

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



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Soil Boring Log

Boring No:
 2-MW-19A

Boring Location info:

Project:

FUSRAP DUPONT GW P4.2

Proj. No.

3404.00

date: 8-23-05

page: 1

time: 0830

of: 1

By: CMY

water depth / time:

water depth / time:

drilling method:

HAND AUGER
 diam: 4 IN

surface conditions:

SOIL

start/finish:

0820 / 0930

elevation:

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

depth (show units)	Soil Texture	Well Construction	sample depth	sample. no.	% recovery	OVA (ppm)	FIDLER Scan	
1		2" SCH 40						SAND, SILTY, CLAYEY, BLACK WITH RUBBLE
2								
3								
4								
5								
6								
7								



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Soil Boring Log

Boring No:

Boring Location info:

4W-20 (A)

F-Corral

DuPont

Project:

DuPont

Proj. No.

date: 7/18/05

page: 1

time: 0700

of: 1

By: MPhillips

water depth / time:

water depth / time:

drilling method: sonic

surface conditions:

diam: 8"

gravel

start/finish: 0700/1000

elevation:

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

depth (show units)	Soil Texture	Well Construction	sample depth	sample no.	% recovery	OVA (ppm)	FIDLER Scan	Description: textures, color, moisture, odor, firmness, fractures, strata, cavities, fossils, contamination, etc.
0			1.0			0.0		0-0.3' gravel
			1.5					0.3-1.5' gravel (crushed stone) mixed with dk yellow-brown (10YR 4/4) clayey silt, moist
			0900					1.5-2.3' concrete foundation / slab
2	ML		2.0			15.2		2.3-3.0' black (10YR 2/1) stained clayey silt w/ some fine sand, moist, includes coal slag/wood ash
			2.5			24.7		3.0-6.4' brown (10YR 4/3) silty fine sand with some clay, moist (saturated at 5.0')
	SM		0900			28.7		
4						24.2		
						21.0		6.4-7.5' gray (5Y 5/1) sandy silt w/ little clay, wet, dense
6	ML					21.4		7.5-8.6' gray (5Y 5/1) silty clay, moist, stiff
	CL					5.2		8.6-9.0' no recovery
8								EOB 9.0' well set to 7.5' bgs screened 5.0-7.5'; sand to 4.5'; bentonite to 3.5'



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Soil Boring Log

Boring No:

MW-21

Boring Location info:

MW-21 (A)
F-Corral
DuPont

Project:

DuPont

Proj. No.

date: 7/14/05

time: 1250

page: 1

of: 2

By: M Phillips

water depth / time:

water depth / time:

drilling method: sonic

diam: 8"

start/finish: 1050/1730

surface conditions:

asphalt paving

elevation:

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

depth (show units)	Soil Texture	Well Construction	sample depth	sample. no.	% recovery	OVA (ppm)	FIDLER Scan	Description
0-0.5'							19	asphalt
0.5-1.0'							518	gravel/asphalt mix
1.0-2.5'								mixed asphalt and possible gravel from previous investigation?
2.5-4.0'								no recovery
4-5.3'	SM		4.3					dark gray-brown (10YR 4/3), clayey fine sand with silt, moist, medium stiff
5.3-7.0'	SW		6.0				66	dark gray-brown (10YR 4/3) well-graded sand with subrounded gravel up to 80mm, wet
7.0-7.6'	ML		7.0					dk brown (10YR 3/3) silty clay w/ some sand (fine), moist, stiff
7.6-8.5'	SW		7.0				133	dk yellow-brown (10YR 4/6) well-graded sand, subrounded, up to 32mm gravel
8.5-9.0'			6.0					no recovery
9-11.5'								slop from previous intervals



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Soil Boring Log

Boring No:

MW-21

Boring Location info:

MW-21 (A)

F-Corral

DuPont

Project:

DuPont

Proj. No.

date: 7/14/05

page: 2

time: 1050

of: 2

By: M. Phillips

water depth / time:

water depth / time:

drilling method: Sonic

surface conditions:

diam: 8"

start/finish: 1050 / 1730

elevation:

depth (show units)

Soil Texture

Well Construction

sample depth

sample no.

% recovery

OVA (ppm)

FIDLER Scan

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

12

SW

27

11.5-12.7 dk gray-brown (10 YR 4/3) well-graded sand, subrounded, up to 5mm, with silt; wet

12.7-14' no recovery

EOB 14' bgs 4" sch 40 PVC well well set to 9' bgs, 2.5' screen (10-slot) screen interval 6.5-9'. W sand to 6'; bentonite chips to 5'; 20:1 cement; bentonite grout to surface

16



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Soil Boring Log

Boring No:

Boring Location info:

MW-22 (A)

F-Coral

DuPont

Project:

DuPont

Proj. No.

date: 7/16/05

page: /

time: 0800

of: 1

By: M.A. Phillips

water depth / time:

water depth / time:

drilling method: sonic

surface conditions:

diam: 8"

gravel/asphalt

start/finish: 1300/0800
7/16/05

elevation:

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

depth - FIDLER (show units)	Soil Texture	Well Construction	sample depth	sample. no.	% recovery	OVA (ppm)	FIDLER Scan	Description: textures, color, moisture, odor, firmness, fractures, strata, cavities, fossils, contamination, etc.
0-0.7'						18.0		0-0.7' asphalt and gravel
0.7-1.1'						160		0.7-1.1' gravel sub-base
1.1-2.5'	SW							1.1-2.5' gray (5Y 6/1) well-graded gravelly sand, subrounded gravel up to 35mm, moist
2.5-3.0'	CL							2.5-3.0' (5Y 3/1) dk. clay gray silty clay w/ some sand, very stiff, moist
3.0-3.6'			3.0-3.5'			2768		3.0-3.6' black (5Y 2.5/1) charcoal/burnt material, slightly moist, very loose
3.6-3.9'	CL		0.100			231		3.6-3.9' brown (10YR 4/3) silty clay, moist, very stiff
3.9-7.0'	SP					3287		3.9-7.0' dk brown (10YR 3/3) fine sand with silt saturated, loose, fines to a silty sand w/ some clay @ 7.0'
7.0-9.0'	SM ML		6.0-6.5'			74.9		7.0-9.0' gray + orange mottled silty clay, medium stiff, moist, mica throughout
9.0-10.0'			0.110			189		9.0-10.0' clayey silt

EOB 9.0' bgs
 screened 4.5-7.0' bgs; sand to 4.0';
 bentonite to 3.0'; grout to surf.



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Soil Boring Log

Boring No:

Boring Location info:

UW-23 (B)

F-Corral

DuPont

Project:

DuPont

Proj. No.

date: 7/18/05

page: 1

time: 1100

of: 2

By: M Phillips

water depth / time:

water depth / time:

drilling method: sonic

surface conditions:

diam: 8"

gravel

start/finish: 1100 / 1600

elevation:

depth (show units)	Soil Texture	Well Construction	sample depth	sample no.	% recovery	OVA (ppm)	FIDLER Scan	Description: textures, color, moisture, odor, firmness, fractures, strata, cavities, fossils, contamination, etc.
2	SM		2.0 2.5 1337			0.7		0-0.5' gravel
						1.7		0.5-1.0' gravel mixed with brown (10YR 5/3) silty clay
4						1.4		1.0-2.6' mix of gravel, coal slag, wood debris trash, moist
	ML					1.1		2.6-5.0' olive gray (5Y 5/2) silty fine sand, dense, saturated
6						1.9		5.0-6.5' olive gray (5Y 5/2) sandy silt with clay, wet, medium stiff
								6.5-9.0' no recovery
8	CH					0.0		9.0-10.4' olive gray (5YR 5/2) silty clay, moist, highly plastic, medium stiff



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Soil Boring Log

Boring No:

Boring Location info:

MW-23 (B)
F-Corral
DuPont

Project:

DuPont

Proj. No.

date: 7/18/05

page: 2

time: 1100

of: 2

By: M. Phillips

water depth / time:

water depth / time:

drilling method: sonic

surface conditions:

diam: 8"

gravel

start/finish: 1100/1600

elevation:

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

depth (show units)	Soil Texture	Well Construction	sample depth	sample. no.	% recovery	OVA (ppm)	FIDLER Scan	
12	ML		10.5- 11.0- 1335			898		10.4-10.8' blue (5YR 4/4) clayey silt with some sand, moist, slightly plastic, soft
14	SW					80.7		10.9-16.5' brown (10YR 4/3) well-graded sand with silt, gravel (subrounded) up to 17mm, saturated, dense
16	SP					16.5		
18	SW					12.7		16.5-17.2' brown (10YR 4/3) medium sand, dense, saturated
						0.9		17.2-18.0' brown (10YR 4/3) well-graded gravelly sand with silt, subrounded gravel up to 28mm
								EOS 18' logs - screen set 8-18' sand to 7.5' bentonite to 6.5' grout to surf.



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Soil Boring Log

Boring No:

Boring Location info:

MW-24 (A)
F-Corral
DuPont

Project:

DuPont

Proj. No.

date: 7/17/05

page: 1

time: 0730

of: 1

By:

M. Phillips

water depth / time:

water depth / time:

drilling method: Sonic

diam: 8"

start/finish: 0730 / 1200

surface conditions:

asphalt paving

elevation:

depth - ft logs (show units)	Soil Texture	Well Construction	sample depth	sample. no.	% recovery	OVA (ppm)	FIDLER Scan	Description: textures, color, moisture, odor, firmness, fractures, strata, cavities, fossils, contamination, etc.
0								0-0.7' asphalt paving
0.7								0.7-1.5' gravel sb-base
1.5	SM		2.0					1.5-2.5' olive gray (SY 4/2) silty, fine to medium sand with some large (up to 4/2mm) subrounded gravel; medium dense, moist
2			2.5					2.5-5.8' concrete rubble, moist at 2.5-4.6'; saturated 4.6-5.8'
4								
5.8	OH SM		6.0					5.8-6.0' black (10 YR 2/1) organic marsh sediment, plastic, wet
6			7.0					6.0-8.5' brown (10 YR 4/3) silty sand with clay, very fine sand, grades to a clayey silt with fine sand at 8.5'
8	ML		8.5					8.5-9.0' no recovery
								EOB 9.0' logs Well set to 8.0' logs, screened 5.5-8.0', sand to 5.0', bentonite to 4.0' logs

Soil Boring Log

Boring No:

MW-25-C

Boring Location info:

GROUNDWATER
OUT, AOI, AOC

Project:

OUT Phase 2

Proj. No.

date:
time:

11/18/05

page:

of:

1

4

by: J. Von Lidenitz

water depth / time:

5-57

water depth / time:

drilling method: Zota sonic

GP 24-300RS

diam: 4-inch

start/finish:

surface conditions:

Asphalt

elevation:

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

depth (show units)	soil texture	Sample well Recovery construction	sample depth	sample. no.	OVA (ppm)	FIDLER Scan	
1		5/5			17.6	4762	0-1.5 Asphalt + Subbase
						4567	1.5-3.5 white + Black Coarse sand + Cobble
					88.1	4725	dry.
2						5725	3-4 Large Rock - appears to be concrete
					95.6	7633	
3						7520	3.5-5 white Coarse sand w/ Rocks
						8115	
					179	4753	
4						4470	
					243	4555	5-8 Brown (Petroleum Saturated - Black rocks)
5		5/5	5'			20313	F-Sed w/ some silt. Loose, non-cohesive
			6'		491	25633	A-G-2 some light gray mottled F-sed + silt.
6						16926	8-9.5 Light Gray/Brown mottled silt clay
					441	11770	w/ some sand. Tight, cohesive, plastic
7						12259	
					1003	10160	9.5-11 Rich Gravel + coarse sand.
8						10832	Saturated w/ heavy sheen
					2135	16546	
9						9998	
					4757	7308	
10							

Background FIDLER: 4478

Soil Boring Log

Boring No

MW-25-C

Boring Location info:

OU1 ^{Ground water} AOI, AOC

Project

OU1 Phase 2

Proj. No.

date: 11/13/05

page: 2

time:

of: 4

by: J. Van Lidenitz

water depth / time:

water depth / time:

drilling method: Rotasonic
 GP 24-300RS

surface conditions:

diam: 4-inch

start/finish:

elevation:

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

depth (show units)	soil texture	Sample with Recovery construction	sample depth	sample. no.	OVA (ppm)	FIDLER Scan
10		5/5		881	6342	
11				203	5724	
12				339	5905	
13				205	5490	
14				291	4826	
15		* 5/5				
16						
17						
18			18		5637	
19			19	238	5220	
20				211	5061	
					4880	

9-5-19 River Corral & coarse
 Sand

* Some of Sample (3-4) was lost in a
 drum or liquid.

19-20 Dark Grey Silty Clay. Tight
 Plastic w/ some unf-sand.

Soil Boring Log

Boring No:

MW-25C

Boring Location info:

Out, ^{Groundwater} AOI, AOC

Project:

Out Phase 2

Proj. No.

date: 11/14/05

page: 3

time:

of: 4

by: J. Von Uderitz

water depth / time:

water depth / time:

drilling method: Zota sonic

GP 24-300RS

diam: 4-inch

surface conditions:

start/finish:

elevation:

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

depth (show units)	soil texture	Sample well Recovery construction	sample depth	sample. no.	OVA (ppm)	FIDLER Scan
21		5/5			26.1	5247
						5403
22					15.3	5620
						5752
23					8.0	5768
						5974
24					4.1	6017
						5963
25			24		0.0	5812
			25			5777
26		5/5			3.5	5545
						5832
27					10.6	5838
						5643
28					3.0	5512
						5461
29					10.1	5464
						5516
30					18.4	5513
						5513

20-24 Dark Grey silty clay. Very tight
 plastic. Trace white to silver mica

(24.5-1" Layer. M-L sand - Dark Grey w/ some
 small conchoidal

24.24-3, Bluish Grey

Very L sand + clay. Tight, cohesive
 trace small conchoidal

Background FIDLER Scan 2-4639



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Soil Boring Log

Boring No:

MW-25-C

Boring Location info:

Groundwater
OU 1, AOI, AOC

Project:

OU Phase 2

Proj. No.

date: 11/14/05

page: 4

time:

of: 24

by: J. Von Uderitz

water depth / time:

water depth / time:

drilling method: Rota sonic
GP 24-300 RS
diam: 4-inch
start/finish:

surface conditions:

elevation:

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

depth (show units)	soil texture	Sample Well Recovery construction	sample depth	sample. no.	OVA (ppm)	FIDLER Scan
31		5/5			2.2	5403
32			31			5198
33			32		2.1	5336
34						5352
35					4.4	5504
36						5678
37					4.9	5887
38						5840
39					2.0	5620
40						5259

31-32.5 Light Gray Coarse Sand w/ silt
w/ some River Gravel, & larger stones

32.5-35

Blue gray silty clay w/ very f. sand
tight, plastic.

TD: 35.Ft

Well Construction MW-25-C

Riser 0-29.5

Screen 29.5-34.5 0.61"

Sand 28-35 II 00 N

Bentonite 26-28 3/4 bag mixed +
Purplex down

Grout 1-26

Drilled out 4" borehole w/ 8" Borehole





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Soil Boring Log

Boring No:

Boring Location info:

NW-26 (A)

F-Coral

DuPont

Project:

DuPont

Proj. No.

date: 7/17/05

page: 1

time: 1230

of: 2

By: M Phillips

water depth / time:

water depth / time:

drilling method: Sonic

diam: 8"

start/finish: 1230/1600

surface conditions:

asphalt paving

elevation:

depth (show units)

Soil Texture

Well Construction

sample depth

sample. no.

% recovery

OVA (ppm)

FIDLER Scan

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

0-0.8' asphalt

0.8-1.2' crushed asphalt and gravel

1.2-2.2' yellow-brown (10YR 5/8) well-graded sand, subrounded, up to 12 mm, moist

2.2-7.0' loose concrete and wood waste (no recovery 4.5-6.2' bgs); dry

6.2-8.5' solid concrete foundation material; dry

8.5-9.0' no recovery, unconsolidated materials



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Soil Boring Log

Boring No:

Boring Location info:

MW-26 (A)
 F-Corral
 Dupont

Project:

DuPont

Proj. No.

date: 7/17/05

page: 2

time: 1230

of: 2

By: M. Phillips

water depth / time:

water depth / time:

drilling method: sonic

surface conditions:

diam: 8"

asphalt

start/finish: 1230 / 1600

elevation:

depth (show units)	Soil Texture	Well Construction	sample depth	sample no.	% recovery	OVA (ppm)	FIDLER Scan
-----------------------	--------------	----------------------	--------------	------------	------------	-----------	-------------

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

10	OL		9.5-9.5 1410					9.0-11.0' silty marsh sediments with some debris including concrete, metal, gravel brick; black (10 YR 2/1), saturated
12	SW							11.0-12.0' olive (5Y 5/3) sand/gravel mix; subrounded gravel up to 19mm; saturated (B aquifer material)
14								EOB 12.0' bgs
16								well screened 6.5-8.0' sand to 5.5' bent. chips to 4.5'



Soil Boring Log

Boring No:

4-MW-010

Boring Location info:
 AOC 4 SWMU 5
 Near water
 Marsh

Project: Supplementary Investigation 04-3406.00
 date: 5-8-06 page: 1
 time: of: 2

By: Ken Marion

water depth / time: water depth / time:

drilling method: Rotarife
 GP24-300RS
 diam: 4-inch core
 5 ft, 100g
 start/finish: 0855-1000
 surface conditions: Marsh
 elevation:

depth ft (show units)	Soil Texture	Well Construction	sample depth	sample no.	% recovery	PLO GVA (ppm)	FIDLER Scan	Description: textures, color, moisture, odor, firmness, fractures, strata, cavities, fossils, contamination, etc.
0					80	0	3761	Very dark grayish brown silty CLAY (CL) with root matter, very moist, low plasticity, soft
1						0	3847	Reddish yellow fine sandy CLAY (CL), moist
						0	3736	mod low plasticity, stiff
2						0	3668	Dark gray medium SAND (SP) with a little
						0	3756	quartz gravel, moist, medium dense
						0	3873	
3						0	3619	
						0	3670	
4						0	3648	Light gray medium to coarse sand (SP) with
						NA	NA	trace brown glass, a little quartz gravel, medium dense, moist, fill
5						NA	NA	No Recovery
					90	0	3865	Dark gray SAND (SW) with a little gravel,
6						0	3671	trace glass and wire fragments, trace
						0	3593	brick fragments, fill, wet, medium dense
7						0	3856	
						0	3846	
						0	3831	
8						0	3652	Very dark gray sandy CLAY (CL) with
						0	3960	organic matter, very moist, medium stiff,
9						0	3731	low plasticity
						0	3832	
10						NA	NA	No Recovery

Background = 3814 cpm
 3816
 4035
 3999

NA = Not Applicable



Soil Boring Log

Boring No:

4-MW-01

Boring Location info:

AOC 4 SWMU 5
Near Water
Marsh

Project: DuPont

Proj. No.

Supplementary Investigation 04-3406.00

date: 5-8-06

page: 2

time:

of: 2

By: Ken Marion

water depth / time:

water depth / time:

drilling method: Rotasonic
GP24-300RS
diam: 4-inch core
5 ft long
start/finish: 0855-1000

surface conditions:
Marsh
elevation:

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

depth (show units)	Soil Texture	Well Construction	sample depth	sample. no.	% recovery	R.D. O.V.A. (ppm)	FIDLER Scan	
10					70	0.1	3928	Dark gray sandy CLAY (CL) with organic matter, very moist, low plasticity, soft
11							3719	
							3974	
12						0.1	4312	Olive gray silty sandy CLAY (CL) with a little reddish yellow mottling, trace gravel, wet, low plasticity, soft
							4385	
						0.1	4435	
13							4465	
						0.1	4484	
14						NA	NA	No Recovery
						NA	NA	
15						NA	NA	
16			4-MW-01-B-P-17		70	0.1	4028	Yellow brown SAND (SC) with trace gravel, trace reddish brown mottling, medium dense, wet
							3872	
							4280	
						0.1	4155	
17							4431	
				X		0	5181	Gray CLAY (CL) with trace silt sand and gravel, moist, very stiff, medium plasticity
18				X		0	5147	
							4629	
19						NA	NA	No Recovery
						NA	NA	
20						NA	NA	

Bottom of Borehole at 20 ft



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Soil Boring Log

Boring No:

4 MW - 02

Boring Location info:

AOC4 SWMU 5
Marsh
Near Water

Project: DUPONT
SUPPLEMENTAL
INVESTIGATION

Proj. No.

04-3406.00
~~4 MW - 02~~

date: 5/8/06

page: 1

time: 1415

of: 1

By: K. MARION

D. KATELOV M. DRISCOLL

water depth / time:

water depth / time:

drilling method:

surface conditions:

diam: 4-inch core

Marsh

5 ft. long

start/finish: 1415-1445

elevation:

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

depth (show units)	Soil Texture	Well Construction	sample depth	sample no.	% recovery	PID GVA (ppm)	FIDLER Scan	
1					100	3753	3722	DARK BROWN CLAYEY SILT (ML), ORGANIC MATTER, MOIST, VERY LOOSE
2						3762	3885	REDDISH YELLOW CLAYEY FINE SAND (SC)
3						3874	3700	TRACE GRAVEL, MOIST, MEDIUM DENSE
4						3725	3725	DARK GRAY MEDIUM SAND (SP)
5						3499	3617	WITH LITTLE GRAVEL, MOIST, MEDIUM DENSE BECOMING LIGHTER IN COLOR TOWARDS END
6					100	3597	3630	GRAYISH BROWN MEDIUM TO COARSE TRACE REDDISH BROWN MOTTLED SAND (SP)
7						3615	3602	VERY MOIST, FINE TO COARSE GRAVEL
8						3725	3647	
9						3610	3697	OLIVE GRAY FINE TO MEDIUM SAND (SP)
10						3760	3967	W/ TRACE GRAVEL, BLACK SLAG. FILL
						3967	3996	VERY MOIST, DENSE
								VERY DARK GRAY W/ SOME SILT (CL), ORGANIC MATTER, MEDIUM STIFF.

Bottom of borehole at 10 ft



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Soil Boring Log

Boring No:

4-MW-05

Boring Location info:

AOC4 SWMU 5

MARSH

NEAR WATER

Project: DUPONT
SUPPLEMENTAL
INCL

Proj. No.

04-3406-00

date: 5-8-06

page: 1

time:

of: 1

D. KATELEY

By: K. MARION

M. DRISCOLL

water depth / time:

water depth / time:

drilling method: ROTASONIC

surface conditions:

diam: 4" CORE

MARSH

5' FT LONG

start/finish:

elevation:

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

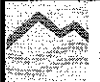
depth (show units)	Soil Texture	Well Construction	sample depth	sample. no.	% recovery	PFD (ppm)	FIDLER Scan
0							3947
1						60	3945
2						0.3	3963
3						0.3	4025
4							4074
5							4270
6							4256
7							4133
8							4079
9							4041
10							4078
							3998
							4053
							3954
							3925
							3790
							3920
							3765

NO RECOVERY

BLACK SAND WITH LITTLE CLAY (SC),
SOME ORGANIC MATTER, TRACE METAL
AND CERAMIC

VERY DARK CLAY (CL) WITH ORGANIC MATTER
MEDIUM STIFF, MOIST

BACKGROUND 4121 CPM
3870 CPM



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Soil Boring Log

Boring No:

4 MW-06

Boring Location info:

GRAVEL PARKING LOT
IN AOC 4, SWMU 5

Project: DUPONT
SUPPLEMENTAL
INVESTIGATION

Proj. No.

04-3406.00

date: 5/9/06

page: 1

time: 0740

of: 1

By: C. YOUNG
D. KATELEY

water depth / time:

water depth / time:

drilling method: ROTOSONIC

surface conditions:

diam: 4 IN CORE
5 FT LONG

GRAVEL LOT

start/finish:
0745 / 0905

elevation:

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

depth (show units)	Soil Texture	Well Construction	sample depth	sample. no.	% recovery	P/O (ppm)	FIDLER Scan
1	GRAVEL				100	0.6	4411
2						0.7	4192
3						5.3	4660
4							
5							
6	GRAVEL				50	0.1	4407
7	GRAVEL					6.2	4705
8	GRAVEL					0.3	5015
9	GRAVEL						6185
10	GRAVEL						6075
							8537
							10100

SAND GRAVELY (SW) TAN GRADING TO
BLACK. FILL

NO RECOVERY

PURPLE BLACK GRAVEL, VERY
WET, STRONG ODOR. (GW)

BACKGROUND 4394 CPM
4387



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Soil Boring Log

Boring No:

4-MW-07

Boring Location info:

AOC 4 SWMS

Near water

Marsh

Next to 4-MW-01

Project: DuPont

Proj. No.

Supplementary Investigation 04-3406-00

date: 5-8-06

page: 1

time:

of: 1

By: Ken Marion, Dave Kateley

M. DRISCOLL

water depth / time:

water depth / time:

drilling method: Rotasonic
GP24 - 300 RS
diam: 4-inch core
5 ft long
start/finish: 1230-1300

surface conditions:
Marsh

elevation:

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

depth (show units)	Soil Texture	Well Construction	sample depth	sample no.	% recovery	RFID DATA (ppm)	FIDLER Scan	Description
0								
1					75	0.2	3927	Dark grayish brown, silty CLAY (CL)
							3833	with root matter, moist, low plasticity, soft
						0.1	3870	Reddish yellow clayey fine sand (SC)
								with a little gravel, moist, medium dense
2							3746	FILL
							3597	Dark gray gravelly sand (SP) with
						0.2	3692	trace brick fragments, moist,
3							3630	medium dense, FILL
4							NA	
						0	NA	NO RECOVERY
5					100	0	3624	
							3470	DARK GRAY GRAVELLY SAND (SP) WITH
							3264	NO BRICK, FINE GRAVEL, WET, FILL
6						0	3408	MEDIUM DENSE.
							3530	
						0	3487	
7							3531	
							3947	VERY DARK GRAY CLAY w/ ORGANIC
8						0	3803	MATTER, MEDIUM PLASTICITY,
							3794	MEDIUM STIFF
9						0	3621	
							3542	
10						0	3685	

BACKGROUND RDG. 3926 CPM / Bottom of Borehole at 10 ft

Soil Boring Log

Boring No:

~~10MW9~~ 6mw01

Boring Location info:

Project:

Proj. No.

003 phase 2

date: 11/29/05

page: 1

time: 800

of: 2

by: Joe Van Uderitz

water depth / time:

9-Ft

water depth / time:

drilling method: Rotasonic

diam: 4" / 12"

surface conditions:

Asphalt

start/finish:

elevation:

AOI-4
AOC-6

depth (show units)	soil texture	Recovery well construction	sample depth	sample. no.	PID OVA (ppm)	FIDLER Scan	Description: textures, color, moisture, odor, firmness, fractures, strata, cavities, fossils, contamination, etc.
1		3/5				7049 6871	0-1 Asphalt + Subbase
2	o.o o.o o.o				2.7	6467 6360	1-2.5 Orange Brown Coarse Sand w/ some silt. many rounded river stones + cobbles. moist. trace light gray f-sand
3					3.1	6550 6468	2.5-3 Dark Gray. f-sand + silt. Tight, non-cohesive
4					-	-	3-5 No Recoveries
5		5/5				6716 6258	5-6 Orange Brown. M-c sand w/ some silt
6					14.5	6693	6-7 Black peat
7			6.5 1.5		15.2	7051 6902	7-8 Darker light Gray f.m sand w/ some silt tight, some water, non-cohesive
8					39.6	6770	
9					26.2	6620 6397	8-10 Light Brown M-c sand w/ trace silt. Loose wet @ 9-Ft, some mottled light gray m-silt, sand
10					67.1	6268 6440	

Background Fidler 9091

Soil Boring Log

Boring No:

GMW 01

Boring Location info:

AOI-4
AOC-6

Project:

OU 3 Phase 2

Proj. No.

date: 11/29/05

page: 2

time: 800

of: 2

by: Joe Van Uden

water depth / time:

9-ft

water depth / time:

drilling method: Rotosonic

surface conditions:

diam: 4" / 12"

Asphalt

start/finish:

elevation:

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

depth (show units)	soil texture	Recovery well construction	sample depth	sample. no.	OVA (ppm)	FIDLER Scan
11	0.0	5			19	6301
12	0.0				171	632
13	0.0				99.2	6919
14	0.0				271	640
15	0.0				201	6087
16	0.0				148	6065
17	0.0				117	6280
18	0.0				62.6	6819
19	0.0				24.1	6620
20	0.0					6100
						6292
						6272
						6113
						6007
						6005
						6219
						6866

11-12.5
Coarse light Brown sand w/ some small
river gravel. Loose, wet, non-cohesive

12.5-14.25
Light Gray & light Brown very f. sand w/ silt. T. fine
non-cohesive

14.25-15
Red Brown m.c sand w/ trace silt.
Semi-tight, non-cohesive

15-17.5
F.M. light Brown silty sand. Semi-tight
non-cohesive

17.5-20
M-C light Gray sand w/ trace silt.
Loose non-cohesive
20" 20 BG S

Drilled out Borehole w/ 12-inch to 18. Ft
well GMW 01

Avg. Rise 0-8

0.01 screen 8-18

0 Sand 6-18 8 BAGS

Asphalt 8-16

Sand 1.5-2 (chain man hole)



Soil Boring Log

Boring No:

6 MW 02

Boring Location info:

AOI- B₄

AOC-6

Project:

003 Phase 2

Proj. No.

date: 11/29/05

page: 1/2
of: 2

time:

by: JGE Van Uderit 2

water depth / time:

8.5 - FT

water depth / time:

drilling method: Rotasonic

diam: 4" / 12"

start/finish:

surface conditions:

Gravel / Asphalt

elevation:

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

depth (show units)	soil texture	Boring well construction	sample depth	sample. no.	OVA (ppm)	FIDLER Scan
0-1	old Asphalt & Gravel	3/5		2.5	4726 4580	
1-2.75	light brown C-Sand w/ some small rounded river gravel. loose, non-cohesive			2.2	4160 4894	
2.75-3	Black Paint w/ trace f- Gray Sand. + silt, semi-cohesive			3.0	5266 5107	
3-5	no Recovery			-	-	-
5-7.5	Brown / Red Brown M-C Sand w/ trace silt. Loose, non-cohesive. moist	4/5		7.4	4731 4673	
7.5-9	Red Brown / light Gray / light brown mottled F-Sand w/ some silt. + silt, non-cohesive. some water @ 8.5			6.6	4857 4954	
9-10	no Recovery			6.0	4726 5050	
* 8.9	Field Duplicate Sample collected		8.9	9.8	5210 5277	
				-	-	-

Background Fidler - 4677



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Soil Boring Log

Boring No:

6 MW 02

Boring Location info:

Project:

Proj. No.

date: 11/29/05

page: 2
of: 2

time:

by:

Joe Van Uderitz

water depth / time:

0.5 ft

water depth / time:

drilling method: Rotasonic

surface conditions:

diam: 4" / 12"

Asphalt / Gravel

start/finish:

elevation:

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

depth (show units)	soil texture	Pressure with construction	sample depth	sample. no.	OVA (ppm)	FIDLER Scan
10-13		5/5			10.6	4657
11					20.1	4756
12					13.3	4749
13					52	4294
14					20.4	4494
15					8.4	4820
16					21.6	4657
17					28.6	4821
18					38.7	4754
19					40.2	4648
20						4837
						4882
						4783
						4885
						4908
						5089
						4890
						4952

10-13
Light Brown & light Gray
C-Sand w/ trace silt. loose, non-cohesive

13-15
Light Brown w/ some light Gray/Red Brown
f. sand w/ some silt. Tight, non-cohesive
Semi-tight, non-cohesive

15-17
Light Gray M-F sand w/ some silt

17-19.5
Light Gray f.m. sand w/ some
silt. Semi-tight, non-cohesive

19.5-20
Red Brown C-M sand w/ trace silt
loose, non-cohesive

20-26
Drilled out Borehole w/ 12"

Riser 0-8
0.01 Screen 8-18
#0 Sand 0-18
Bastite/Grout 2-6



Soil Boring Log

Boring No:

6 MW 03

Boring Location info:

Project:

Proj. No.

0103 Phase 2

date: 11/30/05

page:

time:

of:

by: JOE Van Uderitz

water depth / time:

9.5-ft

water depth / time:

drilling method: Rotasonic

diam: 4 1/2"

surface conditions:

old Asphalt

start/finish:

elevation:

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

depth (show units)	soil texture	Recovery well construction	sample depth	sample. no.	PLD OVA (ppm)	FIDLER Scan
1		5/5			7.9	5095
2					3.8	5323
3					3.6	5478
4					4.4	5466
5					5.8	5640
6		5/5			16.1	5350
7					6.6	5426
8			7.8		13.8	5693
9					11.7	5575
10					15.9	5459

0-1 Asphalt + Subbase
1-3.25 Orange Brown M-C sand w/ some silt. loose, non-cohesive, moist
3.25-4 Light Gray/Black V. F-sand + silt. tight, non-cohesive
4-5 Light Gray + Light Brown mottled m-sand w/ trace silt. Tight, non-cohesive wet @ 5.5 ft (may be from Road)
5-5.5 Black peat
5.5-8 Light Gray + Light Brown mottled M-sand + silt. Tight, semi-cohesive.
8-9 Brown M-sand w/ some silt. loose, non-cohesive
9-9.5 Light Gray w/ small amt. Red Brown mottled M-sand w/ some silt. Extremely tight non-cohesive
9.5-10 Brown C-M sand w/ some silt. loose wet @ 9.5-ft

FIDLER Background = 5042

Soil Boring Log

Boring No:

6 MW03

Boring Location info:

Project:

003 Phase 2

Proj. No.

date: 11/30/05

page: 2

time:

of: 2

by: JOE Van Udenitz

water depth / time:

9.5 ft

water depth / time:

drilling method:

Rotary

diam: 4" / 12"

start/finish:

surface conditions:

old Asphalt

elevation:

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

depth (show units)	soil texture	Recess well construction	sample depth	sample. no.	OVA (ppm)	FIDLER Scan
11	Coarse light brown sand + pea gravel	5/5			11.6	5221 / 5260
12	Coarse light gray M-sand w/ trace silt				21.1	5179 / 5113
13	Coarse light gray M-sand w/ trace silt				32.8	5008 / 5198
14	Coarse light gray M-sand w/ trace silt				8.2	5093 / 5301
15	Coarse light gray M-sand w/ trace silt				16.5	5102 / 5414
16	Coarse light gray M-sand w/ trace silt	5/5			9.4	5104 / 5252
17	Coarse light gray M-sand w/ trace silt		17		20.9	5210 / 5260
18	Coarse light gray M-sand w/ trace silt		18		22.5	5518 / 5260
19	Coarse light gray M-sand w/ trace silt				38.4	5621 / 5471
20	Coarse light gray M-sand w/ trace silt				10.2	5224 / 5216

10-12.75
Coarse light brown sand + pea gravel
loose, non-cohesive some larger rounded cobbles

12.75-20
Light gray M-sand w/ trace silt
loose, non-cohesive.

* More silt (same) 16-18 ft

Drilled out Borehole to 12 inches

Riser 0-8
0.0" Screen 8-18
0 Sand 6-23
Bentonite/Grout 2-6





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Soil Boring Log

Boring No:

6-MW-04

ring Location info:

Project:

FUGRAP D. PONT GW SI

Proj. No:

04-3406.00

date: 5-10-06

page: 1

time:

of: 2

by: CMY

water depth / time:

water depth / time:

drilling method: ROTASONIC

surface conditions:

diam: 10-IN BORE
4-IN WARES

start/finish: 1130 / 1200

elevation:

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

depth (show units)	soil texture	well construction	sample depth	sample no.	OVA (ppm)	FIDLER Scan
0						X
1					1	5099
						5544
2					2	5337
					1	5664
						5790
3						5845
						5662
4						X
5	///					5448
	///				1	5645
6	///					5817
	///				0	5705
7	///					5849
	///				0	5711
8	///				2	5713
	///					5652
9	///					5410
	///					5384
10	///					

COARSE SAND / GRAVEL / WOOD - FILL

CLAY - SANDY, WASHED SAND, MOTTLED
GRAY & BLACK

CLAY - SILTY GRAY

CLAY - SANDY, LIGHT
GRAY

CLAY - SILTY, LIGHT
MODERATELY FIRM GRAY

(SAMPLE)

SAND, CLAYEY, LIGHT GRAY, YELLOW MOTTLED
SILT

BACKGROUND
(ccpm)

5566
5474

5235
5361



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Soil Boring Log

Boring No:
6-MW-04

Boring Location info:

Project:

Proj. No.

date: 5-10-06

page: 2

time:

of: 2

by:

water depth / time:

water depth / time:

drilling method: ROTASonic

1.5-IN BORE

diam: 4-IN GWT

surface conditions:

GRAVEL

start/finish:

1130 / 1200

elevation:

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

depth (show units)	soil texture	well construction	sample depth	sample no.	OVA (ppm)	FIDLER Scan	
10					2	5281	SAND, MED GRAINED POORLY-SORTED
11					1	5308	
12					3	5271/5178	SAND, MED GRAINED w/ GRAVEL WELL-SORTED
13					1	5087	LIGHT GRAY
14					3	5442	-----
15					1	5729	(SAMPLE)
16					2	5698	
17					2	5586	
18					2	5659	
19					1	5444	
20					2	5585	Dk brown to black sandy silt w/ mottles
21					4	5481	
22					0	5354/5487	
23					3	5178	Reddish brown fine to medium SAND
24					2	5034	
25					2	5178	
26							
27							
28							
29							
30							

No recovery

Soil Boring Log

Boring No:

C-MW-05

ring Location info:

NW POSITION REL TO
EAST ROAD DITCH

Project:

FUSRAP DuPont GW SI

Proj. No:

04-3406-00

date: 5-10-06

page: 1

time:

of: 2

by: CMY / RALLEN

water depth / time:

water depth / time:

drilling method: ROTASONIC

surface conditions:

diam: 10-IN BORE

GRAVEL LOT

start/finish: 4-IN CORE

elevation:

09240

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

4-IN

depth (show units)	soil texture	well construction	sample depth	sample no.	OVA (ppm)	FIDLER Scan	
0					0.5	4914	GRAVEL, SANDY, LIGHT BROWN
					0.3	5033	
1					4.1	4813	CLAY, SILTY, GRAVELLY, ORGANIC, BLACK
					5.6	4635 4741	FILL
2					14/20	5067	
3						X	
4	X					X	No recovery
5	X					X	
6					17	5033	CLAY AND RUBBLE, INCLUDING WOOD
					60	4830/ 4906	
7					105	4514	CLAY, SILTY, BLACK, ORGANIC
					9	4458	
8					11	4585	PEAT, BLACK
						5066	
9					7	5317	CLAY, SANDY, BLACK
						5249	
10					2	5316	SAND, SILTY, FINE GRAINED
						5262	POORLY SORTED, MOTTLED, GRAY

8 BACK: 5186 / 5376

Soil Boring Log

Boring No:

6-MW-05

ring Location info:

Project:

FUSRAP DuPont BW SI

Proj. No:

04-3406-00

date: 5-10-06

page: 2

time:

of: 2

by: CMY

water depth / time:

water depth / time:

drilling method: ROTASONIC

10-IN BORING

diam: 4-IN CORE

surface conditions:

start/finish:

elevation:

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

depth (show units)	soil texture	well construction	sample depth	sample. no.	OVA (ppm)	FIDLER Scan
10						5270
11					232	5134
				3		5200
12				12	2	5027
				5		5213/5130
13					7	5189
14	X					X
15	X					X
16					0	5077
					1	4922/5008
17					1	5100
						5197
18						5160
					1	5105
19					3	5308
						5237
						5392
20					2	5074

SAND, MED GRAINED, POORLY SORTED,
 LIGHT GRAY



SAND, MED GRAINED, W/ GRAVEL
 WELL SORTED, YELLOWISH-ORANGE

SAND, MED. GRAINED, POORLY SORTED
 LIGHT GRAY



GRADES TO DARK GRAY

SAND, FINE, POORLY SORTED, GREENISH GRAY

Soil Boring Log

Boring No:

6-MW-06

ring Location info:

EAST ROAD

Box 6

Project: DuPont
Supplemental GW Investigation

Proj. No:
04-3406.00

date: 5/10/2006

page: 1
of: 2

time: 0745

by: CMY / RALLEN

water depth / time:

water depth / time:

drilling method: ROTASONIC

surface conditions:

diam: 10IN BORING

GRAVEL LOT

start/finish: 0800 - 0900

elevation:

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

depth (show units)	soil texture	well construction	sample depth	sample no.	OVA (ppm)	FIDLER Scan
1					0.1	X
2						X
3						X
4						X
5						X
6						X
7						X
8						X
9						X
10						X

GROUND SURFACE - GRAVEL LOT

NO RECOVERY

5027 SAND, GRAVELLY, ORGANIC, BLACK

5089

CLAY, SANDY, STIFF, BLACK

5674

SILT, CLAYEY, LIGHT BROWN

5785

5536/5703

5215

5191

SAND, SILTY, ~~FIN~~ LIGHT BROWN

5130/5332 = BG FIDLER



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Soil Boring Log

Boring No:

G-MW-06

Boring Location info:

Project:

DUPONT FUSRAP GW ST

Proj. No:

04-3406-00

date: 5-10-06

page: 2

time: 0805

of: 2

by: CM7 / RAUEN

water depth / time:

water depth / time:

drilling method: ROTASONIC

surface conditions:

diam: 10"

GRAVEL LOT

start/finish:

elevation:

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

depth (show units)	soil texture	well construction	sample depth	sample no.	OVA (ppm)	FIDLER Scan	
10					0.1	5231	SAND, COARSE, GRAVELLY
						5071	SAND MED GRAINED POORLY SORTED
11						5021 5090	↓ GRADES TO LIGHT GRAY
						5242	
12					0.1	5230	
						5123	
13					0.0	5017	SAND, MED GRAINED, CLAYEY, LIGHT BROWN
14						5249	
						X	NO RECOVERY
15					0.1	5014	SAND, MED GRAINED, POORLY SORTED
						4915	
16					0.4	5024	SAND, CLAYEY MED GRAINED
						5339	
17					0.4	5679/5743	SILT, LIGHT BROWN SAMPLE 17-5-18
18				19	0	5867	SILT, CLAYEY, LIGHT BROWN, SOFT
						5721	↓
19				19	0.6	5612	
					4.8	5320	SAMPLE 19-195 DUP
						5639	



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RADIOLOGICAL - ENVIRONMENTAL - REMEDIATION
WWW.CABRERASERVICES.COM

Soil Boring Log

Boring No:

6 MW-07

Boring Location info:

NORTH SIDE OF EAST RD
@ B ST.

AOC 6

Project: DUPONT
SUPPLEMENTAL
INVESTIGATION

Proj. No.

01-3406.00

date: 5/9/06

page:

time: 1000

1 of 5

C. YOUNG

By: D. KATELEY

water depth / time:

water depth / time:

drilling method: ROTOSonic

surface conditions:

diam: 4 IN CORE

GRAVEL LOT

start/finish: 5 FT LONG

elevation:

1030 /

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

FT. depth (show units)	Soil Texture	Well Construction	sample depth	sample no.	% recovery	P.O. SHA (ppm)	FIDLER Scan	
1					70	7.9 513	5039	GRAVEL w/ SOME SAND, FILL (GW) LIGHT BROWN TO BLACK
2						0.1 5443	5356	CLAYEY SAND. (CL) MOIST, TAN
3						0.2 5314	525	CLAY, TAN TO GRAY (CL)(ML)
4						0.4 535	535	CLAYEY SILT. MOIST
5						1.0 5315		
6								NO RECOVERY
7								
8								
9								
10								

BACKGROUND = 5247 CPM
5087 CPM



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Soil Boring Log

Boring No:

6MW-07

Boring Location info:

EAST RD.

AOC 6

Project: DuPont
SUPPLEMENTAL
INVESTIGATION

Proj. No.

01-3406.00

date: 5/9/06

page:

time: 1000

2 of 5

By: C. YOUNG
D. KATELEY

M. DRISCOLL

water depth / time:

water depth / time:

drilling method: ROTASONIC

surface conditions:

diam: 4 IN CORE

GRAVEL LOT

start/finish:

elevation:

1030

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

depth (show units)	Soil Texture	Well Construction	sample depth	sample no.	% recovery	R/D DVA (ppm)	FIDLER Scan	
11					100	5.0 5574 1.1 5527 12.2 5061 2.2 5271 3.2 5501 3.2 5364		MED GRAY + TAN MOTTLED, VERY MOIST. GRAVELLY, CLAYEY SAND. (SC) SOME GRAVEL.
12						3.4 5564		DARK GRAY CLAYEY SILT, ORGANIC (CH)
13						0.7 5835 0.7 5939 16.5 5921 12.1 4983		MATTER, LOW MOISTURE CLAYEY SAND, TAN, MOIST. (SC) SOME PLASTICITY SAND, TAN, MOIST (SW)
14					90	58.3 5165 92.0 5148 30.2 5127		MEDIUM GRAIN SAND, VERY MOIST, TAN COLOR, ODOR (SW)
15						2.5 5425 2.5 5278 2.5 5171 2.5 5591 2.5 5505 2.5 5434 2.5 5313		SAME AS ABOVE BUT SLIGHTLY LESS MOIST. (SW)
16								
17								
18								
19								
20								NO RECOVERY

Soil Boring Log

Boring No:

6 MW-07

Boring Location info:

EAST RD.

AOC-6

Project: DUPONT

Proj. No.

04-3406.00

date: 5/9/06

page: 3

time: 1000

of: 5

C. YOUNG

by: D. KATELEY

M. DRISCOLL

water depth / time:

water depth / time:

drilling method: ROTASONIC

surface conditions:

diam: 4 IN. CORE

GRAVEL LOT

start/finish:

elevation:

1030

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

FT. depth (show units)	soil texture	well construction	sample depth	sample no.	RD GVA (ppm)	FIDLER Scan	
21					10	5220 5039 4895	SAND, WELL SORTED, TAN, MEDIUM- GRAINED (SW)
22					6	5098 5319	
23	X						NO RECOVERY
24	X						
25	X						
26		X			1.7	5238 5099	SAND, GRAVELLY, WELL-SORTED, TAN (SW) ORANGE COLOR LAST 1 FT.
27					6.2	5171 4857	
28					0.2	4838 4834 4836	
29	X				X	X	NO RECOVERY
30	X				X	X	



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Soil Boring Log

Boring No:

6-MW-07

Boring Location info:

EAST ROAD
AOC-6

Project: DUPONT

Proj. No.

04-3406-00

date: 5/9/06

page: 4

time: 1000

of: 5

By:

water depth / time:

water depth / time:

drilling method: ROTOSONIC

surface conditions:

diam: 4" CORE

GRAVEL LOT


start/finish:

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	RIP OVA (ppm)	GM Scan	
31					70	0.1	4824 4596	SAND, GRAVELLY, WELL SORTED. TAN, MOIST (SW)
32						0.1	4951 4792	
33						1.1	4949 4789 5017	SAND GRAVELLY WELL SORTED LIGHT GRAY, (SW)
34						1.1	4914 5005	
35								NO RECOVERY
36					55	0.0	5235 5276 5738 5859	SAND, GRAVELLY, WELL SORTED. LIGHT TO DARK GRAY. MOIST COURSE SAND LAST 1.5 FT. (SW)
37						0.0	5827	
38						2.1	5674	
39								NO RECOVERY
40								



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Soil Boring Log

Boring No: **6 MW-07**

Boring Location info:

EAST RD.

AOC-6

Project: **DUPONT**

Proj. No. **04-3906-00**

date: **5/9/06**

page: **5**

time: **1000**

of: **5**

C. YOUNG

by: **D. KATZEY** **M. DRISCOLL**

water depth / time:

water depth / time:

drilling method: **ROTOSOLIC**

surface conditions:

diam: **4 in CORE**

GRAVEL LOT

start/finish: **1030/**

elevation:

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

depth (show units)	soil texture	well construction	sample depth	sample no.	PID OVA (ppm)	FIDLER Scan	
41					1.3	5283	DARK GRAY. SAND, GRAVELLY, WELL SORTED. MOIST. (SW) SLIGHT ODOR
						5393	
						5393	
						5322	
42					0.5	5254	
43					1.8	5198	NO RECOVERY
44						/	NO RECOVERY
45						/	DARK GRAY SAND, (SW), GRAVELLY WELL SORTED, MOIST. ODOR.
46					1.2	5221	
						5168	
47					2.3	5142	
						5107	
48					5.0	5297	
						5097	
49							NO RECOVERY
50							

← 20% RECOVERY

← 60% RECOVERY



SHEET: 1

Well No.: MW 20 A OF: 1

Date: 7/18/05

Include a monitoring well construction diagram with this form

[illegible]

Wm. D. D. D.



CABRERA SERVICES
ANALYSIS • DESIGN • CONSTRUCTION

MONITORING WELL CONSTRUCTION DIAGRAM

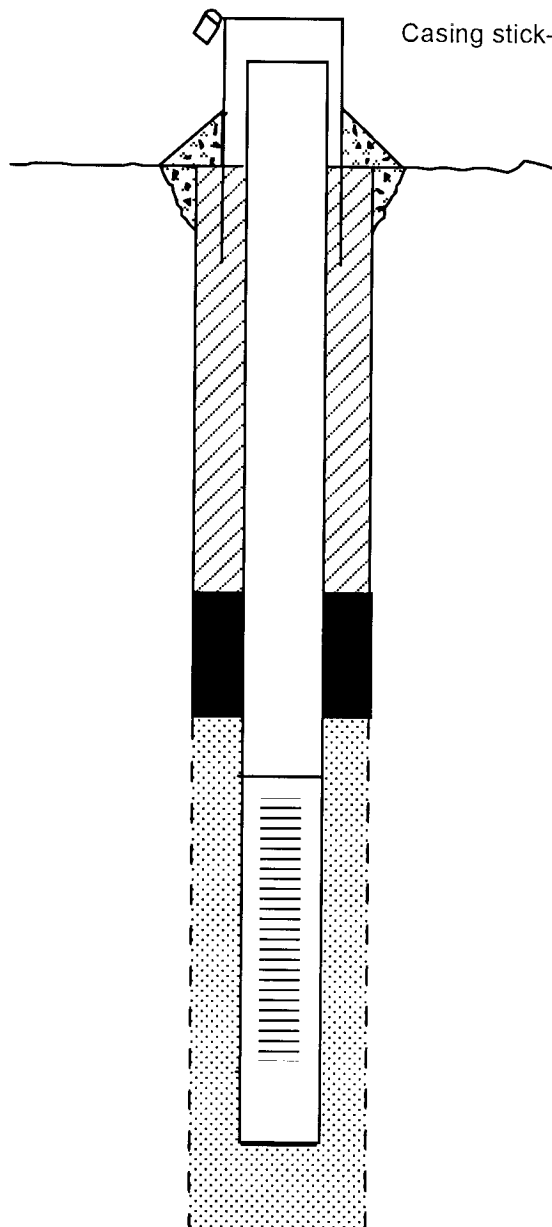
Project: DuPont
Project No.: _____
No.: _____

Boring No.: MW-70
Date: 7/18/05
Installed: _____

Drilling Company: Burser-Morner
Driller: Bruce Kirkpatrick

Geologist: MA Phillips

Development Method: pump/surge



Casing stick-up relative to ground surface: 3 ft

Type of surface seal: concrete

Type of surface casing: square steel

ID of surface casing: 6"

Diameter of borehole: 8"

Riser pipe ID: 4"

Type of riser pipe: Sch 40 PVC

Type of backfill: sand

Depth to top of seal: 3.5' bgs

Type of seal: bentonite chip

Depth to top of sand: 4.5' bgs

Depth to top of screen: 5.0' bgs

Type of screen: Sch 40 PVC

Slot size & length: 10-slot, 2.5'

ID of screen: 4"

Type of sandpack: 00 quartz sand

Depth of bottom of screen: 7.3' bgs

Depth to bottom of sump: 7.5' bgs

Depth of bottom of borehole: 9.0' bgs

Notes:

GAMMA LOGGING DATA FORM

SHEET: 1

Project: Dupont

Well No.: MW-21 (A)

OF: 1

Project No.: _____

By: J-KAPP

Date: 7/14

0-0.5' reading @ background

Include a monitoring well construction diagram with this form

Depth [ft]	reading [cpm]
0.5	—
1	5155
1.5	5155
2	
2.5	
3	
3.5	
4	5653
4.5	5833
5	5852

Depth [ft]	reading [cpm]
5.5	5810
6	5346
6.5	5084
7	5178
7.5	5654
8	5336
8.5	5247
9	5278
9.5	5113
10	5330

Depth [ft]	reading [cpm]
10.5	4775
11	4985
11.5	5016
12	5010
12.5	5140
13	5200
13.5	5412
14	5341
14.5	
15	



MONITORING WELL CONSTRUCTION DIAGRAM

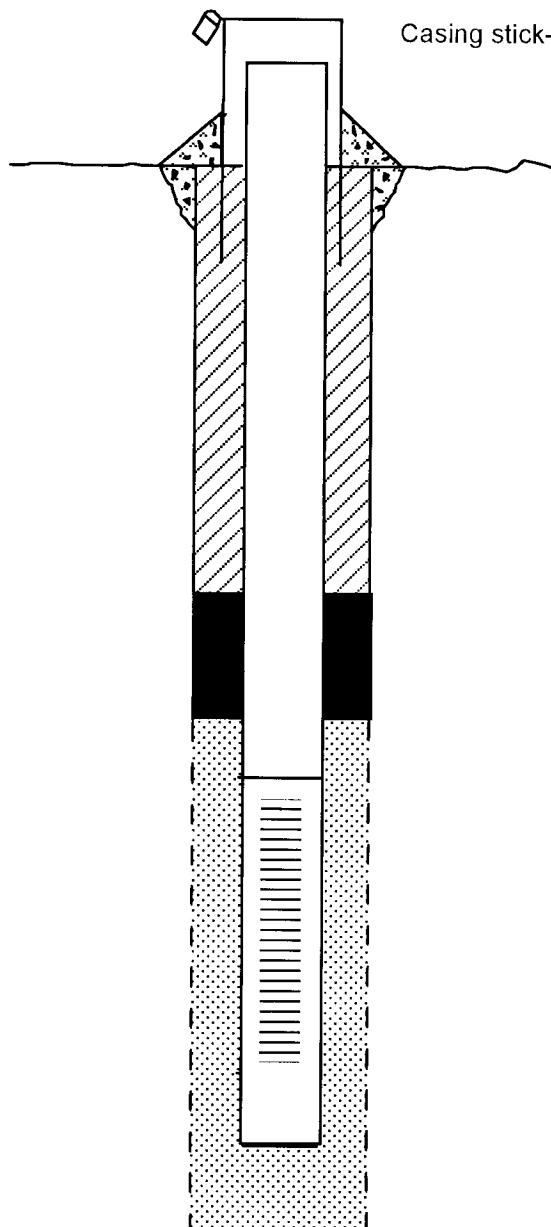
Project: DuPont
Project No.: _____

Boring No.: MW-21
Date: 7/14/05
Installed: 7/14/05

Drilling Company: Bowser-Morner
Driller: Bruce Kirkpatrick

Geologist: M. Phillips

Development Method: pump/surge



Casing stick-up relative to ground surface: 3 ft

Type of surface seal: concrete

Type of surface casing: square steel

ID of surface casing: 6"

Diameter of borehole: 8"

Riser pipe ID: 4"

Type of riser pipe: Sch 40 PVC

Type of backfill: sand

Depth to top of seal: 5.0' bgs

Type of seal: bentonite chip

Depth to top of sand: 6.0' bgs

Depth to top of screen: 6.5' bgs

Type of screen: Sch 40 PVC

Slot size & length: 10-slot, 2.5'

ID of screen: 4"

Type of sandpack: 00 quartz sand

Depth of bottom of screen: 8.8' bgs

Depth to bottom of sump: 9.0' bgs

Depth of bottom of borehole: 14.0' bgs

Notes:



SHEET: 1

Well No.: 9W-22 OF: 1

Date: 7/5/05

0-1.0' not above background

* CONTACT ON SAMPLE

[illegible]



CABRERA SERVICES
ANALYTICAL & ENVIRONMENTAL

MONITORING WELL CONSTRUCTION DIAGRAM

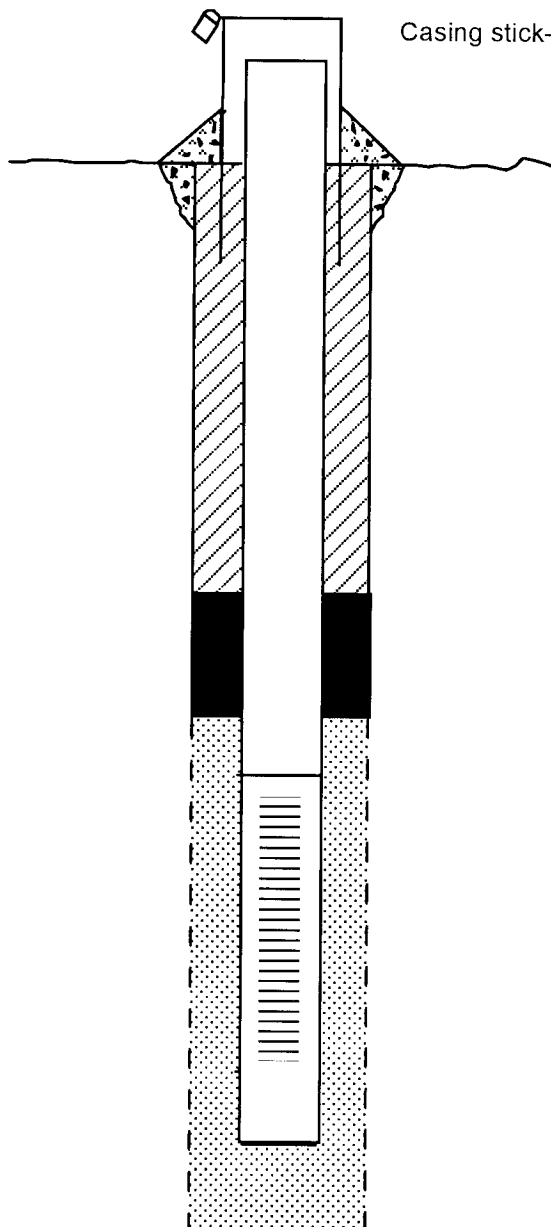
Project: DuPont
Project No.: _____

Boring No.: MW-22
Date: _____
Installed: 7/16/05

Drilling Company: Bowser-Morner
Driller: Bruce Kirkpatrick

Geologist: M Phillips

Development Method: pump/surge



Casing stick-up relative to ground surface: 3 ft

Type of surface seal: concrete

Type of surface casing: square steel

ID of surface casing: 6"

Diameter of borehole: 8"

Riser pipe ID: 4"

Type of riser pipe: Sch 40 PVC

Type of backfill: sand

Depth to top of seal: 3.0' bgs

Type of seal: bentonite chips

Depth to top of sand: 4.0' bgs

Depth to top of screen: 4.5' bgs

Type of screen: Sch 40 PVC

Slot size & length: 10-slot, 2.5'

ID of screen: 4"

Type of sandpack: quartz sand

Depth to bottom of screen: 6.8' bgs

Depth to bottom of sump: 7.0' bgs

Depth to bottom of borehole: 9.0' bgs

Notes:



SHEET: 1

DeFest

MCW-23

OF:

Ned Morgan

Date: 7/18/05

0.2.0' not above background

Include a monitoring well construction diagram with this form

[illegible]



CABRERA SERVICES

MONITORING WELL CONSTRUCTION DIAGRAM

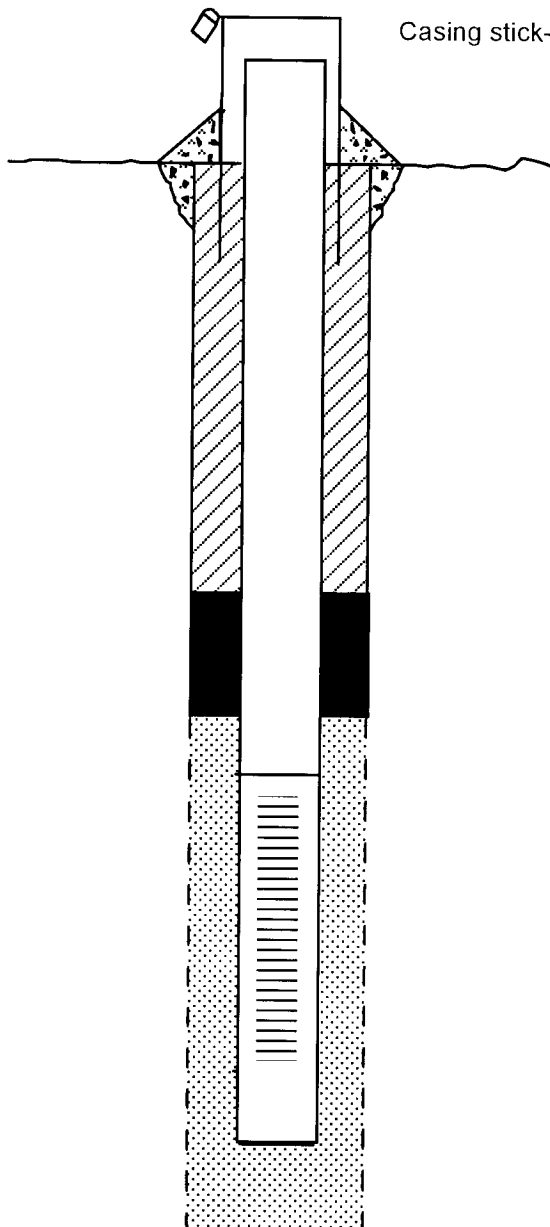
Project: DuPont
Project No.: _____

Boring No.: MW-23
Date Installed: 7/18/05

Drilling Company: Burser-Morner
Driller: Bruce Kirkpatrick

Geologist: M. Phillips

Development Method: pump/surge



Casing stick-up relative to ground surface: 3 ft

Type of surface seal: concrete

Type of surface casing: square steel

ID of surface casing: 6"

Diameter of borehole: 8"

Riser pipe ID: 4"

Type of riser pipe: Sch 40 PVC

Type of backfill: N/A

Depth to top of seal: 6.5' bgs

Type of seal: heatwite chip

Depth to top of sand: 7.5' bgs

Depth to top of screen: 8.0' bgs

Type of screen: Sch 40 PVC

Slot size & length: 10-slot, 10.0'

ID of screen: 4"

Type of sandpack: 00 quartz sand

Depth of bottom of screen: 17.7' bgs

Depth to bottom of sump: 18.0' bgs

Depth of bottom of borehole: 18.0' bgs

Notes:



SHEET: 1

DeFont

MW-24

OF

Table 1

Ned Morgan

Date:

7/17/05

0-1.5' readings at background

Include a monitoring well construction diagram with this form

[illegible][illegible][illegible]



CABRERA SERVICES
ANALYTICAL & CONSULTING

MONITORING WELL CONSTRUCTION DIAGRAM

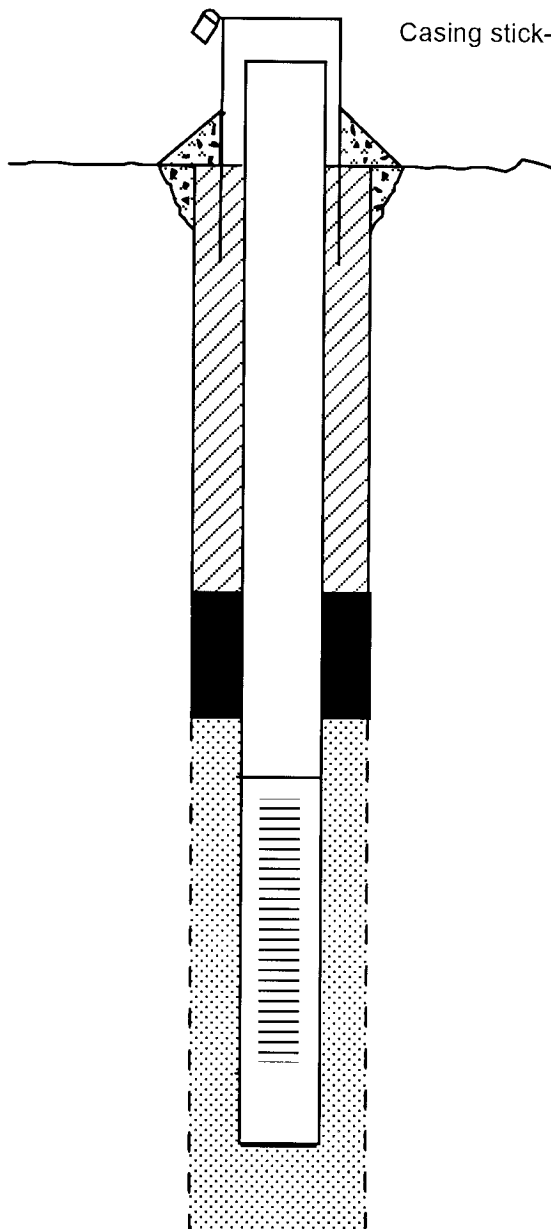
Project: DuPont
Project No.: _____

Boring No.: MW-24
Date Installed: 7/17/05

Drilling Company: Bowser-Morner
Driller: Bruce Kirkpatrick

Geologist: M. Phillips

Development Method: pump/surge



Casing stick-up relative to ground surface: 3 ft

Type of surface seal: concrete

Type of surface casing: square steel

ID of surface casing: 6"

Diameter of borehole: 8"

Riser pipe ID: 4"

Type of riser pipe: Sch 40 PVC

Type of backfill: sand

Depth to top of seal: 4.0' bgs

Type of seal: bentonite chip

Depth to top of sand: 5.0' bgs

Depth to top of screen: 5.5' bgs

Type of screen: Sch 40 PVC

Slot size & length: 10-slot, 2.5'

ID of screen: 4"

Type of sandpack: 00 quartz sand

Depth of bottom of screen: 7.8' bgs

Depth to bottom of sump: 8.0' bgs

Depth of bottom of borehole: 9.0' bgs

Notes:

MONITORING WELL CONSTRUCTION DIAGRAM

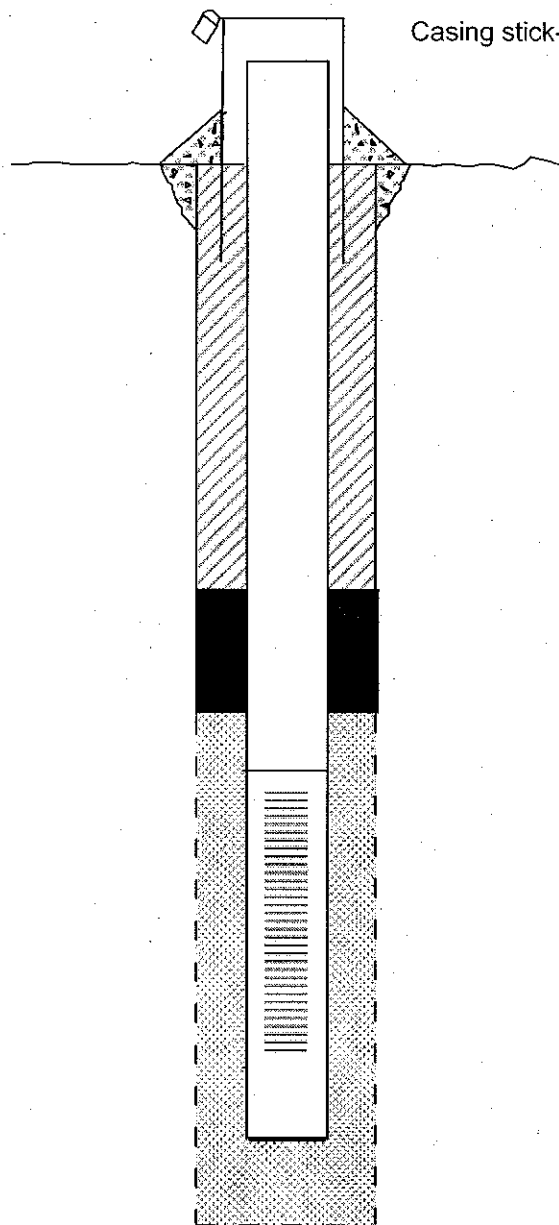
Project: DuPont
Project No.: _____
No.: _____

Boring No.: MW-25
Date: _____
Installed: 11-14-05

Drilling Company: Boart Longyear
Driller: Jon Weeks

Geologist: J. Von Uderitz

Development Method: Pump/Surge



Casing stick-up relative to ground surface: 3 ft.

Type of surface seal: Concrete

Type of surface casing: Steel

ID of surface casing: 6"

Diameter of borehole: 8"

Riser pipe ID: 4"

Type of riser pipe: 5ch 40 PVC

Type of backfill: Grout

Depth to top of seal: 28

Type of seal: bentonite chip

Depth to top of sand: 29.5

Depth to top of screen: 30

Type of screen: 5ch 40 PVC

Slot size & length: 10-slot, 5ft

ID of screen: 4"

Type of sandpack: 00 Quartz sand

Depth to bottom of screen: 34.5

Depth to bottom of sump: 35

Depth to bottom of borehole: 35

Notes:



SHEET: 1

Well No.: MW-26 OF: 1

Date: 7/17/05

0-1.5' readings at background

Include a monitoring well construction diagram with this form

4164



CABRERA SERVICES
WATER RESOURCES • GROUNDWATER • SURFACE WATER

MONITORING WELL CONSTRUCTION DIAGRAM

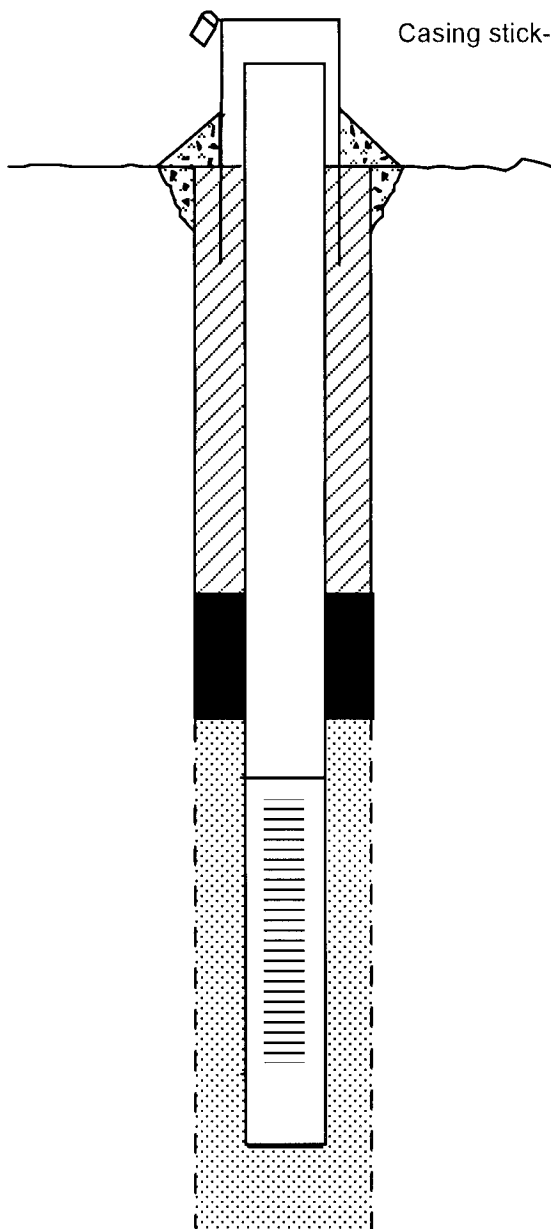
Project: DuPont
Project No.: _____
No.: _____

Boring No.: MW-26
Date Installed: 7/17/05

Drilling Company: Burser-Manner
Driller: Bruce Kirkpatrick

Geologist: M. Phillips

Development Method: pump/large



Casing stick-up relative to ground surface: 3 ft

Type of surface seal: concrete

Type of surface casing: square steel

ID of surface casing: 6"

Diameter of borehole: 8"

Riser pipe ID: 4"

Type of riser pipe: Sch 40 PVC

Type of backfill: sand

Depth to top of seal: 4.5' bgs

Type of seal: bentonite chips

Depth to top of sand: 5.5' bgs

Depth to top of screen: 6.5' bgs

Type of screen: Sch 40 PVC

Slot size & length: 10-slot, 2.5'

ID of screen: 4"

Type of sandpack: CO quartz sand

Depth of bottom of screen: 7.8' bgs

Depth to bottom of sump: 8.0' bgs

Depth of bottom of borehole: 12.0' bgs

Notes:



CABRERA SERVICES
ANALYSIS - DESIGN - CONSTRUCTION - MAINTENANCE

MONITORING WELL CONSTRUCTION DIAGRAM

DuPont

Project: Supplemental Investigation

Boring

No.: 4-MW-01

Drilling

Company: Boart Longyear

Project

Date

No.: 04-3406.00

Installed: 5-8-06

Driller:

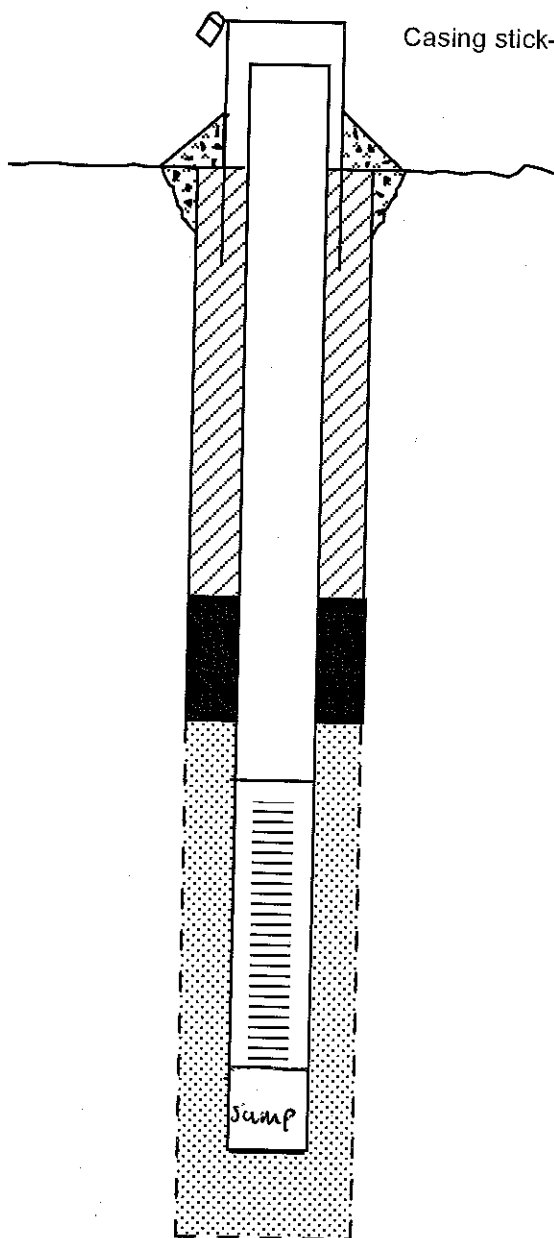
John Weeks

Geologist:

Ken Marion

Development

Method: Surge block



Casing stick-up relative to ground surface: ~3'

Type of surface seal: Cement

Type of surface casing: Steel

ID of surface casing: 6-inch

Diameter of borehole: 10-inches

Riser pipe ID: 4-inch

Type of riser pipe: Schedule 40 PVC

Type of backfill: Cement grout mix

Depth to top of seal: 5.6

Type of seal: Bentonite chips

Depth to top of sand: 7.6

Depth to top of screen: 9.6

Type of screen: Schedule 40 PVC

Slot size & length: 10, 10 ft

ID of screen: 4-inch

Type of sandpack: 00 Sand

Depth of bottom of screen: 19.6

Depth to bottom of sump: 20

Depth of bottom of borehole: 20

Notes: 4-inch sump

13 bags of sand

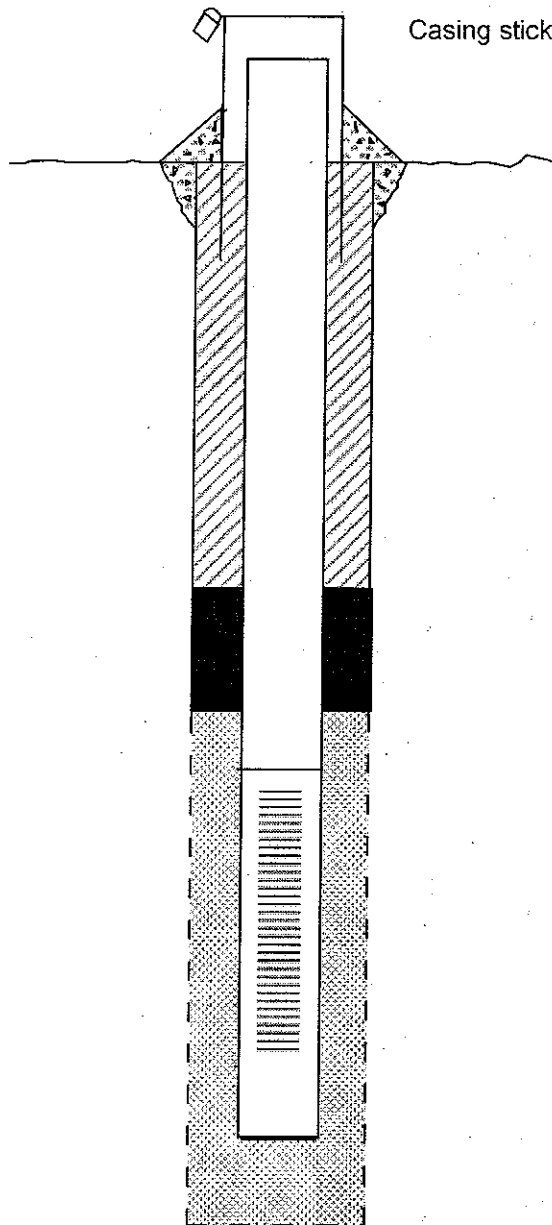
2 bags bentonite chips (hole plug)



CABRERA SERVICES

MONITORING WELL CONSTRUCTION DIAGRAM

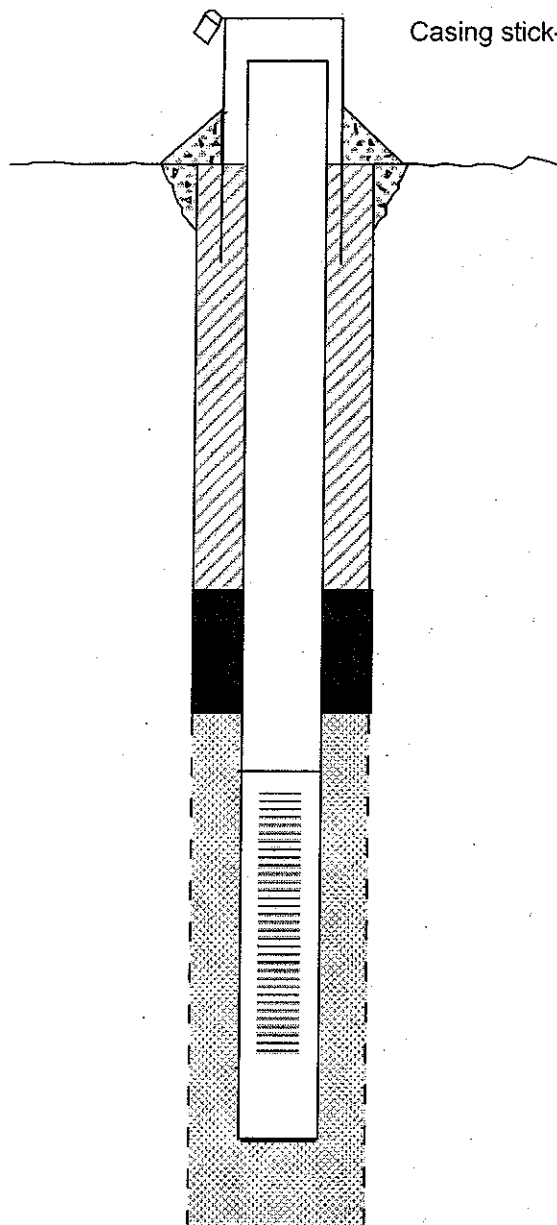
Project: DuPont
 Project: Supplementary Investigation
 No.: 04-3406.00
 Boring No.: 4 MW-02
 Date: 5-8-06
 Installed: 5-8-06
 Drilling Company: Bart Longyear
 Driller: John Weeks
 Development Method: Surge Block
 Geologist: Ken Marston, Dana Kateley

Casing stick-up relative to ground surface: ~3'Type of surface seal: CementType of surface casing: SteelID of surface casing: 6-inchDiameter of borehole: 10-inchRiser pipe ID: 4-inchType of riser pipe: Sch 40 PVCType of backfill: Cement Grout MixDepth to top of seal: 3.1Type of seal: Bentonite chipsDepth to top of sand: 5.1Depth to top of screen: 7.1Type of screen: Sch 40 PVCSlot size & length: 10, 2-5 ftID of screen: 4-inchType of sandpack: 00 SandDepth of bottom of screen: 9.6Depth to bottom of sump: 10Depth of bottom of borehole: 10

Notes: 4-inch sump
4 Bags Sand
3 Bags Hole Plug

MONITORING WELL CONSTRUCTION DIAGRAM

Project: Du Pont
 Project: Supplementary Investigation
 Project No.: 04-3406.00
 Boring No.: 4 MW-05
 Date: 5-8-06
 Installed: 5-8-06
 Drilling Company: Boart Longyear
 Driller: John Weeks
 Development Method: Surge Block
 Geologist: Ken Marion/Dave Keteley



Casing stick-up relative to ground surface: 23'
 Type of surface seal: Cement
 Type of surface casing: Steel
 ID of surface casing: 6-inch
 Diameter of borehole: 10-inch
 Riser pipe ID: 4-inch
 Type of riser pipe: Sch 40 PVC
 Type of backfill: Cement Grout Mix
 Depth to top of seal: 3.1
 Type of seal: Bentonite chips
 Depth to top of sand: 5.1
 Depth to top of screen: 7.1
 Type of screen: Sch 40 PVC
 Slot size & length: 10, 2.5 ft
 ID of screen: 4-inch
 Type of sandpack: 00 Sand
 Depth of bottom of screen: 9.6
 Depth to bottom of sump: 10
 Depth of bottom of borehole: 10

Notes: 4-inch Sump
4 Bags Sand
3 Bags Hole Plug



CABRERA SERVICES

MONITORING WELL CONSTRUCTION DIAGRAM

Project: DUPONT
Project: SUPPLEMENTAL
Project: INVESTIGATION
No.: 04-3406.00

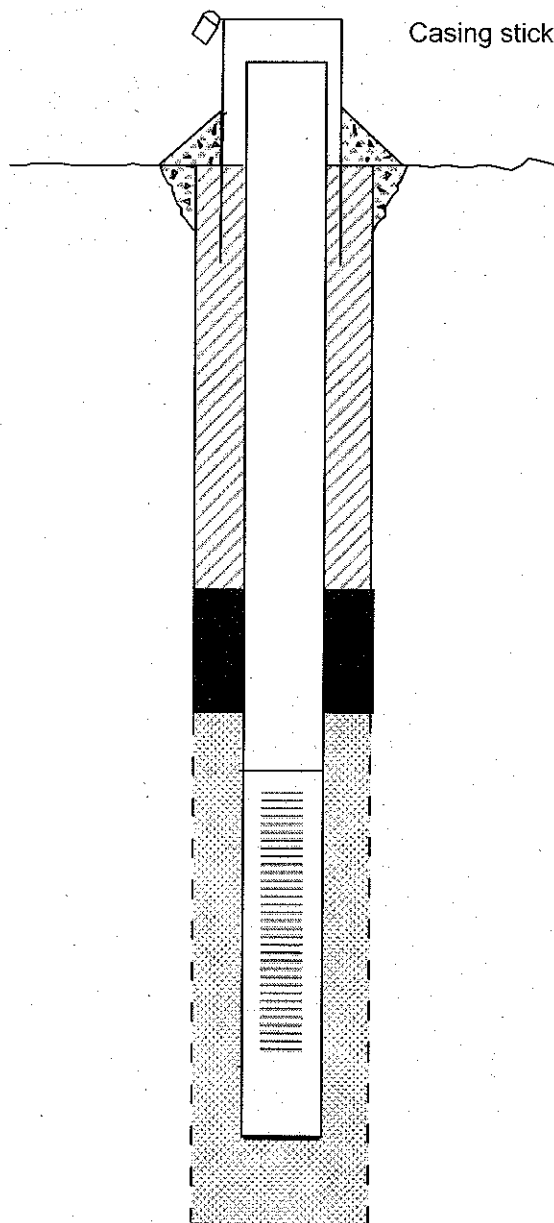
Boring No.: 4 MW-06
Date: 5/9/06
Installed: 5/9/06

Drilling Company: BOAET LONGYEAR

Driller: JOHN WEEKS

Geologist: D. KATELEY

Development Method: SURGE BLOCK



Casing stick-up relative to ground surface: ~ 3 FT

Type of surface seal: CEMENT

Type of surface casing: STEEL

ID of surface casing: 6 IN.

Diameter of borehole: 10 IN.

Riser pipe ID: 4 IN.

Type of riser pipe: SCH. 40 PVC

Type of backfill: CEMENT GROUT MIX

Depth to top of seal: 4 FT

Type of seal: BENTONITE CHIPS

Depth to top of sand: 5 FT.

Depth to top of screen: 5.5 FT

Type of screen: SCH. 40 PVC

Slot size & length: 10, 2.5 FT

ID of screen: 4 IN

Type of sandpack: #00 SAND

Depth of bottom of screen: 8

Depth to bottom of sump: 10

Depth of bottom of borehole: 10

Notes: 4 IN. SUMP

4 BAGS SAND

3 BAGS HOLE PLUG



CABRERA SERVICES

MONITORING WELL CONSTRUCTION DIAGRAM

DuPont

Project:
ProjectNo.: 04-3406.00

Boring

No.: 4 MW-07

Date

Installed: 5-8-06

Drilling

Company: Boart Longyear

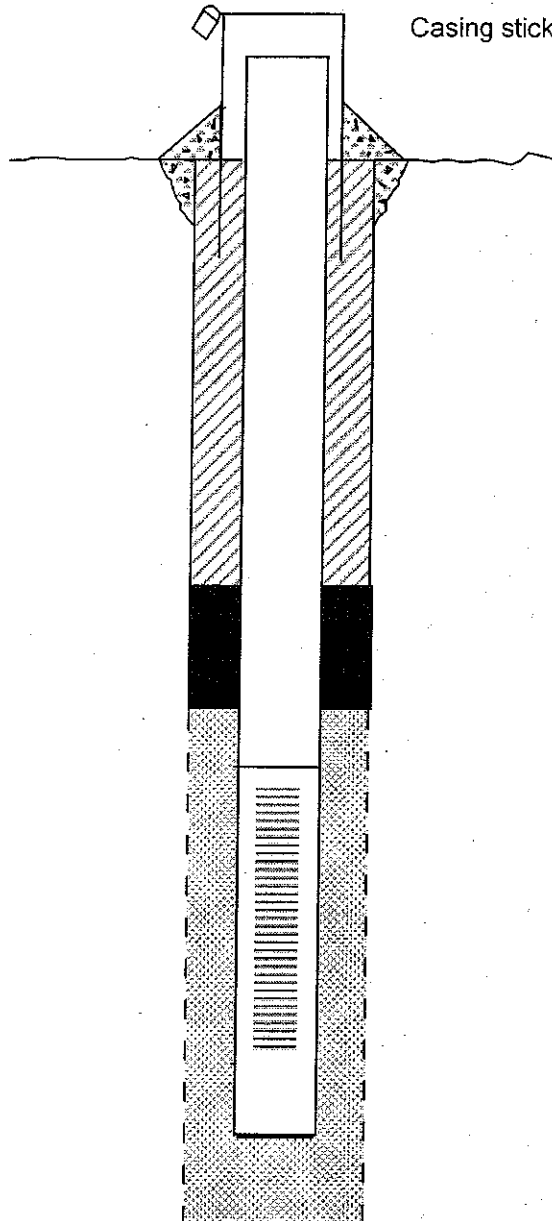
Driller:

John Weeks

Development

Method: Surge Block

Geologist:

Ken Marion/Dave KeteleyCasing stick-up relative to ground surface: ~ 3'Type of surface seal: CementType of surface casing: SteelID of surface casing: 6-inchDiameter of borehole: 10-inchRiser pipe ID: 4-inchType of riser pipe: Sch 40 PVCType of backfill: Cement grout mixDepth to top of seal: 3.1Type of seal: Bentonite chipsDepth to top of sand: 5.1Depth to top of screen: 7.1Type of screen: Sch 40 PVCSlot size & length: 10, 2.5 ftID of screen: 4-inchType of sandpack: 00 SandDepth of bottom of screen: 9.6Depth to bottom of sump: 10Depth of bottom of borehole: 10Notes: 4-inch Sump4 Bags Sand3 Bags Hole Plug



CABRERA SERVICES
NATURAL CYCLICAL • ENVIRONMENTAL • REMEDIATION

MONITORING WELL CONSTRUCTION DIAGRAM

Project: _____
Project No.: _____

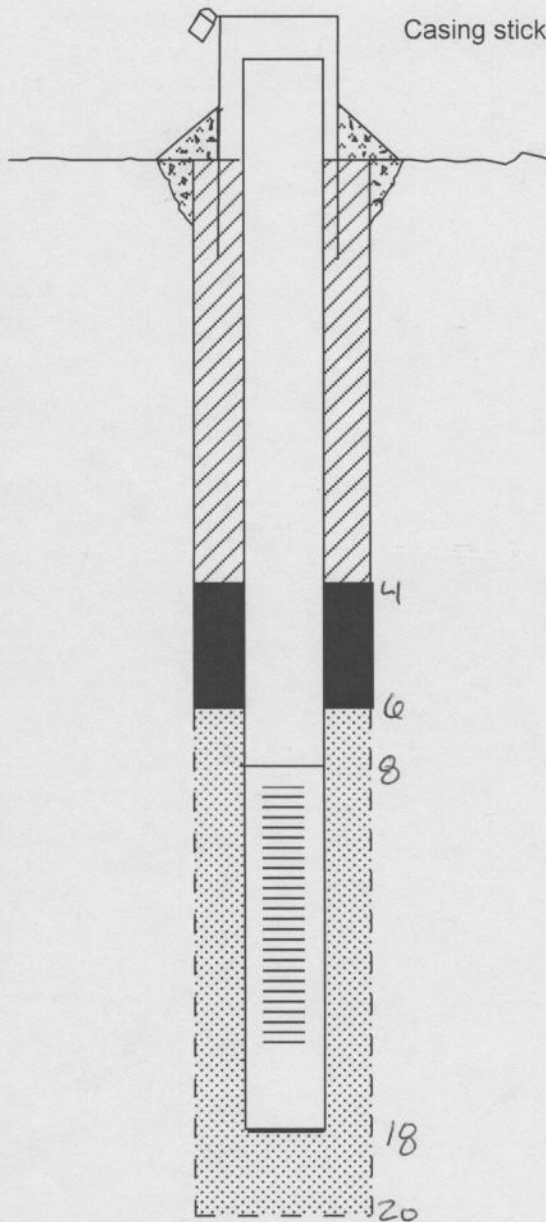
Boring No.: AT 6 MW 01
Date: _____
Installed: 11/29/05

Drilling Company: Boyer Longyear

Driller: Sam Weeks

Geologist: Joe Van Wert

Development Method: Rotasonic



Casing stick-up relative to ground surface: Flush

Type of surface seal: Concrete

Type of surface casing: Steel Flushment

ID of surface casing: 8-inch Flushment

Diameter of borehole: 12-inch

Riser pipe ID: 4-inch

Type of riser pipe: SCH 40 PVC

Type of backfill: #0 Sand

Depth to top of seal: 4-6 + 2-4

Type of seal: Bentonite + Grout

Depth to top of sand: 6-Ft

Depth to top of screen: 8-Ft

Type of screen: SCH 40 0.01" slot

Slot size & length: 0.01" / 10-Ft

ID of screen: 4-inch

Type of sandpack: #0

Depth of bottom of screen: _____

Depth to bottom of sump: _____

Depth of bottom of borehole: 20-Ft

Notes:

MONITORING WELL CONSTRUCTION DIAGRAM

Project: _____
Project No.: _____

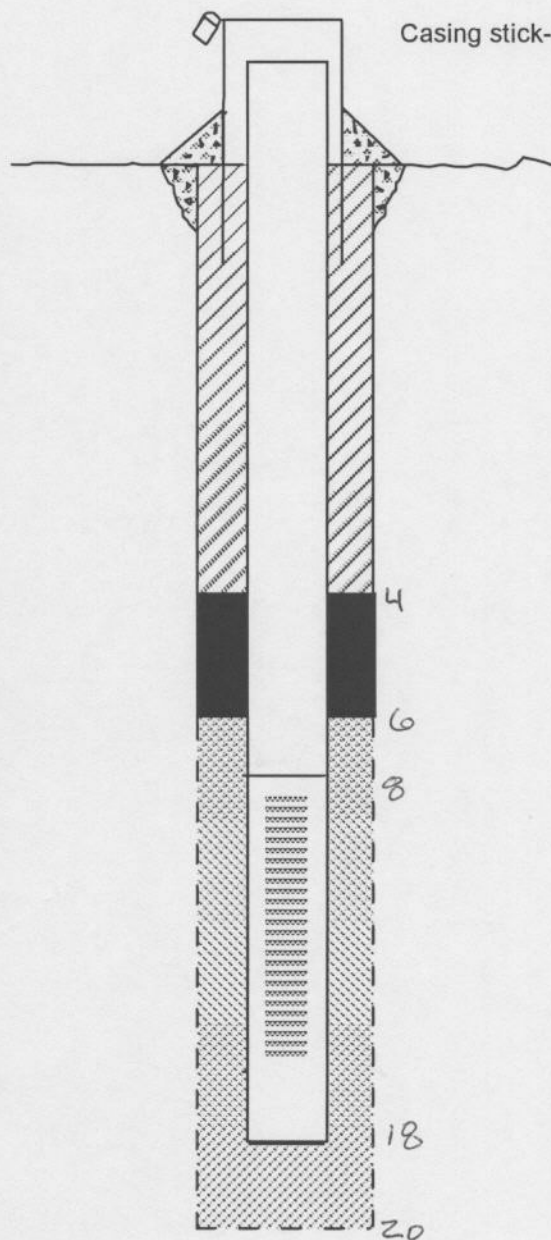
Boring No.: 6Mw02
Date: _____
Installed: 11/29/05

Drilling Company: DuPont Longyear

Driller: Sam Weeks

Geologist: Joe Van Uden

Development Method: Rotasonic



Casing stick-up relative to ground surface: Flush

Type of surface seal: Concrete

Type of surface casing: Steel Flushmount

ID of surface casing: 8-inch Flushmount

Diameter of borehole: 12-inch

Riser pipe ID: 4-inch

Type of riser pipe: Sch 40 PVC

Type of backfill: #0 Sand

Depth to top of seal: 4-6 + 2-4

Type of seal: Bentonite + Grout

Depth to top of sand: 6-Ft

Depth to top of screen: 8-Ft

Type of screen: Sch 40 0.01" slot

Slot size & length: 0.01"/10-Ft

ID of screen: 4-inch

Type of sandpack: #0

Depth to bottom of screen: _____

Depth to bottom of sump: _____

Depth to bottom of borehole: 20-Ft

Notes: _____



CABRERA SERVICES
ANALYTICAL • DESIGN • CONSTRUCTION

MONITORING WELL CONSTRUCTION DIAGRAM

Project: _____
Project No.: _____

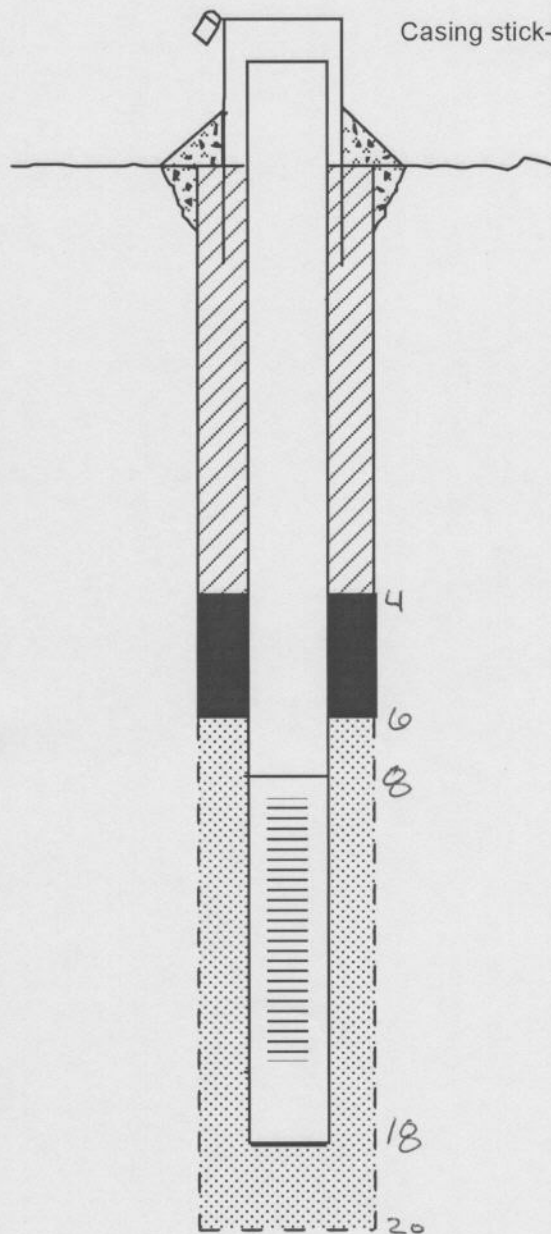
Boring No.: 6MW03
Date Installed: 11/30/05

Drilling Company: Robert Longyear

Driller: Tom Weeks

Geologist: Joe Van Idewitz

Development Method: Rotasonic



Casing stick-up relative to ground surface: Flush

Type of surface seal: Concrete

Type of surface casing: Steel Flushmount

ID of surface casing: 8-inch Flushmount

Diameter of borehole: 12-inch

Riser pipe ID: 4-inch

Type of riser pipe: Sch 40 PVC

Type of backfill: #0 Sand

Depth to top of seal: 4-6 + 2-4

Type of seal: Bentonite + Grout

Depth to top of sand: 6-Ft

Depth to top of screen: 8-Ft

Type of screen: Sch 40 0.01" slot

Slot size & length: 0.01" / 10-Ft

ID of screen: 4-inch

Type of sandpack: #0

Depth of bottom of screen: _____

Depth to bottom of sump: _____

Depth of bottom of borehole: 20-Ft

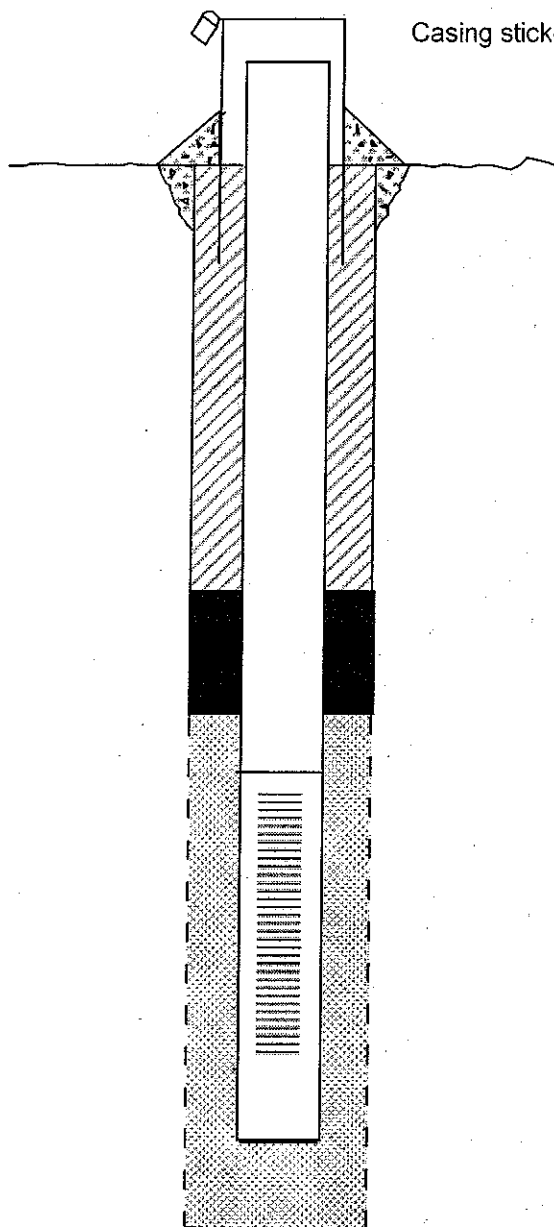
Notes:



CABRERA SERVICES

MONITORING WELL CONSTRUCTION DIAGRAM

Project: Dupont
Project: Supplementary Investigation
Project No.: 04-3406.00
Boring No.: 6-MW-04
Date: 5-10-06
Installed: 5-10-06
Drilling Company: Beart Longyear
Driller: John Weeks
Geologist: Carl Young
Development Method: Surge Block

Casing stick-up relative to ground surface: Flush MountType of surface seal: CementType of surface casing: ManholeID of surface casing: 10-inchDiameter of borehole: 10-inchRiser pipe ID: 4-inchType of riser pipe: Sch 40 PVCType of backfill: Cement grout mixDepth to top of seal: 5.6Type of seal: Bentonite chipsDepth to top of sand: 7.6Depth to top of screen: 9.6Type of screen: Sch 40 PVCSlot size & length: 10, 10 ftID of screen: 4-inchType of sandpack: 00 sandDepth of bottom of screen: 19.6Depth to bottom of sump: 19.6 20Depth of bottom of borehole: 20Notes: 4-inch sump



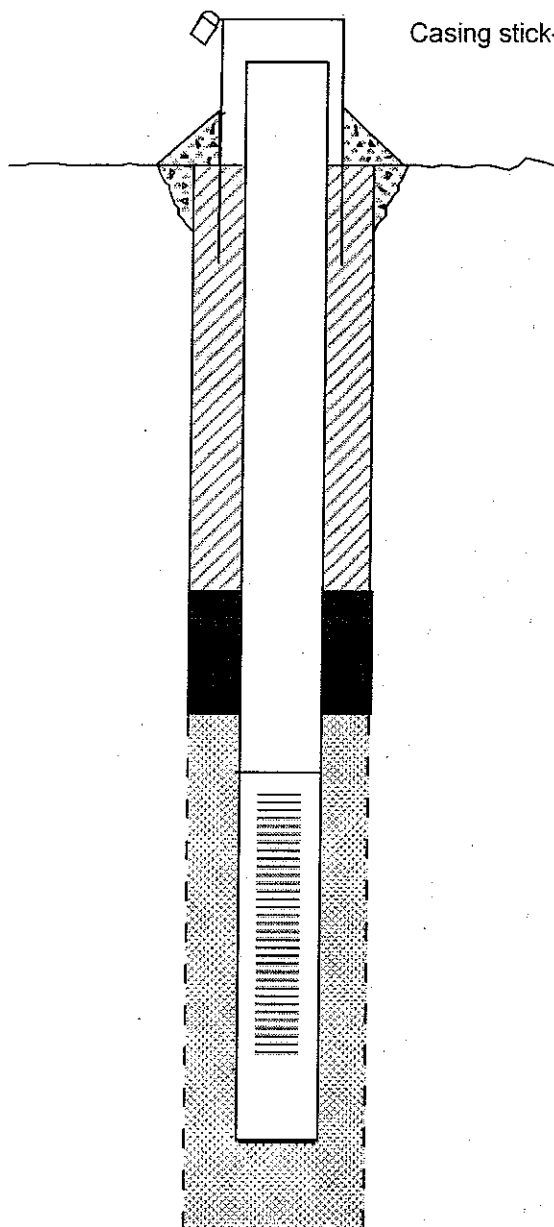
CABRERA SERVICES

MONITORING WELL CONSTRUCTION DIAGRAM

Project: DuPont
Project: Supplementary Investigation
No.: 04-3406.00
Geologist: Carl Young

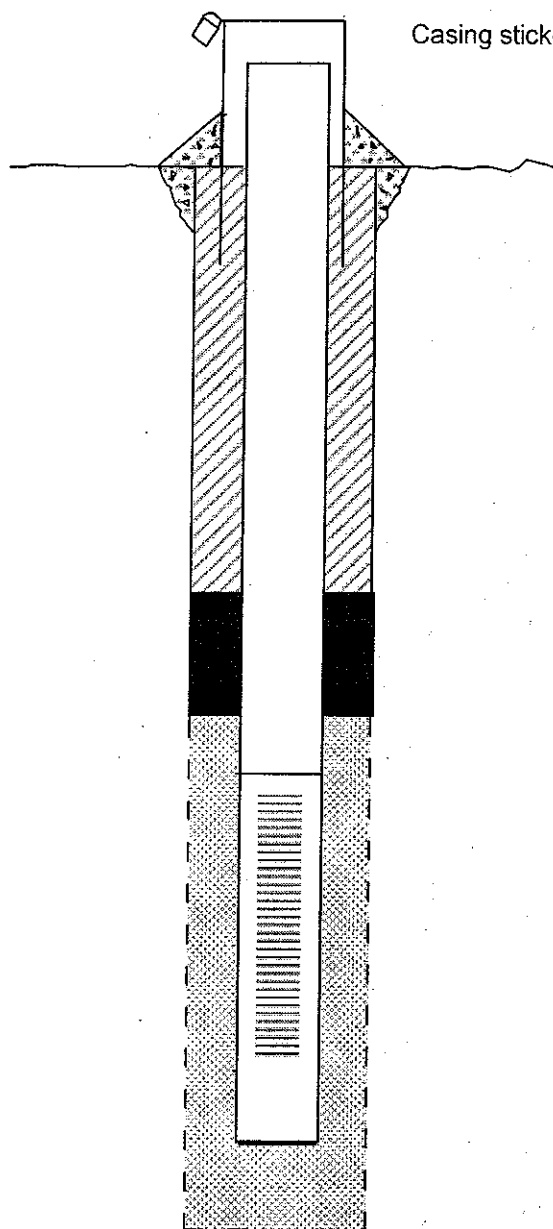
Boring No.: 6-MW-05
Date: 5-10-06
Installed: 5-10-06

Drilling Company: Beart Longear
Driller: John Weeks
Development Method: Surge Block

Casing stick-up relative to ground surface: Flush MountType of surface seal: CementType of surface casing: ManholeID of surface casing: 10-inchDiameter of borehole: 10-inchRiser pipe ID: 4-inchType of riser pipe: sch 40 PVCType of backfill: Cement grout mixDepth to top of seal: 5.6Type of seal: Bentonite ChipsDepth to top of sand: 7.6Depth to top of screen: 9.6Type of screen: sch 40 PVCSlot size & length: 10, 10 ftID of screen: 4-inchType of sandpack: 00 sandDepth of bottom of screen: 19.6Depth to bottom of sump: 20Depth of bottom of borehole: 20Notes: 4-inch sump

MONITORING WELL CONSTRUCTION DIAGRAM

Project: DuPont
 Project: Supplementary Investigation
 No.: 04-3406.00
 Boring No.: 6-MW-06
 Date: 5-10-06
 Installed: 5-10-06
 Drilling Company: Boart Longyear
 Driller: John Weeks
 Geologist: Carl Young
 Development Method: Surge Block



Casing stick-up relative to ground surface: Flush Mount

Type of surface seal: Cement

Type of surface casing: Manhole

ID of surface casing: 10-inch

Diameter of borehole: 10-inch

Riser pipe ID: 4-inch

Type of riser pipe: Sch 40 PVC

Type of backfill: Cement grout mix

Depth to top of seal: 5.6

Type of seal: Bentonite chips

Depth to top of sand: 7.6

Depth to top of screen: 9.6

Type of screen: Sch 40 PVC

Slot size & length: 10, 10 ft

ID of screen: 4-inch

Type of sandpack: 00 Sand

Depth of bottom of screen: 19.6

Depth to bottom of sump: 20

Depth of bottom of borehole: 20

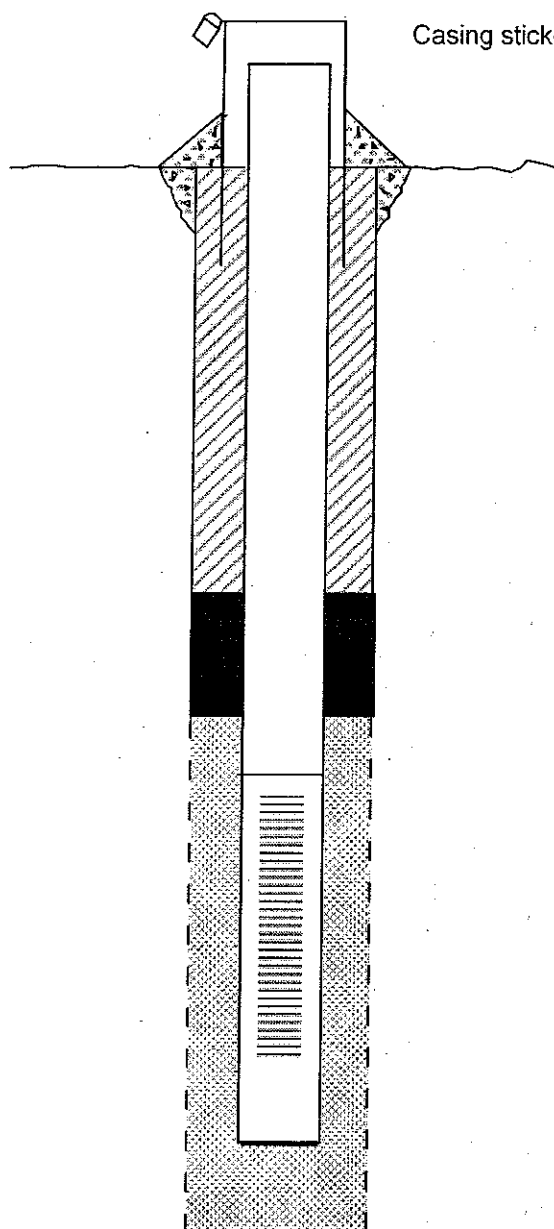
Notes: 4-inch Sump



CABRERA SERVICES
HYDROLOGICAL CONSULTING, INC.

MONITORING WELL CONSTRUCTION DIAGRAM

Project: DuPont Boring No.: 6-MW-07 Drilling Company: Boart Longyear
Project: Supplementary Investigation Date: 5-9-06 Driller: John Weeks
No.: 04-3406.00 Installed: 5-9-06 Development Method: Surge Block
Geologist: Carl Young, Dave Kateley



Casing stick-up relative to ground surface: Flush Mount

Type of surface seal: Cement

Type of surface casing: Manhole

ID of surface casing: 10-inch

Diameter of borehole: 10-inch

Riser pipe ID: 4-inch

Type of riser pipe: Sch 40 PVC

Type of backfill: Cement grout mix

Depth to top of seal: 35.6

Type of seal: Bentonite chips

Depth to top of sand: 37.6

Depth to top of screen: 39.6

Type of screen: Sch 40 PVC

Slot size & length: 10, 10 ft

ID of screen: 4-inch

Type of sandpack: 00 Sand

Depth of bottom of screen: 49.6

Depth to bottom of sump: 50

Depth of bottom of borehole: 50

Notes: 4-inch sump