



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL LABORATORY

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

12 August 2015

Work Order: 1507171

Price: \$3,280.00

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

RE: ABANDONED MINING WASTES-TAMARACK CITY

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



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

Project: ABANDONED MINING WASTES-TAMARACK CITY Ops
 Site Code: 31000098
 Project Manager: Amy Keranen

Reported:
 08/12/2015

Analytical Report for Samples

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Qualifier
CHTC-SD-07-1-3' dup	1507171-01	Soil/Sediment	07/11/2015	07/15/2015	
CHTC-SD-07-1-3'	1507171-02	Soil/Sediment	07/11/2015	07/15/2015	
CHTC-SD-07-3-5'	1507171-03	Soil/Sediment	07/11/2015	07/15/2015	
CHTC-SD-06-0-6"	1507171-04	Soil/Sediment	07/11/2015	07/15/2015	
CHTC-SD-06-1-3'	1507171-05	Soil/Sediment	07/11/2015	07/15/2015	
CHTC-SD-06-3-3.92'	1507171-06	Soil/Sediment	07/11/2015	07/15/2015	
CHTC-SD-20-0-6"	1507171-07	Soil/Sediment	07/12/2015	07/15/2015	
CHTC-SD-20-1-3'	1507171-08	Soil/Sediment	07/12/2015	07/15/2015	
CHTC-SD-20-3-4.25'	1507171-09	Soil/Sediment	07/12/2015	07/15/2015	
CHTC-SD-17-0-6"	1507171-10	Soil/Sediment	07/12/2015	07/15/2015	
CHTC-SD-17-1-3'	1507171-11	Soil/Sediment	07/12/2015	07/15/2015	
CHTC-SD-17-3-5'	1507171-12	Soil/Sediment	07/12/2015	07/15/2015	
CHTC-SD-18-0-6"	1507171-13	Soil/Sediment	07/12/2015	07/15/2015	
CHTC-SD-18-1-3'	1507171-14	Soil/Sediment	07/12/2015	07/15/2015	
CHTC-SD-18-3-5'	1507171-15	Soil/Sediment	07/12/2015	07/15/2015	

Notes and Definitions

- Y20 Reporting Limits (RL) raised due to matrix.
- Y18 Sample was extracted/analyzed past USEPA maximum allowable holding time due to laboratory error. Data is estimated.
- X3 Spike recovery is not applicable due to large target analyte concentration in the source sample.
- PI Result is estimated due to possible interference.
- H Recommended laboratory holding time was exceeded.
- A09 Result is estimated due to high recovery of batch quality control.
- A07 Result(s) and reporting limit(s) are estimated due to poor precision.
- ND Indicates compound analyzed for but not detected
- RL Reporting Limit
- NA Not Applicable
- dry Sample results reported on a dry weight basis



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Client ID: CHTC-SD-07-1-3' dup

Lab ID: 1507171-01

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	290	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11104-28-2	Aroclor 1221	ND	290	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11141-16-5	Aroclor 1232	ND	290	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
53469-21-9	Aroclor 1242	ND	290	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
12672-29-6	Aroclor 1248	ND	290	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11097-69-1	Aroclor 1254	ND	290	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11096-82-5	Aroclor 1260	ND	290	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
37324-23-5	Aroclor 1262	ND	290	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11100-14-4	Aroclor 1268	ND	290	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
<i>Surrogate: Decachlorobiphenyl</i>			71.1 %	30-150		07/30/15	B5G2223	8081/8082	
<i>Surrogate: Tetrachloro-m-xylene</i>			65.5 %	30-150		07/30/15	B5G2223	8081/8082	
Inorganics-General Chemistry									
TS	% Total Solids	69.4	0.1	%	1	07/17/15	B5G1708	2540 B	



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Client ID: CHTC-SD-07-1-3'

Lab ID: 1507171-02

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	07/30/15	B5G2223	8081/8082	
11104-28-2	Aroclor 1221	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11141-16-5	Aroclor 1232	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
53469-21-9	Aroclor 1242	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
12672-29-6	Aroclor 1248	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11097-69-1	Aroclor 1254	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11096-82-5	Aroclor 1260	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
37324-23-5	Aroclor 1262	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11100-14-4	Aroclor 1268	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
<i>Surrogate: Decachlorobiphenyl</i>			68.9 %	30-150		07/30/15	B5G2223	8081/8082	
<i>Surrogate: Tetrachloro-m-xylene</i>			57.7 %	30-150		07/30/15	B5G2223	8081/8082	
Inorganics-General Chemistry									
TS	% Total Solids	70.4	0.1	%	1	07/17/15	B5G1708	2540 B	



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Client ID: CHTC-SD-07-3-5'

Lab ID: 1507171-03

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	07/30/15	B5G2223	8081/8082	
11104-28-2	Aroclor 1221	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11141-16-5	Aroclor 1232	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
53469-21-9	Aroclor 1242	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
12672-29-6	Aroclor 1248	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11097-69-1	Aroclor 1254	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11096-82-5	Aroclor 1260	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
37324-23-5	Aroclor 1262	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11100-14-4	Aroclor 1268	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
<i>Surrogate: Decachlorobiphenyl</i>			72.0 %	30-150		07/30/15	B5G2223	8081/8082	
<i>Surrogate: Tetrachloro-m-xylene</i>			63.3 %	30-150		07/30/15	B5G2223	8081/8082	
Inorganics-General Chemistry									
TS	% Total Solids	72.4	0.1	%	1	07/17/15	B5G1708	2540 B	



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Client ID: CHTC-SD-06-0-6"

Lab ID: 1507171-04

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	260	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11104-28-2	Aroclor 1221	ND	260	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11141-16-5	Aroclor 1232	ND	260	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
53469-21-9	Aroclor 1242	ND	260	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
12672-29-6	Aroclor 1248	ND	260	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11097-69-1	Aroclor 1254	ND	260	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11096-82-5	Aroclor 1260	ND	260	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
37324-23-5	Aroclor 1262	ND	260	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11100-14-4	Aroclor 1268	ND	260	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
<i>Surrogate: Decachlorobiphenyl</i>			81.5 %	30-150		07/30/15	B5G2223	8081/8082	
<i>Surrogate: Tetrachloro-m-xylene</i>			69.8 %	30-150		07/30/15	B5G2223	8081/8082	
Inorganics-General Chemistry									
TS	% Total Solids	76.9	0.1	%	1	07/17/15	B5G1708	2540 B	
57-12-5	Total Cyanide	ND	0.13	mg/kg dry	1	07/27/15	B5G2216	ASTM D7284	
Inorganics-Metals									
7429-90-5	Aluminium	12000	100	mg/kg dry	1000	07/29/15	B5G2401	6020/200.8	
7440-36-0	Antimony	ND	0.3	mg/kg dry	10	07/23/15	B5G2111	6020/200.8	
7440-38-2	Arsenic	1.3	0.5	mg/kg dry	10	07/28/15	B5G2401	6020/200.8	
7440-39-3	Barium	24	1.0	mg/kg dry	10	07/29/15	B5G2401	6020/200.8	
7440-41-7	Beryllium	0.5	0.2	mg/kg dry	10	07/28/15	B5G2401	6020/200.8	
7440-43-9	Cadmium	ND	0.2	mg/kg dry	10	07/28/15	B5G2401	6020/200.8	
7440-47-3	Chromium	24	2.0	mg/kg dry	10	07/28/15	B5G2401	6020/200.8	
7440-48-4	Cobalt	16	0.5	mg/kg dry	10	07/28/15	B5G2401	6020/200.8	
7440-50-8	Copper	510	1.0	mg/kg dry	10	07/28/15	B5G2401	6020/200.8	
7439-89-6	Iron	20000	5.0	mg/kg dry	10	07/28/15	B5G2401	6010/200.7	
7439-92-1	Lead	2.4	1.0	mg/kg dry	10	07/29/15	B5G2401	6020/200.8	
7439-93-2	Lithium	3.5	0.2	mg/kg dry	1	07/28/15	B5G2401	6010/200.7	
7439-95-4	Magnesium	9900	50	mg/kg dry	10	07/28/15	B5G2401	6010/200.7	
7439-96-5	Manganese	250	1.0	mg/kg dry	10	07/28/15	B5G2401	6020/200.8	
7439-97-6	Mercury	ND	0.07	mg/kg dry	1	07/30/15	B5G2905	7471/245.5	
7440-02-0	Nickel	22	1.0	mg/kg dry	10	07/28/15	B5G2401	6020/200.8	
7782-49-2	Selenium	ND	0.2	mg/kg dry	10	07/28/15	B5G2401	6020/200.8	
7440-22-4	Silver	0.7	0.1	mg/kg dry	10	07/28/15	B5G2401	6020/200.8	
7440-28-0	Thallium	ND	0.5	mg/kg dry	10	07/29/15	B5G2401	6020/200.8	
7440-66-6	Zinc	54	1.0	mg/kg dry	10	07/28/15	B5G2401	6020/200.8	



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Client ID: CHTC-SD-06-1-3'

Lab ID: 1507171-05

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Semivolatiles									
									See note Y20
91-57-6	2-Methylnaphthalene	ND	630	ug/kg dry	1	07/23/15	B5G1736	8270	
83-32-9	Acenaphthene	ND	250	ug/kg dry	1	07/23/15	B5G1736	8270	
208-96-8	Acenaphthylene	ND	250	ug/kg dry	1	07/23/15	B5G1736	8270	
120-12-7	Anthracene	ND	250	ug/kg dry	1	07/23/15	B5G1736	8270	
56-55-3	Benz[a]anthracene	ND	250	ug/kg dry	1	07/23/15	B5G1736	8270	
50-32-8	Benzo[a]pyrene	ND	500	ug/kg dry	1	07/23/15	B5G1736	8270	
205-99-2	Benzo[b]fluoranthene	ND	500	ug/kg dry	1	07/23/15	B5G1736	8270	
191-24-2	Benzo[g,h,i]perylene	ND	500	ug/kg dry	1	07/23/15	B5G1736	8270	
207-08-9	Benzo[k]fluoranthene	ND	500	ug/kg dry	1	07/23/15	B5G1736	8270	
218-01-9	Chrysene	ND	250	ug/kg dry	1	07/23/15	B5G1736	8270	
53-70-3	Dibenz[a,h]anthracene	ND	500	ug/kg dry	1	07/23/15	B5G1736	8270	
206-44-0	Fluoranthene	ND	250	ug/kg dry	1	07/23/15	B5G1736	8270	
86-73-7	Fluorene	ND	250	ug/kg dry	1	07/23/15	B5G1736	8270	
193-39-5	Indeno(1,2,3-c,d)pyrene	ND	500	ug/kg dry	1	07/23/15	B5G1736	8270	
91-20-3	Naphthalene	ND	250	ug/kg dry	1	07/23/15	B5G1736	8270	
85-01-8	Phenanthrene	ND	250	ug/kg dry	1	07/23/15	B5G1736	8270	
129-00-0	Pyrene	ND	250	ug/kg dry	1	07/23/15	B5G1736	8270	
<i>Surrogate: 2-Fluorobiphenyl</i>			62.8 %	32.9-115		07/23/15	B5G1736	8270	
<i>Surrogate: Nitrobenzene-d5</i>			60.9 %	31.8-115		07/23/15	B5G1736	8270	
<i>Surrogate: p-Terphenyl-d14</i>			90.6 %	38.5-115		07/23/15	B5G1736	8270	
Organics-PCBs as Aroclors									
12674-11-2	Aroclor 1016	ND	130	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11104-28-2	Aroclor 1221	ND	130	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11141-16-5	Aroclor 1232	ND	130	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
53469-21-9	Aroclor 1242	ND	130	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
12672-29-6	Aroclor 1248	ND	130	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11097-69-1	Aroclor 1254	ND	130	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11096-82-5	Aroclor 1260	ND	130	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
37324-23-5	Aroclor 1262	ND	130	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11100-14-4	Aroclor 1268	ND	130	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
<i>Surrogate: Decachlorobiphenyl</i>			76.0 %	30-150		07/30/15	B5G2223	8081/8082	
<i>Surrogate: Tetrachloro-m-xylene</i>			69.2 %	30-150		07/30/15	B5G2223	8081/8082	



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Client ID: CHTC-SD-06-1-3'

Lab ID: 1507171-05

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Inorganics-General Chemistry									
TS	% Total Solids	79.4	0.1	%	1	07/17/15	B5G1708	2540 B	



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Client ID: CHTC-SD-06-3-3.92'

Lab ID: 1507171-06

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	07/30/15	B5G2223	8081/8082	
11104-28-2	Aroclor 1221	ND	120	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11141-16-5	Aroclor 1232	ND	120	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
53469-21-9	Aroclor 1242	ND	120	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
12672-29-6	Aroclor 1248	ND	120	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11097-69-1	Aroclor 1254	ND	120	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11096-82-5	Aroclor 1260	ND	120	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
37324-23-5	Aroclor 1262	ND	120	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11100-14-4	Aroclor 1268	ND	120	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
<i>Surrogate: Decachlorobiphenyl</i>			71.9 %	30-150		07/30/15	B5G2223	8081/8082	
<i>Surrogate: Tetrachloro-m-xylene</i>			65.5 %	30-150		07/30/15	B5G2223	8081/8082	
Inorganics-General Chemistry									
TS	% Total Solids	80.3	0.1	%	1	07/17/15	B5G1708	2540 B	



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Client ID: CHTC-SD-20-0-6"

Lab ID: 1507171-07

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	330	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11104-28-2	Aroclor 1221	ND	330	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11141-16-5	Aroclor 1232	ND	330	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
53469-21-9	Aroclor 1242	ND	330	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
12672-29-6	Aroclor 1248	ND	330	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11097-69-1	Aroclor 1254	ND	330	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11096-82-5	Aroclor 1260	ND	330	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
37324-23-5	Aroclor 1262	ND	330	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11100-14-4	Aroclor 1268	ND	330	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
<i>Surrogate: Decachlorobiphenyl</i>			70.8 %	30-150		07/30/15	B5G2223	8081/8082	
<i>Surrogate: Tetrachloro-m-xylene</i>			66.4 %	30-150		07/30/15	B5G2223	8081/8082	
Inorganics-General Chemistry									
TS	% Total Solids	60.7	0.1	%	1	07/17/15	B5G1708	2540 B	
57-12-5	Total Cyanide	ND	0.16	mg/kg dry	1	07/27/15	B5G2216	ASTM D7284	
Inorganics-Metals									
7429-90-5	Aluminium	12000	10	mg/kg dry	100	07/29/15	B5G2401	6020/200.8	
7440-36-0	Antimony	ND	0.3	mg/kg dry	10	07/23/15	B5G2111	6020/200.8	
7440-38-2	Arsenic	3.7	0.5	mg/kg dry	10	07/28/15	B5G2401	6020/200.8	
7440-39-3	Barium	200	10	mg/kg dry	100	07/29/15	B5G2401	6020/200.8	
7440-41-7	Beryllium	1.0	0.2	mg/kg dry	10	07/28/15	B5G2401	6020/200.8	
7440-43-9	Cadmium	ND	0.2	mg/kg dry	10	07/28/15	B5G2401	6020/200.8	
7440-47-3	Chromium	40	2.0	mg/kg dry	10	07/28/15	B5G2401	6020/200.8	
7440-48-4	Cobalt	14	0.5	mg/kg dry	10	07/28/15	B5G2401	6020/200.8	
7440-50-8	Copper	1300	1.0	mg/kg dry	10	07/28/15	B5G2401	6020/200.8	
7439-89-6	Iron	21000	5.0	mg/kg dry	10	07/28/15	B5G2401	6010/200.7	
7439-92-1	Lead	21	1.0	mg/kg dry	10	07/29/15	B5G2401	6020/200.8	
7439-93-2	Lithium	6.6	0.2	mg/kg dry	1	07/28/15	B5G2401	6010/200.7	
7439-95-4	Magnesium	9000	50	mg/kg dry	10	07/28/15	B5G2401	6010/200.7	
7439-96-5	Manganese	390	1.0	mg/kg dry	10	07/28/15	B5G2401	6020/200.8	
7439-97-6	Mercury	ND	0.08	mg/kg dry	1	07/30/15	B5G2905	7471/245.5	
7440-02-0	Nickel	42	1.0	mg/kg dry	10	07/28/15	B5G2401	6020/200.8	
7782-49-2	Selenium	ND	0.2	mg/kg dry	10	07/28/15	B5G2401	6020/200.8	
7440-22-4	Silver	1.2	0.1	mg/kg dry	10	07/28/15	B5G2401	6020/200.8	
7440-28-0	Thallium	ND	0.5	mg/kg dry	10	07/29/15	B5G2401	6020/200.8	
7440-66-6	Zinc	70	1.0	mg/kg dry	10	07/28/15	B5G2401	6020/200.8	



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Client ID: CHTC-SD-20-1-3'

Lab ID: 1507171-08

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	270	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11104-28-2	Aroclor 1221	ND	270	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11141-16-5	Aroclor 1232	ND	270	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
53469-21-9	Aroclor 1242	ND	270	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
12672-29-6	Aroclor 1248	ND	270	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11097-69-1	Aroclor 1254	ND	270	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11096-82-5	Aroclor 1260	ND	270	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
37324-23-5	Aroclor 1262	ND	270	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11100-14-4	Aroclor 1268	ND	270	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
<i>Surrogate: Decachlorobiphenyl</i>			69.0 %	30-150		07/30/15	B5G2223	8081/8082	
<i>Surrogate: Tetrachloro-m-xylene</i>			63.9 %	30-150		07/30/15	B5G2223	8081/8082	
Inorganics-General Chemistry									
TS	% Total Solids	72.9	0.1	%	1	07/17/15	B5G1708	2540 B	



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Client ID: CHTC-SD-20-3-4.25'

Lab ID: 1507171-09

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	07/30/15	B5G2223	8081/8082	
11104-28-2	Aroclor 1221	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11141-16-5	Aroclor 1232	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
53469-21-9	Aroclor 1242	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
12672-29-6	Aroclor 1248	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11097-69-1	Aroclor 1254	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11096-82-5	Aroclor 1260	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
37324-23-5	Aroclor 1262	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11100-14-4	Aroclor 1268	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
<i>Surrogate: Decachlorobiphenyl</i>			69.2 %	30-150		07/30/15	B5G2223	8081/8082	
<i>Surrogate: Tetrachloro-m-xylene</i>			62.1 %	30-150		07/30/15	B5G2223	8081/8082	
Inorganics-General Chemistry									
TS	% Total Solids	71.9	0.1	%	1	07/17/15	B5G1708	2540 B	



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Client ID: CHTC-SD-17-0-6"

Lab ID: 1507171-10

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	290	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11104-28-2	Aroclor 1221	ND	290	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11141-16-5	Aroclor 1232	ND	290	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
53469-21-9	Aroclor 1242	ND	290	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
12672-29-6	Aroclor 1248	ND	290	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11097-69-1	Aroclor 1254	ND	290	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11096-82-5	Aroclor 1260	ND	290	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
37324-23-5	Aroclor 1262	ND	290	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11100-14-4	Aroclor 1268	ND	290	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
<i>Surrogate: Decachlorobiphenyl</i>			74.6 %	30-150		07/30/15	B5G2223	8081/8082	
<i>Surrogate: Tetrachloro-m-xylene</i>			68.4 %	30-150		07/30/15	B5G2223	8081/8082	
Inorganics-General Chemistry									
TS	% Total Solids	68.9	0.1	%	1	07/17/15	B5G1708	2540 B	



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Client ID: CHTC-SD-17-1-3'

Lab ID: 1507171-11

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	07/30/15	B5G2223	8081/8082	
11104-28-2	Aroclor 1221	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11141-16-5	Aroclor 1232	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
53469-21-9	Aroclor 1242	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
12672-29-6	Aroclor 1248	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11097-69-1	Aroclor 1254	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11096-82-5	Aroclor 1260	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
37324-23-5	Aroclor 1262	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11100-14-4	Aroclor 1268	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
<i>Surrogate: Decachlorobiphenyl</i>			72.8 %	30-150		07/30/15	B5G2223	8081/8082	
<i>Surrogate: Tetrachloro-m-xylene</i>			63.3 %	30-150		07/30/15	B5G2223	8081/8082	
Inorganics-General Chemistry									
TS	% Total Solids	72.0	0.1	%	1	07/17/15	B5G1708	2540 B	



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Client ID: CHTC-SD-17-3-5'

Lab ID: 1507171-12

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	07/30/15	B5G2223	8081/8082	
11104-28-2	Aroclor 1221	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11141-16-5	Aroclor 1232	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
53469-21-9	Aroclor 1242	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
12672-29-6	Aroclor 1248	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11097-69-1	Aroclor 1254	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11096-82-5	Aroclor 1260	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
37324-23-5	Aroclor 1262	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11100-14-4	Aroclor 1268	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
<i>Surrogate: Decachlorobiphenyl</i>			79.4 %	30-150		07/30/15	B5G2223	8081/8082	
<i>Surrogate: Tetrachloro-m-xylene</i>			63.2 %	30-150		07/30/15	B5G2223	8081/8082	
Inorganics-General Chemistry									
TS	% Total Solids	72.5	0.1	%	1	07/17/15	B5G1708	2540 B	



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Client ID: CHTC-SD-18-0-6"

Lab ID: 1507171-13

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	540	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11104-28-2	Aroclor 1221	ND	540	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11141-16-5	Aroclor 1232	ND	540	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
53469-21-9	Aroclor 1242	ND	540	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
12672-29-6	Aroclor 1248	ND	540	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11097-69-1	Aroclor 1254	ND	540	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11096-82-5	Aroclor 1260	ND	540	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
37324-23-5	Aroclor 1262	ND	540	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11100-14-4	Aroclor 1268	ND	540	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
<i>Surrogate: Decachlorobiphenyl</i>			79.3 %	30-150		07/30/15	B5G2223	8081/8082	
<i>Surrogate: Tetrachloro-m-xylene</i>			67.5 %	30-150		07/30/15	B5G2223	8081/8082	
Inorganics-General Chemistry									
TS	% Total Solids	36.8	0.1	%	1	07/17/15	B5G1708	2540 B	
57-12-5	Total Cyanide	ND	0.27	mg/kg dry	1	08/10/15	B5H1016	ASTM D7284	H
Inorganics-Metals									
7429-90-5	Aluminium	13000	1000	mg/kg dry	10000	08/10/15	B5H0506	6020/200.8	
7440-36-0	Antimony	0.09	0.03	mg/kg dry	1	08/11/15	B5H1007	6020/200.8	
7440-38-2	Arsenic	4.2	0.5	mg/kg dry	10	08/06/15	B5H0506	6020/200.8	
7440-39-3	Barium	3.1	1.0	mg/kg dry	10	08/10/15	B5H0506	6020/200.8	
7440-41-7	Beryllium	0.6	0.2	mg/kg dry	10	08/06/15	B5H0506	6020/200.8	
7440-43-9	Cadmium	ND	0.2	mg/kg dry	10	08/06/15	B5H0506	6020/200.8	
7440-47-3	Chromium	26	2.0	mg/kg dry	10	08/06/15	B5H0506	6020/200.8	
7440-48-4	Cobalt	14	0.5	mg/kg dry	10	08/06/15	B5H0506	6020/200.8	
7440-50-8	Copper	810	1.0	mg/kg dry	10	08/06/15	B5H0506	6020/200.8	
7439-89-6	Iron	16000	5.0	mg/kg dry	10	08/07/15	B5H0506	6010/200.7	
7439-92-1	Lead	ND	1.0	mg/kg dry	10	08/10/15	B5H0506	6020/200.8	
7439-93-2	Lithium	5.4	0.2	mg/kg dry	1	08/07/15	B5H0506	6010/200.7	
7439-95-4	Magnesium	11000	50	mg/kg dry	10	08/07/15	B5H0506	6010/200.7	
7439-96-5	Manganese	360	1.0	mg/kg dry	10	08/06/15	B5H0506	6020/200.8	
7439-97-6	Mercury	ND	0.1	mg/kg dry	1	08/07/15	B5H0604	7471/245.5	
7440-02-0	Nickel	30	1.0	mg/kg dry	10	08/06/15	B5H0506	6020/200.8	
7782-49-2	Selenium	0.3	0.2	mg/kg dry	10	08/06/15	B5H0506	6020/200.8	
7440-22-4	Silver	0.1	0.1	mg/kg dry	10	08/10/15	B5H0506	6020/200.8	
7440-28-0	Thallium	ND	0.5	mg/kg dry	10	08/10/15	B5H0506	6020/200.8	
7440-66-6	Zinc	67	1.0	mg/kg dry	10	08/06/15	B5H0506	6020/200.8	



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Client ID: CHTC-SD-18-1-3'
 Lab ID: 1507171-14

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Semivolatiles									
									See note Y18, Y20
91-57-6	2-Methylnaphthalene	ND	1700	ug/kg dry	1	08/07/15	B5H0412	8270	
83-32-9	Acenaphthene	ND	680	ug/kg dry	1	08/07/15	B5H0412	8270	
208-96-8	Acenaphthylene	ND	680	ug/kg dry	1	08/07/15	B5H0412	8270	
120-12-7	Anthracene	ND	680	ug/kg dry	1	08/07/15	B5H0412	8270	
56-55-3	Benz[a]anthracene	ND	680	ug/kg dry	1	08/07/15	B5H0412	8270	
50-32-8	Benzo[a]pyrene	ND	1400	ug/kg dry	1	08/07/15	B5H0412	8270	
205-99-2	Benzo[b]fluoranthene	ND	1400	ug/kg dry	1	08/07/15	B5H0412	8270	
191-24-2	Benzo[g,h,i]perylene	ND	1400	ug/kg dry	1	08/07/15	B5H0412	8270	
207-08-9	Benzo[k]fluoranthene	ND	1400	ug/kg dry	1	08/07/15	B5H0412	8270	
218-01-9	Chrysene	ND	680	ug/kg dry	1	08/07/15	B5H0412	8270	
53-70-3	Dibenz[a,h]anthracene	ND	1400	ug/kg dry	1	08/07/15	B5H0412	8270	
206-44-0	Fluoranthene	ND	680	ug/kg dry	1	08/07/15	B5H0412	8270	
86-73-7	Fluorene	ND	680	ug/kg dry	1	08/07/15	B5H0412	8270	
193-39-5	Indeno(1,2,3-c,d)pyrene	ND	1400	ug/kg dry	1	08/07/15	B5H0412	8270	
91-20-3	Naphthalene	ND	680	ug/kg dry	1	08/07/15	B5H0412	8270	
85-01-8	Phenanthrene	ND	680	ug/kg dry	1	08/07/15	B5H0412	8270	
129-00-0	Pyrene	ND	680	ug/kg dry	1	08/07/15	B5H0412	8270	
<i>Surrogate: 2-Fluorobiphenyl</i>			70.4 %	32.9-115		08/07/15	B5H0412	8270	
<i>Surrogate: Nitrobenzene-d5</i>			61.5 %	31.8-115		08/07/15	B5H0412	8270	
<i>Surrogate: p-Terphenyl-d14</i>			85.7 %	38.5-115		08/07/15	B5H0412	8270	
Organics-PCBs as Aroclors									
									See note Y20
12674-11-2	Aroclor 1016	ND	270	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11104-28-2	Aroclor 1221	ND	270	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11141-16-5	Aroclor 1232	ND	270	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
53469-21-9	Aroclor 1242	ND	270	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
12672-29-6	Aroclor 1248	ND	270	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11097-69-1	Aroclor 1254	ND	270	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11096-82-5	Aroclor 1260	ND	270	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
37324-23-5	Aroclor 1262	ND	270	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11100-14-4	Aroclor 1268	ND	270	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
<i>Surrogate: Decachlorobiphenyl</i>			78.9 %	30-150		07/30/15	B5G2223	8081/8082	
<i>Surrogate: Tetrachloro-m-xylene</i>			68.9 %	30-150		07/30/15	B5G2223	8081/8082	



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Client ID: CHTC-SD-18-1-3'

Lab ID: 1507171-14

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Inorganics-General Chemistry									
TS	% Total Solids	73.5	0.1	%	1	07/17/15	B5G1709	2540 B	



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Client ID: CHTC-SD-18-3-5'

Lab ID: 1507171-15

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	07/30/15	B5G2223	8081/8082	
11104-28-2	Aroclor 1221	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11141-16-5	Aroclor 1232	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
53469-21-9	Aroclor 1242	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
12672-29-6	Aroclor 1248	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11097-69-1	Aroclor 1254	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11096-82-5	Aroclor 1260	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
37324-23-5	Aroclor 1262	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
11100-14-4	Aroclor 1268	ND	280	ug/kg dry	1	07/30/15	B5G2223	8081/8082	
<i>Surrogate: Decachlorobiphenyl</i>			72.6 %	30-150		07/30/15	B5G2223	8081/8082	
<i>Surrogate: Tetrachloro-m-xylene</i>			63.7 %	30-150		07/30/15	B5G2223	8081/8082	
Inorganics-General Chemistry									
TS	% Total Solids	72.2	0.1	%	1	07/17/15	B5G1709	2540 B	



Analysis Request Sheet

Lab Work Order Number 1507171	Project Name Abandoned Mining Wastes - Torch Lake PCB C&H Tamarack City Ops	Matrix 1/2 SEDIMENT
Site Code/Project Number 31000098	AT 13	LC Email 1 l.binkley@westonsolutions.com
Dept/Division-District DEQ-RRD-UP District	Index 44251	LC Email 2 daniel.jebau@westonsolutions.com
State Project Manager Amy Keranen	PLA 30872	LC Email 3 plncumbej@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 IAT Days
		Project Due Date
		Sample Collector AK/JP/AB-DEQ-RRD DP
		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 01	CHTC-SD07-1-3' dup	7/11/15	1145	1	
2 02	CHTC-SD07-1-3'	}	1145	1	
3 03	CHTC-SD07-3-5'		1150	1	
4 04	CHTC-SD06-0-6"		0910	1	
5 05	CHTC-SD06-1-3'		0915	1	
6 06	CHTC-SD06-3-3.92'		0920	1	
7 07	CHTC-SD20-0-6"	7/12/15	1800	1	
8 08	CHTC-SD20-1-3'		1805	1	
9 09	CHTC-SD20-3-4.25'		1810	1	
10	CHTC-SD-				

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,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

Chain of Custody	Relinquished by	Received By	Date / Time
	Print Name & Org: Don Peabody Signature: <i>[Signature]</i>	JEP CHRISTENSEN, WESTON SOLUTIONS <i>[Signature]</i>	7/14/15 09:15
	Print Name & Org: JEP CHRISTENSEN, WESTON SOLUTIONS Signature: <i>[Signature]</i>	UPS <i>[Signature]</i>	7/14/15 12:45
Print Name & Org: UPS Signature: <i>[Signature]</i>	<i>[Signature]</i>	7/15/15 11:03	



Analysis Request Sheet

Lab Work Order Number 1507171	Project Name Abandoned Mining Wastes - Torch Lake PCB C&H Tamarack City Ops	Matrix 212 SEDIMENT
Site Code/Project Number 31000098	AY 13	CC Email 1 jbinkley@westonsolutions.com
Dept-Division-District DEQ-RRD-UP District	INDEX 44251	CC Email 2 dantef.hebau@westonsolutions.com
State Project Manager Amy Keranen	PCA 30872	CC Email 3 pincumbel@mlchigan.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 IAT Days
		Project Due Date
		Accept Analysis hold time codes no
		Sample Collector AK/JP/AB-DEQ-RRD (DP)
		Sample Collector Phone 906-337-0389
		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
1	10 CHTC-SD17-0-6"	7/12/15	1410	1	
2	11 CHTC-SD17-1-3'	}	1415	1	
3	12 CHTC-SD17-3-5'		1420	1	
4	13 CHTC-SD18-0-6"		1630	1	
5	14 CHTC-SD18-1-3'		1635	1	
6	15 CHTC-SD18-3-5'		1640	1	
7	CHTC-SD-				
8	CHTC-SD-				
9	CHTC-SD-				
10	CHTC-SD-				

ORGANIC CHEMISTRY	METALS CHEMISTRY PACKAGES	MS - TOTAL METALS	GS - 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 / GRO 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,Ti,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	Received By	Date / Time
	Print Name & Org. Dan Peabody	JED CHRISTENSEN, WESTON SOLUTIONS	7/14/15
	Signature: <i>[Signature]</i>	<i>[Signature]</i>	0915
	Print Name & Org. JED CHRISTENSEN, WESTON SOLUTIONS	UPS	7/14/15
Signature: <i>[Signature]</i>	Melissa Smith	12145	
Print Name & Org. UPS	<i>[Signature]</i>	7/15/15	
Signature: J 236 141 6959	<i>[Signature]</i>	1103	