,880 US ft (NAD83)	EASTING: 2,599,377 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: 1/28/09	COMPLETED: 2/5/09	CASING DEPTH: 9.0 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.	MOI	LOG	SOIL AND ROCK DESCRIPTION
24.1					Continued from previous page				
20.7	59.5	5	8	10	18	SS-15			FAT CLAY with sand (CH), light brownish gray (10YR 6/2), very stiff, moist, little fine grained sand, calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules, no HCl reaction on clay *(continued)*
15.7	64.5	6	7	12	19	SS-16			FAT CLAY (CH), grayish brown (2.5Y 5/2), very stiff, moist, few fine grained sand, few calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules, no HCl reaction on clay
10.7	69.5	7	7	9	16	SS-17			64.5 ft: light gray (2.5Y 7/2)
5.7	74.5	5	5	14	19	SS-18			FAT CLAY with sand (CH), light gray (2.5Y 7/2), very stiff, moist, little fine grained sand, little calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules, no HCl reaction on clay
0.7	79.5	14	11	13	24	SS-19			SANDY FAT CLAY (CH), light gray (10YR 7/2), very stiff, moist, some fine grained sand, few calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules, no HCl reaction on clay
-4.3	84.5	43	25	21	46	SS-20			CLAYEY SAND (SC), light gray (10YR 7/2), very firm, wet, fine grained, some fines, no HCl reaction
-9.3	89.5	11	12	22	34	SS-21			SANDY FAT CLAY (CH), light gray (10YR 7/2), hard, moist, some fine grained sand, mostly calcium carbonate nodules, strong HCl reaction
-14.3	94.5	23	36	50	86	SS-22			POORLY GRADED SAND with silt (SP-SM), light gray (10YR 7/2), dense, wet, fine to medium grained, few fines, no HCl reaction
-19.3	99.5	70/0.1			70/0.1	SS-23			94.5 ft: very pale brown (10YR 7/4) to brownish yellow (10YR 6/8), very dense, weak HCl reaction
-29.3	109.5	10	11	13	24	SS-24			99.5 ft: no recovery

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

MACTEC

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-3173	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.2 ft (NAVD88)	NORTHING: 13,411,880 US ft (NAD83)	EASTING: 2,599,377 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: 1/28/09	COMPLETED: 2/5/09	CASING DEPTH: 9.0 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.	MOI	LOG	SOIL AND ROCK DESCRIPTION
-32.0					Continued from previous page				
									FAT CLAY (CH), light gray (5Y 7/2), very stiff, moist, few fine grained sand, few calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules, no HCl reaction on clay, brownish yellow staining *(continued)*
-39.3	119.5								
		7	14	13	27	SS-25			119.5 ft: little calcium carbonate nodules
									-42.8 123.0 POORLY GRADED SAND with silt (SP-SM), light gray (10YR 7/1), very dense, wet, fine grained, few fines, calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules, no HCl reaction on sand
-49.3	129.5								
		10	16	37	53	SS-26			
-59.3	139.5								-59.3 139.5
		3	12	18	30	SS-27A/B			-59.5 140.0 SANDY FAT CLAY (CH), light gray (2.5Y 7/2), very stiff, moist, some fine grained sand, no HCl reaction
									POORLY GRADED SAND with silt (SP-SM), light gray (10YR 7/1), very firm, wet, fine grained, few fines, no HCl reaction
-69.4	149.6								-69.4 149.6
		10	13	12	25	SS-28			CLAYEY SAND (SC), pale yellow (2.5Y 8/2), very firm, moist, fine grained, little fines, weak HCl reaction
-79.3	159.5								-79.3 159.5
		9	10	13	23	SS-29			FAT CLAY with sand (CH), light gray (2.5Y 7/2) with brownish yellow (10YR 6/6), very stiff, little fine grained sand, strong HCl reaction, trace calcium carbonate nodules

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

MACTEC

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-3173	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.2 ft (NAVD88)	NORTHING: 13,411,880 US ft (NAD83)	EASTING: 2,599,377 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: 1/28/09	COMPLETED: 2/5/09	CASING DEPTH: 9.0 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.	MOI	LOG	SOIL AND ROCK DESCRIPTION
-88.1					Continued from previous page				
-89.3	169.5	12	14	8	22	SS-30			FAT CLAY with sand (CH), light gray (2.5Y 7/2) with brownish yellow (10YR 6/6), very stiff, little fine grained sand, strong HCl reaction, trace calcium carbonate nodules *(continued)* 169.5 ft: no recovery
-93.3	173.5	15	44	43	87	SS-31			-93.3 173.5 POORLY GRADED SAND with silt (SP-SM), very pale brown (10YR 8/4), very dense, wet, medium grained, few fines, weak HCl reaction 175.0 -94.8 Boring Terminated at Elevation -94.8 ft

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

MACTEC

GEOTECHNICAL BORING LOG

Prepared By PAW Date 8/10/09

Checked By KAW Date 8-10-09

SHEET 1 OF 6

BECHTEL NO.: 25352	MACTEC NO.: 6468-07-1777	COUNTY: Victoria, TX	GEOLOGIST: R. Harwell
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS			GROUND WATER (ft)
BORING NO.: B-3174	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.4 ft (NAVD88)	NORTHING: 13,411,987 US ft (NAD83)	EASTING: 2,599,454 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 300.0 ft	DRILL MACHINE: CME 55 Track	DRILLER: T. Hahn (MACTEC RAL)	HAMMER (ID): 140 lb. Auto (MEC 21)
DATE STARTED: 2/25/09	COMPLETED: 3/7/09	CASING DEPTH: 15.0 ft	BITS USED: 3 7/8" 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
80.4					Ground Surface				
80.4	0.0	2	3	5	8	SS-1			LEAN CLAY (CL), black (2.5Y 2.5/1), firm, dry, few fine grained sand, no HCl reaction on clay, trace roots
77.1	3.3	2	4	4	8	SS-2			3.3 ft: gray (2.5Y 5/1), moist, trace calcium carbonate nodules, strong HCl reaction
74.2	6.2	2	4	5	9	SS-3			6.2 ft: light gray (2.5Y 7/2), stiff, weak HCl reaction on clay, black staining
72.0	8.4	3	4	5	9	SS-4			8.4 ft: trace fine grained sand
69.2	11.2	4	4	6	10	SS-5			FAT CLAY (CH), pale yellow (2.5Y 7/3), stiff, moist, few fine grained sand, weak HCl reaction on clay, trace calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules, black staining
66.9	13.5	3	5	7	12	SS-6			13.5 ft: mottled with olive yellow (2.5Y 6/6), weak HCl reaction, no calcium carbonate nodules observed
61.9	18.5	3	3	5	8	SS-7			18.5 ft: mottled light gray (2.5Y 7/2), firm
56.9	23.5	3	3	6	9	SS-8			23.5 ft: brownish yellow (10YR 6/6) mottled pale yellow (2.5Y 8/3), stiff
51.9	28.5	6	9	12	21	SS-9			28.5 ft: very stiff, strong HCl reaction
46.9	33.5	4	5	7	12	SS-10			33.5 ft: mottled strong brown (7.5YR 5/6), weak HCl reaction
41.9	38.5	4	7	9	16	SS-11			38.5 ft: trace fine grained sand
36.9	43.5	4	7	9	16	SS-12			43.5 ft: brownish yellow (10YR 6/6)
31.9	48.5	4	6	10	16	SS-13			
26.9	53.5	4	6	9	15	SS-14			53.5 ft: pale yellow (2.5Y 7/3), stiff, few fine grained sand, weak HCl reaction on clay, calcium carbonate nodules, strong HCl reaction on calcium carbonate

69.2 11.2

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

MACTEC

BECHTEL NO.: 25352	MACTEC NO.: 6468-07-1777	COUNTY: Victoria, TX	GEOLOGIST: R. Harwell
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS			GROUND WATER (ft)
BORING NO.: B-3174	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.4 ft (NAVD88)	NORTHING: 13,411,987 US ft (NAD83)	EASTING: 2,599,454 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 300.0 ft	DRILL MACHINE: CME 55 Track	DRILLER: T. Hahn (MACTEC RAL)	HAMMER (ID): 140 lb. Auto (MEC 21)
DATE STARTED: 2/25/09	COMPLETED: 3/7/09	CASING DEPTH: 15.0 ft	BITS USED: 3 7/8" 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
24.3					Continued from previous page				
21.9	58.5	7	9	12	21	SS-15			nodules FAT CLAY (CH), pale yellow (2.5Y 7/3), stiff, moist, few fine grained sand, weak HCl reaction on clay, trace calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules, black staining *(continued)* 58.5 ft: to very stiff, trace fine grained sand
16.9	63.5	6	8	14	22	SS-16			63.5 ft: light yellowish brown (2.5Y 6/3)
11.9	68.5	7	9	15	24	SS-17			SANDY FAT CLAY (CH), light brownish gray (2.5Y 6/2), very stiff, moist, some fine grained sand, weak HCl reaction on clay, trace calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
6.9	73.5	14	13	24	37	SS-18			CLAYEY SAND (SC), pale yellow (2.5Y 8/2), dense, wet, fine grained, little fines, no HCl reaction
1.9	78.5	10	11	12	23	SS-19			SANDY FAT CLAY (CH), pale yellow (2.5Y 7/3), very stiff, moist, some fine grained sand, weak HCl reaction on clay, few calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
-3.1	83.5	6	10	14	24	SS-20			POORLY GRADED SAND with clay (SP-SC), pale yellow (2.5Y 7/3), very firm, moist, fine grained, few fines, no HCl reaction
-8.1	88.5	20	46	49	95	SS-21			SANDY FAT CLAY (CH), pale yellow (2.5Y 7/3), white (2.5Y 8/1), hard, moist, some fine grained sand, weak HCl reaction on clay, few calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
-13.1	93.5	100	50/0.1		150/0.6	SS-22			FAT CLAY (CH), white (2.5Y 8/1), hard, moist, few fine grained sand, weak HCl reaction on clay, few calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
-15.6	96.0								POORLY GRADED SAND (SP), pale yellow (2.5Y 7/3), very firm, wet, fine to coarse grained, few fines, no HCl reaction
-18.1	98.5	9	15	15	30	SS-23			
-28.1	108.5	7	15	17	32	SS-24			SANDY FAT CLAY (CH), pale yellow (2.5Y 7/3), hard, moist, some fine grained sand, weak HCl reaction on clay, trace calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules

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

MACTEC

BECHTEL NO.: 25352	MACTEC NO.: 6468-07-1777	COUNTY: Victoria, TX	GEOLOGIST: R. Harwell
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS			GROUND WATER (ft)
BORING NO.: B-3174	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.4 ft (NAVD88)	NORTHING: 13,411,987 US ft (NAD83)	EASTING: 2,599,454 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 300.0 ft	DRILL MACHINE: CME 55 Track	DRILLER: T. Hahn (MACTEC RAL)	HAMMER (ID): 140 lb. Auto (MEC 21)
DATE STARTED: 2/25/09	COMPLETED: 3/7/09	CASING DEPTH: 15.0 ft	BITS USED: 3 7/8" 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
-31.8					Continued from previous page				
									SANDY FAT CLAY (CH), pale yellow (2.5Y 7/3), hard, moist, some fine grained sand, weak HCl reaction on clay, trace calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules *(continued)*
-38.1	118.5								-38.1 118.5
		6	10	11	21	SS-25			FAT CLAY (CH), pale yellow (2.5Y 7/3), very stiff, moist, few fine grained sand, weak HCl reaction on clay, few calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
-48.1	128.5								-48.1 128.5
		18	22	24	46	SS-26			POORLY GRADED SAND (SP), pale yellow (2.5Y 7/3), dense, wet, fine grained, no HCl reaction
-58.1	138.5								
		10	14	12	26	SS-27			138.5 ft: light gray (2.5Y 7/2), very firm, moist
-68.1	148.5								-68.1 148.5
		10	15	17	32	SS-28			FAT CLAY with sand (CH), pale yellow (2.5Y 8/2), hard, moist, little fine grained sand, weak HCl reaction on clay, trace calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
-78.1	158.5								-78.1 158.5
		10	61	45/0.5	106/1.0	SS-29			SANDY FAT CLAY (CH), pale yellow (2.5Y 7/3), hard, moist, some fine grained sand, strong HCl reaction

EXELON COL BORE VICTORIA PHASE III.GPJ EXELON COL.GDT 5/10/09

MACTEC

BECHTEL NO.: 25352	MACTEC NO.: 6468-07-1777	COUNTY: Victoria, TX	GEOLOGIST: R. Harwell
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS			GROUND WATER (ft)
BORING NO.: B-3174	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.4 ft (NAVD88)	NORTHING: 13,411,987 US ft (NAD83)	EASTING: 2,599,454 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 300.0 ft	DRILL MACHINE: CME 55 Track	DRILLER: T. Hahn (MACTEC RAL)	HAMMER (ID): 140 lb. Auto (MEC 21)
DATE STARTED: 2/25/09	COMPLETED: 3/7/09	CASING DEPTH: 15.0 ft	BITS USED: 3 7/8" 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
-87.9					Continued from previous page				
-88.1	168.5	30	32	36	68	SS-30			POORLY GRADED SAND (SP), pale yellow (2.5Y 8/2), very dense, wet, fine grained, weak HCl reaction
-98.1	178.5	44	26	20	46	SS-31A/B			-97.6 178.0 CLAYEY SAND (SC), pale yellow (2.5Y 8/2), dense, moist, fine grained, some fines, weak HCl reaction -99.2 179.6 POORLY GRADED SAND (SP), pale yellow (2.5Y 8/2), dense, wet, fine grained, weak HCl reaction
-108.1	188.5	18	14	22	36	SS-32A/B/C			-108.5 188.9 188.5 ft: few fines, no HCl reaction -109.2 189.6 SANDY FAT CLAY (CH), pale yellow (2.5Y 7/3), hard, moist, some fine grained sand, weak HCl reaction POORLY GRADED SAND (SP), pale yellow (2.5Y 8/3), dense, wet, fine grained, no HCl reaction
-118.1	198.5	14	19	28	47	SS-33			-118.1 198.5 POORLY GRADED SAND with clay (SP-SC), pale yellow (2.5Y 8/4), dense, moist, fine grained, few fines, no HCl reaction
-128.1	208.5	30	29	44	73	SS-34			-123.1 203.5 POORLY GRADED SAND (SP), pale yellow (2.5Y 8/3), very dense, wet, fine grained, few fines, weak HCl reaction
-138.1	218.5	19	20	29	49	SS-35			-138.1 218.5 SANDY FAT CLAY (CH), light gray (2.5Y 7/2), hard, moist, some fine grained sand, weak HCl reaction on clay, few calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules

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

MACTEC

BECHTEL NO.: 25352	MACTEC NO.: 6468-07-1777	COUNTY: Victoria, TX	GEOLOGIST: R. Harwell
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS			GROUND WATER (ft)
BORING NO.: B-3174	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.4 ft (NAVD88)	NORTHING: 13,411,987 US ft (NAD83)	EASTING: 2,599,454 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 300.0 ft	DRILL MACHINE: CME 55 Track	DRILLER: T. Hahn (MACTEC RAL)	HAMMER (ID): 140 lb. Auto (MEC 21)
DATE STARTED: 2/25/09	COMPLETED: 3/7/09	CASING DEPTH: 15.0 ft	BITS USED: 3 7/8" 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
-144.0					Continued from previous page				
-148.1	228.5								SANDY FAT CLAY (CH), light gray (2.5Y 7/2), hard, moist, some fine grained sand, weak HCl reaction on clay, few calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules *(continued)*
		9	13	20	33	SS-36			-148.1 228.5 FAT CLAY (CH), light gray (2.5Y 7/2), hard, moist, few fine grained sand, weak HCl reaction on clay, few calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
-158.1	238.5								-158.1 238.5
		18	40	50/0.4	90/0.9	SS-37A/B			-158.5 239.2 CLAYEY SAND (SC), pale yellow (2.5Y 8/2), very dense, moist, fine grained, little fines, weak HCl reaction
									-161.6 242.0 POORLY GRADED SAND (SP), pale yellow (2.5Y 8/3), very dense, wet, fine grained, few fines, weak HCl reaction
-168.1	248.5								FAT CLAY with sand (CH), pale yellow (2.5Y 8/2) mottled brownish yellow (10YR 6/6), hard, moist, little fine grained sand, weak HCl reaction on clay, little calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
		31	42	36	78	SS-38A/B			-169.0 249.4 POORLY GRADED SAND (SP), pale yellow (2.5Y 8/2), very dense, wet, fine grained, few fines, weak HCl reaction
-178.1	258.5								258.5 ft: no recovery
		100/0.1			100/0.1	SS-39			-179.1 259.5 FAT CLAY with sand (CH), pale yellow (2.5Y 8/2), hard, moist, little fine grained sand, strong HCl reaction
-188.1	268.5								
		28	37	39	76	SS-40			
-198.1	278.5								-198.1 278.5
		28	39	50/0.2	89/0.7	SS-41			SILTY SAND (SM), light gray (2.5Y 7/2), very dense, moist, fine grained, little fines, no HCl reaction

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

MACTEC

SHEET 6 OF 6

BECHTEL NO.: 25352	MACTEC NO.: 6468-07-1777	COUNTY: Victoria, TX	GEOLOGIST: R. Harwell
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS			GROUND WATER (ft)
BORING NO.: B-3174	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.4 ft (NAVD88)	NORTHING: 13,411,987 US ft (NAD83)	EASTING: 2,599,454 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 300.0 ft	DRILL MACHINE: CME 55 Track	DRILLER: T. Hahn (MACTEC RAL)	HAMMER (ID): 140 lb. Auto (MEC 21)
DATE STARTED: 2/25/09	COMPLETED: 3/7/09	CASING DEPTH: 15.0 ft	BITS USED: 3 7/8" 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
-200.1					Continued from previous page				
									SILTY SAND (SM), light gray (2.5Y 7/2), very dense, moist, fine grained, little fines, no HCl reaction *(continued)*
-202.6	283.0								FAT CLAY (CH), pale yellow (2.5Y 8/2), hard, moist, trace fine grained sand, weak HCl reaction
-208.1	288.5	12	16	21	37	SS-42			
-218.1	298.5	12	16	21	37	SS-43			
-219.6	300.0								Boring Terminated at Elevation -219.6 ft

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

MACTEC

GEOTECHNICAL BORING LOG

Prepared By PAW Date 8/10/09

Checked By KAW Date 8.10.09

SHEET 1 OF 5

BECHTEL NO.: 25352	MACTEC NO.: 6468-07-1777	COUNTY: Victoria, TX	GEOLOGIST: A. Harrington
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS			GROUND WATER (ft)
BORING NO.: B-3175	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.3 ft (NAVD88)	NORTHING: 13,411,912 US ft (NAD83)	EASTING: 2,599,430 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 249.8 ft	DRILL MACHINE: CME 55 D Truck	DRILLER: P. Pitts (MACTEC ATL)	HAMMER (ID): 140 lb. Auto (MEC 20)
DATE STARTED: 2/7/09	COMPLETED: 2/11/09	CASING DEPTH: 13.5 ft	BITS USED: 3 7/8" 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
80.3					Ground Surface				
80.3	0.0	2	4	7	11	SS-1			LEAN CLAY (CL), very dark grayish brown (10YR 3/1), stiff, dry, little fine grained sand, no HCl reaction, roots, grass
76.8	3.5	3	4	6	10	SS-2			FAT CLAY with sand (CH), dark gray (2.5Y 4/1), stiff, moist, little fine grained sand, weak HCl reaction, calcium carbonate nodules, roots
74.3	6.0	3	5	6	11	SS-3			6.0 ft: light gray (2.5Y 7/2) and yellow (10YR 7/8), strong HCl reaction
71.8	8.5	2	7	9	16	SS-4			8.5 ft: pale yellow (2.5Y 7/4) and brownish yellow (10YR 6/6) mottled black (10YR 2/1), very stiff, little fine to medium grained sand
69.3	11.0	5	5	6	11	SS-5			11.0 ft: light gray (2.5Y 7/2) with brownish yellow (10YR 6/6), stiff, little fine grained sand
66.8	13.5	2	7	9	16	SS-6			13.5 ft: very stiff, little fine to medium grained sand, weak HCl reaction
61.8	18.5	2	7	9	16	SS-7			FAT CLAY (CH), light gray (2.5Y 7/2) and yellow (10YR 7/8) mottled black (10YR 2/1), very stiff, moist, few fine grained sand, weak HCl reaction, trace calcium carbonate nodules, slickensides
56.7	23.6	2	7	9	16	SS-8			24.0 ft: no calcium carbonate nodules observed
51.8	28.5	4	6	11	17	SS-9			SANDY FAT CLAY (CH), light gray (2.5Y 7/2) and brownish yellow (10YR 6/8), very stiff, moist, some fine grained sand, weak HCl reaction on clay, calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
46.8	33.5	5	9	11	20	SS-10			33.5 ft: mottled black (10YR 2/1), weak HCl reaction
41.8	38.5	2	7	9	16	SS-11			FAT CLAY (CH), brownish yellow (10YR 6/8) and light gray (2.5Y 7/1), very stiff, moist, few fine grained sand, weak HCl reaction, trace slickensides
36.9	43.4	6	7	10	17	SS-12			43.4 ft: yellowish brown (10YR 5/8) and light gray (2.5Y 7/2)
31.9	48.4	5	7	9	16	SS-13			
26.8	53.5	8	12	13	25	SS-14			FAT CLAY with sand (CH), light gray (2.5Y 7/2), very stiff, moist, little fine grained sand, weak HCl reaction, calcium carbonate nodules

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

MACTEC

SHEET 2 OF 5

BECHTEL NO.: 25352	MACTEC NO.: 6468-07-1777	COUNTY: Victoria, TX	GEOLOGIST: A. Harrington
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS			GROUND WATER (ft)
BORING NO.: B-3175	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.3 ft (NAVD88)	NORTHING: 13,411,912 US ft (NAD83)	EASTING: 2,599,430 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 249.8 ft	DRILL MACHINE: CME 55 D Truck	DRILLER: P. Pitts (MACTEC ATL)	HAMMER (ID): 140 lb. Auto (MEC 20)
DATE STARTED: 2/7/09	COMPLETED: 2/11/09	CASING DEPTH: 13.5 ft	BITS USED: 3 7/8" 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
24.2					Continued from previous page				
21.8	58.5	10	12	12	24	SS-15			FAT CLAY with sand (CH), light gray (2.5Y 7/2), very stiff, moist, little fine grained sand, weak HCl reaction, calcium carbonate nodules *(continued)* 58.5 ft: light gray (2.5Y 7/2) and brownish yellow (10YR 6/8), weak HCl reaction on clay, calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
16.8	63.5	11	11	16	27	SS-16			16.8 — 63.5 SANDY FAT CLAY (CH), pale yellow (2.5Y 8/2) mottled yellowish brown (10YR 5/6), very stiff, moist, some fine grained sand, weak HCl reaction, calcium carbonate nodules
11.8	68.5	7	9	15	24	SS-17A/B			11.8 — 68.5 11.0 — 69.3 CLAYEY SAND (SC), light gray (2.5Y 7/2), very firm, moist, fine grained, some fines, weak HCl reaction, calcium carbonate nodules
6.7	73.6	9	9	14	23	SS-18A/B			FAT CLAY with sand (CH), pale yellow (2.5Y 8/1) and brownish yellow (10YR 6/8), very stiff, moist, little fine grained sand, weak HCl reaction on clay, calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules 6.2 — 74.1 73.6 ft: pale yellow (2.5Y 8/3) and yellow (10YR 7/6) CLAYEY SAND (SC), light gray (2.5Y 7/2), very firm, wet, fine grained, some fines, weak HCl reaction
1.8	78.5	6	11	16	27	SS-19			78.5 ft: calcium carbonate nodules, little fines
-3.2	83.5	11	13	28	41	SS-20			83.5 ft: dense, strong HCl reaction on calcium carbonate nodules
-8.1	88.4	10	13	17	30	SS-21			88.4 ft: pale yellow (2.5Y 8/3), very firm, weak HCl reaction, no calcium carbonate nodules observed
-13.1	93.4	50/0.3			50/0.3	SS-22			-13.1 — 93.4 POORLY GRADED SAND with clay (SP-SC), light gray (2.5Y 7/1), very dense, wet, fine grained, few fines, weak HCl reaction
-18.0	98.3	50/0.3			50/0.3	SS-23			98.3 ft: no recovery
-23.7	104.0								-23.7 — 104.0 FAT CLAY (CH), light gray (2.5Y 7/2) and brownish yellow (10YR 6/8), very stiff, moist, few fine grained sand, weak HCl reaction on clay, calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
-28.1	108.4	7	11	15	26	SS-24			

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

MACTEC

BECHTEL NO.: 25352	MACTEC NO.: 6468-07-1777	COUNTY: Victoria, TX	GEOLOGIST: A. Harrington
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS			GROUND WATER (ft)
BORING NO.: B-3175	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.3 ft (NAVD88)	NORTHING: 13,411,912 US ft (NAD83)	EASTING: 2,599,430 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 249.8 ft	DRILL MACHINE: CME 55 D Truck	DRILLER: P. Pitts (MACTEC ATL)	HAMMER (ID): 140 lb. Auto (MEC 20)
DATE STARTED: 2/7/09	COMPLETED: 2/11/09	CASING DEPTH: 13.5 ft	BITS USED: 3 7/8" 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
-31.9					Continued from previous page				
									FAT CLAY (CH), light gray (2.5Y 7/2) and brownish yellow (10YR 6/8), very stiff, moist, few fine grained sand, weak HCl reaction on clay, calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules *(continued)*
-38.2	118.5								-38.2 118.5
		7	9	14	23	SS-25			CLAYEY SAND (SC), light gray (2.5Y 7/2), very firm, moist, fine grained, some fines, weak HCl reaction, calcium carbonate nodules
-48.1	128.4								-48.1 128.4
		22	40	49	89	SS-26			POORLY GRADED SAND with clay (SP-SC), light gray (2.5Y 7/1), very dense, wet, fine grained, few fines, no HCl reaction
-58.2	138.5								-58.2 138.5
		15	21	26	47	SS-27			POORLY GRADED SAND (SP), light gray (2.5Y 7/2), dense, wet, fine grained, few fines, no HCl reaction
-68.2	148.5								-68.2 148.5
		8	16	17	33	SS-28			SANDY FAT CLAY (CH), pale yellow (2.5Y 8/2) and yellow (10YR 7/8), hard, moist, some fine grained sand, weak HCl reaction, calcium carbonate nodules
-78.2	158.5								-78.2 158.5
		16	14	16	30	SS-29			FAT CLAY with sand (CH), pale yellow (2.5Y 8/3) and brownish yellow (10YR 6/8), very stiff, moist, little fine grained sand, weak HCl reaction, calcium carbonate nodules
-88.1	168.4								-88.1 168.4

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

MACTEC

BECHTEL NO.: 25352	MACTEC NO.: 6468-07-1777	COUNTY: Victoria, TX	GEOLOGIST: A. Harrington
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS			GROUND WATER (ft)
BORING NO.: B-3175	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.3 ft (NAVD88)	NORTHING: 13,411,912 US ft (NAD83)	EASTING: 2,599,430 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 249.8 ft	DRILL MACHINE: CME 55 D Truck	DRILLER: P. Pitts (MACTEC ATL)	HAMMER (ID): 140 lb. Auto (MEC 20)
DATE STARTED: 2/7/09	COMPLETED: 2/11/09	CASING DEPTH: 13.5 ft	BITS USED: 3 7/8" 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
-88.0					Continued from previous page				
		10	26	35	61	SS-30			WELL GRADED SAND with clay (SW-SC), pale yellow (2.5Y 8/3), brownish yellow (10YR 6/8), and black (10YR 2/1), very dense, wet, fine to coarse grained, few fines, weak HCl reaction, calcium carbonate nodules
-98.2	178.5								-98.2 178.5
		9	13	15	28	SS-31			SANDY FAT CLAY (CH), pale yellow (2.5Y 8/2) and yellowish brown (10YR 5/8), very stiff, moist, some fine grained sand, weak HCl reaction on clay, calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
-108.0	188.3								-108.0 188.3
		23	35	36	71	SS-32			SILTY SAND (SM), pale yellow (2.5Y 8/3), very dense, wet, fine grained, little fines, no HCl reaction
-118.1	198.4								-118.1 198.4
		22	30	32	62	SS-33			CLAYEY SAND (SC), pale yellow (2.5Y 8/3), black (10YR 2/1), and brownish yellow (10YR 6/8), very dense, wet, fine to coarse grained, little fines, weak HCl reaction
-128.2	208.5								
		27	50/0.2		77/0.7	SS-34			208.5 ft: pale yellow (2.5Y 8/2)
-138.2	218.5								-138.2 218.5
		10	11	16	27	SS-35			FAT CLAY (CH), pale yellow (5Y 8/2) and reddish yellow (7.5YR 6/8), very stiff, moist, few fine grained sand, weak HCl reaction

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

MACTEC

SHEET 5 OF 5

BECHTEL NO.: 25352	MACTEC NO.: 6468-07-1777	COUNTY: Victoria, TX	GEOLOGIST: A. Harrington
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS			GROUND WATER (ft)
BORING NO.: B-3175	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.3 ft (NAVD88)	NORTHING: 13,411,912 US ft (NAD83)	EASTING: 2,599,430 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 249.8 ft	DRILL MACHINE: CME 55 D Truck	DRILLER: P. Pitts (MACTEC ATL)	HAMMER (ID): 140 lb. Auto (MEC 20)
DATE STARTED: 2/7/09	COMPLETED: 2/11/09	CASING DEPTH: 13.5 ft	BITS USED: 3 7/8" 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
-144.1					Continued from previous page				
-148.2	228.5	12	17	26	43	SS-36			FAT CLAY (CH), pale yellow (5Y 8/2) and reddish yellow (7.5YR 6/8), very stiff, moist, few fine grained sand, weak HCl reaction *(continued)* 228.1 ft: white (2.5Y 8/1) and brownish yellow (10YR 6/8), hard
-158.1	238.4	19	38	39	77	SS-37			SANDY FAT CLAY (CH), pale yellow (5Y 8/2) and brownish yellow (10YR 6/8), hard, moist, some sand, weak HCl reaction
-168.2	248.5	20	33	50/0.3	83/0.3	SS-38A/B			FAT CLAY with sand (CH), pale yellow (2.5Y 8/2) and yellowish brown (10YR 5/8), hard, moist, little fine grained sand, weak HCl reaction, calcium carbonate nodules
-169.5	249.8								CLAYEY SAND (SC), light gray (2.5Y 7/1), very dense, wet, fine grained, little fines, no HCl reaction Boring Terminated at Elevation -169.5 ft

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

MACTEC

GEOTECHNICAL BORING LOG

Prepared By WBD Date 8-10-09

Checked By KAW Date 8-10-09

SHEET 1 OF 4

BECHTEL NO.: 25352	MACTEC NO.: 6468-07-1777	COUNTY: Victoria, TX	GEOLOGIST: B. Mabie
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS			GROUND WATER (ft)
BORING NO.: B-3176	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.5 ft (NAVD88)	NORTHING: 13,412,071 US ft (NAD83)	EASTING: 2,599,439 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 175.0 ft	DRILL MACHINE: CME 550	DRILLER: L. Carter (MACTEC ATL)	HAMMER (ID): 140 lb. Auto (CME-08)
DATE STARTED: 2/4/09	COMPLETED: 2/5/09	CASING DEPTH: 5.0 ft	BITS USED: 2 15/16" 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
80.5					Ground Surface				80.5 0.0
80.5	0.0	2	2	4	4	SS-1			FAT CLAY (CH), dark gray (10YR 4/1), firm, moist, no HCl reaction, organics, roots and grass
77.0	3.5	2	2	2	4	SS-2			3.5 ft: gray (10YR 5/1), soft, strong HCl reaction, calcium carbonate nodules, black staining
74.5	6.0	3	3	5	6	SS-3			6.0 ft: light gray (10YR 7/2), firm
72.0	8.5	5	6	6	12	SS-4			8.5 ft: stiff, orange staining
69.5	11.0	5	7	8	15	SS-5			11.0 ft: light gray (10YR 7/2), weak HCl reaction, black and orange staining
67.0	13.5	4	5	6	11	SS-6			13.5 ft: strong HCl reaction
62.0	18.5	3	4	6	10	SS-7			
57.0	23.5	2	4	5	9	SS-8			23.5 ft: mottled reddish yellow (7.5YR 6/6), weak HCl reaction
52.0	28.5	4	6	11	17	SS-9			28.5 ft: very stiff
47.0	33.5	5	7	9	16	SS-10			
42.0	38.5	3	4	7	11	SS-11			38.5 ft: stiff
37.0	43.5	3	5	8	13	SS-12			43.5 ft: light yellowish brown (10YR 6/4)
32.0	48.5	4	7	10	17	SS-13			48.5 ft: very stiff
27.0	53.5	4	7	8	15	SS-14			53.5 ft: stiff, strong HCl reaction, caliche

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

MACTEC

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-3176	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.5 ft (NAVD88)	NORTHING: 13,412,071 US ft (NAD83)	EASTING: 2,599,439 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 175.0 ft	DRILL MACHINE: CME 550	DRILLER: L. Carter (MACTEC ATL)	HAMMER (ID): 140 lb. Auto (CME-08)
DATE STARTED: 2/4/09	COMPLETED: 2/5/09	CASING DEPTH: 5.0 ft	BITS USED: 2 15/16" 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
24.4					Continued from previous page				
22.0	58.5	8	12	17	29	SS-15			FAT CLAY (CH), dark gray (10YR 4/1), firm, moist, no HCl reaction, organics, roots and grass *(continued)* 22.0 58.5 CLAYEY SAND (SC), light gray (10YR 7/2), very firm, wet, fine grained, some fines, weak HCl reaction, trace calcium carbonate nodules
17.0	63.5	5	6	12	18	SS-16			17.0 63.5 FAT CLAY (CH), light gray (10YR 7/2), very stiff, moist, strong HCl reaction, calcium carbonate nodules, black and orange staining
12.0	68.5	5	6	10	16	SS-17			12.0 68.5 CLAYEY SAND (SC), light gray (10YR 7/2), firm, wet, fine grained, some fines, weak HCl reaction, calcium carbonate nodules, black and orange staining
7.0	73.5	5	6	8	14	SS-18			7.0 73.5 FAT CLAY (CH), light gray (10YR 7/2), stiff, moist, weak HCl reaction, calcium carbonate nodules, black and orange staining
2.0	78.5	6	5	6	11	SS-19			78.5 ft: few fine grained sand
-3.0	83.5	4	4	5	9	SS-20			-3.0 83.5 CLAYEY SAND (SC), light gray (10YR 7/2), loose, moist, fine grained, some fines, weak HCl reaction, orange staining
-8.0	88.5	5	5	8	13	SS-21			-8.0 88.5 SANDY FAT CLAY (CH), light gray (10YR 7/2), stiff, moist, some fine grained sand, weak HCl reaction, orange staining
-13.0	93.5	28	45	50/0.3	95/0.8	SS-22			-13.0 93.5 FAT CLAY (CH), light gray (10YR 7/2), hard, moist, few fine grained sand, strong HCl reaction, caliche, orange staining
-18.0	98.5	70/0.2			70/0.2	SS-23			97.0-98.0 ft: hard drilling, bit chatter -18.0 98.5 POORLY GRADED SAND (SP), white (10YR 8/1), very dense, moist, fine grained, strong HCl reaction, caliche
-28.0	108.5	6	8	15	23	SS-24			-28.0 108.5 FAT CLAY (CH), light gray (10YR 7/2), reddish yellow (7.5YR 6/6), very stiff, moist, weak HCl reaction, calcium carbonate nodules, black staining, caliche

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

MACTEC

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-3176	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.5 ft (NAVD88)	NORTHING: 13,412,071 US ft (NAD83)	EASTING: 2,599,439 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 175.0 ft	DRILL MACHINE: CME 550	DRILLER: L. Carter (MACTEC ATL)	HAMMER (ID): 140 lb. Auto (CME-08)
DATE STARTED: 2/4/09	COMPLETED: 2/5/09	CASING DEPTH: 5.0 ft	BITS USED: 2 15/16" 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
-31.7					Continued from previous page				
									FAT CLAY (CH), light gray (10YR 7/2), reddish yellow (7.5YR 6/6), very stiff, moist, weak HCl reaction, calcium carbonate nodules, black staining, caliche *(continued)*
-38.0	118.5	6	7	10	17	SS-25			118.5 ft: strong HCl reaction, orange staining, no caliche observed
-48.0	128.5	16	19	18	37	SS-26			POORLY GRADED SAND (SP), very pale brown (10YR 8/2), dense, wet, fine to medium grained, weak HCl reaction
									136.0-136.5 ft: hard drilling, bit chatter
-58.0	138.5	8	10	8	18	SS-27			FAT CLAY (CH), light gray (10YR 7/2), very stiff, moist, few fine grained sand, weak HCl reaction, trace calcium carbonate, black and orange staining
-68.0	148.5	12	15	20	35	SS-28			SANDY FAT CLAY (CH), light gray (10YR 7/2), hard, moist, some fine grained sand, strong HCl reaction, calcium carbonate nodules, black and orange staining
-78.0	158.5	9	16	18	34	SS-29			FAT CLAY (CH), light gray (10YR 7/2), hard, moist, strong HCl reaction, calcium carbonate nodules, black and orange staining, caliche

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

MACTEC

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-3176	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.5 ft (NAVD88)	NORTHING: 13,412,071 US ft (NAD83)	EASTING: 2,599,439 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 175.0 ft	DRILL MACHINE: CME 550	DRILLER: L. Carter (MACTEC ATL)	HAMMER (ID): 140 lb. Auto (CME-08)
DATE STARTED: 2/4/09	COMPLETED: 2/5/09	CASING DEPTH: 5.0 ft	BITS USED: 2 15/16" 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
-87.8					Continued from previous page				
-88.0	168.5	20	28	37	65	SS-30			POORLY GRADED SAND (SP), very pale brown (10YR 7/3), very dense, wet, fine to coarse grained, strong HCl reaction, calcium carbonate nodules
-93.0	173.5	19	35	36	71	SS-31			173.5 ft: very pale brown (10YR 8/2), fine to medium grained, weak HCl reaction, no calcium carbonate nodules observed
-94.5	175.0								Boring Terminated at Elevation -94.5 ft

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

MACTEC

GEOTECHNICAL BORING LOG

Prepared By WBD Date 8-10-09

Checked By KAW Date 8-10-09

SHEET 1 OF 6

BECHTEL NO.: 25352	MACTEC NO.: 6468-07-1777	COUNTY: Victoria, TX	GEOLOGIST: A. Harrington/A. Mwembeshi
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS			GROUND WATER (ft)
BORING NO.: B-3177	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.2 ft (NAVD88)	NORTHING: 13,411,788 US ft (NAD83)	EASTING: 2,599,436 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 300.0 ft	DRILL MACHINE: CME 55 D Truck	DRILLER: P. Pitts (MACTEC ATL)	HAMMER (ID): 140 lb. Auto (MEC 20)
DATE STARTED: 2/24/09	COMPLETED: 3/6/09	CASING DEPTH: 25.0 ft	BITS USED: 3 7/8" 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
80.2					Ground Surface				
80.2	0.0	3	3	5	8	SS-1			LEAN CLAY with sand (CL), very dark gray (2.5Y 3/1), firm, moist, little fine grained sand, weak HCl reaction, organics, grass and roots
76.7	3.5	2	4	5	9	SS-2			FAT CLAY with sand (CH), dark gray (2.5Y 4/1), stiff, moist, little fine grained sand, weak HCl reaction
73.8	6.4	3	3	5	6	SS-3			6.4 ft: light gray (2.5Y 7/1) and brownish yellow (10YR 6/8), firm
71.6	8.6	5	8	12	20	SS-4			8.4 ft: mottled yellowish brown (10YR 6/8), very stiff, calcium carbonate nodules
68.9	11.3	6	10	11	21	SS-5			11.3 ft: mottled black (10YR 2/1), strong HCl reaction on calcium carbonate nodules
66.8	13.4	6	10	11	21	SS-6			SANDY FAT CLAY (CH), light gray (2.5Y 7/2) and very dark grayish brown (2.5Y 3/2), very stiff, moist, some fine grained sand, weak HCl reaction on clay, calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
61.7	18.5	5	5	7	12	SS-7			FAT CLAY with sand (CH), light gray (2.5Y 7/1), brownish yellow (10YR 6/8), and black (2.5Y 2.5/1), stiff, moist, little fine grained sand, weak HCl reaction
56.7	23.5	4	6	6	12	SS-8			FAT CLAY (CH), light gray (2.5Y 7/2) and yellowish brown (10YR 5/8), stiff, moist, few fine grained sand, weak HCl reaction
51.7	28.5	5	6	9	15	SS-9			
46.8	33.4	5	7	10	17	SS-10			33.4 ft: very stiff, slickensides
41.8	38.4	6	8	15	23	SS-11			38.4 ft: slickensides not observed
36.7	43.5	6	8	11	19	SS-12			
31.7	48.5	6	7	11	18	SS-13			FAT CLAY with sand (CH), yellowish brown (10YR 5/8), very stiff, moist, little fine grained sand, weak HCl reaction
26.7	53.5	9	15	15	30	SS-14			53.5 ft: light yellowish brown (2.5Y 6/4), calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules, weak HCl reaction on clay

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

MACTEC

BECHTEL NO.: 25352	MACTEC NO.: 6468-07-1777	COUNTY: Victoria, TX	GEOLOGIST: A. Harrington/A. Mwembeshi
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS			GROUND WATER (ft)
BORING NO.: B-3177	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.2 ft (NAVD88)	NORTHING: 13,411,788 US ft (NAD83)	EASTING: 2,599,436 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 300.0 ft	DRILL MACHINE: CME 55 D Truck	DRILLER: P. Pitts (MACTEC ATL)	HAMMER (ID): 140 lb. Auto (MEC 20)
DATE STARTED: 2/24/09	COMPLETED: 3/6/09	CASING DEPTH: 25.0 ft	BITS USED: 3 7/8" 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
24.1					Continued from previous page				
21.8	58.4								FAT CLAY with sand (CH), yellowish brown (10YR 5/8), very stiff, moist, little fine grained sand, weak HCl reaction *(continued)*
		6	18	12	30	SS-15			21.8 — 58.4 SANDY FAT CLAY (CH), light gray (2.5Y 7/2) and brownish yellow (10YR 6/8), very stiff, moist, some fine grained sand, weak HCl reaction
16.8	63.4								16.8 — 63.4
		8	10	15	25	SS-16			FAT CLAY with sand (CH), light brownish gray (2.5Y 6/2), very stiff, moist, little fine grained sand, weak HCl reaction on clay, calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
11.7	68.5								11.7 — 68.5
		10	14	15	29	SS-17			CLAYEY SAND (SC), pale yellow (2.5Y 7/3), very firm, moist, fine grained, some fines, weak HCl reaction
6.8	73.4								
		20	23	20	43	SS-18			73.4 ft: dense, wet, little fines
1.7	78.5								
		7	9	13	22	SS-19			78.5 ft: light gray (2.5Y 7/2) and yellowish red (5YR 5/8), very firm, some fines
-3.2	83.4								-3.2 — 83.4
		8	8	10	18	SS-20			SANDY FAT CLAY (CH), light gray (2.5Y 7/1) and brownish yellow (10YR 6/8), very stiff, moist, some fine grained sand, no HCl reaction
-8.3	88.5								-8.3 — 88.5
		8	16	22	38	SS-21			CLAYEY SAND (SC), light gray (2.5Y 7/1), dense, wet, fine grained, little fines, weak HCl reaction
-13.3	93.5								
		42	50/0.2		92/0.7	SS-22			93.5 ft: white (2.5Y 8/1) and yellow (2.5Y 7/8), very dense, moist, some fines, calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules, weak HCl reaction on clay
-18.2	98.4								
		50/0.2			50/0.2	SS-23			98.4 ft: no recovery
-26.2	108.4								-24.8 — 105.0
		6	10	17	27	SS-24			FAT CLAY (CH), light greenish gray (10Y 8/1) and yellowish brown (10YR 5/6), very stiff, moist, few fine to medium grained sand, weak HCl reaction on clay, few calcium carbonate fragments, strong HCl reaction on calcium carbonate nodules, black staining

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

MACTEC

BECHTEL NO.: 25352	MACTEC NO.: 6468-07-1777	COUNTY: Victoria, TX	GEOLOGIST: A. Harrington/A. Mwembeshi
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS			GROUND WATER (ft)
BORING NO.: B-3177	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.2 ft (NAVD88)	NORTHING: 13,411,788 US ft (NAD83)	EASTING: 2,599,436 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 300.0 ft	DRILL MACHINE: CME 55 D Truck	DRILLER: P. Pitts (MACTEC ATL)	HAMMER (ID): 140 lb. Auto (MEC 20)
DATE STARTED: 2/24/09	COMPLETED: 3/6/09	CASING DEPTH: 25.0 ft	BITS USED: 3 7/8" 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
-32.0					Continued from previous page				
									FAT CLAY (CH), light greenish gray (10Y 8/1) and yellowish brown (10YR 5/6), very stiff, moist, few fine to medium grained sand, weak HCl reaction on clay, few calcium carbonate fragments, strong HCl reaction on calcium carbonate nodules, black staining *(continued)*
-38.3	118.5								-38.3 118.5
		6	10	10	20	SS-25			FAT CLAY with sand (CH), light greenish gray (10Y 7/1), very stiff, moist, little fine to medium grained sand, weak HCl reaction on clay, few calcium carbonate fragments, strong HCl reaction on calcium carbonate fragments
-44.8	125.0								-44.8 125.0
									SILTY SAND (SM), light gray (7.5YR 7/1), very dense, wet, fine to medium grained, little fines, no HCl reaction
-48.4	128.6								
		14	30	30	60	SS-26			
-58.2	138.4								-58.2 138.4
		12	16	18	34	SS-27			POORLY GRADED SAND with silt (SP-SM), light gray (7.5YR 7/1), dense, wet, fine to coarse grained, few fines, no HCl reaction
-62.8	143.0								-62.8 143.0
									FAT CLAY (CH), light greenish gray (10Y 7/1) and yellowish brown (10YR 5/6), very stiff, moist, few fine grained sand, strong HCl reaction, trace calcium carbonate nodules
-68.2	148.4								
		7	11	19	30	SS-28			
-78.4	158.6								-78.4 158.6
		8	12	16	28	SS-29			FAT CLAY with sand (CH), light greenish gray (10Y 7/1) and strong brown (7.5YR 5/6), very stiff, moist, little fine grained sand, strong HCl reaction
-85.8	166.0								-85.8 166.0

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

MACTEC

BECHTEL NO.: 25352	MACTEC NO.: 6468-07-1777	COUNTY: Victoria, TX	GEOLOGIST: A. Harrington/A. Mwembeshi
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS			GROUND WATER (ft)
BORING NO.: B-3177	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.2 ft (NAVD88)	NORTHING: 13,411,788 US ft (NAD83)	EASTING: 2,599,436 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 300.0 ft	DRILL MACHINE: CME 55 D Truck	DRILLER: P. Pitts (MACTEC ATL)	HAMMER (ID): 140 lb. Auto (MEC 20)
DATE STARTED: 2/24/09	COMPLETED: 3/6/09	CASING DEPTH: 25.0 ft	BITS USED: 3 7/8" 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
-88.1					Continued from previous page				
-88.3	168.5	18	28	28	56	SS-30			WELL GRADED SAND (SW), very pale brown (10YR 8/2), very dense, wet, fine to medium grained, few fines, weak HCl reaction, trace calcium carbonate nodules *(continued)*
-98.2	178.4	12	17	24	41	SS-31			-98.2 178.4 POORLY GRADED SAND with silt (SP-SM), very pale brown (10YR 8/2), dense, wet, fine to medium grained, few fines, no HCl reaction
-108.2	188.4	20	50/0.2		70/0.7	SS-32			189.0 ft: very dense, weak HCl reaction 189.0 to 192.0 ft: hard drilling
-118.3	198.5	50/0.3			50/0.3	SS-33			198.5 ft: no recovery
-128.3	208.5	10	16	21	37	SS-34			-125.8 206.0 SANDY FAT CLAY (CH), gray (10YR 6/1) and brown (10YR 5/3), hard, moist, some fine grained sand, strong HCl reaction, few calcium carbonate nodules
-138.2	218.4	6	10	12	22	SS-35			-138.2 218.4 FAT CLAY (CH), light greenish gray (10Y 7/1), very stiff, moist, weak HCl reaction, black and orange staining, trace calcium carbonate nodules

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

MACTEC

BECHTEL NO.: 25352	MACTEC NO.: 6468-07-1777	COUNTY: Victoria, TX	GEOLOGIST: A. Harrington/A. Mwembeshi
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS			GROUND WATER (ft)
BORING NO.: B-3177	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.2 ft (NAVD88)	NORTHING: 13,411,788 US ft (NAD83)	EASTING: 2,599,436 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 300.0 ft	DRILL MACHINE: CME 55 D Truck	DRILLER: P. Pitts (MACTEC ATL)	HAMMER (ID): 140 lb. Auto (MEC 20)
DATE STARTED: 2/24/09	COMPLETED: 3/6/09	CASING DEPTH: 25.0 ft	BITS USED: 3 7/8" 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
-144.2					Continued from previous page				
									FAT CLAY (CH), light greenish gray (10Y 7/1), very stiff, moist, weak HCl reaction, black and orange staining, trace calcium carbonate nodules *(continued)*
-148.2	228.4	11	17	26	43	SS-36			228.4 ft: light gray (N 7/) and strong brown (7.5YR 5/6), hard, moist, strong HCl reaction
-153.8	234.0								SILTY SAND (SM), very pale brown (10YR 8/2), very dense, wet, fine to medium grained, some fines, weak HCl reaction, few calcium carbonate nodules
-158.3	238.5	16	40	50/0.4	90/0.9	SS-37			
-168.3	248.5	50/0.4			50/0.4	SS-38			248.5 ft: light gray (10YR 7/1), little fines, no HCl reaction on sand, strong HCl reaction on clay lens, no calcium carbonate nodules observed
-178.4	258.6	26	50/0.3		76/0.8	SS-39			POORLY GRADED SAND (SP), pinkish gray (7.5YR 7/2) and yellowish brown (10YR 5/6), very dense, wet, fine to coarse grained, few fines, weak HCl reaction, few calcium carbonate nodules
-188.2	268.4	24	28	42	70	SS-40			SILTY SAND (SM), light gray (10YR 7/1), very dense, wet, fine to medium grained, some fines, no HCl reaction on sand, calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
-198.3	278.5	50/0.3			50/0.3	SS-41			

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

MACTEC

BECHTEL NO.: 25352	MACTEC NO.: 6468-07-1777	COUNTY: Victoria, TX	GEOLOGIST: A. Harrington/A. Mwembeshi
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS			GROUND WATER (ft)
BORING NO.: B-3177	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.2 ft (NAVD88)	NORTHING: 13,411,788 US ft (NAD83)	EASTING: 2,599,436 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 300.0 ft	DRILL MACHINE: CME 55 D Truck	DRILLER: P. Pitts (MACTEC ATL)	HAMMER (ID): 140 lb. Auto (MEC 20)
DATE STARTED: 2/24/09	COMPLETED: 3/6/09	CASING DEPTH: 25.0 ft	BITS USED: 3 7/8" 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
-200.3					Continued from previous page				
-208.4	288.6	10	17	20	37	SS-42			POORLY GRADED SAND with silt (SP-SM), white (10YR 8/1), very dense, wet, fine to medium grained, few fines, strong HCl reaction, some calcium carbonate nodules *(continued)* FAT CLAY (CH), light greenish gray (10Y 7/1) and little reddish brown (2.5YR 5/4), hard, moist, few fine grained sand, strong HCl reaction, trace calcium carbonate nodules
-218.3	298.5	9	14	21	35	SS-43			298.5 ft: light gray (2.5Y 7/1), weak HCl reaction
-219.8	300.0								Boring Terminated at Elevation -219.8 ft

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

MACTEC

GEOTECHNICAL BORING LOG

Prepared By BAM Date 8/10/09

Checked By KAW Date 8-10-09

SHEET 1 OF 4

BECHTEL NO.: 25352	MACTEC NO.: 6468-07-1777	COUNTY: Victoria, TX	GEOLOGIST: B. Mabie
SITE DESCRIPTION: Exelon Texas COL Project - Supplemental Investigation, Including UHS			GROUND WATER (ft)
BORING NO.: B-3178	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.3 ft (NAVD88)	NORTHING: 13,412,146 US ft (NAD83)	EASTING: 2,599,455 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 175.0 ft	DRILL MACHINE: CME 550	DRILLER: L. Carter (MACTEC ATL)	HAMMER (ID): 140 lb. Auto (CME-08)
DATE STARTED: 1/28/09	COMPLETED: 2/3/09	CASING DEPTH: 5.0 ft	BITS USED: 2 15/16" 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
80.3					Ground Surface				80.3 0.0
80.3	0.0	1	2	3	5	SS-1			FAT CLAY (CH), very dark gray (10YR 3/1), firm, dry, few fine grained sand, no HCl reaction, trace organics, roots and grass
76.8	3.5	2	4	3	7	SS-2			3.5 ft: dark gray (10YR 4/1), moist, trace fine grained sand, trace orange staining
74.3	6.0	4	4	4	8	SS-3			6.0 ft: very pale brown (10YR 7/3), weak HCl reaction, calcium carbonate nodules, black staining
71.8	8.5	6	7	8	15	SS-4			8.5 ft: stiff, strong HCl reaction
69.3	11.0	6	8	13	21	SS-5			11.0 ft: light gray (10YR 7/2), very stiff, black and orange staining
66.8	13.5	5	6	9	15	SS-6			13.5 ft: stiff
61.8	18.5	4	6	8	14	SS-7			18.5 ft: mottled reddish yellow (7.5YR 6/6), weak HCl reaction
56.8	23.5	4	5	6	11	SS-8			23.5 ft: no calcium carbonate nodules observed
51.8	28.5	3	6	7	13	SS-9			28.5 ft: trace calcium carbonate nodules
46.8	33.5	4	6	8	14	SS-10			33.5 ft: no calcium carbonate nodules observed
41.8	38.5	4	5	8	13	SS-11			38.5 ft: reddish yellow (7.5YR 6/6), trace calcium carbonate nodules
36.8	43.5	4	6	8	14	SS-12			43.5 ft: light gray (10YR 7/2) mottled reddish yellow (7.5YR 6/6)
31.8	48.5	5	6	10	16	SS-13			48.5 ft: pale yellow (2.5Y 7/4), very stiff
26.8	53.5	6	9	10	19	SS-14			53.5 ft: light gray (10YR 7/2), caliche

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

MACTEC

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-3178	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.3 ft (NAVD88)	NORTHING: 13,412,146 US ft (NAD83)	EASTING: 2,599,455 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 175.0 ft	DRILL MACHINE: CME 550	DRILLER: L. Carter (MACTEC ATL)	HAMMER (ID): 140 lb. Auto (CME-08)
DATE STARTED: 1/28/09	COMPLETED: 2/3/09	CASING DEPTH: 5.0 ft	BITS USED: 2 15/16" 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
24.2					Continued from previous page				
21.8	58.5								FAT CLAY (CH), very dark gray (10YR 3/1), firm, dry, few fine grained sand, no HCl reaction, trace organics, roots and grass *(continued)*
		15	15	15	30	SS-15			58.5 ft: light gray (10YR 7/2), very stiff, moist, few fine grained sand, strong HCl reaction
16.8	63.5								
		6	6	10	16	SS-16			63.5 ft: very pale brown (10YR 7/3), weak HCl reaction, black and orange staining, no caliche observed
11.8	68.5								
		5	8	10	18	SS-17			68.5 ft: light gray (10YR 7/2)
6.8	73.5								
		6	8	10	18	SS-18			
1.8	78.5								1.8 — 78.5
		8	12	14	26	SS-19			SANDY FAT CLAY (CH), very pale brown (10YR 8/2), very stiff, moist, some fine grained sand, weak HCl reaction, orange and red staining
-3.2	83.5								-3.2 — 83.5
		8	9	12	21	SS-20			POORLY GRADED SAND (SP), light gray (10YR 7/2), very firm, wet, fine grained, few fines, no HCl reaction
-8.2	88.5								
		8	11	10	21	SS-21			92.0 - 93.5 ft: hard drilling, bit chatter
-13.2	93.5								
		81	50/0.1		131/0.6	SS-22			93.5 ft: white (10YR 8/1), very dense, moist, fine to medium grained, strong HCl reaction, caliche 95.0 - 98.0 ft: hard drilling, bit chatter
-18.2	98.5								
		11	27	42	69	SS-23			98.5 ft: yellow (10YR 8/6), dense, wet, fine to coarse grained, trace fines
-28.2	108.5								-28.2 — 108.5
		6	7	11	18	SS-24			FAT CLAY (CH), light gray (10YR 7/2), very stiff, moist, calcium carbonate nodules, black and orange staining

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

MACTEC

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-3178	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.3 ft (NAVD88)	NORTHING: 13,412,146 US ft (NAD83)	EASTING: 2,599,455 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 175.0 ft	DRILL MACHINE: CME 550	DRILLER: L. Carter (MACTEC ATL)	HAMMER (ID): 140 lb. Auto (CME-08)
DATE STARTED: 1/28/09	COMPLETED: 2/3/09	CASING DEPTH: 5.0 ft	BITS USED: 2 15/16" 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
-31.9					Continued from previous page				
									FAT CLAY (CH), light gray (10YR 7/2), very stiff, moist, calcium carbonate nodules, black and orange staining *(continued)*
-38.2	118.5	7	9	11	20	SS-25			118.5 ft: strong HCl reaction
-48.2	128.5	16	16	23	39	SS-26			POORLY GRADED SAND (SP), very pale brown (10YR 7/3), dense, wet, fine to coarse grained, weak HCl reaction, trace gravel
-58.2	138.5	5	7	10	17	SS-27			FAT CLAY (CH), light gray (10YR 7/2), very stiff, moist, few fine grained sand, strong HCl reaction, calcium carbonate nodules, black and orange staining
-68.2	148.5	4	11	18	29	SS-28A/B			148.5 ft: weak HCl reaction
-69.4	149.7								POORLY GRADED SAND (SP), very pale brown (10YR 7/3), very firm, wet, fine to coarse grained, weak HCl reaction
-78.2	158.5	6	9	21	30	SS-29			FAT CLAY (CH), light gray (10YR 7/2), very stiff, moist, strong HCl reaction, calcium carbonate nodules, black and orange staining

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

MACTEC

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-3178	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.3 ft (NAVD88)	NORTHING: 13,412,146 US ft (NAD83)	EASTING: 2,599,455 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 175.0 ft	DRILL MACHINE: CME 550	DRILLER: L. Carter (MACTEC ATL)	HAMMER (ID): 140 lb. Auto (CME-08)
DATE STARTED: 1/28/09	COMPLETED: 2/3/09	CASING DEPTH: 5.0 ft	BITS USED: 2 15/16" 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
-88.0					Continued from previous page				
-88.2	168.5	25	44	50/0.4	94/0.3	SS-30			POORLY GRADED SAND (SP), very pale brown (10YR 7/3), very dense, wet, fine to coarse grained, calcium carbonate nodules, strong HCl reaction
-93.2	173.5	38	46	43	89	SS-31			173.5 ft: weak HCl reaction, no calcium carbonate nodules observed
-94.7	175.0								Boring Terminated at Elevation -94.7 ft

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

MACTEC

GEOTECHNICAL BORING LOG

Prepared By WSD Date 11-10-09

Checked By PAH Date 11/10/09

SHEET 1 OF 1

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-3179	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.1 ft (NAVD88)	NORTHING: 13,412,080 US ft (NAD83)	EASTING: 2,599,531 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 20.0 ft	DRILL MACHINE: CME 550	DRILLER: L. Carter (MACTEC ATL)	HAMMER (ID): 140 lb. Auto (CME-08)
DATE STARTED: 2/3/09	COMPLETED: 2/4/09	CASING DEPTH: 5.0 ft	BITS USED: 2 15/16" 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
80.1					Ground Surface				80.1 0.0
80.1	0.0	4	4	5	9	SS-1			FAT CLAY (CH), very dark gray (10YR 3/1), stiff, moist, no HCl reaction, trace organics, roots and grass
76.6	3.5	3	2	3	5	SS-2			3.5 ft: gray (10YR 6/1), firm, few fine grained sand, weak HCl reaction, calcium carbonate nodules
74.1	6.0	5	7	9	16	SS-3			6.0 ft: light brownish gray (10YR 6/2), very stiff, strong HCl reaction, black and orange staining
71.6	8.5	6	8	9	17	SS-4			8.5 ft: light gray (10YR 7/2), caliche
69.1	11.0	6	8	9	17	SS-5			11.0 ft: no caliche observed
66.6	13.5	4	5	8	13	SS-6			13.5 ft: stiff
61.6	18.5	4	4	7	11	SS-7			Boring terminated short of planned depth due to equipment issues. Boring was redrilled as B-3179B at an offset location. 60.1 20.0
									Boring Terminated at Elevation 60.1 ft

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

MACTEC

GEOTECHNICAL BORING LOG

Prepared By WBP Date 8-10-09

Checked By KAW Date 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-3179B	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.2 ft (NAVD88)	NORTHING: 13,412,088 US ft (NAD83)	EASTING: 2,599,525 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 250.2 ft	DRILL MACHINE: CME 75 Truck	DRILLER: J. Cook (MILLER)	HAMMER (ID): 140 lb. Auto (100)
DATE STARTED: 2/8/09	COMPLETED: 2/11/09	CASING DEPTH: 3.4 ft	BITS USED: 3 7/8" Wing 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
80.2					Ground Surface				
80.2	0.0	2	3	3	6	SS-1			FAT CLAY (CH), black (N 2.5/), firm, moist, few fine grained sand, no HCl reaction
76.5	3.7	4	5	6	11	SS-2			FAT CLAY with sand (CH), black (N 2.5/), greenish gray (10Y 5/1), stiff, moist, little fine to medium grained sand, weak HCl reaction, few calcium carbonate nodules
73.9	6.3	3	6	6	12	SS-3			6.0 ft: olive gray (5Y 5/2), strong HCl reaction, little calcium carbonate nodules
71.5	8.7	5	5	6	11	SS-4			8.7 ft: greenish gray (10Y 5/1)
69.0	11.2	5	5	7	12	SS-5			
66.4	13.8	2	3	4	7	SS-6			FAT CLAY (CH), greenish gray (10Y 5/1), firm, moist, weak HCl reaction, few calcium carbonate nodules, few black staining
61.5	18.7	4	5	6	11	SS-7			18.7 ft: greenish gray (10Y 5/1) and strong brown (7.5YR 5/6), stiff, trace gypsum
56.5	23.7	3	3	4	7	SS-8			23.7 ft: firm, no calcium carbonate nodules observed
51.6	28.6	4	5	6	11	SS-9			28.6 ft: strong brown (7.5YR 5/6), stiff, calcium carbonate nodules
46.5	33.7	3	5	8	13	SS-10			33.7 ft: and greenish gray (10Y 6/1), no calcium carbonate nodules observed
41.5	38.7	4	5	8	13	SS-11			38.7 ft: no HCl reaction
36.5	43.7	4	4	7	11	SS-12			43.7 ft: yellowish brown (10YR 5/4), stiff, few fine grained sand, weak HCl reaction, trace calcium carbonate nodules
31.6	48.6	4	6	7	13	SS-13			48.6 ft: greenish gray (10Y 5/1) and strong brown (7.5YR 5/6), few medium to coarse grained calcium carbonate nodules
26.5	53.7	4	7	8	15	SS-14			53.7 ft: grayish brown (2.5Y 5/2), few fine grained sand, little calcium carbonate nodules

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

MACTEC

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-3179B	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.2 ft (NAVD88)	NORTHING: 13,412,088 US ft (NAD83)	EASTING: 2,599,525 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 250.2 ft	DRILL MACHINE: CME 75 Truck	DRILLER: J. Cook (MILLER)	HAMMER (ID): 140 lb. Auto (100)
DATE STARTED: 2/8/09	COMPLETED: 2/11/09	CASING DEPTH: 3.4 ft	BITS USED: 3 7/8" Wing 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
24.1					Continued from previous page				
21.5	58.7								FAT CLAY (CH), greenish gray (10Y 5/1), firm, moist, weak HCl reaction, few calcium carbonate nodules, few black staining *(continued)*
		8	14	16	30	SS-15			58.7 ft: greenish gray (10Y 6/1), very stiff, few fine grained sand, weak HCl reaction on clay, few calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
16.5	63.7								16.5 — 63.7
		5	10	13	23	SS-16			SANDY FAT CLAY (CH), greenish gray (10Y 6/1), very stiff, moist, some fine to medium grained sand, weak HCl reaction on clay, calcium carbonate nodules, strong HCl reaction on calcium carbonate nodules
11.6	68.6								11.6 — 68.6
		6	9	12	21	SS-17			POORLY GRADED SAND (SP), pinkish gray (7.5YR 7/2), very firm, wet, fine to medium grained, few fines, no HCl reaction
6.5	73.7								6.5 — 73.7
		9	13	18	31	SS-18			SILTY SAND (SM), light brownish gray (10YR 6/2), dense, wet, fine to medium grained, little fines, no HCl reaction
1.6	78.6								2.2 — 78.0
		6	9	13	22	SS-19			SANDY FAT CLAY (CH), gray (N 6/), very stiff, moist, some fine grained sand, no HCl reaction, black, orange and brown staining
-3.5	83.7								-0.8 — 81.0
		8	11	18	29	SS-20			SILTY SAND (SM), light gray (10YR 7/2), very firm, wet, fine grained, some fines, no HCl reaction
-8.5	88.7								88.7 ft: light greenish gray (10Y 7/1), loose, moist, fine to medium grained
		2	2	4	6	SS-21A/B			-8.8 — 89.0
-13.4	93.6								SANDY FAT CLAY (CH), light greenish gray (10Y 7/1), firm, moist, some fine to medium grained sand, no HCl reaction
		15	17	22	39	SS-22			-11.8 — 92.0
-18.5	98.7								FAT CLAY (CH), greenish gray (10Y 6/1), hard, moist, few fine grained sand, strong HCl reaction, few calcium carbonate nodules, brown staining
		50/0.3			50/0.3	SS-23			-16.8 — 97.0
-28.5	108.7								SILTY SAND (SM), light gray (10YR 7/2), very dense, wet, fine to coarse grained, little fines, weak HCl reaction
		4	6	12	18	SS-24			-25.8 — 106.0
									FAT CLAY (CH), light greenish gray (10YR 7/1) and strong brown (7.5YR 5/6), very stiff, moist, weak HCl reaction, trace calcium carbonate nodules

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

MACTEC

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-3179B	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.2 ft (NAVD88)	NORTHING: 13,412,088 US ft (NAD83)	EASTING: 2,599,525 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 250.2 ft	DRILL MACHINE: CME 75 Truck	DRILLER: J. Cook (MILLER)	HAMMER (ID): 140 lb. Auto (100)
DATE STARTED: 2/8/09	COMPLETED: 2/11/09	CASING DEPTH: 3.4 ft	BITS USED: 3 7/8" Wing 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
-32.0					Continued from previous page				
									FAT CLAY (CH), light greenish gray (10YR 7/1) and strong brown (7.5YR 5/6), very stiff, moist, weak HCl reaction, trace calcium carbonate nodules *(continued)*
-38.4	118.6	6	9	13	22	SS-25			118.6 ft: greenish gray (10Y 6/1), few fine grained sand, few calcium carbonate nodules, trace black staining
-44.8	125.0								POORLY GRADED SAND (SP), pale yellow (2.5Y 7/3), dense, wet, fine to coarse grained, few fines, no HCl reaction
-48.5	128.7	14	17	27	44	SS-26			
-58.5	138.7	15	21	25	46	SS-27			SILTY SAND (SM), pale brown (10YR 6/3), dense, wet, fine grained, some fines, weak HCl reaction
-68.4	148.6	10	14	20	34	SS-28			CLAYEY SAND (SC), light gray (2.5Y 7/2), dense, moist, fine grained, some fines, weak HCl reaction, trace calcium carbonate nodules
-73.8	154.0								FAT CLAY (CH), light greenish gray (10Y 7/1) and strong brown (7.5YR 5/6), hard, moist, few fine grained sand, weak to strong HCl reaction, trace calcium carbonate nodules
-78.5	158.7	7	14	22	36	SS-29			
-85.8	166.0								

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

MACTEC

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-3179B	DRILL METHOD: Mud Rotary	SAMPLE METHODS: SPT	0 HR. ND
GROUND SURFACE ELEV.: 80.2 ft (NAVD88)	NORTHING: 13,412,088 US ft (NAD83)	EASTING: 2,599,525 US ft (NAD83)	24 HR. ND
TOTAL DEPTH: 250.2 ft	DRILL MACHINE: CME 75 Truck	DRILLER: J. Cook (MILLER)	HAMMER (ID): 140 lb. Auto (100)
DATE STARTED: 2/8/09	COMPLETED: 2/11/09	CASING DEPTH: 3.4 ft	BITS USED: 3 7/8" Wing 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
-88.1					Continued from previous page				
-88.5	168.7	20	36	37	73	SS-30			POORLY GRADED SAND (SP), pinkish gray (7.5YR 7/2), very dense, wet, fine to coarse grained, few fines, weak to strong HCl reaction, trace calcium carbonate nodules *(continued)*
-98.4	178.6	42	48	40	88	SS-31			178.6 ft: light brown (7.5YR 6/3), fine to medium grained, few subangular gravel
-108.5	188.7	14	19	20	39	SS-32			188.7 ft: dense, fine to coarse grained, few fine to coarse subangular gravel, weak HCl reaction
-116.8									197.0
-118.5	198.7	5	7	10	17	SS-33			SANDY FAT CLAY (CH), greenish gray (10Y 6/1), very stiff, moist, some fine grained sand, no HCl reaction
-128.4	208.6	19	27	24	51	SS-34			207.0 ft: driller indicates change; insufficient information to divide soils above and below based on driller's comment 208.6 ft: light greenish gray (10Y 7/1), hard, some fine to medium grained sand, strong HCl reaction, few calcium carbonate nodules, trace red staining
-134.8									215.0 ft: hard drilling 215.0
-138.5	218.7	19	24	50	74	SS-35			SILTY SAND (SM), light gray (10YR 7/1), very dense, wet, fine grained, some fines, weak HCl reaction, few calcium carbonate nodules, little orange staining

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