May 2012 Detrex Soil Boring Investigation Fields Brook Action Group's Field Notes and Photographs

HALEY & ALDRICH

MEETING SUMMARY

Route To:

Project: Fields Brands Soil Sampling

Topic: Boring log GP-36 (1st Boring)

Meeting Location: Ashtabula, OH (Detrex Facility)

Attendees (Name/Firm): H&A, URS, U.S. EPA, OEPA, Detrex

File No. 38539-000

Date: 5/1/12

Time: to

Sheet 1 of 1

Recovery	Depth (BGS)	PID	Description
	Action by		
10/48			0-0.75' BGS Limestone Gravel Fill Stiff, brown, lean CLAY mps = <1mm, Slight chem-like odor, moist, Contains minor silt component, gray mottling throughout. Black Staining 1.0-1.5' BGS
5/48	4		SAA, except clay contains occasional fracture w/ weathered surfaces.
8/48	8		
8/48	11		
8/48	12		Stiff, gray SILT, mps = <1mm, Slight Chem-like odor, wet, slight Sheen present on H_2O surface 10.5'-11.0' BGS.
	16		Stiff, gray, lean CLAY, mps = <1mm, no odor, moist, contains minor silt component. Grades back into SILT (same as silt above). Wet @ 14.5' BGS
8/48	17.5		Stiff, gray lean CLAY, mps = 5mm, no odor, moist, trace sands and gravel throughout, contains minor silt component. Glacial Till.
8/48	20		
	24		BOE @ 24' BGS
	28		

Prepared by

MS03AFZ.FRP 5 September 1997

HALEY & ALDRICH

MEETING SUMMARY

Route To:

Project: Fields Brook Soil Sampling

Topic: Boring log CP-49 (second boring)

Meeting Location: Ashtabula, OH (Detrex facility)

File No. 38539-000

Attendees (Name/Firm): H&A, URS, U.S. EPA, OEPA, Detrex

Date: 5/1/12

Time: ____ to ____

Sheet ____ of ____

Recovery	Depth (BGS)	PID	Description
	Action by		
18/48	2.0		Stiff, dark-brown SILT, mps = 2 cm, chem-like odor, moist, minor clay component.
18/48	4		Stiff, brown, lean CLAY, mps = <1 mm, chem-like odor, moist, contains minor silt component, gray mottling + iron oxide staining throughout, interbedded w/ very thin to thin silt layers. Moisture content increasing @ 4.0' BGS. Wet SILT layer 6.5-7.0' BGS, chem-like odor.
40/48	8		Clay contains fractures (near horizontal + low angle) w/ weathered surfaces. Gray @ 8.75' BGS very moist to wet, strong chem-like odor. Brown @ 10.0' BGS, observable NAPL on soil surface, strong chem-like odor.
33/48	12		Brown-gray @ 11.5, very moist. Gray @ 13' BGS.
18/48	16 / 18.5		Med-stiff, gray, SILT, mps = <1 mm, strong chem-like odor, wet trace sheen on H_2O surface.
15/48	20		Stiff, gray, lean CLAY, mps = 5 mm, strong chem-like odor, very moist, ~~trace sands + gravels throughout~~, AKF contains minor silt component, slight trace of NAPL at top of clay.
	24		Stiff except moist, contains trace sands + gravels throughout. Glacial till. BOE @ 24' BGS
	28		

Prepared by

MS03AFZ.FRP 5 September 1997

HALEY & ALDRICH

MEETING SUMMARY

Route To:

Project: Fields Brook Soil Sampling

Topic: Boring log GP-10 (Third Boring)

Meeting Location: Ashtabula, OH (Detrex Facility)

Attendees (Name/Firm): H&A, URS, U.S. EPA, OEPA, Detrex

File No. 38539-000

Date 5/1/12

Time ____ to ____

Sheet ____ of ____

Recovery	Depth (BGS)	PID	Description
	Action by		
24/48	1.75		Alternating ~~tock~~ layers of fill materials consisting of sandy CLAY w/gravel, fine SAND w/ clay, chem-like odor, moist.
			Stiff, brown, SILT w/ clay, mps = < 1 mm, chem-like odor, moist.
	4		** Poor Recovery 0-4' Interval.
18/48			* * Very Poor Recovery 4-8' Interval.
			Sample appears to be Same as above (SAA) except very moist.
	8 8.5		Strong chem-like odor.
45/48			Very Soft, dark-brown to dark red-brown, Sludge-like fill material, very moist, Strong chem-like odor, trace sands throughout.
	12 12		
11/48			Stiff, gray-brown SILT, mps = < 1 mm, Strong chem-like odor, moist, gray mottling throughout.
	14.5		Wet layer 13.5 – 14.5' BGS.
	16		Stiff, gray, Silty CLAY, mps = < 1 mm, Strong chem-like odor, moist occasional thin silt layer.
48/48			Very moist to wet @ 19' BGS, Sheen present on H_2O Surface
	20		Wet @ 20' BGS, NAPL Visible around Sample Core 20' - 22' BGS
48/48			
	22		
			Silt content decreases, grades into lean CLAY, occasional thin silt layer, very moist to wet.
	24		
			BOE @ 24' BGS
	28		

Prepared by

MS03AFZ.FRP 5 September 1997

HALEY & ALDRICH

MEETING SUMMARY

Route To:

Project: Fields Brook Soil Sampling

Topic: Boring log GP-7 (Fourth Boring)

Meeting Location: Ashtabula, OH (Detrex Facility)

Attendees (Name/Firm): H&A, URS, U.S. EPA, OEPA, Detrex

File No. 38539-000

Date: 5/1/12

Time: _____ to _____

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Recovery	Depth (BGS) Action by	PID	Description
42/48			Stiff, brown, silty CLAY, mps ~ <1mm, no odor, moist, iron oxide staining + gray mottling throughout, frequent fractures.
45/48	4		SAA, except slight chem-like odor, occasional to frequent ~~thin~~ very thin to thin silt layer.
48/48	8		Brown @ 8.25' BGS, silt content increasing w/ depth Very moist @ 9.5' BGS. 12" Thick SILT layer @ 10.25' BGS, strong chem-like odor, wet, sheen present on H_2O surface. Very moist @ 11.25', occasional fracture w/ weathered surfaces
48/48	12		Heavy iron oxide staining 13.5-14.5' BGS Gray @ 14.5' BGS, varved.
48/48	16		
18/48	20		SAA.
	24		BOE @ 24' BGS
	28		

Prepared by _____

MS03AFZ.FRP 5 September 1997

HALEY & ALDRICH

MEETING SUMMARY

Route To:

Project: Fields Brooks Soil Sampling

Topic: Boring log GP-11e (Fifth Boring)

Meeting Location: Ashtabula, OH (Detrex Facility)

Attendees (Name/Firm): H&A, URS, U.S. EPA, OEPA, Detrex

File No. 38539-000

Date 5/2/12

Time to

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Recovery	Depth (BGS)	PID	Description
Action by			
8/48		2.7	Top 3" Sandy lean CLAY w/ gravel
			Stiff, brown, lean CLAY, mps = < 1mm, Slight chem-like odor, moist,
		21.2	gray mottling + iron oxide staining throughout, occasional organic fragment.
	4	11.4	2" gravel fill layer @ 3.75 BGS
	6.0	1062	Strong chem-like odor @ 4.25 BGS
33/48		210	Very soft, gray, sludge-like fill material, Strong chem-like odor, very
		260	moist.
	8.0		Red-brown @ 7.6 w/ gravel
	8.5	890	
48/48		1116	med-dense, brown, silty GRAVEL w/ Sand, mps = 1.5cm, Strong chem-like odor,
	10		moist to very moist. ~~Fill~~ Silt content increasing w/ depth. Fill.
	10.5	2160	Stiff, brown, SILT w/ gravel + Sand, mps = 1cm, Strong chem-like odor,
			moist. Silt content increasing w/ depth
	12	1120	Grades into stiff, brown, SILT, mps = < 1mm, Strong chem-like odor,
48/48		3667	moist, frequent thin clay layers throughout, iron oxide staining throughout.
		2770	Stiff, brown, Silty CLAY, mps = < 1mm, chem-like odor, moist, iron oxide
		770	staining throughout, occasional fracture w/ weathered surfaces + ~~thin~~ thin silt
	16	390	layers throughout.
18/48		365	Gray @ 17.5' BGS, Trace NAPL-like material present on surface of
		168	Soil Core 17' – 18.5' BGS
	20	176	
		118	Wet ~~Silty~~ Clayey Silt layer 20 – 21.5' BGS w/ NAPL-like material
18/48			present on outside of Soil Core.
		190	trace NAPL visible on ~~outside~~ surface of Soil Core to ≈ 25' BGS.
	24		
		115	
36/48		14.7	Stiff, gray, silty CLAY, mps = 5mm, Strong chem-like odor,
			moist, trace sands + gravels throughout. Glacial Till.
	28		BOE @ 27' BGS

Prepared by

MS03KFZLFRP 5 September 1997

HALEY & ALDRICH

MEETING SUMMARY

Route To:

Project: Fields Brook Soil Sampling

Topic: Boring log GP-25 (sixth boring)

Meeting Location: Ashtabula, OH (Detrex facility)

Attendees (Name/Firm): H&A, URS, U.S. EPA, OEPA, Detrex

File No. 38539-000

Date 5/2/12

Time to

Sheet 1 of 1

GP-25

Recovery	Depth (BGS)	PID	Description
Action by			
43/48		9.7	Top 6" Stiff, brown, Sandy CLAY fill material. 0.5-0.75 mix of gravel + silt.
		19.7	Stiff, brown, Silty CLAY, mps = < 1 mm, slight chem-like odor, moist, iron oxide staining + gray mottling throughout, occasional fracture w/ weathered surfaces, occasional organic fragment. Fill
	4	680	
		3556	1.5" Silt layer @ 5.75' BGS, fractures becoming frequent.
		1590	
	8	2440	
		602	
		1290	gray-brown @ 10.5' BGS w/ ~~trace~~ occasional trace sand + fine gravel,
		425	interbedded w/ occasional to frequent very thin to thin silt layer.
	12	515	
		3660	
		294	
		87.5	wet silt layer 15'-16' BGS, strong chem-like odor.
	16	76.6	moist to very moist @ 16' BGS
		17.2	
		6.8	
	19.75 20	6.2	
		6.5	Stiff, gray, Silty CLAY, mps = 8 mm, chem-like odor, moist, trace sands + gravels throughout, occasional shale fragment. Glacial Till.
		7.1	
	24	6.1	
	28		BOE @ 27' BGS

Prepared by

MS03AFZ.FRP 5 September 1997

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HALEY & ALDRICH

MEETING SUMMARY

Route To:

Project: Fields Brooks Soil Sampling

Topic: Boring log GP-28 (7th Boring)

Meeting Location: Ashtabula, OH (Detrex facility)

Attendees (Name/Firm): H&A, URS, U.S. EPA, OEPA, Detrex

File No. 38539-000

Date: 5/2/12

Time: to

Sheet 1 of 1

Recovery	Depth (BGS)	PID	Description
	Action by		
28/48			Top 3" organics and brown Sandy CLAY
			Stiff, brown, lean CLAY, mps = 3mm, no odor, moist, gray mottling and iron oxide staining throughout, Contains trace Sands and fine gravel, occasional thin Silt layer and occasional fracture w/ weathered surfaces.
	4		Less gray mottling and iron oxide staining at 4.0' BGS.
42/48		51.2	
		161	
	8	2.88	
48/48		410	Gray at 9.5' BGS, Visible NAPL-like material on outside of soil
		1510	Core 9.5 - 10.5' BGS. Material is Varved lacustrine deposits.
		18.5	
	12	9.8	Wet at 12' BGS.
48/48			12'-16' Sample Contains frequent ~~silt~~ thin Silt layers.
	16		No Silt layers at 16' BGS, material is moist to very moist.
8/48			Contains trace Sands and fine gravel at 17.5' BGS, transitioning to glacial Till
	20		Grades into Stiff gray lean CLAY, mps = 5 mm, no odor, moist trace Sands and gravel throughout, contains minor silt Component, Glacial Till
18/48			
	24		
36/36			
	28		BOE at 27' BGS

Prepared by

MS034FZ.FRP 5 September 1997

HALEY & ALDRICH

MEETING SUMMARY

Route To:

Project: Fields Brook Soil Sampling

Topic: Boring Log GP-20 (8th Boring)

Meeting Location: Ashtabula, OH (Detrex Facility)

Attendees (Name/Firm): H&A, URS, U.S. EPA, OEPA, Detrex

File No. 38539-000

Date: 5/2/12

Time: to

Sheet 1 of 1

Recovery	Depth (BGS)	PID	Description
	Action by		
28/48	0	6.8	med-Stiff, brown, silty CLAY, mps=<1mm, no odor, moist, iron oxide
	1.5	36.5	staining and gray mottling throughout. Fill
			Soft, gray, sludge-like fill material, Strong chem-like odor
	4	802	* Poor Recovery 4-8' Interval, material appears to be Same as above.
24/48		2241	
		2665	
	8		NAPL-Like material Present 8-9' BGS
		4055	
48/48		3065	Stiff, brown, Clayey SILT, mps=<1mm, Strong chem-like odor, moist,
		326	heavily fractured with weathered surfaces; occasional gray mottling.
	12	612	Gray at 11.5' BGS.
		51.8	Very moist to wet 12'-13' BGS.
18/48	14	40.6	Heavily fractured with iron oxide staining throughout 13-14' BGS.
			Stiff, gray, fat CLAY interbedded with SILT, moist to very
		47.3	moist, chem-like odor.
	16		wet 16'-19' BGS
8/48			
	20		
18/48			
			Stiff, gray silty CLAY, mps=6mm, no odor, moist, trace
	24		Sands and fine gravel throughout. Glacial Till.
			BOE at 24' BGS
	28		

Prepared by

MS03AFZ.FRP 5 September 1997

HALEY & ALDRICH

MEETING SUMMARY

Route To:

Project: Fields Brooks Soil Sampling

Topic: Boring log GP-11 (9th Boring)

Meeting Location: Ashtabula, OH (Detrex facility)

Attendees (Name/Firm): H&A, URS, U.S. EPA, OEPA, Detrex

File No. 38559-000

Date: 5/2/12

Time: to

Sheet 1 of 1

Recovery	Depth (BGS)	PID	Description
	Action by		
32/48			Mod-Stiff, brown, lean CLAY, mps = < 1mm, no odor, moist, iron oxide staining and gray mottling throughout, Contains minor silt Component. Fill
	4		Olive-gray at 3.75' BGS
38/48			
	6.75	55	
	8	26	Soft, brown, Sludge-like material, Strong chem-like odor, moist to very moist, ~~Con~~ Contains Sands + gravels 8' - 8.75' BGS. Fill
	10	2630	At 9.75' BGS, 3-inch thick gravel layer with possible NAPL-like Material, Strong chem-like odor, material covered in sheen
48/48			Stiff, gray, SILT, mps = < 1mm, Strong chem-like odor, moist
	12		
48/48			Very stiff, gray, silty CLAY, mps = < 1mm, chem-like odor, moist. Wet silt layer 13.25 - 13.75' BGS
	16		
48/48			Wet silt layer 17.25 - 17.75' BGS.
	20		
48/48			Grades into stiff, gray, silty CLAY, mps = 7 mm, no odor, moist, trace sands + fine gravel throughout. Glacial Till.
	24		BOE at 24' BGS
	28		

Prepared by

MS03AFZ.FRP 5 September 1997

HALEY & ALDRICH

MEETING SUMMARY

Route To:

Project: Fields Brooks Soil Sampling

Topic: Boring log GP 21 (10th Boring)

Meeting Location: Ashtabula, OH (Detrex Facility)

Attendees (Name/Firm): H&A, URS, U.S. EPA, OEPA, Detrex

File No. 38539-000

Date 5/2/12

Time 1 to 1

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Recovery	Depth (BGS) Action by	PID	Description
38/48			Stiff, brown, lean CLAY, mps = < 1mm, no odor, moist, iron oxide staining and gray mottling throughout. Contains minor silt component.
	4		
		5.8	
42/48			Wet silt layer 6.5 - 7.75' BGS
	8	2752	
		2665	Grades into stiff, brown, silty CLAY, chem-like odor, moist,
48/48		1712	Contains vertical & horizontal fractures with weathered surfaces.
		21.6	Wet silt zone 10.75 - 11.0' BGS.
	12	N/D	
45/48			Becomes interbedded w/ silty clay layers (occasional)
	16		
38/48			
	20	10.3	
40/48			Stiff, gray, silty CLAY, mps = 8 mm, no odor, moist, trace sands and gravel throughout. Glacial Till.
	24		BOE @ 24' BGS
	28		

Prepared by

MSDAFZ.FRP 5 September 1997

HALEY & ALDRICH

MEETING SUMMARY

Route To:

Project: Fields Brook Soil Sampling

Topic: Boring log GP-6 (17th Boring)

Meeting Location: Ashtabula, OH (Detrex Facility)

Attendees (Name/Firm): H&A, URS, U.S. EPA, OEPA, Detrex

File No. 38539-000

Date: 5/2/12

Time: ____ to ____

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Recovery	Depth (BGS) Action by	PID	Description
45/48			Stiff, brown, silty CLAY, mps = < 1 mm, no odor, moist, iron oxide staining and gray mottling throughout. Occasional broken glass. Fill
	4	381	
42/48		1134	5.5'-6.5', mix of coal-like material, glass and other industrial fill materials, strong chem-like odor
	6.5	341	
		1887	Slight NAPL-like material 6.5-7.0' BGS
48/48	8	28.9	Stiff, brown, silty CLAY, mps = < 1 mm, strong chem-like odor, moist. Lacustrine deposits.
		660	Heavily fractured at 8.0' BGS, fractures are mostly horizontal, also
	12	1048	contains vertical fractures. Fracture surfaces are weathered.
48/48		52.9	10.5-12.0' BGS, Trace NAPL-like material present on soil
		272	core surface.
		97.6	Gray at 12.5' BGS, No fracturing, less silt component.
			Slight NAPL-like material on soil core surface in 16'-20' interval
	16		
48/48		42.9	
	18.5	117	
	20	75.5	Stiff, gray, SILT, mps = < 1 mm, chem-like odor, wet, minor clay
48/48		32.1	Component from 18-19.75' BGS
			Grades into clayey SILT, mps = < 1 mm, chem-like odor, very moist
	24	15.5	to wet.
48/48			Wet at 24' BGS
			Med-stiff, gray CLAY, very moist, slight chem-like odor
	28		lacustrine
			BOE @ 28' BGS

Prepared by

MS934AFZ.FRP 5 September 1997

HALEY & ALDRICH

MEETING SUMMARY

Route To:

Project: Fields Brook Soil Sampling

Topic: Boring Log GP-48 (12th Boring)

Meeting Location: Ashtabula, OH (Detrex facility)

Attendees (Name/Firm): H&A, URS, U.S. EPA, OEPA, Detrex

File No. 38539-000

Date: ~~6/APR~~ 5/2/12

Time: to

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Recovery	Depth (BGS)	PID	Description
	Action by		
42/48			Stiff, brown, silty CLAY, mps = < 1 mm, no odor, moist. Fill
			Slight chem-like odor at 1.5' BGS
		32.5	
	4	760	Strong chem-like odor at 3.5' BGS
		1297	
15/48		102	Black granular industrial fill material, very moist, Strong chem-like odor.
	6.5	360	
	8	720	Stiff, brown, silty CLAY, mps = < 1 mm, strong chem-like odor, moist.
		129	Possible Trace NAPL-like material on soil core surface 7.5-8.0' BGS.
48/48			Iron oxide staining and trace gray mottling throughout, fractured with
		628	weathered surfaces, some fractures are high angle, occasional
		1933	silt layer
	12	325	Gray layer 12-12.75' BGS
48/48			2.5" highly weathered layer at 12.75' BGS
		4117	
	16	2027	Gray at 15.5' BGS
48/48		474	17.5'-18.5' Wet SILT layer
	20	29	19.25-20.0' Wet clayey SILT layer.
		192	
13/48	22.5	268	
	24 24	1753	Med-stiff, gray, SILT, mps = < 1 mm, Strong chem-like odor, wet,
		27.8	heavy LNAPL-like staining present
36/36		16.3	Stiff, gray, silty CLAY, mps = < 1 mm, Strong chem-like odor,
			very moist to wet, varved, occasional thin silt layer.
	28		BOE at 27' BGS

Prepared by

MS03AFZ.FRP 5 September 1997

HALEY & ALDRICH

MEETING SUMMARY

Route To:

Project: Fields Brook Soil Sampling

Topic: Boring log GPMW-10 (13th Boring)

Meeting Location: Ashtabula, OH (Detrex Facility)

Attendees (Name/Firm): H&A, URS, U.S. EPA, OEPA, Detrex

File No. 38539-000

Date: 5/2/12

Time: + to

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Recovery	Depth (BGS)	PID	Description
Action by			Stiff, brown, Silty CLAY, mps = < 1mm, no odor, moist, iron oxide staining + gray mottling throughout. Lacustrine.
	4		
			Chem-like odor at 5.5' BGS.
		17.4	
		11.7	
	8	10.1	
		17.6	Med-dense, brown, SILT, mps = < 1mm, slight Chem-like odor, moist, interbedded with occasional silty Clay layer.
		N/A	Wet at 8.0' BGS
	12		
	16		
	20		Stiff, gray, silty CLAY, mps = 8mm, no odor, moist, trace Sand and fine gravel throughout. Glacial Till.
	24		BOE at 24' BGS
	28		

Prepared by

MS03AFZ.FRP 5 September 1997

Photographs

Photos of Soil Boring GP-6

ynolds

HOMER'S
BUCKET

Photos of Soil Boring GP-7

Photos of Soil Boring GP-10

Photos of Soil Boring GP-11

Photos of Soil Boring GP-16

SULLIVAN

HAD

Photos of Soil Boring GP-20

HITACHI

HAD
330-925-1000

Photos of Soil Boring GP-21

HAD

Photos of Soil Boring GP-25

11.7 eV
RAE

Photos of Soil Boring GP-28

11.7 eV
RAE

Photos of Soil Boring GP-36

Photos of Soil Boring GP-48

Photos of Soil Boring GP-49