

APPENDIX C

Soil Logs & Well Construction Diagrams

- C-1: Geoprobe Soil Logs
- C-2: Cone Penetrometer Testing (CPT) Soil Logs
- C-3: Subsurface Drilling Soil Logs & Well Construction Diagrams
- C-4: Test Pit Logs – OU 1

Soil Boring Log

Boring No:
 MW-1

Boring Location info:
 F-Corral Parking Lot
 DUPONT

Project: **DUPONT** Proj. No. **04-3401-00**
 date: **09/22/04** page: **2**
 time: **1115/1220** of: **2**
 By: **A. Marcum**
 water depth / time: / water depth / time: /
 drilling method: **HSA** surface conditions:
 diam: **2"** **Bituminous Pavement**
 start/finish: **1115/1220** elevation: /

Description: textures, color, moisture, odor, firmness, fractures, strata, cavities, fossils, contamination, etc.

depth (show units)	Lithology	Well Construction	sample depth	sample. no.	% recovery	OVA (ppm)	GM Scan
12	SP-SG			X	/	16.2 40	/
				X	/	15.7 40	/
				X	/	48.6 60	/
	SP-SG			X	/	/	/
				X	/	2.8 40	/
14				X	/	2.6 40	/
	SP			X	/	/	/
				X	/	2.8 30	/
	SP			X	/	3.2 40	/
16	SP-SG			X	/	/	/
				X	/	1.9 40	/
				X	/	2.2 30	/
18				X	/	/	/
	SW			X	/	0 50	/
20	ML			X	/	0 40	/

10-12 - same as above.
 (12")
 12-13.5' - same as above
 (12") 13.5'-14' - Dark yellowish brown (10 YR 3/6),
 HARD, wet, silty coarse SAND
 w/some gravel (0.2-0.3")
 (Rounded)
 (14") 14-15'
 Brown (10 YR 5/3), wet, silty coarse
 SAND.
 15-15.5 - SAME AS ABOVE
 15.5-18 - Brown (10 YR 5/3), wet, silty
 Coarse SAND and GRAVEL.
 (Rounded ~ 0.4-1.5")
 (18") 18-19 - same as above
 19.0-19.5 - Light yellowish brown (10 YR 6/4),
 wet med SAND.
 19.5-20 - ~~Black clayey~~
 Very dark gray (10 YR 3/1), wet,
 SILT

*Terminated Boring @ 20' BGS



Soil Boring Log

Boring No:
MW-2

Boring Location info:

**F-Corral Parking Lot
DU PONT**

Project:

DUPONT

Proj. No.

04-3401-00

date: **09/21/04**

page: **1**

time: **1240/1315**

of: **1**

By: **A. Marcum**

water depth / time:

water depth / time:

drilling method: **HSA**

surface conditions:

diam: **2"**

Bituminous Pavement

start/finish: **1240/1315**

elevation: **/**

Description: textures, color, moisture, odor, firmness, fractures, strata, cavities, fossils, contamination, etc.

depth (show units)	Lithology	Well Construction	sample depth	sample no.	% recovery	OVA (ppm)	GM Scan
	Pavement			X	/	/	
	SP					0 90	
	SP					0 150	
						0 80	
				X	/	/	
						12.7	
						33.8 1200	
	SW					59.1 1050	
	ML					68.8 10,500	
				X	/	/	
	ML					59.2 2000	
						20.5 900	
	ML-SW					19.0	
						20.0 1020	

2

4

6

2

4

6

18"

26"

18"

0-6" - Bituminous Paving
 6"-1' - Brownish yell pw (10YR 6/6), HARD
 Moist med. SAND w/ some gravel
 (no. 4-1" angular) (FILL)
 1'-2.5' - Dark Brown (10YR 3/3), Moist,
 HARD, silty med. SAND and
 GRAVEL (Rounded no. 1-0.9")
 (FILL)
 2.5'-2' - Light brownish gray (10YR 6/2)
 Moist, HARD, silty med. SAND
 w/ little gravel.
 Collected sample @ 2' @ 1325 / 1328
 # 01 # 04
 2'-3.0' - Same as above.
 3'-3.5' - Brown (10YR 5/3), Moist, HARD
 silty fine SAND.
 3.5'-4' - Black (10YR 2/1), wet, STIFF
 clayey SILT w/ some sand.
 Collected sample @ 1330 1332
 # 03 # 03
 4'-4.5' - Same as above
 4.5'-5.5' - Black (10YR 2/1), wet, STIFF,
 clayey SILT w/ little fine sand.
 5.5'-6.0' - Grayish brown (10YR 5/2),
 wet, SILT and med. SAND.
 STIFF
 Collected sample @ 6' @ 1336
 # 02 # 05 (378)

Terminated boring @ 6' BBS.



Soil Boring Log

Boring No:

MW-3

Boring Location info:

F. Corral Parking Lot
DUPONT

Project:

DUPONT

Proj. No.

04-3401.00

date: 09/21/04

9/22/04

page: 1

time: 1340 / 1540

of: 2

By: A. marcum

water depth / time:

water depth / time:

drilling method: HSA

surface conditions:

diam: 2"

Bituminous Pavement

start/finish: 9/21 / 9/22
1340 / 1515 / 0830 / 0915

elevation: /

Description: textures, color, moisture, odor, firmness, fractures, strata, cavities, fossils, contamination, etc.

depth (show units)	Lithology	Well Construction	sample depth	sample no.	% recovery	OVA (ppm)	GM Scan	Description
0	Asphalt							0-2" - Bituminous Paving
0	CONCRETE							3" - 1.5' - CONCRETE
1.5	SP				0	80		1.5-2.0' - Light brownish gray (10 yr 6/2) Moist, HARD, med SAND and GRAVEL (0.5-2") rounded (FILL) (40)
2.0	SP				0	1100		2.0-3.0' - Black (10 yr 2/1), Moist, HARD, med. SAND and GRAVEL w/ some silt (gravel rounded ~0.4-2.5") collected sample @ 2' #01 (1500) #05 (1505) (18)
2.3	SP				1.4	1000		
3.0	ML				2.3	2000		3-3.5' - SAME AS ABOVE
3.5	ML				96.4	4000		3.5-6' - Black (10 yr 2/1), wet, M. SHIP, SILT w/ little sand. Product observed @ the 5-6' interval. (18)
3.9	ML				221.3	15000		
3.9	ML				329.7	10050		6-7' - Same as above
4.7	SW-ML				9.7	4000		7-8' - Dark yellowish brown (10 yr 4/6), wet, fine SAND and SILT, HARD. collected sample @ 8' #03 1520 #03 1520 #04 1525 (14)
8.9	SW-ML				8.9	3000		
26.4	SP-SG				26.4	4000		8-9.5' - NO RECOVERY
32.8	SP-SG				32.8	3000		9.5-10' - Black, wet, silty med. SAND and GRAVEL (0.1-0.6") similar (40)



Soil Boring Log

Boring No:

MW-3

Boring Location info:

F-Corral Parking Lot
 DUPONT

Project:

DUPONT

Proj. No.

04-3401-00

date: 09/21/04

09/22/04

page: 2

time: 1340/1540

0830/0915

of: 2

By: A. Marum

water depth / time:

water depth / time:

drilling method:

HSA

surface conditions:

Bituminous Pavement
 elevation: /

diam: 2"

09/21

start/finish: 1340 / 1540

09/22 0830/0915

Description: textures, color, moisture, odor, firmness, fractures, strata, cavities, fossils, contamination, etc.

depth (show units)	Lithology	Well Construction	sample depth	sample no.	% recovery	OVA (ppm)	GM Scan
12	SP					99.8 300	
						78.7 200	
						104.6 190	
						89.9 100	
	SP-SB					38.6 250	
						29.4 200	
						23.7 210	
	SP-SB						
	SP-SB					51.7 120	
						51.7 70	
	SP						
						32.7 50	
	SB					19.4 90	
						8.9 70	
	SP						
20						3.6 60	

10-12' - Brown (10YR 4/3), wet, silty coarse SAND w/ some gravel. HARD

(24)

collected sample @ 10' @ 845

- product observed w/ in this interval 0848 702/90 706

12-14 - Dark grayish brown (10YR 4/2), wet, V. HARD, silty coarse SAND and GRAVEL (no. 1-0.9") angular.

(18)

14-15.5 - SAME AS ABOVE

PID 68.6

15.5-16.0' - Yellowish brown (10YR 5/3), wet, V. HARD, silty coarse SAND and GRAVEL (no. 1-0.5" angular)

(12)

16.0-17.5 - Yellowish brown (10YR 5/2), wet, V. HARD silty coarse SAND.

(18)

17.5-18 - Yellowish brown (10YR 5/6), wet, V. HARD, silty GRAVEL w/ some coarse sand. Product observed this interval

PID 18

18-20' - Brownish yellow (10YR 6/8), wet, V. HARD, silty coarse SAND.

(6)

Terminated Boring @ 20' BGS.



Soil Boring Log

Boring No: 2 MW-4

2 MW-4

Boring Location info:
E13-M01B
F-Corral Parking Lot
DUPONT

Project: DUPONT
Proj. No. 04-3401.00
date: 09/10/04 page: 2
time: 0850-1045 of: 2
By: Anna-Lisa Marcusm
water depth / time: /
drilling method: HSA surface conditions: Bituminous Paving
diam: 2" elevation: /
start/finish: 0850/1045

depth (show units)
Lithology
Well Construction
sample depth
sample no.
% recovery
PID OVA (ppm)
GM Scan

Description: textures, color, moisture, odor, firmness, fractures, strata, cavities, fossils, contamination, etc.

12							0	50	10.5-12 wet, Dark gray (7.5 yr 4/1) silty coarse SAND and some gravel (sub-angular 0.3-2cm) wood fragments @ 10.5-11.2.
							0	50	
							0	52	
							0	50	12 (24") collected sample @ 0910 (2-MW-4-B-P-03) HARD
							1	X	
							0	50	12-13.6 - same as above
							0	62	(18") 13.6-14 - wet, Dark yellowish brown (10yr 4/6) coarse SAND and GRAVEL. HARD, (sub angular - 0.2-1")
14							0	50	
							Y	X	
							0	45	13.6-15 - SAME AS ABOVE
							0	50	
							0	48	15-16 - Texture same as above, moisture HARD color - Dark yellowish brown (10yr 4/6)
16							X	X	(18")
							0	48	
							0	61	16-17 - SAME AS ABOVE HARD
							0	50	17-18 - SAME AS ABOVE HARD
18							0	50	
							0	50	18 (14") 18-19 - SAME AS ABOVE
							0	55	
							0	57	19-20 - Black, silty CLAY (10 yr 2/1) ML-CL
20							0	50	20 (20")

15-16 slightly mottled reddish brown (5 yr 4/3)

Time	collected sample @
0835	18-19.0 / 2-MW-4-B-P-02
1040	19.5-19.20 / 2-MW-4-B-P-04



Soil Boring Log

Boring No:
MW-5

Boring Location info:
**F-Coral Parking Lot
 DUPONT**

Project: **DUPONT** Proj. No: **04-3401.00**

date: **09/20/04 09/21/04** page: **1**
 time: **1605/1720 0815/0900** of: **2**

By: **A. Marcum**

water depth / time: **/** water depth / time: **/**

drilling method: **HSA** surface conditions:
 diam: **2"** • **Bituminous Pavement**
 start/finish: **1605/1720-9/20** elevation:
0815/0900-9/21

Description: textures, color, moisture, odor, firmness, fractures, strata, cavities, fossils, contamination, etc.

depth (show units)	Lithology	Well Construction	sample depth	sample no.	% recovery	OVA (ppm)	GM Scan
0-2'	Pavement						
2-2.5'	CONCRETE						
2.5-3.5'							
3.5-4'	ML-SP						
4-4.5'							
4.5-5'							
5-6'	ML-SP						
6-6.25'							
6.25-6.5'							
6.5-7.5'	ML-CL						
7.5-8'							
8-9.4'	ML						
9.4-10'							

0-2" - Bituminous pavement
 6" - 25' - CONCRETE
 2.5' - 3.5' - Very dark gray (10YR 3/1), wet, silty med. SAND
 3.5' - 4' - Black (10YR 2/1), wet, HARD sandy SILT w/ some gravel (no. 1 - 0.9") angular. Collected sample @ 4' @ 1635
 5-B-P-01 - 1635
 5-B-PA-01 - 1635
 4-6' - dark gray (10YR 4/1), wet, M. HARD, sandy SILT w/ some gravel (0.1 - 0.9") angular. collected sample @ 5' @ 1645
 6-25' - Gray (10YR 5/1), wet, fine sandy SILT w/ yellowish brown (10YR 5/6) mottling. (5-B-P-03)
 2.5-8' - Gray (10YR 5/1) wet, clayey SILT w/ yellowish brown mottles (10YR 5/6) product observed throughout 6-8' interval.
 8-10' - Gray (10YR 6/1), wet SILT w/ dark yellowish brown (10YR 5/6) mottles.

Collected Sample
 @ 8' - 5-B-P-01 - 1710
 10' - 5-B-P-02 - 1715



Soil Boring Log

Boring No:

MW-5

Boring Location info:

Project:

DUPONT

Proj. No.

04-3401.00

date: 09/20/04 09/21/04

page: 2

time: 1605/1720 0815/0900

of: 2

F-Corral Parking Lot
DUPONT

By: A. Marcum

water depth / time: /

water depth / time: /

drilling method: HSA

surface conditions:

diam: 2"

Bituminous Pavement

start/finish: 09/20 09/21

elevation: /

1605/1720 0815/0900

Description: textures, color, moisture, odor, firmness, fractures, strata, cavities, fossils, contamination, etc.

depth (show units)	Lithology	Well Construction	sample depth	sample no.	% recovery	OVA (ppm)	GM Scan	Description
		MC			X	/	/	10-11.5 - Same as above
		SP			X	4.3	200	11.5-12 - Very dark grayish brown (10YR 3/2), wet, HARD, silty coarse SAND w/ rounded gravel (#0.1-0.4")
12		SP-S6			X	5.9	180	12-13 - Same as above
		SP			X	0.9	90	13-13.5 - Black (10YR 2/1), wet, HARD, coarse SAND w/ some rounded gravel (#0.1-0.4")
14		SP			X	1.4	60	13.5-14 - Yellowish brown (10YR 5/6), wet, HARD, silty coarse SAND w/ little gravel (#0.1-0.2")
		SP			X	1.9	100	14-15.5 - Same as above
16		SP			X	1.2	40	15.5-16 - Dark yellowish brown (10YR 4/4), wet, very hard, silty coarse SAND
		SP			X	3.6	50	16-16.5 - SAME AS ABOVE
18		SP-S6			X	/	/	16.5-18 - Dark yellowish brown (10YR 4/6), wet, very HARD, coarse SAND and GRAVEL (rounded ~ 0.1-1.2")
		SP			X	0.2	60	18-20 - Dark yellowish brown (10YR 4/4), wet, very HARD, silty coarse SAND and GRAVEL (#0.1-1") rounded
20					X	61.9	70	Product observed from 18-20.
					X	89.2	90	Terminated boring @ 201 logs.



Soil Boring Log

Boring No:

MW-6

Boring Location info:

F-Conal Parking Lot
 DUPONT

Project:

DUPONT

Proj. No.

04-3401.00

date: 09/15/04

page: 1

time: 1510/1607

of: 1

By: Anna-Lisa Marcum

water depth / time:

water depth / time:

drilling method: HSA

surface conditions:

diam: 2"

Bituminous Paving

start/finish: 1510/1607

elevation: /

Description: textures, color, moisture, odor, firmness, fractures, strata, cavities, fossils, contamination, etc.

depth (show units)	Lithology	Well Construction	sample depth	sample. no.	% recovery	OVA (ppm)	GM Scan
	PAVEMENT CONCRETE				✓	/	/
2							
4							
6							

0-2" Bituminous Paving
 2"-15.5" Concrete Auger refusal @ 15.5"
 offset 4' southeast of boring.

Terminated Boring @ 15.5"
 (Refusal)

cuttings
 PID ~ 0.0
 CGI - 20.710/0 (Boring Hole)



Soil Boring Log

Boring No:

MW-6-offset

Boring Location info:

F-Corral Parking Lot
 DUPONT

Project:

DUPONT

Proj. No.

04-3401.00

date: 09/15/04

page: 1

time: 1607 / 1650

of: 1

By: Anna-Lisa Marcum

water depth / time:

water depth / time:

drilling method: HSA

surface conditions:

diam: 2"

Bituminous Paving

start/finish: 1607/1650

elevation: /

depth (show units)	Lithology	Well Construction	sample depth	sample no.	% recovery	OVA (ppm)	GM Scan
	Asphalt PAVEMENT					1	1
	X X X					1	1
	X X X					0	65
	X X X	FILL				0	59
	X X X	FILL				1	1
2						0	50
		ML SW	2.5'			0	55
		SW				0	60
4						6	55
		ML SW				0	46
		SW				0	50
6						0	50

Description: textures, color, moisture, odor, firmness, fractures, strata, cavities, fossils; contamination, etc.

offset from original local. 4' SE
 0-8" - Bituminous paving / Gravel sub-base

(12") 8"-2' - Black (10YR4/1), Moist, silty med. SAND and GRAVEL (FILL) gravel angular (no. 1 - 0.9")

2'-2.6' - SAME AS ABOVE

(20") 2.6-4' - Dark gray (5Y 4/1), Moist-2.6-3.5, wet @ 3.5 silty med. SAND.

Sample from 2.0' @ 1630 2MW-6-B-P-01

Sample from 2.5' @ 1645 2MW-6-B-P-02

4'-5.2' - SAME AS ABOVE

(24") 5.2-6' - Gray (5Y 5/1), wet, silty fine SAND.

collected sample @ 6' - 1450 - 2-MW-6-B-P-03

Boring terminated @ 6.0' bgs.



Soil Boring Log

Boring No:

BMU-7

Boring Location info:

*F - Corral Parking Lot
DUPONT*

Project:

DUPONT

Proj. No.

04-3401.00

date: **09/16/04**

page: **1**

time: **0720/1030**

of: **2**

By: **Anna-Lisa Marcum**

water depth / time:

1

water depth / time:

1

drilling method: **HSA**

surface conditions:

diam: **2"**

Bituminous paving

start/finish: **0720/1030**

elevation:

Description: textures, color, moisture, odor, firmness, fractures, strata, cavities, fossils, contamination, etc.

depth (show units)	Lithology	Well Construction	sample depth	sample. no.	% recovery	OVA (ppm)	GM Scan
0-4"	Asphalt Bituminous Paving				1	1	
4"-9"	FILL				1	1	
9"-2'		SM/ SW	266'		0	45	2
2'-4'		SM/ SW			0	50	4
4'-4'		SM/ SW			0	50	4
4'-4'		SM/ SW			0	50	4
4'-6'		SM/ SW			0	55	6
6'-7.5'		SM/ SW			0	55	6
7.5'-8'		SM/ SW			0	60	8
8'-8.5'		SM/ SW			0	55	8
8.5'-9.5'		SM/ SW			0	55	8
9.5'-10'		SP			0	50	10

0-4" - ~~Asphalt~~ Bituminous Paving
 4"-9" - Gravel sub base
 9"-2' - Black (2.5 yr 2.5/1), Moist, silty med SAND with some gravel (angular #0.2-0.9"), M. Hard
 (6")
 2'-4' - Dark grayish brown, (10 yr 4/2), Moist (2-2.6), wet (2.6-4), silty med. SAND w/ little gravel. M. Hard. ~~well graded~~
 (10")
 * [collected sample @ 4'-7.5 (BMU-7-B-P-01)
 collected sample @ 4'-8.5 (BMU-7-B-P-04)]
 4'-4' - SAME AS ABOVE
 4'-6' - Light yellowish brown (2.5 yr 5/3), wet, soft, silty med. SAND, well graded
 (24")
 6'-7.5' - same as above, w/ yellowish brown (10 yr 5/6) silty lens @ 6.5-6.8'
 (14")
 7.5'-8' - Gray (10 yr 5/1), wet, M. Hard, silty fine SAND,
 * [collected sample @ 8'-8.5 (BMU-7-B-P-02) D-02] - 0825
 8'-8.5' - same as above
 (24")
 8.5'-9.5' - Grayish brown (2.5 yr 5/2), wet, M. Hard, med. SAND
 9.5'-10' - Yellowish brown (10 yr 5/6), wet, M. Hard, silty, coarse SAND
 * [collected sample @ 9.5' - BMU-7-B-P-05 @ 0930]



Soil Boring Log

Boring No:

Boring Location info:

F-Corral Parking Lot
DUPONT

Project:

DUPONT

Proj. No.

EMW-7

date: 09/16/04

page: 2

time: 0720 / 1030

of: 2

By: Anna-lisa Marcum

water depth / time:

water depth / time:

drilling method: HSA

surface conditions:

diam: 2"

Bituminous paving

start/finish: 0720 / 1030

elevation: /

Description: textures, color, moisture, odor, firmness, fractures, strata, cavities, fossils, contamination, etc.

depth (show units)	Lithology	Well Construction	sample depth	sample. no.	% recovery	OVA (ppm)	GM Scan	Description: textures, color, moisture, odor, firmness, fractures, strata, cavities, fossils, contamination, etc.
10-12	SP					1	1	10-12' yellowish brown (10YR 9/6), wet, HARD, silty coarse SAND.
12	SP					0	50	(6") 12-13.5' - SAME AS ABOVE
13.5-14'	SP-SG					0	55	(24") 13.5-14' - yellowish brown (10Y 5/8), wet, HARD, very coarse gravelly SAND with some silt. (gravel sub-angular no. 1 - 1.2")
14-15'	SP-SG					0	50	14-15' same as above
15-16'	SP					0	45	(20") 15-16' - same as above with dark brown (7.5YR 3/3) mottling
16-17.9'	SP-SG					0	50	(12") 16-17.9' - dark yellowish brown (10YR 4/4), wet, HARD, coarse SAND with some silt
17.9-18'	SP-SG					0	50	17.9-18' - dark yellowish brown (10YR 4/4), wet, HARD, coarse SAND and GRAVEL w/silt (sub angular gravel ~ 0.1 - 0.9")
18-18.5'	SM					2.1	50	(19") 18-18.5' - SAME AS ABOVE
18.5-19.0'						4.6	55	18.5-19.0' - Gray (10YR 5/1), wet, H. Hard, med. silty
19.0-20.0'						7.8	40	19.0-20.0' - Gray (10YR 5/1) and Grayish brown (10Y 4.5/2) Alternating fine silty SAND.

* Boring terminated @ 20' bps

NOTE: Gray buffers - 3" - 4", Grayish brown layers (1 at 5")

W/200



Soil Boring Log

Boring No:

MW-8

Boring Location info:

F-Corral Parking Lot
 DUPONT

Project:

DUPONT

Proj. No.

04-3401-00

date:

09/20/04

page: 1

time:

1415/1540

of: 1

By:

A. Marcum

water depth / time:

1

water depth / time:

1

drilling method: HSA

surface conditions:

diam: 2"

GRAVEL

start/finish: 1415/1540

elevation: ✓

Description: textures, color, moisture, odor, firmness, fractures, strata, cavities, fossils, contamination, etc.

depth (show units)	Lithology	Well Construction	sample depth	sample no.	% recovery	OVA (ppm)	GM Scan
0-4"	GRAVEL				X	1	1
4-11"	SP				X	40	
11-21"	CONCRETE				X	1030	
21-31"	CONCRETE				X	1050	2
31-41"	SP				X	90	4
41-51"	SW				X	150	5
51-61"					X	120	6
61-71"					X	50	6

0-4" - GRAVEL
 4"-11" - yellowish brown (10YR 5/6), moist med. SAND w/ some gravel, HARD (sub-angular ~0.2-0.0")
 11"-21" - very dark gray (10YR 3/1), moist, silty med SAND and GRAVEL (~0.4-2") angular.
 21"-31" - CONCRETE - NO RECOVERY
 31"-41" - Dark grayish brown (10YR 4/2), moist HARD, silty med SAND w/ some gravel (~0.1-1.5") angular. (wet @ 4')
 Collected sample @ 4' - 8-B-P-01-1450
 8-B-P-02-1455
 51"-61" - NO RECOVERY
 OFFSET 21"N - 51" - DK GRAY (10YR 4/1), silty fine SAND, wet - 600ml
 [collected sample @ 5' - 8-B-P-04-1520
 8-B-P-04-1520 (250ml)
 " @ 6' - 8-B-P-03-1535

- Terminated boring @ 6' BGS



Soil Boring Log

Boring No:

MW-9

Boring Location info:

F. Corral Parking Lot
DUPONT

Project:

DUPONT

Proj. No.

04-3901-00

date: 09/20/04

page: 1

time: 0830/1100

of: 2

By: A. Marcum

water depth / time:

/

water depth / time:

/

drilling method: HSA

surface conditions:

GRAVEL

diam: 2"

start/finish: 0830/1100

elevation: /

Description: textures, color, moisture, odor, firmness, fractures, strata, cavities, fossils, contamination, etc.

depth (show units)	Lithology	Well Construction	sample depth	sample no.	% recovery	OVA (ppm)	GM Scan	Description
0-4"	GRAVEL			X	1	1		0-4" - GRAVEL
4"-10"	SP (FILL)			0	50	0	15"	4"-10" - yellowish brown (10YR 5/6), moist, HARD med. SAND w/ some gravel (FILL) (sub-angular 0.2-1")
10"-16"	(FILL)			2.9	40	0	2	10"-16" - very dark grayish brown (10YR 3/2), moist silty med SAND w/ gravel
16"-2'	(FILL)			X	1	1		16"-2' - very dark yellowish brown (10YR 4/6), moist, silty med SAND w/ little gravel. loose
				0	70	0		collected sample @ 1' (1-MW-9-B-R-02) @ 0910
2'-30'				0.5	60	0	4	2'-30' - CONCRETE CONCRETE NO RECOVERY
3'-4'				0.6	50	0	4	3'-4' - Very dark brown (10YR 2/2), wet, silty med. SAND, M. HARD
4'-5'				0	50	0		4'-5' - Gray (10YR 5/1), wet, silty med. SAND, M. HARD
				0	60	0		collected sample @ 4' - 0925/0928
				2.4	70	0	6	1-MW-9-B-P-01 & QA-01
				0.6	50	0	6	5-6' - same as above
				0.4	90	0	7	6-7' - Dark yellowish brown (10YR 4/6), wet, silty med SAND, M. HARD
				1	1	0	8	Sample @ 5' - 0945 - B-P-04 500ML
				1	1	0	8	0946 B-P-04 250ML
				1	1	0	8	0948 B-DUP-04 250ML
				0	40	0	9	7 Sample @ 6' - 0950 - B-P-03
				0	60	0	9	8 - 9 - SAME AS ABOVE
				0	80	0	10	(7" hole LG chunk of concrete in spore)



Soil Boring Log

Boring No:

MW-9

Boring Location info:

F-Loral parking Lot
DUPONT

Project:

DUPONT

Proj. No.

04-3401.00

date: 09/20/04

page: 2

time: 0830/1100

of: 2

By: A. Marcum

water depth / time:

1

water depth / time:

1

drilling method: HSA

surface conditions:

Gravel

diam: 2"

start/finish: 0830/1100

elevation:

1

Description: textures, color, moisture, odor, firmness, fractures, strata, cavities, fossils, contamination, etc.

depth (show units)	Lithology	Well Construction	sample depth	sample no.	% recovery	OVA (ppm)	GM Scan	Description
9-10'	ML-CL					0 90		Gray (10YR 5/1), wet, silty CLAY w/ dark yellowish brown (10YR 4/6) mottling
10-11'	ML-CL					0 80		Gray (10YR 5/1), wet clayey SILT, stiff. (24")
						0 40		collected sample @ 91-MW-9-B-P-01 @ 1005.
11-11.9'	SW					2.4 40		11-11.9- SAME AS ABOVE
11.9-12.5'	SP					19.6 50		11.9-12.5- Very dark gray (10YR 3/1), wet, silty med. SAND, Mottled
12.5-13'	SP					32.4 40		12.5-13- Very dark gray (10YR 3/1), wet HARD, silty coarse SAND w/ little gravel. (0.1-0.6")
13-14.5'	SW					48.6 30		13-14.5- SAME AS ABOVE
14.5-14.8'	SP-SG					61.1 40		14.5-14.8- Gray (10YR 6/1), wet, HARD silty fine SAND.
14.8-15'	SP-SG					58.9 40		14.8-15- Gray (10YR 5/1), wet, HARD silty coarse SAND and GRAVEL (rounded w/ 0.4-0.7")
15-16.5'	SG					53.2 50		15-16.5- SAME AS ABOVE
16.5-17'	SP					0 50		16.5-17- Dark yellowish brown (10YR 4/4) very hard, wet, silty GRAVEL w/ coarse sand (angular 0.5-1.6")
17-17.5'	SW					1.4 60		17-17.5- SAME AS ABOVE
17.5-18.5'	SP					3.7 70		17.5-18.5- Dark yellowish brown (10YR 4/4), wet, HARD, silty coarse SAND
18.5-19.0'	SW					0 50		18.5-19.0- Dark gray (10YR 4/1), wet, HARD, fine SAND.
19-20'	SP					0 50		19-20- Dark gray (10YR 4/1), wet, MEDIUM HARD MEDIUM SAND.

Terminated Boring @ 20' BGS



Soil Boring Log

Boring No:
2MW-10

Boring Location info:

F-13 - MOZA

F-Corral Parking Lot
DUPONT

Project:

DUPONT

Proj. No.

09-3401-60

date: 09/10/04

09/13/04

page: 1

time: 1500/1601

0901/0950

of: 1

By: Annalisa Marcum

water depth / time:

water depth / time:

drilling method: HSA

surface conditions:

diam: 2"

Gravel

start/finish: 1500/1601-9/10
0901/0950-9/13

elevation:

Description: textures, color, moisture, odor, firmness, fractures, strata, cavities, fossils, contamination, etc.

depth (show units)	Lithology	Well Construction	sample depth	sample no.	% recovery	OVA (ppm)	GM Scan	Description
0-5"	surface cover							Gravel and SAND (surface cover)
5"-1'	concrete							Concrete
1'-2'	ML-SW				0	50		Dark yellowish brown (10 yr 4/4), Moist, loose, fine silty SAND
2'-4'	ML-SW				0	50		Unable to recover sample, running SAND appearing in cuttings, very wet, fine wet SAND. (GM-48) (PID-0.0)
4'-4.5'	wood fragments							SAME AS ABOVE
4.5'-5.5'	wood fragments							Wood fragments (GM-55) (PID-0.0) NO recovery of soil
5.5'-6'	ML-SW							NO recovery, cuttings appear to be wet SAND as noted in 2'-4' interval. soil cuttings from 5.5'-6' Black (10 yr 2/1), wet, silty med. SAND ("running sand") (GM-89) (PID-0.0)

Boring terminated @ 6.0' bgs.



Soil Boring Log

Boring No: **MW-11**

Boring Location info:

**F-Coral Parking Lot
DUPONT**

Project:

DUPONT

Proj. No.

04-3401.00

date: **09/13/04 10/04/04**

page: **1**

time: **1105-1615 0730-0915**

of: **2**

By: **Anna-Lisa Marcellon**

water depth / time:

water depth / time:

drilling method: **HSA**

surface conditions:

Gravel Paved

diam: **2"**

start/finish: **1105/1615 09/13
0730/0915 09/14**

elevation:

Description: textures, color, moisture, odor, firmness, fractures, strata, cavities, fossils, contamination, etc.

depth (show units)	Lithology	Well Construction	sample depth	sample no.	% recovery	OVA (ppm)	GM Scan	Description
0-6"	FILL							0-6" - Gravel (FILL)
6"-2'	FILL							6"-2' - Yellowish brown (10YR 5/6), moist, silty med. SAND and GRAVEL (FILL) (6") HARD (FILL)
2'-4'	FILL							2'-4' - NO RECOVERY, cuttings exhibited brick debris and gravel, moist, FILL GM SCAN cuttings - 79 HARD = 2-3.5 PW = 0.0 M.HARD = 3.5-4
4'-6'	SW					110 99 105		4'-6' - Dark yellowish brown, (10YR 3/6), M.HARD wet, silty fine SAND with little gravel (angular no. 1-0.6 mm) Red brick debris in top 6" (4.6-5.0') collected sample @ 4.5' 2 MWU BPO1 → 1130 1400 @ 5.5' 2 MWU BPO3
6'-7'	SW-CL					98 87		6'-7' - SAME AS ABOVE
7'-8'	CL							7'-8' - Yellowish brown (10YR 3/6), wet, silty fine SAND w/ gray (10YR 6/1) bands of CLAY, stiff. 1415 - 2 MWU BPO-04
8'-10'	CL					45 52		8'-10' - GRAY (2.5Y 6/1), wet, silty CLAY w/ yellowish brown (10.5YR 5/6) mottles collected sample @ 1535 8' 2 MWU-11-B-P-05 8.5' 2 MWU-11-B-P-05 → 1540



Soil Boring Log

Boring No: _____

Boring Location info:

F-Corral Parking Lot
 DUPONT

Project:

DUPONT

Proj. No. MW-11

09-3401.00

date: 09/13/04 / 09/14/04

page: 2

time: 1105-1615 / 0730-0815

of: 2

By: Anna-Lisa Marcano

water depth / time:

water depth / time:

drilling method: HSA

surface conditions:

diam: 2" 09/13/04 09/14/04

gravel covered

start/finish: 1105/1615

elevation: /

Description: textures, color, moisture, odor, firmness, fractures, strata, cavities, fossils, contamination, etc.

depth (show units)	Lithology	Well Construction	sample depth	sample no.	% recovery	OVA (ppm)	GM Scan	Description
10-11'						34		10-11' - SAME AS ABOVE
11-12'						44		11-12' - Gray (2.5 Y 6/1), wet, m. stiff, silty CLAY w/ fewer mottles.
11-8-12'								11-8-12' - Dark yellowish brown (10YR 4/6), wet, m. HARD, silty fine SAND w/ some clay.
12-14'						45		12-14' - Gray (2.5 Y 6/1), wet, m. stiff, clayey SILT w/ some fine sand.
14-14.6'						49		14-14.6' - SAME AS ABOVE
14.6-16'						50		14.6-16' - Alternating reddish brown (5YR 4/4) and dark reddish gray (5YR 4/2), wet, coarse SAND w/ some gravel (sub-angular no. 1-0.3 cm).
16-18'						50		(END OF DAY - 1615) 09/13/04
16-18'						49		09/14/04 - 0730
16-18'						1		16-18' - Reddish brown (5YR 4/4) and dark reddish gray (5YR 4/2) alternating, wet, HARD, coarse SAND and GRAVEL (0.3-1.4") (sub-angular fragments).
18-20'						40		18-20' - Dark gray (10YR 4/1), wet, HARD, medium SAND with some gravel (0.1-1.3").
20'						55		

Bottom of Boring - 20'



Soil Boring Log

Boring No:

MW-12

Boring Location info:

F-Corral Parking Lot
DUPONT

Project:

DUPONT

Proj. No.

04-3401.00

date: 09/16/04

page: 1

time: 11:57:00

of: 1

By: A. Marcum

water depth / time:

/

water depth / time:

/

drilling method: HSA

surface conditions:

diam: 2"

Bituminous Paving

start/finish: 11:57:00

elevation: /

Description: textures, color, moisture, odor, firmness, fractures, strata, cavities, fossils, contamination, etc.

depth (show units)	Lithology	Well Construction	sample depth	sample no.	% recovery	OVA (ppm)	GM Scan
0.0 - 0.5	PAVEMENT						
0.5 - 1.0	CONCRETE						
1.0 - 1.5	FILL			0	60		
1.5 - 2.0	FILL						
2.0 - 2.5	SM (FILL)			0	50		
2.5 - 3.5	SP/ (FILL)			0.4	60		
3.5 - 4.0	SP			1.2	100		
4.0 - 4.2				4.8	70		
4.2 - 5.5				5.1	60		
5.5 - 6.0				14.6	60		
				30.1	90		

2.5" - Bituminous Paving
 2.5" - 1.5 - Concrete
 1.5 - 2.0' - Light gray (10 yr 7/1), Moist, HARD,
 (6") (FILL) fine SAND and GRAVEL, appears to be pulverized concrete debris.
 2.0 - 2.5 - SAME AS ABOVE
 2.5 - 3.5 - Yellowish brown (10 yr 5/6), Moist, silty fine SAND.
 (15")
 3.5 - 4.0' - ~~yellow~~ Black (10 yr 2/1); Moist, silty med. SAND w/ wood fragments, brick fragments.
 4' - 4.2' - same as above
 4.2 - 6.0 - Black (10 yr 2/1), wet, silty med. SAND w/ some wood fragments and ~1" long fibers. Appeared to have a sheen from 5.5' - 6.0'.

2

4

6

Collected samples @ 4'
 2-MW-12-B-P-01 } - 1509
 03 } - 1518
 Collected samples @ 6'
 2-MW-12-B-P-02 } - 1530
 04 } - 1535
 * Terminated Boring @ 6.0'



Soil Boring Log

Boring No:

MW-13

Boring Location info:

F-Corral Parking Lot
DUPONT

Project:

DUPONT

Proj. No.

04-3401.00

date: 09/24/04

page: 01

time: 1115/1250

of: 02

By: A. marum

water depth / time:

/

water depth / time:

/

drilling method: HSA

surface conditions:

diam: 2"

start/finish: 1115/1250

~~GRAVEL~~
GRAVEL
elevation: /

Description: textures, color, moisture, odor, firmness, fractures, strata, cavities, fossils, contamination, etc.

depth (show units)	Lithology	Well Construction	sample depth	sample. no.	% recovery	OVA (ppm)	GM Scan
0							
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

0-3" GRAVEL
3"-1.5' - Brownish yellow (10 YR 6/6), moist, med. SAND w/ some gravel (angular 20.4-12)

1.5'-2' - Concrete. Collected sample @ 21-13-B-P-01-1120

2'-3.5' - Concrete / s and mix Collected sample @ 41-13-B-P-03 @ 1120

3.5'-4' - Dark gray (10 YR 4/0), wet SILTY fine SAND.

4'-4.5' - same as above

4.5'-6.0' - Concrete debris Collected sample @ 61-13-B-P-02 @ 1130

6.0'-8.0' - Gray (10 YR 6/1), wet, silty clayey SILT with Dark yellowish brown (6 YR 4/6) mottles. Collected sample @ 81-13-B-P-04 @ 1136

8.0'-8.8' - same as above

8.8'-9.5' - yellowish brown (10 YR 5/6), silty wet, clayey SILT

9.5'-10' - Gray (10 YR 6/1), wet, silty med. SAND.



Soil Boring Log

Boring No:

MW-13

Boring Location info:

F- Corral Parking Lot
DUPONT

Project:

DUPONT

Proj. No.

04-3401-00

date: 09/24/04
time:

page: 2
of: 2

By: A-Marcum

water depth / time:

water depth / time:

drilling method: HSA
diam: 2"

surface conditions:

start/finish: 119/1250

elevation: /

Description: textures, color, moisture, odor, firmness, fractures, strata, cavities, fossils, contamination, etc.

depth (show units)	Lithology	Well Construction	sample depth	sample no.	% recovery	OVA (ppm)	GM Scan	Description
10-12					0	50		10-12' - Gray (10 yr 6/1), wet, silty clay stiff w/ dark yellowish brown (10 yr 4/6) mottled.
					0	40		collected sample @ 12.0' - 13-B-R-05 @ 1200
					0	40		
					0	50		12-12.5 - same as above
				X	/	/		
					0	50		12.5-13.4 - yellowish brown (10 yr 5/6) wet, silty med sand
					0	50		
					0	50		13.4-13.6 - gray (10 yr 6/1) wet, med fine sand.
				X	/	/		
					0	40		13.6-14' - yellowish brown (10 yr 5/6) wet, med coarse sand and gravel (0.1-0.4") angular.
					0	50		collected sample @ 13.5' - 13-B-R-06 @ 1205
					0	40		14-15.2 - yellowish brown (10 yr 5/6) wet, stiff silt and fine sand.
				X	/	/		
					0	40		15.2-16' - yellowish brown (10 yr 5/6) wet, med sand w/ some gravel (angular 0.4-1")
					0	60		16-17.5 - light yellowish brown (10 yr 6/1) wet, med, sand, med. sand.
				X	/	/		
					0	60		17.5-18 - light brownish gray (10 yr 6/2) wet, med sand and gravel (0.2-1") angular.
				X	/	/		
					0	60		18-19.5 NO RECOVERY
				X	/	/		
					0	60		19.5-20 - dark grayish brown (10 yr 4/2) wet, silty gravel w/ coarse sand (angular 0.4-6.5").
				X	/	/		Terminated Boring @ 2nd BGS.



Soil Boring Log

Boring No:
MCW-14

Boring Location info:

**F-Comm. parking lot
DUPONT**

Project: **DUPONT** Proj. No. **04-3401.00**
 date: **09/23/04** page: **1**
 time: **1430** of: **2**
 By: **A. Marcus**
 water depth / time: water depth / time:
 drilling method: **HSA** surface conditions:
 diam: **2"** **Bituminous pavement**
 start/finish: **1430/** elevation: **/**

Description: textures, color, moisture, odor, firmness, fractures, strata, cavities, fossils, contamination, etc.

depth (show units)	Lithology	Well Construction	sample depth	sample no.	% recovery	OVA (ppm)	GM Scan
0	Pavement				X		
0-4"	SP						
4"-1.6'	SP					60	
1.6'-2'	SP					70	
2'-2.5'	SP					90	
2.5'-3.5'	ML-SM					90	
3.5'-4.0'						40	
4.0'-6'						60	
6'-6.5'							
6.5'-7.8'	ML					40	
7.8'-8.0'	SW					50	
8.0'-8.5'	SW					40	
8.5'-9.0'	ML-SM					50	
9.0'-10.0'	ML					50	

0 - 4" - Bituminous pavement
 4" - 1.6' - Brownish yellow (10yr 6/6) moist, med. SAND w/ GRAVEL
 1.6 - 2' - Black (10yr 2/1), moist, med. SAND w/ some gravel.
 2.0 - 2.5 - same as above
 2.5 - 3.5 - Gray (10yr 5/1), wet, fine sandy SILT.
 3.5 - 4.0' - Black (10yr 2/1), wet, SILT w/ wood fragments, organic matter.
 4 - 6' - NO RECOVERY
 6 - 6.5 - Gray (10yr 5/1), wet, fine sandy SILT
 6.5 - 7.8 - Gray (10yr 5/1) and Dark yellowish brown (10yr 4/6), wet, silty fine SAND.
 7.8 - 8.0 - Dark yellowish brown (10yr 5/6) wet, fine SAND.
 8 - 9.0 - ~~Dark yellowish brown~~ Gray (10yr 6/1) very fine SAND w/ yellowish brown (10yr 5/6) ~~and~~ mottles.

Collected samples @ 2' - 14-B-P-01 (1450) 9.0 - 9.5 - Gray (10yr 6/1) sandy SILT w/ yellowish brown (10yr 5/6) mottles.
 @ 4' - 14-B-P-03 (1500)
 @ 6' - 14-B-P-02 (1510) 9.5 - 10.0 - SAME AS ABOVE
 @ 8' - 14-B-P-04 (1525)



Soil Boring Log

Boring No:

MW-14

Boring Location info:

F-Coral Parking Lot
DUPONT

Project:

DUPONT

Proj. No.

04-3401.00

date: 09/23/04

page: 2

time: 1430

of: 2

By: A. Marcum

water depth / time:

water depth / time:

drilling method: HSA

surface conditions:

diam: 2"

Bituminous Pavement

start/finish: 1430

elevation: /

Description: textures, color, moisture, odor, firmness, fractures, strata, cavities, fossils, contamination, etc.

depth (show units)	Lithology	Well Construction	sample depth	sample. no.	% recovery	OVA (ppm)	GM Scan	Description
10.0 - 10.5				0	60			10.0-10.5 - GRAY (10YR 6/1), wet, SILT with yellowish brown (10YR 5/6) mottles. (24")
10.5 - 11.0				0	90			
11.0 - 11.5				0	70			
11.5 - 12.0				0	50			
12.0 - 12.5				0	60			
12.0 - 13.5				0	100			12 12-13.5 - SAME AS ABOVE
13.5 - 14.0				0	50			(24") 13.5-14.0 - GRAY (10YR 6/2), wet, med SAND w/ some gravel (sus angular < 0.1-1.5")
14.0 - 14.5				0	60			
14.5 - 15.0		SP		X	/	/		14-15 - yellowish brown (10YR 5/6) wet, silty, coarse SAND
15.0 - 15.5				0	60			15-16 - yellowish brown (10YR 5/6), wet, silty, coarse SAND and GRAVEL.
15.5 - 16.0				0	90			
16.0 - 16.5				0	100			
16.5 - 17.5		SP-SG		X	/	/		16-17.5 - Same as above.
17.5 - 18.0				0	90			17.5-18.0 - Light brownish gray (10YR 6/2) wet, coarse SAND.
18.0 - 18.5				0	70			
18.5 - 19.0		SP		0	90			18-20 - Light brownish gray (10YR 4/2) wet, coarse SAND and GRAVEL (0.1 - 0.5")
19.0 - 19.5				X	/	/		
19.5 - 20.0		SP-SG		X	/	/		
20.0 - 20.5				0	60			Terminated Boring @ 20.0'
20.5 - 21.0				0	70			



Soil Boring Log

Boring No:

MW-15

Boring Location info:

F-Corral Parking Lot
DUPONT

Project:

DUPONT

Proj. No.

04-3401.00

date: 09/22/04

page: 1

time: 1730/1755

of: 1

By: A. Marum

water depth / time:

water depth / time:

drilling method: HSA

surface conditions:

diam: 2"

Bituminous Pavement

start/finish: 1730/1759

elevation: /

Description: textures, color, moisture, odor, firmness, fractures, strata, cavities, fossils, contamination, etc.

depth (show units)	Lithology	Well Construction	sample depth	sample. no.	% recovery	OVA (ppm)	GM Scan
	Pavement						
	FILL						
	FILL						
	Brick Debris						
	SW-ML						
	SW-ML						
	ML						

0-6" Bituminous Pavement

6"-1.5' - Black (10 yr 2/1), moist, silty med. SAND w/ some gravel (angular 0.2-2")

1.5'-2.0' - same as above w/ brick debris.

2.0'-3.0' - same as above

3.0'-3.5' - Brick debris

3.5'-4.0' - Grayish brown (10 yr 5/2), moist, silty fine SAND.

4'-5.5' - same as above

5.5'-6.0' - Pale Brown (10 yr 6/3), moist, med stiff clayey SILT.

collected sample @ 2' @ 1735 - 15-B-R-01
4' @ 1740 - 15-B-R-02
6' @ 1753 - 15-B-R-03

* Terminated Boring @ 6.0' BGS.

2

4

6



Soil Boring Log

Boring No:

MW-16

Boring Location info:

F-Corral Parking Lot
DUPONT

Project:

DUPONT

Proj. No.

04-3401.00

date: 09/23/04

page: 1

time: 0830

of: 2

By: A. Marcum

water depth / time:

/

water depth / time:

/

drilling method: HSA

surface conditions:

Bituminous
Pavement

diam: 2"

start/finish: 0846/

elevation: /

Description: textures, color, moisture, odor, firmness, fractures, strata, cavities, fossils, contamination, etc.

depth (show units)	Lithology	Well Construction	sample depth	sample no.	% recovery	OVA (ppm)	GM Scan	Description
	Pavement							0-6" - Bituminous Pavement
	SP							6" - 1.5' - Brown (10YR 5/3), moist, v. HARD, silty med. SAND w/ some gravel (rounded no. 4-2")
2	SM					0 110		1.5-2' - Black (10YR 2/1), moist, stiff, fine sandy SILT w/ little clay and gravel (rounded no. 2-0.5")
	ML					0 50		* Collected sample @ 2' MW-16-B-P-01 @ 0850
	ML					0 40		2'-4' - Black (10 yr 2/1), wet, clayey SILT. M. stiff
4	ML					0 40		* Collected sample @ 4' MW-16-B-P-03 @ 0856
	SW					0 50		4-5' - Same as above
	SW					0 50		5'-6' - Black (10YR 2/1), wet, M. stiff FINE SILT and FINE SAND w/ wood fragments and organic matter.
6	SW					0 70		* Sample collected @ 6' - 2-MW-16-B-P-02 @ 0910
	SP					0 50		6.5-8' - Black (10YR 2/1), wet, silty coarse SAND and GRAVEL (sub-angular 0.1-0.5")
	SM					0 40		Collected sample @ 8' 2-MW-16-B-P-04 @ 0920
	SM					0 60		8-8.4' - Black (10YR 2/1), wet, HARD, silty fine SAND
8	SP					0 60		
	SP					0 60		
10						0 50		8.4-10' - Very dark gray (10YR 3/1) wet, v. HARD, silty coarse SAND.



Soil Boring Log

Boring No:

ML-16

Boring Location info:

Exterior Parking Lot
DUPONT

Project:

DUPONT

Proj. No.

04-3401-00

date: 09/23/04

page: 2

time: 0830/1035

of: 2

By: A. Marum

water depth / time:

/

water depth / time:

/

drilling method: HSA

surface conditions:

diam: 2"

Bituminous Paving

start/finish: 0830/1035

elevation: /

Description: textures, color, moisture, odor, firmness, fractures, strata, cavities, fossils, contamination, etc.

depth (show units)	Lithology	Well Construction	sample depth	sample no.	% recovery	OVA (ppm)	GM Scan
	SP			X	/	/	
	SP				0	40	
	SP				0	60	
12	SP-SG				0	60	
	SP				0	100	
	SP				0	50	
	SP-SG				0	50	
14	SP-SG				0	60	
	SW			X	/	/	
	SP				0	70	
	SW				0	60	
16	SP				0	40	
	SW				/	/	
	SP				/	/	
	SW				/	/	
18	CL-MC				0	40	
	CL-MC				0	40	
	CL-MC				0	50	
	CL-MC				0	50	
20	CL-MC				0	60	

10-11.3' - Same as above.

11.3-12.5' - Very dark gray (10YR 3/1), HARD, wet, coarse SAND w/ some gravel (sub-angular no. 2 - 1.3") silty

12 11.5-12 - Very dark gray (10YR 3/1), HARD, wet, coarse SAND and GRAVEL (sub angular ~0.4-2")

12 12-12.6 - Very dark gray (10YR 3/1), wet, HARD, coarse SAND w/ little gravel.

14 12.6-14' - Black (10YR 2/1), wet, silty, coarse SAND w/ some gravel. (sub-angular ~0.1-1.5")

16 14-14.2 - Same as above w/ HARD, wet

16 14.2-16.0 - Black (10YR 2/1), silty, med SAND alternating layers w/ silty coarse SAND.

18 16-17.6' - same as above

18 17.6-18 - Gray (10YR 5/1), wet, soft, silty CLAY.

18-20 - same as above.

- Terminated Boring @ 20' BBS



Soil Boring Log

Boring No: **MW-18**

Boring Location info:

Project:

Proj. No.

date: 09/12/04
time: 0745/0930

page:
of:

By:

water depth / time:

water depth / time:

drilling method:
diam:

surface conditions:

Bituminous Paving

start/finish: 0745/0930

elevation:

Description: textures, color, moisture, odor, firmness, fractures, strata, cavities, fossils, contamination, etc.

Concrete 3.5-5'

depth (show units)	Lithology	Well Construction	sample depth	sample no.	% recovery	OVA (ppm)	GM Scan
0-6.4				X		0 50	
6.4-9.1				X			
9.1-2'				X			
2-2.5				X		0 40	
2.5-3.5				X		0 40	
3.5-5.0'				X		0 50	
5.0-6'				X			
6'-7.5'				X		14.2 60	
7.5-8'				X		12.2 50	
8-8.5				X		12.4 50	
8.5-9'				X		12.6 50	
9-9.5				X		12.6 40	
9.5-10'				X		32.4 60	
10-10.5				X		51.6 40	
10.5-11'				X		62.8 40	
11-11.5				X		86.3 40	
11.5-12'				X		62.8 40	
12-12.5				X		65.3 50	
12.5-13'				X		29.9 50	
13-13.5				X		143.9 50	

0-6.4 - Bituminous Paving
 6.4-9.1 - sub base-gravel
 9.1-2' - Black (10 yr 21), moist, silty med. SAND w/ gravel.
 2-2.5 - 2+2.5 - Grayish brown (10 yr 5/2), moist clayey SILT w/ some fine sand.
 2.5-3.5 - Dark grayish brown (10 yr 4/2) wet, clayey SILT w/ some fine SAND
 3.5-5.0' - Concrete
 5.0-6' - Light grayish brown (10 yr 6/2), wet, silty ~~SAND~~ w/ some ^{CLAY} med. SAND
 6'-7.5' - Gray (10 yr 5/1), wet, silty fine SAND w/ yellowish brown (10 yr 5/8) mottling.
 7.5-8' - Dark yellowish brown (10 yr 4/6) wet, med. SAND w/ some silt.
 8-8.5 - Observed green on sample elevated, PLO reading.
 Sample @ 5'
 Sample @ 9'
 8-8.5 - same as above
 16" 8.5-10' - Very dark gray (10 yr 3/1), wet, alternating Dark Brown (10 yr 3/3) Coarse SAND w/ gravel increasing @ 9.5-10' (color becomes Dark yellowish brown (10 yr 4/6))



Soil Boring Log

Boring No:
MW-17

Boring Location info:

Project:

Proj. No.

date:
time:

page:
of:

By:

water depth / time:

water depth / time:

drilling method:

surface conditions:

diam:

start/finish:

elevation:

depth (show units)	Lithology	Well Construction	sample depth	sample. no.	% recovery	OVA (ppm)	GM/Scan
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Description: textures, color, moisture, odor, firmness, fractures, strata, cavities, fossils, contamination, etc.

10-11.5	Dark yellowish brown (10YR 4/6); wet silty coarse SAND, with some gravel (0.2-0.6 in) rounded gravel.			58.9	40	40	40
11.5-12	Yellowish brown (10YR 5/8) wet silty coarse SAND, poorly sorted with some gravel (0.2-0.7 in) rounded.			61.9	40	50.5	50
12-13	same as above			152.5	50	28.7	70
13-14	Dark yellowish brown (10YR 4/6) wet silty SAND, sand is medium, well graded			11.1	60	17.4	50
14-16	SAME AS ABOVE			23.1	60	17.4	50
16-17	SAME AS ABOVE			17.4	50	8.8	50
17-18.2	Dark yellowish brown (10YR 3/6) wet, silty coarse SAND and GRAVEL w/ gray (10YR 6/1) inclusions, (gravel rounded (0.2-0.8 in)).			9.1	50		
18-19	Dark gray (10YR 4/1), wet, silty CLAY.						
19-20	Clayey SILT						

Boring terminated @ 19.01

9.1 ppm silty CLAY
50 GM Clayey SILT



Soil Boring Log

Boring No:
MW-18

Boring Location info:

**F-Connell parking Lot
DUPONT**

Project:

DUPONT

Proj. No.

04-3401.00

date: **09/17/04**
time:

page: **1**
of: **1**

By: **Sandy Staigerwald**

water depth / time:

1

water depth / time:

1

drilling method: **HSA**

surface conditions:

diam: **2"**

Bituminous pavement

start/finish: **1315/1450**

elevation:

1

Description: textures, color, moisture, odor, firmness, fractures, strata, cavities, fossils, contamination, etc.

depth (show units)	Lithology	Well Construction	sample depth	sample. no.	% recovery	OVA (ppm)	GM Scan
							50
				X	0.3		
				X	0.1	200	
				X	0.7	120	
				X		200	
				X		150	
				X		70	
				X		150	
				X			
				X			
				X		79	70
				X		14	70

15" 0-4" Bituminous paving

0.3 ppm 4"-10" sub base gravel moist, gray *bagged sample from 1.4-1.7*

0.1 ppm 10"-2' Black (2.5 YR 2.5/1), moist

0.7 ppm silty coarse SAND with some gravel (to 1.2')

200 rounded. Reveal as concrete offset 4' to SE

11"

3.138' black (2.5 YR 2.5/1), gravelly SAND, with 70ppm little silt, wet. Gravel is subrounded. Wet

22 ppm same as above, wood fragments present. Sampled from 3.5-3.5' 1-MW-18-B-P-01. Wet.

4-5.8'

11"

4'-6' black (2.5 YR 2.5/1), wet, silty SAND with some gravel, gravel is subrounded, wood fragments

2
4
6