

**COLEMAN ENGINEERING COMPANY**

635 Circle Drive  
Iron Mountain, Michigan 49801  
Telephone: (906) 774-3440 Fax: (906) 774-7776

**REPORT OF: MECHANICAL GRAIN SIZE ANALYSIS**Job Name: Florida Gas Site, Laurium, MIBoring No. PB-107Job No: G-99001Sample No. 9Remarks: (ML) SANDY SILT, dark brown,  
low plasticity, fine sand, tr/gravelDepth: 9.0'Date: 06/02/2000MECHANICAL ANALYSIS  
PORTION OF  
HYDROMETER  
ANALYSIS

Sieve Size	Grain Diameter (mm)	Weight Retained	Percent Retained	Percent Finer
3"				
1	25.4			
3/4	19.1	0	0	100
1/2	12.7			
4M	4.76	1.86	1.5	98.5
10M	2.00	4.24	3.5	95.0
40M	0.42	5.7	7.7	92.3 /* 87.7
100M	0.149	15.5	20.9	71.4 /* 67.8
200M	0.074	7.7	10.4	61.0 /* 58.0
Pan		45.1	61.0	0 /* 0

**\*Percent Based on Total Sample**

Original Sample:

Material retained on No. 10 mesh: weight = 6.1 = 5.0%Material passing No. 10 mesh: weight = 114.5 = 95.0%Weight of Total Sample = 120.6

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## REPORT OF: HYDROMETER GRAIN SIZE ANALYSIS

Job Name: Florida Gas

Job No: G-99001-B

Remarks: (ML) SANDY SILT, dark brown,  
low plasticity, fine sand, trace of

Boring No: PB-107

Sample No: 9

Depth: 9.0'

Date:

Dispersing Agent:

Kind Used Sodium Hexametaphosphate

Amount	125 ml @ 4% sol
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Hydrometer Number

### % of Original Sample Used

For Hydrometer Analysis	95.0	%
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Weight of Sample Dispersed	74.04	g.
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Specific Gravity (G)	2.68
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Starting Time 10:44 a.m. - 6/01/00

[illegible]



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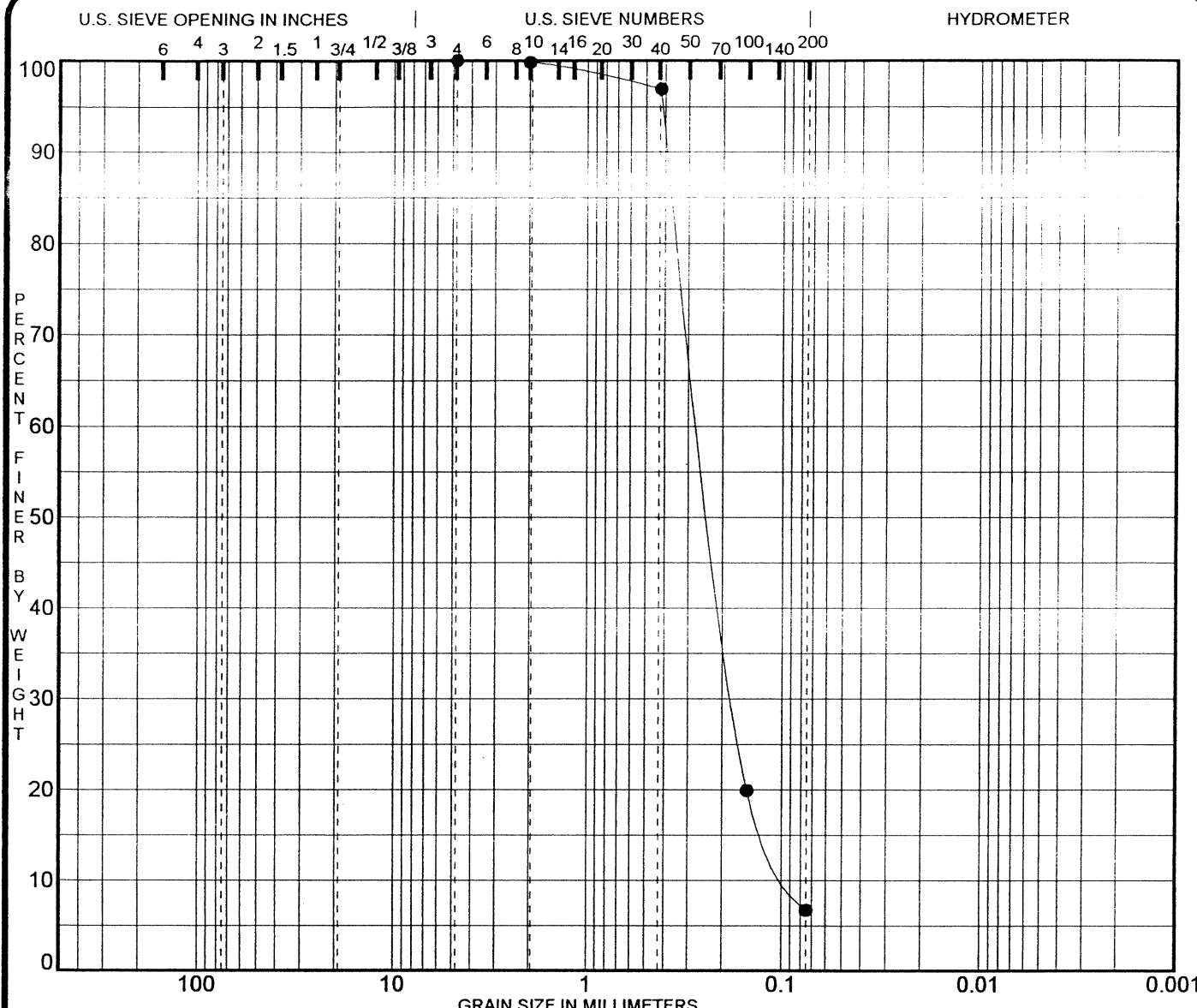
**REPORT OF: MECHANICAL GRAIN SIZE ANALYSIS**Job Name: Florida Gas Site, Laurium, MIBoring No. PB-109Job No: G-99001Sample No. 4Remarks: (SP-SM) SAND, brn, fn to med,  
w/silt, tr/gravel, ASTM D-2487Depth:                     Date: 05/31/2000MECHANICAL ANALYSIS  
PORTION OF  
HYDROMETER  
ANALYSIS

Sieve Size	Grain Diameter (mm)	Weight Retained	Percent Retained	Percent Finer
3"				
1	25.4	0	0	100
3/4	19.1	0	0	100
1/2	12.7	0	0	100
4M	4.76	0	0	100
10M	2.00	0.3	0.2	99.8
40M	0.42	3.7	2.9	96.9 /*
100M	0.149	99.2	77.0	19.9 /*
200M	0.074	17.0	13.2	6.7 /*
Pan		8.6	6.7	0 /*

**\*Percent Based on Total Sample**

Original Sample:

Material retained on No. 10 mesh: weight = 0.3 = 0.2%Material passing No. 10 mesh: weight = 128.5 = 99.8%Weight of Total Sample = 128.7





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Telephone: (906)-774-3440 Fax: (906)-774-7776

JOB NO.: 99001.GPJ

PROJECT: Florida Gas Site, Laurium, Michigan

BORING NO.: MW-44-00

CLIENT: Roy F. Weston, Inc.

1 OF 1

BORING LOCATION: Refer to Boring Location Drawing

ELEV.: 1187.3

RIG TYPE: Diedrich D-50 Truck Mount

DRILL CREW: P. McClanahan / R. Scott

DRILLING METHOD: 4-1/4" H.S.A.

BORING DEPTH: 13.4

DATE STARTED: Apr 6, 00

DATE COMPLETED: Apr 6, 00

REVIEWED BY: W. Rice

DATE: 7/13/00

HOLE CLOSURE: Monitoring Well Installed

SAMPLE				DEPTH (FT)	SOIL DESCRIPTION	WATER TABLE	ELEV. (FT)	COMMENTS	TEST RESULTS				
NUMBER	SPT VALUES BLOWS/6" (N)	RECOVERY	LEGEND						+4 -200	MOISTURE CONTENT (%)	LL PL	q <sub>a</sub> T (tsf)	q <sub>u</sub> (tsf)
				0	Asphalt		1187.3	4-1/4" H.S.A.					
					Aggregate Base Course	0.2'		3" Split Barrel Sampling					
					(Fill) GRAVEL, brick/rubble	0.5'		140# wt, 30" drop					
					(PT) PEAT-MUCK	2.5'							
					(SP) SAND, red-brown, fine to medium, trace of silt, wet, dense	3.0'							
1	15 32 8 12 (40)	1.5'											
2	11 21 16 18 (37)	1.5'											
3	9 11 15 21 (26)	1.5'		5	(SM) SAND, red-brown, fine to coarse, with silt, trace of gravel, wet, medium dense (till)	5.0'	1182.3						
4	5 7 13 18 (20)	1.0'			...fine to medium, trace of silt			Sample 4 - pocket pen. 4.5 +					
5	37 64/6 -- (-)	1.0'			...fine to coarse, with silt, very dense								
6	67/4 bouncing (-)	0.4'					1177.3						
7	74/4 --- (-)	0.4'											
					End of Boring	13.4'		Monitoring Well installed, refer to Well Installation Diagram for Well Construction Details					
				15			1172.3						
				20			1167.3						
				25			1162.3						

AS-Auger Sample

BS-Bag Sample

RC-Rock-Core

GS-Grab Sample

PS-Piston Tube

2SS-2" Split Spoon

3SS-3" Split Spoon

2ST-2" Shelby Tube

3ST-3" Shelby Tube

while drilling 2.0

after drilling N/A

N/A after N/A hours

BORING NO.:

MW-44-00

## TECHNICIAN: RLM/GNP

**BORING NUMBER:**

JOB NUMBER: 93-051

**DRILLERS: BSY/GDS**

PEN GAS

**JOB NAME:**

DATE: 4-27-93

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Telephone: (906)-774-3440 Fax: (906)-774-7776

JOB NO.: 99001.GPJ

PROJECT: Florida Gas Site, Laurium, Michigan

BORING NO.: **PB-111-00**

CLIENT: Roy F. Weston, Inc.

1 OF 1

BORING LOCATION: As Staked

ELEV.: 1186.3

RIG TYPE: Diedrich D-50 Topkick

DRILL CREW: R. Ochs / D. A.

DRILLING METHOD: 4-1/4" H.S.A.

BORING DEPTH: 22.0

DATE STARTED: Apr 12, 00

DATE COMPLETED: Apr 12, 00

REVIEWED BY: T. Brasure

DATE: 7/13/00

HOLE CLOSURE: Bentonite Chips

SAMPLE				DEPTH (FT)	SOIL DESCRIPTION	WATER TABLE	ELEV. (FT)	COMMENTS	TEST RESULTS				
NUMBER	SPT VALUES BLOWS/6" (N)	RECOVERY	LEGEND						+4 -200	MOISTURE CONTENT (%)	LL PL	q <sub>a</sub> T (tsf)	q <sub>u</sub> (tsf)
1	8 7 8 12 (15)	2.0'		0	Topsoil (SP) SAND, brown, fine, trace of silt, trace of gravel, medium dense, moist		1186.3	4-1/4" H.S.A. 3" S. S. Sampling 140# wt, 30" drop					
2	10 5 4 11 (9)	1.0'			(GP) GRAVEL, black, fine to coarse, trace of silt, trace of sand, wet, odor (SM) SILTY SAND, black, fine, trace of gravel, with organic peat, wet, loose								
3	6 9 12 14 (21)	1.8'		5	(SM) SAND, brown, fine, with silt, trace of gravel, wet, medium dense		1181.3						
4	5 3 10 11 (13)	1.3'			(SM) SAND, brown, fine, trace of silt, wet								
5	14 20 23 26 (45)	1.2'											
6	35 --- (-)	0.5'		10			1176.3						
7	31 48 -- (-)	0.6'											
8	35 100 -- (-)	0.5'		15			1171.3						
9	50 --- (-)	0.2'			(SM) SAND, red-brown, fine, some silt, wet, very dense (till) ...with gravel			Drillers Note: cobbles and/or boulders 17.0' to 22.0'					
10	80 50'.2 -- (-)	0.5'											
11	21 100 -- (-)	0.5'		20	...with cobbles		1166.3						
					End of Boring			Borehole backfilled with bentonite chips and natural material					
				25			1161.3						

☐ AS-Auger Sample  
☐ BS-Bag Sample  
☐ RC-Rock-Core

☐ GS-Grab Sample  
☐ PS-Piston Tube  
☐ ZSS-2" Split Spoon

☐ ZSS-3" Split Spoon  
☐ ZST-2" Shelby Tube  
☐ ZST-3" Shelby Tube

☐ while drilling 2.0  
☐ after drilling N/A

☐ N/A after N/A hours

BORING NO.:  
**PB-111-00**





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JOB NO.: 99001.GPJ

PROJECT: Florida Gas Site, Laurium, Michigan

BORING NO.: PB-108-00

CLIENT: Roy F. Weston, Inc.

1 OF 1

BORING LOCATION: Refer to Boring Location Drawing

ELEV.: 1186.5

RIG TYPE: Diedrich D-50 Truck Mount

DRILL CREW: P. McClanahan / R. Scott

DRILLING METHOD: 4-1/4" H.S.A.

BORING DEPTH: 16.0

DATE STARTED: Apr 5, 00

DATE COMPLETED: Apr 5, 00

REVIEWED BY: W. Rice

DATE: 7/13/00

HOLE CLOSURE: Cuttings

SAMPLE				DEPTH (FT)	SOIL DESCRIPTION	WATER TABLE	ELEV. (FT)	COMMENTS	TEST RESULTS				
NUMBER	SPT VALUES BLOWS/6"(N)	RECOVERY	LEGEND						+4 -200	MOISTURE CONTENT (%)	LL PL	q <sub>a</sub> T (tsf)	q <sub>u</sub> (tsf)
1	4 10 11 14 (21)	1.2'		0	Topsoil (Fill) SAND, brown, fine to medium, trace of gravel, medium dense, moist		1186.5	4-1/4" H.S.A. 3" S. S. Sampling 140# wt, 30" drop					
2	8 7 6 8 (13)	1.0'											
3	3 7 5 3 (12)	1.2'			(OL) ORGANIC SILT, black, trace of gravel, odor, slight sheen								
				5	(SP) SAND, red-brown, fine to medium, medium dense, wet		1181.5	Install Temporary Well 8.0' deep, 5' screen					
4	20 14 14 11 (28)	0.5'			(PT) PEAT, black, mucky, sand, wood material								
5	5 8 11 11 (19)	0.8'			(SM) SAND, red-brown, fine, with silt, trace of gravel, medium dense, wet								
6	8 14 17 16 (31)	1.0'		10	...fine to medium		1176.5						
7	5 11 24 50/3 (35)	1.0'			...2" yellow seam at 13.0'								
8	14 47 49 44 (96)	1.0'			(SM) SAND, red-brown, fine to coarse, silty (till)		1171.5						
				15									
					End of Boring			Borehole backfilled with natural material					
				20			1166.5						
				25			1161.5						

AS-Auger Sample

GS-Grab Sample

SSS-3" Split Spoon

while drilling 3.0

N/A after N/A hours

BORING NO.:

BS-Bag Sample

PS-Piston Tube

2ST-2" Shelby Tube

after drilling N/A

PB-108-00

RC-Rock-Core

SSS-2" Split Spoon

3ST-3" Shelby Tube



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Telephone: (906)-774-3440 Fax: (906)-774-7776

JOB NO.: 99001.GPJ

PROJECT: Florida Gas Site, Laurium, Michigan

BORING NO.: PB-110-00

CLIENT: Roy F. Weston, Inc.

1 OF 1

BORING LOCATION: As Staked

ELEV.: 1185.9

RIG TYPE: Diedrich D-50 Topkick

DRILL CREW: R. Ochs / D. A.

DRILLING METHOD: 4-1/4" H.S.A.

BORING DEPTH: 16.0

DATE STARTED: Apr 12, 00

DATE COMPLETED: Apr 12, 00

REVIEWED BY: T. Brasure

DATE: 7/13/00

HOLE CLOSURE: Bentonite Chips

SAMPLE				DEPTH (FT)	SOIL DESCRIPTION	WATER TABLE	ELEV. (FT)	COMMENTS	TEST RESULTS				
NUMBER	SPT VALUES BLOWS/6" (N)	RECOVERY	LEGEND						+4 -200	MOISTURE CONTENT (%)	LL PL	q <sub>a</sub> T (tsf)	q <sub>u</sub> (tsf)
1	21 21 13 13 (34)	1.5'		0	(Fill) GRAVEL, brown, fine to coarse, trace of silt, some sand, moist, dense 1.0'		1185.9	4-1/4" H.S.A. 3" S. S. Sampling 140# wt, 30" drop					
2	12 11 10 50 (21)	0.8'			(Fill) SAND, brown, fine, trace of silt, trace of gravel, moist, dense 2.0'			Drillers Note: cobbles and/or boulders 2.0' to 5.0'					
3	50 12 30 45 (42)	1.8'			(Fill) GRAVEL, brown, fine to coarse, trace of sand, brick fragments, wet, medium dense 5.0'								
4	14 10 15 12 (25)	1.0'		5	(SM) SAND, black and gray, fine, silty, slight odor, dense, wet 5.2'		1180.9						
5	5 6 6 7 (12)	0.2'			(SP) SAND, dark brown, fine to coarse, trace of silt, medium dense, wet, sandy silt layer with odor 7.0' to 7.4' 8.0'			Rock in tip of sampler on Sample 5					
6	4 10 16 10 (26)	1.2'		10	(SM) SAND, red-brown, fine to medium, with silt, trace of gravel, trace of clay, odor, medium dense, wet ...stratified black, fine sand and dark brown silt, 2" layers, slight odor 12.5'		1175.9						
7	11 21 27 44 (48)	1.3'			(SM) SAND, red-brown, fine to coarse, trace of gravel, some silt, very dense to hard 15								
8	12 37 107 0 (144)	1.0'			...gray layer 0.1' at 14.3' 16.0'		1170.9						
					End of Boring			Borehole backfilled with bentonite chips					
				25			1165.9						
							1160.9						

☒ -AS-Auger Sample  
☒ -BS-Bag Sample  
☒ -RC-Rock-Core

☒ -GS-Grab Sample  
☒ -PS-Piston Tube  
☒ -2SS-2" Split Spoon

☒ -3SS-3" Split Spoon  
☒ -2ST-2" Shelby Tube  
☒ -3ST-3" Shelby Tube

☒ while drilling 2.0  
☒ after drilling N/A

☒ N/A after N/A hours

BORING NO.:  
PB-110-00

# WELL BORING LOG

**JOB NUMBER: 93-051**

DRILLERS: BSY/GDS

**JOB NAME:** PEN GAS

DATE: 4-27-83

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Telephone: (906)-774-3440 Fax: (906)-774-7776

JOB NO.: 99001.GPJ

PROJECT: Florida Gas Site, Laurium, Michigan

BORING NO.: MW-35D-00

CLIENT: Roy F. Weston, Inc.

1 OF 1

BORING LOCATION: Refer to Boring Location Drawing

ELEV.: 1186.2

RIG TYPE: Diedrich D-50 ATV

DRILL CREW: K. Frome / R. Scott / R. Ochs

DRILLING METHOD: 4-1/4" H.S.A.

BORING DEPTH: 23.0

DATE STARTED: Mar 24, 00

DATE COMPLETED: Mar 24, 00

REVIEWED BY: J. Edlebeck

DATE: 7/13/00

HOLE CLOSURE: Monitoring Well Installed

SAMPLE				DEPTH (FT)	SOIL DESCRIPTION	WATER TABLE	ELEV. (FT)	COMMENTS	TEST RESULTS				
NUMBER	SPT VALUES BLOWS/6"(N)	RECOVERY	LEGEND						$\gamma$ 200	MOISTURE CONTENT (%)	LL PL	$q_a$ T (tsf)	$q_u$ (tsf)
1	5 9 14 14 (23)	2.0'		0	TOPSOIL 0.3' (SM) SAND, brown, fine, with silt, with gravel, mottles, moist, medium dense		1186.2	4-1/4" H.S.A. 2" / 3" Split Barrel Sampling 140# wt, 30" drop					
2	16 9 6 7 (15)	1.5'											
3	11 10 4 5 (14)	1.5'			3.5' (SP) SAND, brown, fine, trace of silt, moist, medium dense to loose to very dense								
4	3 4 3 7 (7)	1.1'		5	...wet, loose		1181.2						
5	2 5 10 70/2 (15)	1.0'			...medium dense								
6	14 23 28 49 (51)	1.2'		10	...very dense		1176.2						
7	27 50 50/3 (100+)	1.0'			13.0' (SM) SAND, brown, fine to medium, with silt, trace of gravel, with 2" - 3" silt layers, moist, very dense			Refer to Monitoring Well Construction Diagram for installation details					
8	40 100 - (100+)	0.5'		15	...with gravel		1171.2						
9	41 101/3 (100+)	0.6'			19.4' (SM) SILTY SAND, dark gray, fine to coarse, trace of gravel, moist, very dense								
10	68 50/3 - (-)	0.5'		20	...fractured rocks		1166.2						
					23.0' End of Boring and Auger Drilling Refusal								

AS-Auger Sample

BS-Bag Sample

RC-Rock-Core

GS-Grab Sample

PS-Piston Tube

2SS-2" Split Spoon

3SS-3" Split Spoon

2ST-2" Shelby Tube

3ST-3" Shelby Tube

while drilling 6.0

after drilling N/A

N/A after N/A hours

BORING NO.:

MW-35D-00



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IRON MOUNTAIN, MICHIGAN 49801  
Telephone: (906)-774-3440 Fax: (906)-774-7776

JOB NO.: 99001.GPJ

PROJECT: Florida Gas Site, Laurium, Michigan

BORING NO.: **MW-42D-00**

CLIENT: Roy F. Weston, Inc.

1 OF 1

BORING LOCATION: Refer to Boring Location Drawing

ELEV.: 1183.8

RIG TYPE: Diedrich D-50 Truck Mount

DRILL CREW: P. McClanahan / R. Scott

DRILLING METHOD: 4-1/4" H.S.A.

BORING DEPTH: 18.0

DATE STARTED: Apr 4, 00

DATE COMPLETED: Apr 4, 00

REVIEWED BY: W. Rice

DATE: 7/13/00

HOLE CLOSURE: Monitoring Well Installed

SAMPLE				DEPTH (FT)	SOIL DESCRIPTION	WATER TABLE	ELEV. (FT)	COMMENTS	TEST RESULTS				
NUMBER	SPT VALUES BLOWS/6" (N)	RECOVERY	LEGEND						4 -200	MOISTURE CONTENT (%)	LL PL	q <sub>a</sub> T (tsf)	q <sub>u</sub> (tsf)
				0	(Fill) GRAVEL, dark brown, silty sand, slag		1183.8	4-1/4" H.S.A. 3" Split Barrel Sampling 140# wt, 30" drop					
1	4 6 8 10 (14)	1.9'											
				2.0'	(SM) SAND, brown, fine, silty, moist, medium dense								
2	6 6 8 11 (14)	1.9'											
				4.0'	(ML) SILT, red-brown, trace of sand, trace of clay, medium dense to dense, wet								
3	11 13 21 26 (34)	1.8'		5			1178.8						
4	10 13 21 23 (34)	0.8'			...trace of gravel								
5	52 49 35 49 (84)	1.5'		10			1173.8						
6	55 67 49 51 (116)	0.6'			(SM) SAND, gray, fine to coarse, silty, wet, very dense (till)								
7	125 --- (-)	0.5'						Driller's Note: hard drilling 13.0' to 17.5'					
				15	...trace of gravel		1168.8						
8	137 --- (-)	0.4'											
9	158 --- (-)	0.5'											
				18.0'	End of Boring and Auger Drilling Refusal			Monitoring Well installed, refer to Well Installation Diagram for Well Construction Details					
				20			1163.8						
				25			1158.8						

☐ -AS-Auger Sample

☐ -GS-Grab Sample

☐ -3SS-3" Split Spoon

☐ while drilling 4.5

☐ N/A after N/A hours

BORING NO.:

☐ -BS-Bag Sample

☐ -PS-Piston Tube

☐ -2ST-2" Shelby Tube

MW-42D-00

☐ -PC Back Core

☐ -2ST-2" Shelby Tube

☐ -2ST-2" Shelby Tube

☐ while drilling 4.5

☐ N/A after N/A hours

MW-42D-00



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Telephone: (906)-774-3440 Fax: (906)-774-7776

JOB NO.: 99001.GPJ

PROJECT: Florida Gas Site, Lathrum, Michigan

BORING NO.: PB-102-00

CLIENT: Roy F. Weston, Inc.

1 OF 1

BORING LOCATION: Refer to Boring Location Drawing

ELEV.: 1186.3

RIG TYPE: Diedrich D-50 ATV

DRILL CREW: K. Frome / R. Scott

DRILLING METHOD: 4-1/4" H.S.A.

BORING DEPTH: 20.0

DATE STARTED: Mar 23, 00

DATE COMPLETED: Mar 23, 00

REVIEWED BY: J. Edlebeck

DATE: 7/13/00

HOLE CLOSURE: Bentonite Chips 10.0' to 20.0', then Monitoring Well Installation

SAMPLE				DEPTH (FT)	SOIL DESCRIPTION	WATER TABLE	ELEV. (FT)	COMMENTS	TEST RESULTS				
NUMBER	SPT VALUES BLOWS/6"(N)	RECOVERY	LEGEND						+4 -200	MOISTURE CONTENT (%)	LL PL	q <sub>a</sub> T (tsf)	q <sub>u</sub> (tsf)
1	---	NR		0	TOPSOIL, black, building rubble		1186.3	4-1/4" H.S.A. 2" / 3" Split Barrel Sampling 140# wt, 30" drop					
2	2 2 2 2 (4)	2.0'		2.0'	(Fill) SAND, brown, fine, with silt, wet, loose			cobbles and/or boulders from 0.0' - 3.0'					
				3.0'	PEAT, black, fibrous, wet								
3	2 10 15 10 (25)	2.0'		5.0'	(SP) SAND, brown, fine to coarse, with gravel, trace of silt, wet, medium dense		1181.3	Temporary well PB-102-00 installed, refer to Monitoring Well Construction Diagram for installation details					
4	12 16 10 10 (26)	0.3'											
5	2 5 3 2 (8)	1.0'			...fine, trace of gravel, loose								
6	9 24 41 40 (65)	NR		10	...very dense		1176.3						
7	WOH 3 13 18 (16)	1.0'			...medium dense								
8	7 16 18 20 (34)	2.0'		15	...dense		1171.3						
9	7 12 24 30 (36)	1.5'											
10	11 18 21 30 (39)	1.5'											
				20.0'	End of Boring		1166.3	Borehole backfilled with bentonite chips 10.0' - 20.0'					
				25			1161.3						

AS-Auger Sample

BS-Bag Sample

RC-Rock-Core

GS-Grab Sample

PS-Piston Tube

2SS-2" Split Spoon

3SS-3" Split Spoon

2ST-2" Shelby Tube

3ST-3" Shelby Tube

while drilling 4.0

after drilling N/A

N/A after N/A hours

BORING NO.:

PB-102-00



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JOB NO.: 99001.GPJ

BORING NO.: MW-37D-00

1 OF 2

PROJECT: Florida Gas Site, Laurium, Michigan

CLIENT: Roy F. Weston, Inc.

BORING LOCATION: Refer to Boring Location Drawing

ELEV.: 1185.4

RIG TYPE: Diedrich D-50 ATV

DRILL CREW: K. Frome / R. Ochs

DRILLING METHOD: 4-1/4" H.S.A.

BORING DEPTH: 32.0

DATE STARTED: Mar 29, 00 DATE COMPLETED: Mar 29, 00

REVIEWED BY: J. Edlebeck

DATE: 7/13/00

HOLE CLOSURE: Monitoring Well Installed

SAMPLE				DEPTH (FT)	SOIL DESCRIPTION	WATER TABLE	ELEV. (FT)	COMMENTS	TEST RESULTS				
NUMBER	SPT VALUES BLOWS/6"(N)	RECOVERY	LEGEND						+4 -200	MOISTURE CONTENT (%)	PL	q <sub>a</sub> (tsf)	q <sub>u</sub> (tsf)
1	10 17 10 10 (27)	1.0'		0	TOPSOIL (Fill) SILTY SAND, brown, fine, moist, medium dense 0.4'		1185.4	4-1/4" H.S.A. 2" / 3" Split Barrel Sampling 140# wt, 30" drop					
2	3 5 11 13 (16)	1.5'			PEAT AND SAND, black, fine, moist, medium dense 2.0'								
					(ML) SILT, brown, slightly plastic, with sand, moist, medium dense 3.0'								
3	6 11 8 9 (19)	1.7'			(SP) SAND, brown, fine to medium, trace of silt, moist, medium dense to loose, 0.5' silt seam at 4.5' to 5.0' 3.5'								
				5	...fine		1180.4						
4	2 5 4 5 (9)	1.0'			...wet, loose								
5	2 3 4 6 (7)	1.0'			(SM) SAND, brown, fine, with silt, wet, loose 8.0'								
6	2 3 5 7 (8)	1.1'		10			1175.4						
7	50/0.3 (-)												
7A	25 37 43 50 (80)	1.8'		15	...reddish-brown		1170.4	Two attempts to obtain Sample 7 Sample 7 - large rock in tip of sampler Sample 7A - 2" SPT Sampling					
8	9 12 19 50 (31)	1.8						Hard drilling from 18.0' - 32.0'					
9	27 40 50/4 (90+)	1.3'		20	...trace of gravel		1165.4						
10	50/4 -- (-)	0.3'			(SM) SAND, brown-gray, fine to coarse, with silt, trace of fine gravel, wet, very dense (fill)								
11	49 50 50 (100+)	0.8'		25			1160.4	sampler bouncing					

☐ AS-Auger Sample  
☐ BS-Bag Sample  
☐ RC-Rock-Core

☐ GS-Grab Sample  
☐ PS-Piston Tube  
☐ SS-2" Split Spoon  
☐ SS-3" Split Spoon

☐ SS-3" Split Spoon  
☐ ST-2" Shelby Tube  
☐ ST-3" Shelby Tube

☐ while drilling 6.0  
☐ after drilling N/A

☐ N/A after N/A hours

BORING NO.: MW-37D-00



# COLEMAN ENGINEERING COMPANY

635 CIRCLE DRIVE  
IRON MOUNTAIN, MICHIGAN 49801  
Telephone: (906)-774-3440 Fax: (906)-774-7776

PROJECT: Florida Gas Site, Laurium, Michigan

JOB NO.: 99001.GPJ

CLIENT: Roy F. Weston, Inc.

BORING NO.: MW-38-00

1 OF 1

BORING LOCATION: Refer to Boring Location Drawing

ELEV.: 1185.4

RIG TYPE: Diedrich D-50 ATV

DRILL CREW: K. Frome / R. Ochs

DRILLING METHOD: 4-1/4" H.S.A.


BORING DEPTH: 10.0

DATE STARTED: Mar 29, 00 DATE COMPLETED: Mar 29, 00

REVIEWED BY: J. Edlebeck

DATE: 7/13/00

HOLE CLOSURE: Monitoring Well Installed

SAMPLE				DEPTH (FT)	SOIL DESCRIPTION	WATER TABLE	ELEV. (FT)	COMMENTS	TEST RESULTS				
NUMBER	SPT VALUES BLOWS/6" (N)	RECOVERY	LEGEND						Moisture CONTENT (%)	LL	PL	$q_u$ (tsf)	$q_{uc}$ (tsf)
1	Blind Drilled			0	TOPSOIL		1185.4	4-1/4" H.S.A. Blind Drilled					
					(Fill) SILTY SAND, brown, fine, moist		0.4'						
					PEAT-SAND, black, fine, moist		2.0'						
					(ML) SILT, brown, slightly plastic, with sand, moist		3.0'						
					(SP) SAND, brown, fine to medium, trace of silt, moist		3.5'						
				5	0.5' silt seam at 4.5' to 5.0'		1180.4	Monitoring Well Installed 5' from Monitoring Well MW-37D-00, assumed similar soil conditions					
					(SM) SAND, brown, fine, with silt, wet		8.0'						
				10	End of Boring		1175.4	Refer to Monitoring Well Construction diagram for Installation details					
				15			1170.4						
				20			1165.4						
				25			1160.4						

☐ AS-Auger Sample  
☐ BS-Bag Sample  
☐ RC-Rock-Core

☐ GS-Grab Sample  
☐ PS-Piston Tube  
☒ SS-2" Split Spoon

☐ SS-3" Split Spoon  
☐ ST-2" Shelby Tube  
☐ ST-3" Shelby Tube

☒ while drilling 6.0  
☐ after drilling N/A

☐ N/A after N/A hours

BORING NO.:  
MW-38-00





# COLEMAN ENGINEERING COMPANY

635 CIRCLE DRIVE  
IRON MOUNTAIN, MICHIGAN 49801  
Telephone: (906)-774-3440 Fax: (906)-774-7776

JOB NO.: 99001.GPJ

BORING NO.: MW-39D-00

1 OF 1

PROJECT: Florida Gas Site, Laurium, Michigan

CLIENT: Roy F. Weston, Inc.

BORING LOCATION: Refer to Boring Location Drawing

ELEV.: 1186.8

RIG TYPE: Diedrich D-50 ATV

DRILL CREW: K. Frome / R. Ochs

DRILLING METHOD: 4-1/4" H.S.A.

BORING DEPTH: 18.3

DATE STARTED: Mar 30, 00 DATE COMPLETED: Mar 30, 00

REVIEWED BY: J. Edlebeck

DATE: 7/13/00

HOLE CLOSURE: Monitoring Well Installed

SAMPLE				DEPTH (FT)	SOIL DESCRIPTION	WATER TABLE	ELEV. (FT)	COMMENTS	TEST RESULTS				
NUMBER	SPT VALUES BLOWS/6" (N)	RECOVERY	LEGEND						±4 -200	MOISTURE CONTENT (%)	LL PL	q <sub>a</sub> T (tsf)	q <sub>u</sub> (tsf)
1	89 15 15 (24)	1.8'		0	ASPHALT  (Fill) SAND, black, fine to coarse, with gravel, some silt, moist, medium dense		1186.8	4-1/4" H.S.A. 3" SPT Sampling 140# wt, 30" drop					
2	64 15 24 (19)	1.5'			(Fill) SILTY SAND, dark brown to black, with gravel, moist, medium dense								
3	47 14 13 (21)	0.2'		5			1181.8	Plug - possibly pushed rock					
4	10 6 4 5 (10)	1.6'			(SM) SAND, brown, fine to medium, with silt, wet, medium dense			slight odor					
5	69 11 15 (20)	1.2'			(SM) SILTY SAND, brown, fine, wet, medium dense								
6	10 19 39 42 (58)	1.5'		10	(SM) SAND, brown, fine, with silt, wet, very dense		1176.8						
7	12 22 34 7 (56)	1.4'			...silty sand layer 11.0' to 11.5'								
8	5 12 22 30 (34)	1.7'			...reddish-brown, silt layer 13.3' to 13.8'								
9	50 50/2 - (-)	0.7'		15	...silt layer 14.3' to 14.4', 15.1' to 15.6'		1171.8						
					(SM) SAND, red-brown, fine to coarse, with silt, trace of gravel, very dense (fill)			Hard drilling from 17.0' - 18.3'					
					End of Boring and Auger Drilling Refusal			Monitoring Well installed, refer to Monitoring Well Construction Diagram for installation details					
				20			1166.8						
				25			1161.8						

- ☒ -AS-Auger Sample    ☒ -GS-Grab Sample    ☒ -SSS-3" Split Spoon  
☒ -BS-Bag Sample    ☒ -PS-Piston Tube    ☒ -2ST-2" Shelby Tube  
☒ -RC-Rock-Core    ☒ -SSS-2" Split Spoon    ☒ -3ST-3" Shelby Tube

while drilling 6.0

after drilling N/A

N/A after N/A hours









BORING NO.:  
MW-39D-00

# LOG OF BORING WGP-01

(Page 1 of 1)

U.S. EPA  
Florida Gas Site  
W.O # 12634.001.001.0601.00

Date Started	: 5/17/2006	Logged By	: J. Chrestensen
Date Completed	: 5/17/2006	Checked By	: J. Chrestensen
Hole Diameter	: 2 inches	Drilled By	: MDEQ
Drilling Method	: Geoprobe	Crew Chief	: Mark Henry
Sampling Method	: Geoprobe/Discrete Sampler	Geoprobe	: Geoprobe 6600

Depth in Feet	Samples	% Rec- overy	GRAPHIC	USCS	DESCRIPTION	REMARKS	Water Levels
0					Topsoil		
1				SW	SAND, fine to medium grained, trace coarse grained sand, little silt, red-brown, moist		
2	1	75		ML	SILT, organics (topsoil)- trace roots, dark brown and black, moist		
3				SP	SAND, fine to medium grained, little silt, red-brown, wet	PID 3.5' to 4' 0.3 ppm	
4						PID 4.5' to 5' 1.6 ppm	
5				CL	SANDY CLAY, red-brown, moist		
6	2	95		SC	CLAYEY SAND, some silt, red-brown, wet		
7							
8							
9							
10	3	80		SC	CLAYEY SAND, fine grained , little silt, trace coarse grained sand, gray, moist		
11				SW	SAND, fine grained, trace to little clay, little silt, trace fine gravel, red-brown, moist	PID 10'-11' 0.1 ppm	
12							
13							
14							
15							

End of boring at 12 ft bgs.



# LOG OF BORING WGP-02

(Page 1 of 1)

U.S. EPA  
Florida Gas Site  
W.O # 12634.001.001.0601.00

Date Started	: 5/17/2006	Logged By	: J. Chrestensen
Date Completed	: 5/17/2006	Checked By	: J. Chrestensen
Hole Diameter	: 2 inches	Drilled By	: MDEQ
Drilling Method	: Geoprobe	Crew Chief	: Mark Henry
Sampling Method	: Geoprobe/Discrete Sampler	Geoprobe	: Geoprobe 6600


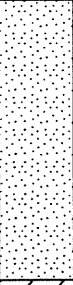

Depth in Feet	Samples	% Recovery	GRAPHIC	USCS	DESCRIPTION	REMARKS	Water Levels
0					Topsoil		
1				SM	SILTY SAND, fine to medium grained, little clay, dark brown, moist		
2	1	80					
3				SW	SAND, fine to medium grained, trace silt, little coarse sand, brown, wet	PID 3.5' to 4' 0.3 ppm	
4						PID 4' to 5' 0.6 ppm	
5				ML	SILT, some very fine sand, brown, moist		
6	2	95		SC	CLAYEY SAND, fine to medium grained, brown, moist		
7							
8							
End of boring at 8 ft bgs.							
9							
10							

# LOG OF BORING WGP-03

(Page 1 of 1)

U.S. EPA  
Florida Gas Site  
W.O # 12634.001.001.0601.00

Date Started	: 5/17/2006	Logged By	: J. Chrestensen
Date Completed	: 5/17/2006	Checked By	: J. Chrestensen
Hole Diameter	: 2 inches	Drilled By	: MDEQ
Drilling Method	: Geoprobe	Crew Chief	: Mark Henry
Sampling Method	: Geoprobe/Discrete Sampler	Geoprobe	: Geoprobe 6600

Depth in Feet	Samples	% Rec- overy	GRAPHIC	USCS	DESCRIPTION	REMARKS	Water Levels
0					Clayey topsoil, dark brown, moist		
1							
2	1	50					
3							
4					SAND, fine to medium grained, some coarse sand, trace silt, red-brown, wet	Sheen at interface PID 3' to 4' 7.8 ppm	
5				SW		PID 5' to 6' 1.7 ppm	
6	2	60					
7					CLAY, little fine sand, little silt, red-brown, moist to wet		
8				CL		PID 7.5' to 8' 0.3 ppm	
9					SAND, fine to medium grained, trace silt, brown, wet		
10	3	80		SP		8' to 12' core liner shattered, recovered in pieces	
11				ML	SILT, little fine sand, little coarse sand, gray, stiff, moist		
12				SP	SAND, fine to medium grained, some silt, red-brown, hard, moist		
End of boring at 12 ft bgs.							
13							
14							
15							



# LOG OF BORING WGP-04

(Page 1 of 1)

U.S. EPA  
Florida Gas Site  
W.O # 12634.001.001.0601.00

Date Started	: 5/17/2006	Logged By	: J. Chrestensen
Date Completed	: 5/17/2006	Checked By	: J. Chrestensen
Hole Diameter	: 2 inches	Drilled By	: MDEQ
Drilling Method	: Geoprobe	Crew Chief	: Mark Henry
Sampling Method	: Geoprobe/Discrete Sampler	Geoprobe	: Geoprobe 6600

Depth in Feet	Samples	% Rec- overy	GRAPHIC	USCS	DESCRIPTION	REMARKS	Water Levels
0					Topsoil		▼
1					SAND, fine to medium grained, trace to little silt, trace fine gravel, red-brown, wet		
2	1	60		SW			
3						PID 3' to 4' 19 ppm	
4						PID 4' to 4.25' 8.9 ppm	
5					SILT, trace to little coarse sand, gray, stiff, moist		
6	2	50		ML			
7					End of recoverable core		
8					End of boring at 8 ft bgs.		
9							
10							
11							
12							
13							
14							
15							

# LOG OF BORING WGP-05

(Page 1 of 1)

U.S. EPA  
Florida Gas Site  
W.O # 12634.001.001.0601.00

Date Started	: 5/17/2006	Logged By	: J. Chrestensen
Date Completed	: 5/17/2006	Checked By	: J. Chrestensen
Hole Diameter	: 2 inches	Drilled By	: MDEQ
Drilling Method	: Geoprobe	Crew Chief	: Mark Henry
Sampling Method	: Geoprobe/Discrete Sampler	Geoprobe	: Geoprobe 6600

Depth in Feet	Samples	% Rec- overy	GRAPHIC	USCS	DESCRIPTION	REMARKS	Water Levels
0					Topsoil		
1					SAND, fine to medium grained, trace silt, red-brown, wet		
2	1	70		SP		PID 1' to 2' 4.3 ppm	
3							
4						PID 3' to 4' 4.9 ppm	
5				ML	SILT, little coarse sand, gray, stiff, moist		
					End of recoverable core		
6	2	20					
7							
8							
					End of boring at 8 ft bgs.		
9							
10							
11							
12							



# LOG OF BORING WGP-06

(Page 1 of 1)

U.S. EPA  
Florida Gas Site  
W.O # 12634.001.001.0601.00

Date Started	: 5/17/2006	Logged By	: J. Chrestensen
Date Completed	: 5/17/2006	Checked By	: J. Chrestensen
Hole Diameter	: 2 inches	Drilled By	: MDEQ
Drilling Method	: Geoprobe	Crew Chief	: Mark Henry
Sampling Method	: Geoprobe/Discrete Sampler	Geoprobe	: Geoprobe 6600

Depth in Feet	Samples	% Rec- overy	GRAPHIC	USCS	DESCRIPTION	REMARKS	Water Levels
0					Topsoil		
1					SAND, fine to medium grained, trace silt, trace fine gravel, red-brown, wet	PID 1' to 3' 0.2 ppm	
2	1	60		SW			
3				SW			
4				SW			
5				SW			
6	2	80		SW	SAND, fine to medium grained, trace silt, trace fine gravel, black, discolored, wet	Soil sample WGP-06 collected at 6-6.5 ft bgs	
7				SC	CLAYEY SAND, red-brown, moist	PID 6' to 6.5' 5.4 ppm	
End of boring at 7 ft bgs							
8							
9							
10							
11							
12							

# LOG OF BORING WGP-07

(Page 1 of 1)

U.S. EPA  
Florida Gas Site  
W.O # 12634.001.001.0601.00

Date Started	: 5/17/2006	Logged By	: J. Chrestensen
Date Completed	: 5/17/2006	Checked By	: J. Chrestensen
Hole Diameter	: 2 inches	Drilled By	: MDEQ
Drilling Method	: Geoprobe	Crew Chief	: Mark Henry
Sampling Method	: Geoprobe/Discrete Sampler	Geoprobe	: Geoprobe 6600

Depth in Feet	Samples	% Rec- overy	GRAPHIC	USCS	DESCRIPTION	REMARKS	Water Levels
0					SILTY SAND, fine to medium grained, dark brown, moist		
1				SM			
2	1	50			SAND, fine to medium grained, trace silt, red-brown, wet		
3							
4				SP		PID 3.5' to 4' 0.1 ppm	
5							
6	2	75			CLAYEY SAND, fine to medium grained, brown, wet		
7				SC		PID 6.5' to 7' 0.9 ppm	
8					End of boring at 7.5 ft bgs		
9							
10							
11							
12							



# LOG OF BORING WGP-08

(Page 1 of 1)

U.S. EPA  
Florida Gas Site  
W.O # 12634.001.001.0601.00

Date Started	: 5/17/2006	Logged By	: J. Chrestensen
Date Completed	: 5/17/2006	Checked By	: J. Chrestensen
Hole Diameter	: 2 inches	Drilled By	: MDEQ
Drilling Method	: Geoprobe	Crew Chief	: Mark Henry
Sampling Method	: Geoprobe/Discrete Sampler	Geoprobe	: Geoprobe 6600

Depth in Feet	Samples	% Rec- overy	GRAPHIC	USCS	DESCRIPTION	REMARKS	Water Levels
0					SILTY SAND, some clay, dark brown-black, moist		
1	1	65		SM			
2							
3							
4				ML	SILT, some clay, olive, moist		
5	2	40		SP	SAND, fine to medium grained, some silt, dark brown and black, wet, sheen	Soil sample WGP-08 collected at 3.5 to 4.5 ft bgs	
6				SC	CLAYEY SAND, fine grained, red-brown, hard, moist	Sheen, black staining	
7					End of boring at 6.5 ft bgs		
8							
9							
10							
11							
12							

# LOG OF BORING WGP-09

(Page 1 of 1)

U.S. EPA  
Florida Gas Site  
W.O # 12634.001.001.0601.00

Date Started	: 5/17/2006	Logged By	: J. Chrestensen
Date Completed	: 5/17/2006	Checked By	: J. Chrestensen
Hole Diameter	: 2 inches	Drilled By	: MDEQ
Drilling Method	: Geoprobe	Crew Chief	: Mark Henry
Sampling Method	: Geoprobe/Discrete Sampler	Geoprobe	: Geoprobe 6600


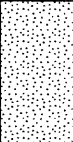



Depth in Feet	Samples	% Rec- overy	GRAPHIC	USCS	DESCRIPTION	REMARKS	Water Levels
0					Topsoil		
1					SAND, fine to medium grained, trace silt, brown, wet		
2	1	25		SP			
3							
4							
5				SP	SAND, fine to medium grained, trace silt, black staining, wet	PID 5' to 6' 5.9 ppm	
6	2	70		SC	CLAYEY SAND, fine to medium grained, red-brown, wet		
7						PID 7' to 7.5' 0.5 ppm	
8					End of boring at 7.5 ft bgs		
9							
10							
11							
12							

# LOG OF BORING WGP-10

(Page 1 of 1)

U.S. EPA  
Florida Gas Site  
W.O # 12634.001.001.0601.00

Date Started	: 5/17/2006	Logged By	: J. Chrestensen
Date Completed	: 5/17/2006	Checked By	: J. Chrestensen
Hole Diameter	: 2 inches	Drilled By	: MDEQ
Drilling Method	: Geoprobe	Crew Chief	: Mark Henry
Sampling Method	: Geoprobe/Discrete Sampler	Geoprobe	: Geoprobe 6600

Depth in Feet	Samples	% Rec- overy	GRAPHIC	USCS	DESCRIPTION	REMARKS	Water Levels
0					Topsoil		
1				SP	SAND, fine to medium grained, trace silt, red-brown, wet		
2	1	40				PID 2' to 2.5' 0.0 ppm	
3					CLAYEY SILT, some fine sand, organics, dark brown, moist	PID 3' to 3.5' 0.0 ppm	
4						PID 3.5' to 4' 0.4 ppm	
5				SP	SAND, fine to medium grained, trace silt, dark brown, wet		
6	2	30				Sheen from 6.5-7 ft bgs Soil sample WGP-10 collected at 6.5 to 7 ft bgs	
7				SC	CLAYEY SAND, fine to medium grained, some silt, red-brown, moist	PID 6.5' to 7' 0.9 ppm	
8					End of boring at 7.5 ft bgs		
9							
10							
11							
12							



# LOG OF BORING WGP-11

(Page 1 of 1)

U.S. EPA  
Florida Gas Site  
W.O # 12634.001.001.0601.00

Date Started	: 5/17/2006	Logged By	: J. Chrestensen
Date Completed	: 5/17/2006	Checked By	: J. Chrestensen
Hole Diameter	: 2 inches	Drilled By	: MDEQ
Drilling Method	: Geoprobe	Crew Chief	: Mark Henry
Sampling Method	: Geoprobe/Discrete Sampler	Geoprobe	: Geoprobe 6600






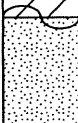
Depth in Feet	Samples	% Rec- overy	GRAPHIC	USCS	DESCRIPTION	REMARKS	Water Levels
0				AR	Rocks		
1				SP	SAND, fine to medium grained, trace silt, brown, wet		
2	1	75		SP	SAND, fine to medium grained, trace silt, dark brown, wet	PID 1' to 3' 0.5 ppm	
3				SP	SAND, fine to medium grained, trace silt, brown, wet		
4				SP	SAND, fine to medium grained, trace silt, brown, wet		
5				SP	SAND, fine to medium grained, trace silt, brown, wet		
6	2	65		SP	SAND, fine to medium grained, trace silt, brown, wet	PID 5' to 6.5' 0.8 ppm	
7				SC	CLAYEY SILT, red-brown, wet	PID 7' to 7.5' 0.2 ppm	
8					End of boring at 7.5 ft bgs		
9							
10							
11							
12							

# LOG OF BORING WGP-12

(Page 1 of 1)

U.S. EPA  
Florida Gas Site  
W.O # 12634.001.001.0601.00

Date Started	: 5/17/2006	Logged By	: J. Chrestensen
Date Completed	: 5/17/2006	Checked By	: J. Chrestensen
Hole Diameter	: 2 inches	Drilled By	: MDEQ
Drilling Method	: Geoprobe	Crew Chief	: Mark Henry
Sampling Method	: Geoprobe/Discrete Sampler	Geoprobe	: Geoprobe 6600

Depth in Feet	Samples	% Recovery	GRAPHIC	USCS	DESCRIPTION	REMARKS	Water Levels
0				AR	Asphalt pieces		
1				SP	SAND, fine to medium grained, little silt, red-brown, wet		
2	1	60					
3						PID 3.5' 0.1 ppm	
4							
5				SM	SILTY SAND, roots, dark brown, moist		
6				ML	CLAYEY SILT, fine to medium grained, olive green, moist		
7	2	70		CL	SILTY CLAY, roots, black, moist		
8						PID 6' to 6.5' 0.2 ppm	
9				SP	SAND, fine to medium grained, little silt, red-brown, hard, moist		
10					End of boring at 7.5ft bgs		
11							
12							

# LOG OF BORING WGP-13

(Page 1 of 1)

U.S. EPA  
Florida Gas Site  
W.O # 12634.001.001.0601.00

Date Started	: 5/17/2006	Logged By	: J. Chrestensen
Date Completed	: 5/17/2006	Checked By	: J. Chrestensen
Hole Diameter	: 2 inches	Drilled By	: MDEQ
Drilling Method	: Geoprobe	Crew Chief	: Mark Henry
Sampling Method	: Geoprobe/Discrete Sampler	Geoprobe	: Geoprobe 6600

Depth in Feet	Samples	% Recovery	GRAPHIC	USCS	DESCRIPTION	REMARKS	Water Levels
0					Topsoil		
1					SAND, fine to medium grained, trace silt, red-brown, wet		
2	1	50		SP			
3							
4							
5				SC	SILTY CLAY, some fine sand, dark brown, wet		
6	2	80		SW	SAND, fine to medium grained, little fine gravel, trace silt, red-brown, wet	PID 5' to 5.5' 0.1 ppm	
7				SP	SAND, fine to medium grained, little silt, hard, red-brown, wet		
8					End of boring at 7.5 ft bgs		
9							
10							
11							
12							

# LOG OF BORING WGP-14

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U.S. EPA  
Florida Gas Site  
W.O # 12634.001.001.0601.00

Date Started	: 5/18/2006	Logged By	: J. Chrestensen
Date Completed	: 5/18/2006	Checked By	: J. Chrestensen
Hole Diameter	: 2 inches	Drilled By	: MDEQ
Drilling Method	: Geoprobe	Crew Chief	: Mark Henry
Sampling Method	: Geoprobe/Discrete Sampler	Geoprobe	: Geoprobe 6600

Depth in Feet	Samples	% Rec- overy	GRAPHIC	USCS	DESCRIPTION	REMARKS	Water Levels
0					SAND, fine to medium grained, trace silt, red-brown, wet		
1							
2	1	50		SP		PID 2' to 4' 0.0 ppm	
3							
4					SAND, fine to medium grained, trace silt, dark brown, wet	PID 4' to 5' 0.0 ppm	
5							
6	2	80		SP		PID 6.5' to 7' 0.1 ppm	
7							
8				SM	SAND, fine to medium grained, some clay, little silt, red-brown, wet		
End of boring at 8 ft bgs							
9							
10							
11							
12							



# LOG OF BORING WGP-15

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U.S. EPA  
Florida Gas Site  
W.O # 12634.001.001.0601.00

Date Started	: 5/18/2006	Logged By	: J. Chrestensen
Date Completed	: 5/18/2006	Checked By	: J. Chrestensen
Hole Diameter	: 2 inches	Drilled By	: MDEQ
Drilling Method	: Geoprobe	Crew Chief	: Mark Henry
Sampling Method	: Geoprobe/Discrete Sampler	Geoprobe	: Geoprobe 6600

Depth in Feet	Samples	% Recovery	GRAPHIC	USCS	DESCRIPTION	REMARKS	Water Levels
0					Topsoil		
1					SAND, fine to medium grained, trace silt, trace fine gravel, red-brown, wet	PID 1' to 2' 0.0 ppm	
2	1	55		SW			
3							
4						PID 4' to 5' 0.1 ppm	
5					SAND, fine to medium grained, trace silt, trace fine gravel, dark brown, wet		
6	2	75		SW			
7						PID 7' to 7.5' 0.3 ppm	
8				SW	SAND, fine to medium grained, some clay, little silt, red-brown, wet		
End of boring at 8 ft bgs							
9							
10							
11							
12							



# LOG OF BORING WGP-16

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U.S. EPA  
Florida Gas Site  
W.O # 12634.001.001.0601.00

Date Started	: 5/18/2006	Logged By	: J. Chrestensen
Date Completed	: 5/18/2006	Checked By	: J. Chrestensen
Hole Diameter	: 2 inches	Drilled By	: MDEQ
Drilling Method	: Geoprobe	Crew Chief	: Mark Henry
Sampling Method	: Geoprobe/Discrete Sampler	Geoprobe	: Geoprobe 6600

Depth in Feet	Samples	% Rec- overy	GRAPHIC	USCS	DESCRIPTION	REMARKS	Water Levels
0					SAND, fine to medium grained, trace silt, red-brown, wet		
1							
2	1	60					
3				SP			
4						PID 3' to 4' 0.1 ppm	
5							
6	2	90		SP-SM	SILTY SAND, medium grained, some clay, trace fine gravel, dark brown, sheen		
7				SM SP	SILTY SAND, fine grained, red-brown, wet	PID 6' to 7' 12.7 ppm Soil Sample WGP-16 collected at 6' to 8' bgs	
8				SC	SAND, medium grained, some fine gravel, black, sheen	PID 7.5' to 8' 1 ppm	
					CLAYEY SAND, medium grained, red-brown, wet		
9					End of boring at 8 ft bgs		
10							
11							
12							



# LOG OF BORING WGP-17

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U.S. EPA  
Florida Gas Site  
W.O # 12634.001.001.0601.00

Date Started	: 5/18/2006	Logged By	: J. Chrestensen
Date Completed	: 5/18/2006	Checked By	: J. Chrestensen
Hole Diameter	: 2 inches	Drilled By	: MDEQ
Drilling Method	: Geoprobe	Crew Chief	: Mark Henry
Sampling Method	: Geoprobe/Discrete Sampler	Geoprobe	: Geoprobe 6600

Depth in Feet	Samples	% Rec- overy	GRAPHIC	USCS	DESCRIPTION	REMARKS	Water Levels
0					SAND, fine to medium grained, trace silt, red-brown, wet		
1							
2	1	60		SP		PID 3' to 4' 0.3 ppm	
3							
4							
5							
6	2	95		SP	SAND, fine to medium grained, trace silt, dark brown, wet	Sheen from 7'3" to 7'10" bgs PID 7' to 8' 4.7 ppm	
7							
8					SAND, fine to medium grained, some clay, little silt, red-brown, wet		
9							
10	3	40		SP		PID 10' to 11' 0.2 ppm	
11							
12					End of boring at 12 ft bgs		
13							
14							
15							



# LOG OF BORING WGP-18

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U.S. EPA  
Florida Gas Site  
W.O # 12634.001.001.0601.00

Date Started	: 5/18/2006	Logged By	: J. Chrestensen
Date Completed	: 5/18/2006	Checked By	: J. Chrestensen
Hole Diameter	: 2 inches	Drilled By	: MDEQ
Drilling Method	: Geoprobe	Crew Chief	: Mark Henry
Sampling Method	: Geoprobe/Discrete Sampler	Geoprobe	: Geoprobe 6600

Depth in Feet	Samples	% Rec- overy	GRAPHIC	USCS	DESCRIPTION	REMARKS	Water Levels
0					SAND, fine to medium grained, trace silt, red-brown, wet		
1							
2	1	50					
3				SP		PID 2' to 3' 0.0 ppm	
4							
5							
6	2	90		SP	SAND, fine to medium grained, little silt, dark brown, wet	PID 6' to 7' 3.0 ppm	
7				SC	CLAYEY SAND, medium grained, little silt, red-brown, wet		
8							
End of boring at 8 ft bgs							
9							
10							
11							
12							



# LOG OF BORING WGP-19

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U.S. EPA  
Florida Gas Site  
W.O # 12634.001.001.0601.00

Date Started	: 5/18/2006	Logged By	: J. Chrestensen
Date Completed	: 5/18/2006	Checked By	: J. Chrestensen
Hole Diameter	: 2 inches	Drilled By	: MDEQ
Drilling Method	: Geoprobe	Crew Chief	: Mark Henry
Sampling Method	: Geoprobe/Discrete Sampler	Geoprobe	: Geoprobe 6600

Depth in Feet	Samples	% Rec- overy	GRAPHIC	USCS	DESCRIPTION	REMARKS	Water Levels
0					SAND, fine to medium grained, trace silt, trace fine gravel, red-brown, wet		
1							
2	1	50					
3							
4				SP		PID 3' to 4' 0.1 ppm	
5							
6	2	80					
7				SP	SAND, fine to medium grained, trace silt, trace fine gravel, red-brown, wet, sheen	PID 7' to 7.5' 0.8 ppm	
8				SC	CLAYEY SAND, medium grained, little silt, red-brown, wet	PID 8' 0.1 ppm	
End of boring at 8 ft bgs							
9							
10							
11							
12							



# LOG OF BORING WGP-20

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U.S. EPA  
Florida Gas Site  
W.O # 12634.001.001.0601.00

Date Started	: 5/18/2006	Logged By	: J. Chrestensen
Date Completed	: 5/18/2006	Checked By	: J. Chrestensen
Hole Diameter	: 2 inches	Drilled By	: MDEQ
Drilling Method	: Geoprobe	Crew Chief	: Mark Henry
Sampling Method	: Geoprobe/Discrete Sampler	Geoprobe	: Geoprobe 6600

Depth in Feet	Samples	% Rec- overy	GRAPHIC	USCS	DESCRIPTION	REMARKS	Water Levels
0					SAND, fine to medium grained, trace silt, red-brown, wet		
1							
2	1	60		SP			
3							
4					SAND, fine to medium grained, trace silt, dark brown, wet	PID 3.5' to 4' 0.1 ppm	
5							
6	2	80		SP			
7							
8				SM	SILTY SAND, medium grained, roots, stones at 7.75', dark brown, wet	PID 7.5' to 8' 1.0 ppm	
9					End of boring at 8 ft bgs		
10							
11							
12							

# LOG OF BORING WGP-21

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U.S. EPA  
Florida Gas Site  
W.O # 12634.001.001.0601.00

Date Started	: 5/18/2006	Logged By	: J. Chrestensen
Date Completed	: 5/18/2006	Checked By	: J. Chrestensen
Hole Diameter	: 2 inches	Drilled By	: MDEQ
Drilling Method	: Geoprobe	Crew Chief	: Mark Henry
Sampling Method	: Geoprobe/Discrete Sampler	Geoprobe	: Geoprobe 6600

Depth in Feet	Samples	% Rec- overy	GRAPHIC	USCS	DESCRIPTION	REMARKS	Water Levels
0				SW	SAND, fine to medium grained, little fine gravel, trace silt, brown, moist		
1					Topsoil, silty, roots, dark brown, moist		
2	1	70		SP	SAND, fine to medium grained, little silt, red-brown, wet		
3					SILTY SAND, medium grained, some clay, roots, dark brown-black, moist		
4				SM		PID 3' to 4' 0.6 ppm	
5							
6	2	80		SP	SAND, fine to medium grained, little silt, red-brown, wet		
7				SP	SAND, fine to medium grained, black staining, sheen, visible free product	Soil sample WGP-21 collected at 6' to 8' bgs	
8						PID 7.5' to 8.5' 10.0 ppm	
9					End of boring at 8 ft bgs		
10							
11							
12							



# LOG OF BORING WGP-22

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U.S. EPA  
Florida Gas Site  
W.O # 12634.001.001.0601.00

Date Started	: 5/18/2006	Logged By	: J. Chrestensen
Date Completed	: 5/18/2006	Checked By	: J. Chrestensen
Hole Diameter	: 2 inches	Drilled By	: MDEQ
Drilling Method	: Geoprobe	Crew Chief	: Mark Henry
Sampling Method	: Geoprobe/Discrete Sampler	Geoprobe	: Geoprobe 6600

Depth in Feet	Samples	% Rec- overy	GRAPHIC	USCS	DESCRIPTION	REMARKS	Water Levels
0					no recovery		
1	1	0		0			
2							
3							
4				SP	SAND, fine grained, some medium grained sand, roots, brown-dark brown, wet, slight sheen	PID 3.5' to 4.5' 0.3 ppm	
5	2	70		SP	SAND, fine to medium grained, trace silt, red-brown, wet		
6						PID 6' to 6.5' 0.3 ppm	
7				SC	SILTY CLAY, trace coarse sand, red-brown, moist		
End of boring at 7 ft bgs							
8							
9							
10							
11							
12							