



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

12 June 2015

Work Order: 1505192

Price: \$2,600.50

Amy Keranen
MDEQ-RRD-UP
1504 W. Washington St.
Marquette, MI 49855

RE: ABANDONED MINING WASTES-TORCH LAKE NS

I certify that the analyses performed by the MDEQ Environmental Laboratory were conducted by methods approved by the U.S. Environmental Protection Agency and other appropriate regulatory agencies .

Sincerely,

George Krisztian
Laboratory Director



**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL LABORATORY**

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

MDEQ-RRD-UP
1504 W. Washington St.
Marquette MI, 49855

Project: ABANDONED MINING WASTES-TORCH LAKE NS
Site Code: 31000098
Project Manager: Amy Keranen

Reported:
06/12/2015

Analytical Report for Samples

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Qualifier
CHTC-SB-04-6"-12"	1505192-01	Soil/Sediment	05/17/2015	05/20/2015	
CHTC-SB-04-12"-5'	1505192-02	Soil/Sediment	05/17/2015	05/20/2015	
CHTC-SB-08-0-6"	1505192-03	Soil/Sediment	05/18/2015	05/20/2015	
CHTC-SB-08-6"-4'	1505192-04	Soil/Sediment	05/18/2015	05/20/2015	
CHTC-SB-07-0-6"	1505192-05	Soil/Sediment	05/18/2015	05/20/2015	
CHTC-SB-07-6"-4'	1505192-06	Soil/Sediment	05/18/2015	05/20/2015	
CHTC-SB-10-0-6"	1505192-07	Soil/Sediment	05/18/2015	05/20/2015	
CHTC-SB-10-6"-4'	1505192-08	Soil/Sediment	05/18/2015	05/20/2015	
CHTC-SB-10-6"-4' DUP	1505192-09	Soil/Sediment	05/18/2015	05/20/2015	
CHTC-SB-09-0-6"	1505192-10	Soil/Sediment	05/18/2015	05/20/2015	
CHTC-SB-09-6"-4'	1505192-11	Soil/Sediment	05/18/2015	05/20/2015	
CHTC-SB-14-0-6"	1505192-12	Soil/Sediment	05/18/2015	05/20/2015	
CHTC-SB-14-6"-7'	1505192-13	Soil/Sediment	05/18/2015	05/20/2015	
CHTC-SB-15-0-6"	1505192-14	Soil/Sediment	05/18/2015	05/20/2015	
CHTC-SB-15-6"-5'	1505192-15	Soil/Sediment	05/18/2015	05/20/2015	
CHTC-SB-34-0-6"	1505192-16	Soil/Sediment	05/18/2015	05/20/2015	
CHTC-SB-34-6"-2'	1505192-17	Soil/Sediment	05/18/2015	05/20/2015	

Notes and Definitions

- Y25 Sample extract would not concentrate to the normal volume causing raised reporting limits.
- Y20 Reporting Limits (RL) raised due to matrix.
- X Methods 8260 & 624 are used to analyze volatile organics that have boiling points below 200 °C. 2-Methylnaphthalene & naphthalene have boiling points above 200 °C and are better suited to analysis by methods 8270 & 625 as semivolatile organics.
- T Reported value is less than the reporting limit (RL). Result is estimated.
- A07 Result(s) and reporting limit(s) are estimated due to poor precision.
- A04 Result is estimated due to high matrix spike recovery.
- ND Indicates compound analyzed for but not detected
- RL Reporting Limit
- NA Not Applicable
- dry Sample results reported on a dry weight basis



**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL LABORATORY**

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: CHTC-SB-04-6"-12"

Lab ID: 1505192-01

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PCBs as Aroclors									
12674-11-2	Aroclor 1016	ND	130	ug/kg dry	1	06/10/15	B5F0210	8081/8082	
11104-28-2	Aroclor 1221	ND	130	ug/kg dry	1	06/10/15	B5F0210	8081/8082	
11141-16-5	Aroclor 1232	ND	130	ug/kg dry	1	06/10/15	B5F0210	8081/8082	
53469-21-9	Aroclor 1242	ND	130	ug/kg dry	1	06/10/15	B5F0210	8081/8082	
12672-29-6	Aroclor 1248	ND	130	ug/kg dry	1	06/10/15	B5F0210	8081/8082	
11097-69-1	Aroclor 1254	ND	130	ug/kg dry	1	06/10/15	B5F0210	8081/8082	
11096-82-5	Aroclor 1260	ND	130	ug/kg dry	1	06/10/15	B5F0210	8081/8082	
37324-23-5	Aroclor 1262	ND	130	ug/kg dry	1	06/10/15	B5F0210	8081/8082	
11100-14-4	Aroclor 1268	ND	130	ug/kg dry	1	06/10/15	B5F0210	8081/8082	
<i>Surrogate: Decachlorobiphenyl</i>			74.2 %	30-150		06/10/15	B5F0210	8081/8082	
<i>Surrogate: Tetrachloro-m-xylene</i>			82.6 %	30-150		06/10/15	B5F0210	8081/8082	
Inorganics-General Chemistry									
TS	% Total Solids	79.6	0.1	%	1	05/20/15	B5E2020	2540 B	



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
 ENVIRONMENTAL LABORATORY

P.O. Box 30270
 Lansing, MI 48909
 TEL: (517) 335-9800
 FAX: (517) 335-9600

Client ID: CHTC-SB-04-12''-5'

Lab ID: 1505192-02

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
630-20-6	1,1,1,2-Tetrachloroethane	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
71-55-6	1,1,1-Trichloroethane	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
79-34-5	1,1,2,2-Tetrachloroethane	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
79-00-5	1,1,2-Trichloroethane	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
75-34-3	1,1-Dichloroethane	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
75-35-4	1,1-Dichloroethylene	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
87-61-6	1,2,3-Trichlorobenzene	ND	300	ug/kg dry	50	05/27/15	B5E2708	8260	
96-18-4	1,2,3-Trichloropropane	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
526-73-8	1,2,3-Trimethylbenzene	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
120-82-1	1,2,4-Trichlorobenzene	ND	300	ug/kg dry	50	05/27/15	B5E2708	8260	
95-63-6	1,2,4-Trimethylbenzene	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
96-12-8	1,2-Dibromo-3-chloropropane	ND	300	ug/kg dry	50	05/27/15	B5E2708	8260	
106-93-4	1,2-Dibromoethane	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
95-50-1	1,2-Dichlorobenzene	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
107-06-2	1,2-Dichloroethane	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
78-87-5	1,2-Dichloropropane	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
108-67-8	1,3,5-Trimethylbenzene	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
541-73-1	1,3-Dichlorobenzene	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
106-46-7	1,4-Dichlorobenzene	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
78-93-3	2-Butanone (MEK)	ND	300	ug/kg dry	50	05/27/15	B5E2708	8260	
591-78-6	2-Hexanone	ND	300	ug/kg dry	50	05/27/15	B5E2708	8260	
91-57-6	2-Methylnaphthalene	ND	300	ug/kg dry	50	05/27/15	B5E2708	8260	X
67-64-1	2-Propanone (acetone)	ND	1200	ug/kg dry	50	05/27/15	B5E2708	8260	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	300	ug/kg dry	50	05/27/15	B5E2708	8260	
107-13-1	Acrylonitrile	ND	300	ug/kg dry	50	05/27/15	B5E2708	8260	
71-43-2	Benzene	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
108-86-1	Bromobenzene	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
74-97-5	Bromochloromethane	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
75-27-4	Bromodichloromethane	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
75-25-2	Bromoform	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
74-83-9	Bromomethane	ND	300	ug/kg dry	50	05/27/15	B5E2708	8260	
75-15-0	Carbon disulfide	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
56-23-5	Carbon tetrachloride	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
108-90-7	Chlorobenzene	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
75-00-3	Chloroethane	ND	300	ug/kg dry	50	05/27/15	B5E2708	8260	
67-66-3	Chloroform	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
74-87-3	Chloromethane	ND	300	ug/kg dry	50	05/27/15	B5E2708	8260	
156-59-2	cis-1,2-Dichloroethylene	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
10061-01-5	cis-1,3-Dichloropropylene	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
110-82-7	Cyclohexane	ND	300	ug/kg dry	50	05/27/15	B5E2708	8260	
124-48-1	Dibromochloromethane	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
 ENVIRONMENTAL LABORATORY

P.O. Box 30270
 Lansing, MI 48909
 TEL: (517) 335-9800
 FAX: (517) 335-9600

Client ID: CHTC-SB-04-12"-5'

Lab ID: 1505192-02

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
74-95-3	Dibromomethane	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
75-71-8	Dichlorodifluoromethane	ND	300	ug/kg dry	50	05/27/15	B5E2708	8260	
60-29-7	Diethyl ether	ND	300	ug/kg dry	50	05/27/15	B5E2708	8260	
108-20-3	Diisopropyl Ether	ND	300	ug/kg dry	50	05/27/15	B5E2708	8260	
100-41-4	Ethylbenzene	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
637-92-3	Ethyltertiarybutylether	ND	300	ug/kg dry	50	05/27/15	B5E2708	8260	
67-72-1	Hexachloroethane	ND	300	ug/kg dry	50	05/27/15	B5E2708	8260	
98-82-8	Isopropylbenzene	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
1330-20-7	m & p - Xylene	ND	120	ug/kg dry	50	05/27/15	B5E2708	8260	
74-88-4	Methyl iodide	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
75-09-2	Methylene chloride	ND	300	ug/kg dry	50	05/27/15	B5E2708	8260	
1634-04-4	Methyltertiarybutylether	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
91-20-3	Naphthalene	ND	300	ug/kg dry	50	05/27/15	B5E2708	8260	X
104-51-8	n-Butylbenzene	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
103-65-1	n-Propylbenzene	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
95-47-6	o-Xylene	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
99-87-6	p-Isopropyl toluene	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
135-98-8	sec-Butylbenzene	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
100-42-5	Styrene	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
98-06-6	tert-Butylbenzene	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
75-65-0	tertiary Butyl Alcohol	ND	3000	ug/kg dry	50	05/27/15	B5E2708	8260	
994-05-8	tertiaryAmylmethylether	ND	300	ug/kg dry	50	05/27/15	B5E2708	8260	
127-18-4	Tetrachloroethylene	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
109-99-9	Tetrahydrofuran	ND	300	ug/kg dry	50	05/27/15	B5E2708	8260	
108-88-3	Toluene	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
156-60-5	trans-1,2-Dichloroethylene	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
10061-02-6	trans-1,3-Dichloropropylene	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
110-57-6	trans-1,4-Dichloro-2-butene	ND	300	ug/kg dry	50	05/27/15	B5E2708	8260	
79-01-6	Trichloroethylene	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
75-69-4	Trichlorofluoromethane	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
75-01-4	Vinyl chloride	ND	59	ug/kg dry	50	05/27/15	B5E2708	8260	
Surrogate: Bromofluorobenzene			108 %	40.3-194		05/27/15	B5E2708	8260	
Surrogate: Dibromofluoromethane			112 %	52.1-217		05/27/15	B5E2708	8260	
Surrogate: Toluene-d8			117 %	55.4-196		05/27/15	B5E2708	8260	



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
 ENVIRONMENTAL LABORATORY

P.O. Box 30270
 Lansing, MI 48909
 TEL: (517) 335-9800
 FAX: (517) 335-9600

Client ID: CHTC-SB-04-12''-5'

Lab ID: 1505192-02

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Semivolatiles									
									See note Y20
91-57-6	2-Methylnaphthalene	ND	560	ug/kg dry	1	06/01/15	B5E2617	8270	
83-32-9	Acenaphthene	ND	220	ug/kg dry	1	06/01/15	B5E2617	8270	
208-96-8	Acenaphthylene	ND	220	ug/kg dry	1	06/01/15	B5E2617	8270	
120-12-7	Anthracene	ND	220	ug/kg dry	1	06/01/15	B5E2617	8270	
56-55-3	Benz[a]anthracene	ND	220	ug/kg dry	1	06/01/15	B5E2617	8270	
50-32-8	Benzo[a]pyrene	ND	450	ug/kg dry	1	06/01/15	B5E2617	8270	
205-99-2	Benzo[b]fluoranthene	ND	450	ug/kg dry	1	06/01/15	B5E2617	8270	
191-24-2	Benzo[g,h,i]perylene	ND	450	ug/kg dry	1	06/01/15	B5E2617	8270	
207-08-9	Benzo[k]fluoranthene	ND	450	ug/kg dry	1	06/01/15	B5E2617	8270	
218-01-9	Chrysene	ND	220	ug/kg dry	1	06/01/15	B5E2617	8270	
53-70-3	Dibenz[a,h]anthracene	ND	450	ug/kg dry	1	06/01/15	B5E2617	8270	
206-44-0	Fluoranthene	ND	220	ug/kg dry	1	06/01/15	B5E2617	8270	
86-73-7	Fluorene	ND	220	ug/kg dry	1	06/01/15	B5E2617	8270	
193-39-5	Indeno(1,2,3-c,d)pyrene	ND	450	ug/kg dry	1	06/01/15	B5E2617	8270	
91-20-3	Naphthalene	ND	220	ug/kg dry	1	06/01/15	B5E2617	8270	
85-01-8	Phenanthrene	ND	220	ug/kg dry	1	06/01/15	B5E2617	8270	
129-00-0	Pyrene	ND	220	ug/kg dry	1	06/01/15	B5E2617	8270	
<i>Surrogate: 2-Fluorobiphenyl</i>			76.2 %	32.9-115		06/01/15	B5E2617	8270	
<i>Surrogate: Nitrobenzene-d5</i>			60.7 %	31.8-115		06/01/15	B5E2617	8270	
<i>Surrogate: p-Terphenyl-d14</i>			76.6 %	38.5-115		06/01/15	B5E2617	8270	
Organics-PCBs as Aroclors									
12674-11-2	Aroclor 1016	ND	110	ug/kg dry	1	06/10/15	B5F0210	8081/8082	
11104-28-2	Aroclor 1221	ND	110	ug/kg dry	1	06/10/15	B5F0210	8081/8082	
11141-16-5	Aroclor 1232	ND	110	ug/kg dry	1	06/10/15	B5F0210	8081/8082	
53469-21-9	Aroclor 1242	ND	110	ug/kg dry	1	06/10/15	B5F0210	8081/8082	
12672-29-6	Aroclor 1248	ND	110	ug/kg dry	1	06/10/15	B5F0210	8081/8082	
11097-69-1	Aroclor 1254	ND	110	ug/kg dry	1	06/10/15	B5F0210	8081/8082	
11096-82-5	Aroclor 1260	ND	110	ug/kg dry	1	06/10/15	B5F0210	8081/8082	
37324-23-5	Aroclor 1262	ND	110	ug/kg dry	1	06/10/15	B5F0210	8081/8082	
11100-14-4	Aroclor 1268	ND	110	ug/kg dry	1	06/10/15	B5F0210	8081/8082	
<i>Surrogate: Decachlorobiphenyl</i>			92.7 %	30-150		06/10/15	B5F0210	8081/8082	
<i>Surrogate: Tetrachloro-m-xylene</i>			86.6 %	30-150		06/10/15	B5F0210	8081/8082	



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: CHTC-SB-04-12''-5'

Lab ID: 1505192-02

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Inorganics-General Chemistry									
TS	% Total Solids	89.7	0.1	%	1	05/20/15	B5E2020	2540 B	



**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL LABORATORY**

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: CHTC-SB-08-0-6"

Lab ID: 1505192-03

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PCBs as Aroclors									
12674-11-2	Aroclor 1016	ND	120	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
11104-28-2	Aroclor 1221	ND	120	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
11141-16-5	Aroclor 1232	ND	120	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
53469-21-9	Aroclor 1242	ND	120	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
12672-29-6	Aroclor 1248	ND	120	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
11097-69-1	Aroclor 1254	ND	120	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
11096-82-5	Aroclor 1260	ND	120	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
37324-23-5	Aroclor 1262	ND	120	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
11100-14-4	Aroclor 1268	ND	120	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
<i>Surrogate: Decachlorobiphenyl</i>			67.6 %	30-150		06/10/15	B5F0317	8081/8082	
<i>Surrogate: Tetrachloro-m-xylene</i>			73.5 %	30-150		06/10/15	B5F0317	8081/8082	
Inorganics-General Chemistry									
TS	% Total Solids	80.6	0.1	%	1	05/20/15	B5E2020	2540 B	



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: CHTC-SB-08-6"-4'

Lab ID: 1505192-04

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PCBs as Aroclors									See note Y20
12674-11-2	Aroclor 1016	ND	280	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
11104-28-2	Aroclor 1221	ND	280	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
11141-16-5	Aroclor 1232	ND	280	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
53469-21-9	Aroclor 1242	ND	280	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
12672-29-6	Aroclor 1248	ND	280	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
11097-69-1	Aroclor 1254	ND	280	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
11096-82-5	Aroclor 1260	ND	280	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
37324-23-5	Aroclor 1262	ND	280	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
11100-14-4	Aroclor 1268	ND	280	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
<i>Surrogate: Decachlorobiphenyl</i>			51.5 %	30-150		06/10/15	B5F0317	8081/8082	
<i>Surrogate: Tetrachloro-m-xylene</i>			67.7 %	30-150		06/10/15	B5F0317	8081/8082	
Inorganics-General Chemistry									
TS	% Total Solids	71.5	0.1	%	1	05/20/15	B5E2020	2540 B	



**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL LABORATORY**

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: CHTC-SB-07-0-6"

Lab ID: 1505192-05

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PCBs as Aroclors									
12674-11-2	Aroclor 1016	ND	110	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
11104-28-2	Aroclor 1221	ND	110	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
11141-16-5	Aroclor 1232	ND	110	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
53469-21-9	Aroclor 1242	ND	110	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
12672-29-6	Aroclor 1248	ND	110	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
11097-69-1	Aroclor 1254	ND	110	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
11096-82-5	Aroclor 1260	ND	110	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
37324-23-5	Aroclor 1262	ND	110	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
11100-14-4	Aroclor 1268	ND	110	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
<i>Surrogate: Decachlorobiphenyl</i>			67.8 %	30-150		06/10/15	B5F0317	8081/8082	
<i>Surrogate: Tetrachloro-m-xylene</i>			74.6 %	30-150		06/10/15	B5F0317	8081/8082	
Inorganics-General Chemistry									
TS	% Total Solids	87.2	0.1	%	1	05/20/15	B5E2020	2540 B	



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: CHTC-SB-07-6"-4'

Lab ID: 1505192-06

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PCBs as Aroclors									
12674-11-2	Aroclor 1016	ND	120	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
11104-28-2	Aroclor 1221	ND	120	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
11141-16-5	Aroclor 1232	ND	120	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
53469-21-9	Aroclor 1242	ND	120	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
12672-29-6	Aroclor 1248	ND	120	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
11097-69-1	Aroclor 1254	ND	120	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
11096-82-5	Aroclor 1260	ND	120	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
37324-23-5	Aroclor 1262	ND	120	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
11100-14-4	Aroclor 1268	ND	120	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
<i>Surrogate: Decachlorobiphenyl</i>			62.9 %	30-150		06/10/15	B5F0317	8081/8082	
<i>Surrogate: Tetrachloro-m-xylene</i>			71.7 %	30-150		06/10/15	B5F0317	8081/8082	
Inorganics-General Chemistry									
TS	% Total Solids	83.1	0.1	%	1	05/20/15	B5E2020	2540 B	



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: CHTC-SB-10-0-6"

Lab ID: 1505192-07

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PCBs as Aroclors									
12674-11-2	Aroclor 1016	ND	130	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
11104-28-2	Aroclor 1221	ND	130	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
11141-16-5	Aroclor 1232	ND	130	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
53469-21-9	Aroclor 1242	ND	130	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
12672-29-6	Aroclor 1248	ND	130	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
11097-69-1	Aroclor 1254	ND	130	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
11096-82-5	Aroclor 1260	ND	130	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
37324-23-5	Aroclor 1262	ND	130	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
11100-14-4	Aroclor 1268	ND	130	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
<i>Surrogate: Decachlorobiphenyl</i>			78.9 %	30-150		06/10/15	B5F0317	8081/8082	
<i>Surrogate: Tetrachloro-m-xylene</i>			75.9 %	30-150		06/10/15	B5F0317	8081/8082	
Inorganics-General Chemistry									
TS	% Total Solids	79.5	0.1	%	1	05/20/15	B5E2020	2540 B	



**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL LABORATORY**

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: CHTC-SB-10-6"-4'

Lab ID: 1505192-08

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PCBs as Aroclors									
12674-11-2	Aroclor 1016	ND	120	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
11104-28-2	Aroclor 1221	ND	120	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
11141-16-5	Aroclor 1232	ND	120	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
53469-21-9	Aroclor 1242	ND	120	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
12672-29-6	Aroclor 1248	ND	120	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
11097-69-1	Aroclor 1254	ND	120	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
11096-82-5	Aroclor 1260	ND	120	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
37324-23-5	Aroclor 1262	ND	120	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
11100-14-4	Aroclor 1268	ND	120	ug/kg dry	1	06/10/15	B5F0317	8081/8082	
<i>Surrogate: Decachlorobiphenyl</i>			84.2 %	30-150		06/10/15	B5F0317	8081/8082	
<i>Surrogate: Tetrachloro-m-xylene</i>			81.3 %	30-150		06/10/15	B5F0317	8081/8082	
Inorganics-General Chemistry									
TS	% Total Solids	85.8	0.1	%	1	05/20/15	B5E2020	2540 B	



**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL LABORATORY**

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: CHTC-SB-10-6''-4' DUP

Lab ID: 1505192-09

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PCBs as Aroclors									
12674-11-2	Aroclor 1016	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11104-28-2	Aroclor 1221	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11141-16-5	Aroclor 1232	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
53469-21-9	Aroclor 1242	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
12672-29-6	Aroclor 1248	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11097-69-1	Aroclor 1254	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11096-82-5	Aroclor 1260	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
37324-23-5	Aroclor 1262	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11100-14-4	Aroclor 1268	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
<i>Surrogate: Decachlorobiphenyl</i>			88.2 %	30-150		06/11/15	B5F0317	8081/8082	
<i>Surrogate: Tetrachloro-m-xylene</i>			70.4 %	30-150		06/11/15	B5F0317	8081/8082	
Inorganics-General Chemistry									
TS	% Total Solids	85.7	0.1	%	1	05/20/15	B5E2020	2540 B	



**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL LABORATORY**

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: CHTC-SB-09-0-6"

Lab ID: 1505192-10

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PCBs as Aroclors									
12674-11-2	Aroclor 1016	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11104-28-2	Aroclor 1221	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11141-16-5	Aroclor 1232	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
53469-21-9	Aroclor 1242	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
12672-29-6	Aroclor 1248	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11097-69-1	Aroclor 1254	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11096-82-5	Aroclor 1260	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
37324-23-5	Aroclor 1262	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11100-14-4	Aroclor 1268	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
<i>Surrogate: Decachlorobiphenyl</i>			72.7 %	30-150		06/11/15	B5F0317	8081/8082	
<i>Surrogate: Tetrachloro-m-xylene</i>			74.4 %	30-150		06/11/15	B5F0317	8081/8082	
Inorganics-General Chemistry									
TS	% Total Solids	86.1	0.1	%	1	05/20/15	B5E2020	2540 B	



**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL LABORATORY**

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: CHTC-SB-09-6"-4'

Lab ID: 1505192-11

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PCBs as Aroclors									
12674-11-2	Aroclor 1016	ND	170	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11104-28-2	Aroclor 1221	ND	170	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11141-16-5	Aroclor 1232	ND	170	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
53469-21-9	Aroclor 1242	ND	170	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
12672-29-6	Aroclor 1248	ND	170	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11097-69-1	Aroclor 1254	ND	170	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11096-82-5	Aroclor 1260	ND	170	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
37324-23-5	Aroclor 1262	ND	170	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11100-14-4	Aroclor 1268	ND	170	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
<i>Surrogate: Decachlorobiphenyl</i>			73.5 %	30-150		06/11/15	B5F0317	8081/8082	
<i>Surrogate: Tetrachloro-m-xylene</i>			67.5 %	30-150		06/11/15	B5F0317	8081/8082	
Inorganics-General Chemistry									
TS	% Total Solids	58.8	0.1	%	1	05/20/15	B5E2020	2540 B	



**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL LABORATORY**

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: CHTC-SB-14-0-6"

Lab ID: 1505192-12

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PCBs as Aroclors									
12674-11-2	Aroclor 1016	ND	130	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11104-28-2	Aroclor 1221	ND	130	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11141-16-5	Aroclor 1232	ND	130	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
53469-21-9	Aroclor 1242	ND	130	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
12672-29-6	Aroclor 1248	ND	130	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11097-69-1	Aroclor 1254	ND	130	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11096-82-5	Aroclor 1260	ND	130	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
37324-23-5	Aroclor 1262	ND	130	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11100-14-4	Aroclor 1268	ND	130	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
<i>Surrogate: Decachlorobiphenyl</i>			77.5 %	30-150		06/11/15	B5F0317	8081/8082	
<i>Surrogate: Tetrachloro-m-xylene</i>			72.3 %	30-150		06/11/15	B5F0317	8081/8082	
Inorganics-General Chemistry									
TS	% Total Solids	79.2	0.1	%	1	05/20/15	B5E2020	2540 B	



**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL LABORATORY**

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: CHTC-SB-14-6''-7'

Lab ID: 1505192-13

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PCBs as Aroclors									
12674-11-2	Aroclor 1016	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11104-28-2	Aroclor 1221	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11141-16-5	Aroclor 1232	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
53469-21-9	Aroclor 1242	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
12672-29-6	Aroclor 1248	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11097-69-1	Aroclor 1254	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11096-82-5	Aroclor 1260	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
37324-23-5	Aroclor 1262	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11100-14-4	Aroclor 1268	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
<i>Surrogate: Decachlorobiphenyl</i>			78.5 %	30-150		06/11/15	B5F0317	8081/8082	
<i>Surrogate: Tetrachloro-m-xylene</i>			72.4 %	30-150		06/11/15	B5F0317	8081/8082	
Inorganics-General Chemistry									
TS	% Total Solids	84.5	0.1	%	1	05/20/15	B5E2020	2540 B	



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: CHTC-SB-15-0-6"

Lab ID: 1505192-14

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PCBs as Aroclors									
12674-11-2	Aroclor 1016	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11104-28-2	Aroclor 1221	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11141-16-5	Aroclor 1232	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
53469-21-9	Aroclor 1242	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
12672-29-6	Aroclor 1248	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11097-69-1	Aroclor 1254	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11096-82-5	Aroclor 1260	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
37324-23-5	Aroclor 1262	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11100-14-4	Aroclor 1268	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
<i>Surrogate: Decachlorobiphenyl</i>			76.7 %	30-150		06/11/15	B5F0317	8081/8082	
<i>Surrogate: Tetrachloro-m-xylene</i>			73.6 %	30-150		06/11/15	B5F0317	8081/8082	
Inorganics-General Chemistry									
TS	% Total Solids	81.7	0.1	%	1	05/20/15	B5E2020	2540 B	



**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL LABORATORY**

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: CHTC-SB-15-6"-5'

Lab ID: 1505192-15

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PCBs as Aroclors									
12674-11-2	Aroclor 1016	ND	110	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11104-28-2	Aroclor 1221	ND	110	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11141-16-5	Aroclor 1232	ND	110	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
53469-21-9	Aroclor 1242	ND	110	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
12672-29-6	Aroclor 1248	ND	110	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11097-69-1	Aroclor 1254	ND	110	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11096-82-5	Aroclor 1260	ND	110	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
37324-23-5	Aroclor 1262	ND	110	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11100-14-4	Aroclor 1268	ND	110	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
<i>Surrogate: Decachlorobiphenyl</i>			73.6 %	30-150		06/11/15	B5F0317	8081/8082	
<i>Surrogate: Tetrachloro-m-xylene</i>			68.6 %	30-150		06/11/15	B5F0317	8081/8082	
Inorganics-General Chemistry									
TS	% Total Solids	91.8	0.1	%	1	05/20/15	B5E2020	2540 B	



**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL LABORATORY**

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: CHTC-SB-34-0-6"

Lab ID: 1505192-16

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PCBs as Aroclors									
12674-11-2	Aroclor 1016	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11104-28-2	Aroclor 1221	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11141-16-5	Aroclor 1232	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
53469-21-9	Aroclor 1242	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
12672-29-6	Aroclor 1248	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11097-69-1	Aroclor 1254	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11096-82-5	Aroclor 1260	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
37324-23-5	Aroclor 1262	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11100-14-4	Aroclor 1268	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
<i>Surrogate: Decachlorobiphenyl</i>			87.2 %	30-150		06/11/15	B5F0317	8081/8082	
<i>Surrogate: Tetrachloro-m-xylene</i>			82.1 %	30-150		06/11/15	B5F0317	8081/8082	
Inorganics-General Chemistry									
TS	% Total Solids	81.4	0.1	%	1	05/20/15	B5E2020	2540 B	



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: CHTC-SB-34-6"-2'

Lab ID: 1505192-17

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PCBs as Aroclors									
12674-11-2	Aroclor 1016	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11104-28-2	Aroclor 1221	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11141-16-5	Aroclor 1232	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
53469-21-9	Aroclor 1242	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
12672-29-6	Aroclor 1248	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11097-69-1	Aroclor 1254	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11096-82-5	Aroclor 1260	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
37324-23-5	Aroclor 1262	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
11100-14-4	Aroclor 1268	ND	120	ug/kg dry	1	06/11/15	B5F0317	8081/8082	
<i>Surrogate: Decachlorobiphenyl</i>			83.7 %	30-150		06/11/15	B5F0317	8081/8082	
<i>Surrogate: Tetrachloro-m-xylene</i>			69.5 %	30-150		06/11/15	B5F0317	8081/8082	
Inorganics-General Chemistry									
TS	% Total Solids	80.7	0.1	%	1	05/21/15	B5E2123	2540 B	



Analysis Request Sheet

Lab Work Order Number 1505190	Project Name Abandoned Mining Wastes - Torch Lake PCB C&H Tamarack City Ops	Matrix SOIL
Site Code/Project Number 31000098	AT 13	CC Email 1 j.binkley@westonsolutions.com
Dept-Division-District DEQ-RRD-UP District	Index 44251	CC Email 2 daniel.liebau@westonsolutions.com
State Project Manager Amy Keranen	PCA 30872	CC Email 3 plncumbel@michigan.gov
State Project Manager Email keranena@michigan.gov	Project 456990	Overflow Lab Choice 1
State Project Manager Phone 906-337-0389	Phase 00	Overflow Lab Choice 2
		Project IAI Days
		Sample Collector AK/JP/AB-DEQ-RRD
		Project Due Date
		Sample Collector Phone 906-337-0389
		Accept Analysis hold time codes no
		Contract Firm Weston Solutions
		Contract Firm Primary Contact Jeff Binkley
		Primary Contact Phone 906-523-5457

Lab Use Only	Field Sample Identification	Collection Date	Collection Time	Container Count	Comments
01	CHTC-SB-04 6"-12"	5-17-15	0810		
02	CHTC-SB-04 12"-5"	5-17-15	0810		
03	CHTC-SB-08 - 0-6"	5-18-15	0830		
04	CHTC-SB-08 - 6"-4'	5-18-15	0835		
05	CHTC-SB-07 - 0-6"	5-18-15	0900		
06	CHTC-SB-07 - 6"-4'	5/18/15	0905		
07	CHTC-SB-10 - 0-6"	5/18/15	0943		
08	CHTC-SB-10 - 6"-4'	5/18/15	0945		
09	CHTC-SB-10 - 6"-4' DuP	5/18/15	0946		
10	CHTC-SB-09 - 0-6"	5/18/15	1050	182	

ORGANIC CHEMISTRY	METALS CHEMISTRY PACKAGES	MS - TOTAL METALS	GENERAL CHEMISTRY
VOA - Volatile Organic Acidic Volatiles - Full List 1 2 3 4 5 6 7 8 9 10 BTEX/MTBE/TMB only 1 2 3 4 5 6 7 8 9 10 Chlorinated only 1 2 3 4 5 6 7 8 9 10 GRO 1 2 3 4 5 6 7 8 9 10 1,4 Dioxane 1 2 3 4 5 6 7 8 9 10	OpMemo2 - Total 1 2 3 4 5 6 7 8 9 10 (Sb,As,Ba,Be,Cd,Cr,Cu,Co,Fe,Pb,Mn,Hg,Mo,Ni,Se,Ag,Tl,V,Zn) Michigan10 - Total 1 2 3 4 5 6 7 8 9 10 (As,Ba,Cd,Cr,Cu,Pb,Hg,Se,Ag,Zn)	Silver - Ag 1 2 3 4 5 6 7 8 9 10 Aluminum - Al 1 2 3 4 5 6 7 8 9 10 Arsenic - As 1 2 3 4 5 6 7 8 9 10 Barium - Ba 1 2 3 4 5 6 7 8 9 10 Beryllium - Be 1 2 3 4 5 6 7 8 9 10 Cadmium - Cd 1 2 3 4 5 6 7 8 9 10 Cobalt - Co 1 2 3 4 5 6 7 8 9 10 Chromium - Cr 1 2 3 4 5 6 7 8 9 10 Copper - Cu 1 2 3 4 5 6 7 8 9 10 Iron - Fe 1 2 3 4 5 6 7 8 9 10 Mercury - Hg 1 2 3 4 5 6 7 8 9 10 Lithium - Li 1 2 3 4 5 6 7 8 9 10 Manganese - Mn 1 2 3 4 5 6 7 8 9 10 Molybdenum - Mo 1 2 3 4 5 6 7 8 9 10 Nickel - Ni 1 2 3 4 5 6 7 8 9 10 Lead - Pb 1 2 3 4 5 6 7 8 9 10 Antimony - Sb 1 2 3 4 5 6 7 8 9 10 Selenium - Se 1 2 3 4 5 6 7 8 9 10 Strontium - Sr 1 2 3 4 5 6 7 8 9 10 Titanium - Ti 1 2 3 4 5 6 7 8 9 10 Thallium - Tl 1 2 3 4 5 6 7 8 9 10 Uranium - U 1 2 3 4 5 6 7 8 9 10 Vanadium - V 1 2 3 4 5 6 7 8 9 10 Zinc - Zn 1 2 3 4 5 6 7 8 9 10 Calcium - Ca 1 2 3 4 5 6 7 8 9 10 Potassium - K 1 2 3 4 5 6 7 8 9 10 Magnesium - Mg 1 2 3 4 5 6 7 8 9 10 Sodium - Na 1 2 3 4 5 6 7 8 9 10	GS - General Chemistry Total Cyanide - CN 1 2 3 4 5 6 7 8 9 10 Available Cyanide - CN 1 2 3 4 5 6 7 8 9 10 Chem Oxyg Dem - COD 1 2 3 4 5 6 7 8 9 10 Total Org Carbon - TOC 1 2 3 4 5 6 7 8 9 10 Kjeldahl Nitrogen - KN 1 2 3 4 5 6 7 8 9 10 Total Phosphorus - TP 1 2 3 4 5 6 7 8 9 10
OS - Pesticides, PCBs Pesticides & PCBs 1 2 3 4 5 6 7 8 9 10 Pesticides only 1 2 3 4 5 6 7 8 9 10 PCBs only 1 2 3 4 5 6 7 8 9 10 Toxaphene 1 2 3 4 5 6 7 8 9 10			
BNA - Base Neutral Acids BNAs 1 2 3 4 5 6 7 8 9 10 PNAs only 1 2 3 4 5 6 7 8 9 10 BNs only 1 2 3 4 5 6 7 8 9 10			
Organic Specialty Requests Library search - Volatiles 1 2 3 4 5 6 7 8 9 10 Library search - SemiVols 1 2 3 4 5 6 7 8 9 10 Finger Print 1 2 3 4 5 6 7 8 9 10 DRO / ORO 1 2 3 4 5 6 7 8 9 10			

Chain of Custody	Relinquished by	Received By	Date / Time
	Print Name & Org. JEFF PINCUMBE MDEQ	Melissa Smith LCCPA	5/20/15 9:37
	Signature: <i>Jeff Pincombe</i>		
	Print Name & Org. 		
Signature: 			
Print Name & Org. 			
Signature: 			



Analysis Request Sheet

Lab Work Order Number 1505192	Project Name Abandoned Mining Wastes - Torch Lake PCB C&H Tamarack City Ops	Matrix SOIL
Site Code/Project Number 31000098	AY 13	CC Email 1 j.binkley@westonsolutions.com
Dept-Division-District DEQ-RRD-UP District	Index 44251	CC Email 2 daniel.liebau@westonsolutions.com
State Project Manager Amy Keranen	PCA 30872	CC Email 3 plncumbel@michigan.gov
State Project Manager Email keranena@michigan.gov	Project 456990	Overflow Lab Choice 1
State Project Manager Phone 906-337-0389	Phase 00	Overflow Lab Choice 2
		Project IAI Days
		Project Due Date
		Sample Collector AK/JP/AB-DEQ-RRD
		Sample Collector Phone 906-337-0389
		Contract Firm Weston Solutions
		Contract Firm Primary Contact Jeff Binkley
		Primary Contact Phone 906-523-5457
		Accept Analysis hold time codes no

Lab Use Only	Field Sample Identification	Collection Date	Collection Time	Container Count	Comments
1	CHTC-SB-09-6"-4"	5/18/15	1050	1-802	
2	CHTC-SB-14-0-6"	5/18/15	1120	1-802	
3	CHTC-SB-14-6"-7"	5/18/15	1125	1-802	
4	CHTC-SB-15-0-6"	5/18/15	1305	1-802	
5	CHTC-SB-15-6"-5"	5/18/15	1308	1-802	
6	CHTC-SB-34-0-6"	5/18/15	1430	1-802	
7	CHTC-SB-34-6"-2"	5/18/15	1435	1-802	
8	CHTC-SB-				
9	CHTC-SB-				
10	CHTC-SB-				

ORGANIC CHEMISTRY	METALS CHEMISTRY PACKAGES	MS - TOTAL METALS	GENERAL CHEMISTRY
VOA - Volatile Organic Acidic Volatiles - Full List 1 2 3 4 5 6 7 8 9 10 BTEX/MTBE/TMB only 1 2 3 4 5 6 7 8 9 10 Chlorinated only 1 2 3 4 5 6 7 8 9 10 GRO 1 2 3 4 5 6 7 8 9 10 1,4 Dioxane 1 2 3 4 5 6 7 8 9 10 OS - Pesticides, PCBs Pesticides & PCBs 1 2 3 4 5 6 7 8 9 10 Pesticides only 1 2 3 4 5 6 7 8 9 10 PCBs only 1 2 3 4 5 6 7 8 9 10 Toxaphene 1 2 3 4 5 6 7 8 9 10 BNA - Base Neutral Acids BNAs 1 2 3 4 5 6 7 8 9 10 PNAs only 1 2 3 4 5 6 7 8 9 10 BNs only 1 2 3 4 5 6 7 8 9 10 Organic Specialty Requests Library search - Volatiles 1 2 3 4 5 6 7 8 9 10 Library search - SemiVols 1 2 3 4 5 6 7 8 9 10 Finger Print 1 2 3 4 5 6 7 8 9 10 DRO / ORO 1 2 3 4 5 6 7 8 9 10	OpMemo2 - Total 1 2 3 4 5 6 7 8 9 10 (Sb,As,Ba,Bc,Cd,Cr,Cu,Co,Fe,Pb,Mn,Hg,Mo,Ni,Se,Ag,Tl,V,Zn) Michigan10 - Total 1 2 3 4 5 6 7 8 9 10 (As,Ba,Cd,Cr,Cu,Pb,Hg,Se,Ag,Zn)	Silver - Ag 1 2 3 4 5 6 7 8 9 10 Aluminum - Al 1 2 3 4 5 6 7 8 9 10 Arsenic - As 1 2 3 4 5 6 7 8 9 10 Barium - Ba 1 2 3 4 5 6 7 8 9 10 Beryllium - Be 1 2 3 4 5 6 7 8 9 10 Cadmium - Cd 1 2 3 4 5 6 7 8 9 10 Cobalt - Co 1 2 3 4 5 6 7 8 9 10 Chromium - Cr 1 2 3 4 5 6 7 8 9 10 Copper - Cu 1 2 3 4 5 6 7 8 9 10 Iron - Fe 1 2 3 4 5 6 7 8 9 10 Mercury - Hg 1 2 3 4 5 6 7 8 9 10 Lithium - Li 1 2 3 4 5 6 7 8 9 10 Manganese - Mn 1 2 3 4 5 6 7 8 9 10 Molybdenum - Mo 1 2 3 4 5 6 7 8 9 10 Nickel - Ni 1 2 3 4 5 6 7 8 9 10 Lead - Pb 1 2 3 4 5 6 7 8 9 10 Antimony - Sb 1 2 3 4 5 6 7 8 9 10 Selenium - Se 1 2 3 4 5 6 7 8 9 10 Strontium - Sr 1 2 3 4 5 6 7 8 9 10 Titanium - Ti 1 2 3 4 5 6 7 8 9 10 Thallium - Tl 1 2 3 4 5 6 7 8 9 10 Uranium - U 1 2 3 4 5 6 7 8 9 10 Vanadium - V 1 2 3 4 5 6 7 8 9 10 Zinc - Zn 1 2 3 4 5 6 7 8 9 10 Calcium - Ca 1 2 3 4 5 6 7 8 9 10 Potassium - K 1 2 3 4 5 6 7 8 9 10 Magnesium - Mg 1 2 3 4 5 6 7 8 9 10 Sodium - Na 1 2 3 4 5 6 7 8 9 10	GS - General Chemistry Total Cyanide - CN 1 2 3 4 5 6 7 8 9 10 Available Cyanide - CN 1 2 3 4 5 6 7 8 9 10 Chem Oxyg Dem - COD 1 2 3 4 5 6 7 8 9 10 Total Org Carbon - TOC 1 2 3 4 5 6 7 8 9 10 Kjeldahl Nitrogen - KN 1 2 3 4 5 6 7 8 9 10 Total Phosphorus - TP 1 2 3 4 5 6 7 8 9 10

Chain of Custody	Relinquished by Print Name & Org. JEFF PINCUMBE MDEQ Signature: <i>[Signature]</i>	Received By <i>[Signature]</i>	Date / Time 5/20/15 9:37
	Print Name & Org. Signature:		
	Print Name & Org. Signature:		
	Print Name & Org. Signature:		