

SOIL BORING LOG

Facility/Project Name		Driller/Drill Rig		Boring Number
Former Cliffs-Dow Plant Site		TriMedia/Geo Probe		SB-1
Site Address/Location		Technician	Drilling Method	Borehole Diameter
Wright St & Lakeshore Blvd, Marquette, MI		DDM	Direct Push	2.25 inches
Site Owner (If different than above.)		Project Number	Groundwater Depth	Comments
City of Marquette		99-059	N/A	
		Start Date	Well Name	
		8/25/2009	N/A	
		Completion Date	Grid Location	Adjacent to SS-48
		8/25/2009		

TRIMEDIA SAMPLE NUMBER	LENGTH RECOVERED	BLOW COUNT	DEPTH	USCS	PID	REMARKS			
Sample SB-1 1-2' BSG	36"		0	ML					
			-				<u>0-10" SILTY SAND</u> Silty sand and gravel, poorly graded, brown.		
			-						
			-						
			-						
			-						
			1				SP		<u>10-29" POORLY GRADED SAND</u> Sand with silt, charcoal, gravel, black.
			-						
			-						
			-						
			-						
			-						
2									
-									
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-									
3			<u>29-36" TAR</u>						
-									
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-									
4			35"		<u>0-10" TAR AND WOOD DEBRIS</u> Saturated	Saturated at 4' BSG			
-									
-									
-									
-									
-									
5	ML				<u>10-14" BROKEN BRICK</u> Red.				
-									
-									
-									
-									
-									
6									
-									
-									
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-									
7			36"		<u>0-6" TAR AND SAND</u> Tar and medium grained sand, saturated.	Saturated at 8' BSG			
-									
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8	SP				<u>6-36" POORLY GRADED SAND</u> Medium grained sand, saturated, gray.				
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12									
			EOB						

DDM	Geologist/Technician
TAG	Reviewed



SOIL BORING LOG

Facility/Project Name Former Cliffs-Dow Plant Site		Driller/Drill Rig TriMedia/Geo Probe		Boring Number SB-2	
Site Address/Location Wright St & Lakeshore Blvd, Marquette, MI		Technician DDM	Drilling Method Direct Push		Borehole Diameter 2.25 inches
Site Owner (If different than above.) City of Marquette		Project Number 99-059	Groundwater Depth N/A		Comments Adjacent to SS-26
		Start Date 8/25/2009	Well Name N/A		
		Completion Date 8/25/2009	Grid Location		

TRIMEDIA SAMPLE NUMBER	LENGTH RECOVERED	BLOW COUNT	DEPTH		USCS	PID	REMARKS
Sample SB-2 1-2' BSG	25"		0	0-4" CONCRETE Broken concrete.			
			-	4-10" WELL GRADED SAND Medium grained sand, trace gravel, reddish-brown.	SW		
			-	10-21" TAR AND SAND Tar and medium grained sand, black.			
			-	21-25" TAR			
			-				
			-				
			-				
			-				
			-				
			-				
			-				
			-				
Sample SB-2 8-9" BSG	18"		4	0-10" TAR AND WOOD DEBRIS			
			-				
			-	10-18" POORLY GRADED SAND Medium grained sand, impacted, blackish-gray.	SP		
			-				
			-				
			-				
			-				
			-				
			-				
			-				
			-				
			-				
Sample SB-2 8-9" BSG	24"		8	0-24" POORLY GRADED SAND Medium grained sand, heavily impacted, saturated, gray and black.	SP		
			-				
			-				
			-				
			-				
			-				
			-				
			-				
			-				
			-				
			-				
			-				

DDM	Geologist/Technician
TAG	Reviewed



SOIL BORING LOG

Facility/Project Name Former Cliffs-Dow Plant Site				Driller/Drill Rig TriMedia/Geo Probe		Boring Number SB-2		
Site Address/Location Wright St & Lakeshore Blvd, Marquette, MI				Technician DDM		Drilling Method Direct Push		Borehole Diameter 2.25 inches
Site Owner (If different than above.) City of Marquette				Project Number 99-059		Groundwater Depth N/A		Comments
				Start Date 8/25/2009		Well Name N/A		
				Completion Date 8/25/2009		Grid Location		
TRIMEDIA SAMPLE NUMBER	LENGTH RECOVERED	BLOW COUNT	DEPTH			USCS	PID	REMARKS
	24"		12	0-23" SAND AND TAR Medium grained sand and tar, heavily impacted, saturated, black.				
			-					
			-					
			-					
			-					
			-					
			13					
			-					
			-					
			-					
			-					
			-					
			-					
			-					
			-					
			14	23-24" POORLY GRADED SAND Medium grained sand brown.		SP		
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			15	EOB				
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			17					
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			21					
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			24					

DDM	Geologist/Technician
TAG	Reviewed



SOIL BORING LOG

Facility/Project Name				Driller/Drill Rig		Boring Number			
Former Cliffs-Dow Plant Site				TriMedia/Geo Probe		SB-3			
Site Address/Location				Technician	Drilling Method	Borehole Diameter			
Wright St & Lakeshore Blvd, Marquette, MI				DDM	Direct Push	2.25 inches			
Site Owner (If different than above.)				Project Number	Groundwater Depth	Comments			
City of Marquette				99-059	N/A	Adjacent to SS-62			
				Start Date	Well Name				
				8/25/2009	N/A				
				Completion Date	Grid Location				
				8/25/2009					
TRIMEDIA SAMPLE NUMBER	LENGTH RECOVERED	BLOW COUNT	DEPTH		USCS	PID	REMARKS		
	34"		0	0-10" POORLY GRADED SAND Coarse to medium grained sand, gravel, dark brown.	SP		First attempt, refusal at 6' BSG		
			-						
				-					
				-					
				1	10-19" POORLY GRADED SAND Medium grained sand, with few charcoal pieces, reddish-brown.	SP			
				-					
				-					
				-					
				2	19-25" BROKEN CONCRETE Broken concrete and red brick.				
				-					
				-					
				3	25-34" SILTY SAND Silty sand, charcoal and gravel, black.	ML			
			-						
			-						
			-						
			4	0-11" SILTY SAND Silty sand, charcoal and gravel, black.					
			-						
			-						
			-						
			5	EOB			Concrete Refusal at 5' BSG		
			-						
			-						
			6						
			-						
			-						
			7						
			-						
			-						
			8						
			-						
			-						
			-						
			9						
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			-						
			10						
			-						
			-						
			11						
			-						
			-						
			12						

DDM	Geologist/Technician
TAG	Reviewed



SOIL BORING LOG

Facility/Project Name Former Cliffs-Dow Plant Site				Driller/Drill Rig TriMedia/Geo Probe		Boring Number SB-4		
Site Address/Location Wright St & Lakeshore Blvd, Marquette, MI				Technician DDM	Drilling Method Direct Push	Borehole Diameter 2.25 inches		
Site Owner (If different than above.) City of Marquette				Project Number 99-059	Groundwater Depth N/A	Comments Adjacent to SS-6		
				Start Date 8/31/2009	Well Name N/A			
				Completion Date 8/31/2009	Grid Location			
TRIMEDIA SAMPLE NUMBER	LENGTH RECOVERED	BLOW COUNT	DEPTH		USCS	PID	REMARKS	
	17"		0	0-9" ORGANIC MATERIAL Organic material, black.	OL			
				-				
				-				
				-	9-12" ORGANIC MATERIAL Black silty sand and organic material, poorly graded.	OL		
				1	12-13" POORLY GRADED SAND Fine to medium grained sand and organic material, brown.	SP		
				-				
				-	13-17" ORGANIC MATERIAL Organic material, very dark brown.	OL		
				2				
				-				
				-				
				3				
				-				
				-				
	39"		4	0-11" ORGANIC MATERIAL Organic material and woody debris.	OL			
				-				
				-				
				5	11-39" POORLY GRADED SAND Medium grained sand, gray.	SP		Slight tar odor Saturated
				-				
				-				
				6				
				-				
				-				
				7				
				-				
				-				
		46"		8	0-32" POORLY GRADED SAND Medium to coarse grained sand, trace gravel, gray.	SP		Saturated
				-				
				-				
				9				
				-				
				-				
				10				
				-				
				-				
				11	32-46" POORLY GRADED SAND Fine to medium grained sand grayish brown.	SP		Saturated
				-				
				-				
				12				
				EOB				

DDM	Geologist/Technician
TAG	Reviewed



SOIL BORING LOG

Facility/Project Name				Driller/Drill Rig		Boring Number		
Former Cliffs-Dow Plant Site				TriMedia/Geo Probe		SB-5		
Site Address/Location				Technician	Drilling Method	Borehole Diameter		
Wright St & Lakeshore Blvd, Marquette, MI				DDM	Direct Push	2.25 inches		
Site Owner (If different than above.)				Project Number	Groundwater Depth	Comments		
City of Marquette				99-059	4'11"	Adjacent to SS-4		
				Start Date	Well Name			
				8/31/2009	N/A			
				Completion Date	Grid Location			
				8/31/2009				
TRIMEDIA SAMPLE NUMBER	LENGTH RECOVERED	BLOW COUNT	DEPTH		USCS	PID	REMARKS	
30"			0	<u>0-4" SILTY SAND</u> Silty sand, organic material and gravel, poorly	SM		Tar odor.	
			-	<u>4-7" SILTY SAND</u> Silty sand and charcoal, black.	SM			
			-	<u>7-9" POORLY GRADED SAND</u> Medium grained sand and gravel, brown.	SP			
			1	<u>9-23" SILTY SAND</u> Silty sand and charcoal and organic material, black.	SM			
			-					
			-					
			-	<u>23-25" SILTY SAND</u> Silty sand, reddish-brown.	SM			
			2	<u>25-28" POORLY GRADED SAND</u> Medium grained sand, black.	SP			
			-	<u>28-30" ORGANIC MATERIAL</u> Organic material, black.	OL			
			-					
			-					
			38"			4		<u>0-4" ORGANIC MATERIAL</u> Organic material, very dark brown sand.
-	<u>4-37" POORLY GRADED SAND</u> Medium grained sand, saturated, grayish brown.	SP						
-								
5	<u>11-24" POORLY GRADED SAND</u> Medium grained sand, dark gray, saturated.	SP						
-								
-								
47"			6	<u>24-38" POORLY GRADED SAND</u> Medium grained sand, grayish-brown, saturated.	SP			
			-					
			-					
			-					
			8	<u>0-48" POORLY GRADED SAND</u> fine to medium grained sand, saturated, grayish brown.	SP			
47"			9					
			-					
			-					
			10					
47"			11	<u>37-47" POORLY GRADED SAND</u> Medium grained sand, dark gray, saturated.	SP		Tar odor.	
			-					
			-					
			12	EOB				

DDM	Geologist/Technician
TAG	Reviewed



SOIL BORING LOG

Facility/Project Name Former Cliffs-Dow Plant Site				Driller/Drill Rig TriMedia/Geo Probe		Boring Number SB-6	
Site Address/Location Wright St & Lakeshore Blvd, Marquette, MI				Technician DDM	Drilling Method Direct Push	Borehole Diameter 2.25 inches	
Site Owner (If different than above.) City of Marquette				Project Number 99-059	Groundwater Depth 4'5" BSG	Comments Adjacent to SS-37	
				Start Date 8/31/2009	Well Name N/A		
				Completion Date 8/31/2009	Grid Location		
TRIMEDIA SAMPLE NUMBER	LENGTH RECOVERED	BLOW COUNT	DEPTH		USCS	PID	REMARKS
	30"		0	0-4" SILTY SAND Silty sand, organic material and gravel, poorly graded, black.	SM		Petroleum odor
			-	4-20" DEBRIS Sand and brick and concrete debris.	SM		
			-	10-16" SILTY SAND Silty medium grained sand, charcoal and gravel, black.	SM		
			1				
			-				
			-				
			-				
			-				
			-				
			-				
			-				
			-				
	36"		4	0-5" ORGANIC MATERIAL Organic material, black.	OL	122	Tar/petroleum odor Saturated at 4'5" BSG
			-	5-36" POORLY GRADED SAND Medium grained sand, saturated, dark gray.	SP		
			-				
			-				
			-				
			-				
			-				
			-				
			-				
			-				
			-				
		0"		8	0-48" POORLY GRADED SAND fine to medium grained sand, saturated, grayish brown.	SP	
			-				
			-				
			-				
			-				
			9				
			10				
			11				
			12				
				EOB			

DDM	Geologist/Technician
TAG	Reviewed



SOIL BORING LOG

Facility/Project Name				Driller/Drill Rig		Boring Number			
Former Cliffs-Dow Plant Site				TriMedia/Geo Probe		SB-7			
Site Address/Location				Technician	Drilling Method	Borehole Diameter			
Wright St & Lakeshore Blvd, Marquette, MI				DDM	Direct Push	2.25 inches			
Site Owner (If different than above.)				Project Number	Groundwater Depth	Comments			
City of Marquette				99-059	2'1" BSG	Isolated ash impacted area to the north.			
				Start Date	Well Name				
				8/31/2009	N/A				
				Completion Date	Grid Location				
				8/31/2009					
TRIMEDIA SAMPLE NUMBER	LENGTH RECOVERED	BLOW COUNT	DEPTH		USCS	PID	REMARKS		
	35"		0	0-4" SILTY SAND Silty sand, organic material and gravel, poorly graded, black.	SM				
			-						
				-	4-20" DEBRIS Sand and brick and concrete debris.				
				-					
				1	14-25" SILTY SAND Silty sand, slag, charcoal and gravel, poorly graded, black.	SM			
				-					
				-					
				2	25-35" SILTY SAND Silty sand, slag, charcoal and gravel, poorly graded, black, saturated.	SM			Tar odor Saturated at 2'1" BSG
				-					
				-					
				3					
				-					
	31"		4	0-4" ORGANIC MATERIAL Organic material, very dark brown sand.	OL			Tar odor	
			-						
				-	4-37" POORLY GRADED SAND Medium grained sand, saturated, grayish brown.	SP			Tar odor
				-					
				-	3-31" POORLY GRADED SAND Medium grained sand, saturated, dark gray.	SP			Tar odor
				5					
				-					
				-					
				6					
				-					
				-					
				7					
			-						
	48"		8	0-48" POORLY GRADED SAND fine to medium grained sand, saturated, grayish brown.	SP				
			-						
				-					
				-					
				9					
				-					
				-					
				10					
				-					
				-					
				11					
				-					
			-	40-48" POORLY GRADED SAND Fine to medium grained sand, saturated, very dark gray.	SP				
			12						
				EOB					

DDM	Geologist/Technician
TAG	Reviewed



SOIL BORING LOG

Facility/Project Name Former Cliffs-Dow Plant Site				Driller/Drill Rig TriMedia/Geo Probe		Boring Number SB-8	
Site Address/Location Wright St & Lakeshore Blvd, Marquette, MI				Technician DDM	Drilling Method Direct Push	Borehole Diameter 2.25 inches	
Site Owner (If different than above.) City of Marquette				Project Number 99-059	Groundwater Depth 4'4" BSG	Comments Adjacent to SS-18	
				Start Date 8/31/2009	Well Name N/A		
				Completion Date 8/31/2009	Grid Location		
TRIMEDIA SAMPLE NUMBER	LENGTH RECOVERED	BLOW COUNT	DEPTH		USCS	PID	REMARKS
	20"		0 - - - - 1 - - - - 2 - - - - 3 - - - - -	0-4" SILTY SAND Silty sand, organic material and gravel, poorly graded, black. 4-20" DEBRIS Sand and brick and concrete debris.	SM		
	37"		4 - - - - 5 - - - - 6 - - - - 7 - - - - -	0-4" ORGANIC MATERIAL Organic material, very dark brown sand. 4-37" POORLY GRADED SAND Medium grained sand, saturated, grayish brown.	OL SP		Saturated at 4'4" BSG Slight tar odor.
	48"		8 - - - - 9 - - - - 10 - - - - 11 - - - - 12	0-48" POORLY GRADED SAND fine to medium grained sand, saturated, grayish brown.	SP		Slight tar odor.
				EOB			

DDM	Geologist/Technician
TAG	Reviewed



SOIL BORING LOG

Facility/Project Name				Driller/Drill Rig		Boring Number		
Former Cliffs-Dow Plant Site				TriMedia/Geo Probe		SB-9		
Site Address/Location				Technician	Drilling Method	Borehole Diameter		
Wright St & Lakeshore Blvd, Marquette, MI				DDM	Direct Push	2.25 inches		
Site Owner (If different than above.)				Project Number	Groundwater Depth	Comments		
City of Marquette				99-059	8' BSG	Adjacent to SS-33		
				Start Date	Well Name			
				8/31/2009	N/A			
				Completion Date	Grid Location			
				8/31/2009				
TRIMEDIA SAMPLE NUMBER	LENGTH RECOVERED	BLOW COUNT	DEPTH		USCS	PID	REMARKS	
	21"		0	<u>0-9" POORLY GRADED SAND</u> Medium grained sand, trace gravel, brown.	SP			
			-					
				-				
				-				
				-	<u>9-15" SILTY SAND</u> Silty sand, charcoal, gravel, poorly graded, black.	SM		
				1				
				-				
				-	<u>15-21" ORGANIC MATERIAL</u> Silty sand, organic material, black.	OL		Tar odor
				-				
				-				
				-				
		4"		4	<u>0-4" ORGANIC MATERIAL</u> Organic material, very dark brown.	OL		
			-					
				-				
				-				
				-				
				5				
				-				
				-				
	45"		8	<u>0-21" POORLY GRADED SAND</u> Fine to medium grained sand, saturated, gray.	SP		Saturated at 8' BSG	
			-					
				-				
				-				
				-				
				9				
				-				
				-	<u>21-45" POORLY GRADED SAND</u> Medium grained sand, saturated, dark gray.	SP		Tar odor
				10				
				-				
				-				
				11				
			-					
			-					
			12					
				EOB				

DDM	Geologist/Technician
TAG	Reviewed



SOIL BORING LOG

Facility/Project Name				Driller/Drill Rig		Boring Number			
Former Cliffs-Dow Plant Site				TriMedia/Geo Probe		SB-10			
Site Address/Location				Technician	Drilling Method	Borehole Diameter			
Wright St & Lakeshore Blvd, Marquette, MI				DDM	Direct Push	2.25 inches			
Site Owner (If different than above.)				Project Number	Groundwater Depth	Comments			
City of Marquette				99-059	5'2" BSG	Adjacent to SS-34			
				Start Date	Well Name				
				8/31/2009	N/A				
				Completion Date	Grid Location				
				8/31/2009					
TRIMEDIA SAMPLE NUMBER	LENGTH RECOVERED	BLOW COUNT	DEPTH		USCS	PID	REMARKS		
	26"		0	<u>8-10" POORLY GRADED SAND</u> Silty sand and gravel, dark brown.	SP				
			-						
				-					
				-					
				-	<u>10-15" SILTY SAND</u> Silty sand, charcoal and gravel, poorly graded, very dark brown.	SM			
				1					
				-					
				-	<u>15-26" SILTY SAND</u> Silty sand, charcoal and gravel.	SM			
				-					
				2					
				-					
				-					
	25"		4	<u>0-6" ORGANIC MATERIAL</u> Organic material, and silty sand, black.	OL				
			-						
				-					
				-	<u>6-14" ORGANIC MATERIAL</u> Organic material, and silty sand, very dark brown.	OL			
				-					
				5					
				-	<u>14-17" POORLY GRADED SAND</u> Medium grained sand, saturated, very dark gray.	SP		Tar odor	
				-					
				-	<u>17-25" POORLY GRADED SAND</u> Medium grained sand, saturated, gray.	SP		Saturated at 5'2" BSG Tar odor	
				-					
				6					
				-					
			-						
			7						
			-						
			-						
	48"		8	<u>0-48" POORLY GRADED SAND</u> Medium grained sand, saturated, dark gray.	SP		Tar odor		
			-						
				-					
				9					
				-					
			-						
			10						
			-						
			-						
			11						
			-						
			-						
			12						
				EOB					

DDM	Geologist/Technician
TAG	Reviewed

