


DC53-127

 <b>MWH</b>	MWH Americas, Inc. 335 Phoenixville Pike Malvern, Pennsylvania 19355	<b>Boring ID: SB4</b> <span style="font-size: 1.5em; font-family: cursive;">DC53-127</span> Page 1 of 5
<b>Project Name:</b> Valero  <b>Location:</b> Delaware City, DE <b>Project Number:</b> <b>Date Started:</b> 5/24/2007 <b>Date Finished:</b> 5/24/2007 <b>Drilling Method:</b> Geoprobe <b>Sampling Method:</b> <b>State Permit Number:</b> NA	<b>Boring Location:</b> Delaware City Refinery <b>Drilling Company:</b> BL Myers (J. Long)  <b>Ground Elevation (ft/msl):</b> <b>Total Depth (ft):</b> 70.0' <b>Boring Diameter (in):</b> " <b>Water Level During Drilling (ft/bgs):</b> <b>Weather Conditions:</b> <b>Logged By:</b> A. Clark	

Depth (feet)	Blow Counts	Recovery (inches)	PID (ppm)	Sample ID	Sample Interval	USCS	Lithology	Lithologic Description	Remarks
0								0' - 0.5' Brown SAND and GRAVEL, surface material	
1								0.5' - 5' Gray SAND, trace gravel, wet at 3' bgs	
2									
3									
4									
5			1078			SW		5' - 5.6' Dark gray to light gray fine-medium-grained SAND, some medium-grained rounded gravel at 5.5'-5.6' bgs, gray brown clay lense at 5.1' bgs, wet, black staining around edges	
6			113			SW		5.6' - 7' Black fine-medium-grained SAND, grading to very dark gray brown	
7			36.7						
8			19.9			CL		7' - 7.2' Very dark gray CLAY band, medium-grained subrounded gravel beneath, wet	
9			40.8			SW		7.2' - 8.4' Very dark gray brown (black 7.6'-7.9' bgs) fine-medium-grained SAND, trace gravel at bottom and coarse-grained sand, wet	
10			7.7					8.4' - 10' No Lithology	
11			0.2			GW		10' - 10.1' Coarse-grained GRAVEL fragment (or cobble), fine-coarse-grained sand, fine-coarse-grained gravel	
12			0.3			GW		10.1' - 11.8' Dark gray brown fine-medium-grained SAND, trace fine-coarse-grained gravel and coarse-grained sand	
13			0.2						
14			0.1			ML		Black 10.2'-10.4' bgs and d11.3'-11.4' bgs	
15			0.1			ML		11.8' - 11.85' Dark grayish brown SILT, wet, soft	
16			36			CL		11.85' - 12.1' Dark gray SILT, little clay, micaceous, soft, wet	
17			0.0					12.1' - 13' Black CLAY, some silt, trace rootlets	
18								13' - 15' No Lithology	



Depth (feet)	Blow Counts	Recovery (inches)	PID (ppm)	Sample ID	Sample Interval	USCS	Lithology	Lithologic Description	Remarks
15			0.0			ML		15' - 18' Very dark gray SILT, some clay, soft, slightly micaceous, trace rootlets and organics. moist	
16			0.3						
17			0.0						
18	36		0.2					18' - 20' No Lithology	
19									
20			1.6			PT		20.8' - 21.6' Dark reddish brown silty PEAT	Sampled SB4 (20-20.9) for C-14 analyses 6/27/07
21			2.8		CL		20.8' - 21' Very dark brown CLAY, little silt		
21			1.9		ML		21' - 21.6' Dark gray SILT, soft, moist		
22			1.6		PT		21.6' - 21.9' Very dark brown (10YR 2.5/2) to black silt PEAT		
22	22.8							21.9' - 25' No Lithology	
23									
24									
25			2.0			ML		25' - 25.8' Dark gray (7.5YR 4/1) SILT, some organic material (brown)	
26			1.7			PT		25.8' - 26' Very dark brown silty PEAT	
26			1.4			ML		26' - 27.1' Very dark brown to black at bottom 0.1' SILT, some organic material (brown)	
27			1.6					27.1' - 30' No Lithology	
28									
29									
30			0.9			PT		30' - 31.3' Very dark red brown silty PEAT	Sampled SB4 (30.9-31.2) for C-14 analyses 6/27/07
31			1.4						
31			1.9			ML		31.3' - 31.4' Very dark gray SILT, trace fine-grained sand, very moist	
32			1.4			ML		31.4' - 31.6' Bluish gray SILT, some coarse-grained rounded gravel, little fine-grained sand	
32			0.8			CL		31.6' - 31.9' SILT, trace fine-grained gravel and sand	
33									



Depth (feet)	Blow Counts	Recovery (inches)	PID (ppm)	Sample ID	Sample Interval	USCS	Lithology	Lithologic Description	Remarks
33								31.9' - 37' Bluish gray (GLEY 2 5/1) CLAY, some silt, olive brown silty fine-grained sand lenses last 0.2'	
34									
35			0.8						
36			0.5						
37		24	1.9					37' - 40' No Lithology	
38			0.4						
39									
40			1.2			ML		40' - 40.9' Dark gray SILT, olive brown sand, micaceous	
41			0.3			CL		40.9' - 42' Very dark gray silty CLAY, light gray micaceous laminations, stiff, moist	
42		24	1.7						
43			0.8					42' - 50' No Lithology	
44									
45									
46									
47		0							
48									
49									
50			0.5			ML		50' - 51.1' Very dark gray to dark grayish brown SILT, trace fine-grained subangular gravel, fine and coarse-grained sand, lightly micaceous, glauconite, gray	
51			0.4						



Depth (feet)	Blow Counts	Recovery (inches)	PID (ppm)	Sample ID	Sample Interval	USCS	Lithology	Lithologic Description	Remarks
52	31.2		0.1			CL		brown cemented sand layer 50.75'-50.9' bgs	
			0.2			ML		51.1' - 51.6' Very dark gray silty CLAY, glauconite	
			0.5			ML		51.6' - 52' Very dark gray to dark grayish brown SILT, trace fine-grained subangular gravel, fine and coarse-grained sand, lightly micaceous, glauconite, gray brown cemented sand layer 50.75'-50.9' bgs	
53								52' - 52.6' Very dark gray SILT, trace clay, slightly micaceous	
54								52.6' - 55' No Lithology	
55	30		3.6			CL		55' - 57.5' Very dark gray silty CLAY, stiff, lightly micaceous, trace fine-grained sand	
56			2.4						
57			2.4						
			3.3						
58								57.5' - 60' No Lithology	
59									
60	37.2		1.7			CL		60' - 63.1' Very dark gray silty CLAY, micaceous, trace fine-grained sand, gray brown fine-grained sandy lenses, pyrite at bottom and glauconite	
61			2.3						
62			1.3						
			2.2						
63			0.9						
			4.1						
64								63.1' - 65' No Lithology	
65	38.4		0.4			ML		65' - 68.2' Very dark gray SILT, some clay, micaceous, trace gray brown fine-grained sandy lenses and fine-grained sand, stiff	
66			0.3						
			0.5						
67			0.0						
			0.1						
68			0.2						
69								68.2' - 70' No Lithology	



**MWH**

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Depth (feet)	Blow Counts	Recovery (inches)	PID (ppm)	Sample ID	Sample Interval	USCS	Lithology	Lithologic Description	Remarks
70								70' End of Boirng	
71									
72									
73									
74									
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