

LABORATORY REPORT

If you have any questions concerning this report, please do not hesitate to call us at (800) 332-4345 or (574) 233-4777.

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 South Bend, IN 46617
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Laboratory Report

Client: Superior Watershed Partnership & Land Trust

Report:

335866

Attn: Geraldine Grant

Priority:

Standard Written

2 Peter White Drive

Status:

Final

Presque Isle Park

PWS ID:

Not Supplied

Marquette, MI 49855

Copies

to: None

Sample Information					
EEA ID #	Client ID	Method	Collected Date / Time	Collected By:	Received Date / Time
3202622	703DBA CEM-10010240	300.0	03/10/15 12:38	Client	03/11/15 11:00
3202622	703DBA CEM-10010240	353.2	03/10/15 12:38	Client	03/11/15 11:00
3202622	703DBA CEM-10010240	353.2	03/10/15 12:38	Client	03/11/15 11:00
3202622	703DBA CEM-10010240	2320 B	03/10/15 12:38	Client	03/11/15 11:00
3202622	703DBA CEM-10010240	4500-F- C	03/10/15 12:38	Client	03/11/15 11:00
3202623	703DBA CEM-10010240	200.8	03/10/15 12:38	Client	03/11/15 11:00
3202623	703DBA CEM-10010240	2340 B	03/10/15 12:38	Client	03/11/15 11:00
3202623	703DBA CEM-10010240	200.7	03/10/15 12:38	Client	03/11/15 11:00
3202624	703DBA CEM-10010240	4500-NH3 D	03/10/15 12:38	Client	03/11/15 11:00
3202625	703DBA CEM-10010240	4500-S2 D	03/10/15 12:38	Client	03/11/15 11:00
3202626	704DBA CEM-10010241	300.0	03/10/15 09:52	Client	03/11/15 11:00
3202626	704DBA CEM-10010241	353.2	03/10/15 09:52	Client	03/11/15 11:00
3202626	704DBA CEM-10010241	353.2	03/10/15 09:52	Client	03/11/15 11:00
3202626	704DBA CEM-10010241	2320 B	03/10/15 09:52	Client	03/11/15 11:00
3202626	704DBA CEM-10010241	4500-F- C	03/10/15 09:52	Client	03/11/15 11:00
3202627	704DBA CEM-10010241	200.8	03/10/15 09:52	Client	03/11/15 11:00
3202627	704DBA CEM-10010241	2340 B	03/10/15 09:52	Client	03/11/15 11:00
3202627	704DBA CEM-10010241	200.7	03/10/15 09:52	Client	03/11/15 11:00
3202628	704DBA CEM-10010241	4500-NH3 D	03/10/15 09:52	Client	03/11/15 11:00
3202629	704DBA CEM-10010241	4500-S2 D	03/10/15 09:52	Client	03/11/15 11:00
3202630	704LLA CEM-10010242	300.0	03/10/15 11:00	Client	03/11/15 11:00
3202630	704LLA CEM-10010242	353.2	03/10/15 11:00	Client	03/11/15 11:00
3202630	704LLA CEM-10010242	353.2	03/10/15 11:00	Client	03/11/15 11:00
3202630	704LLA CEM-10010242	2320 B	03/10/15 11:00	Client	03/11/15 11:00
3202630	704LLA CEM-10010242	4500-F- C	03/10/15 11:00	Client	03/11/15 11:00
3202631	704LLA CEM-10010242	200.8	03/10/15 11:00	Client	03/11/15 11:00
3202631	704LLA CEM-10010242	2340 B	03/10/15 11:00	Client	03/11/15 11:00
3202631	704LLA CEM-10010242	200.7	03/10/15 11:00	Client	03/11/15 11:00
3202632	704LLA CEM-10010242	4500-NH3 D	03/10/15 11:00	Client	03/11/15 11:00
3202633	704LLA CEM-10010242	4500-S2 D	03/10/15 11:00	Client	03/11/15 11:00

Report Summary

Other Compounds Detected: In the method 200.8 analysis, uranium was detected in sample 704DBA CEM-10010241 at a concentration of 31 ug/L, which is greater than the current MCL of 30 ug/L.

Detailed quantitative results are presented on the following pages. The results presented relate only to the samples provided for analysis.

We appreciate the opportunity to provide you with this analysis. If you have any questions concerning this report, please do not hesitate to call James Van Fleit at (574) 233-4777.

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Authorized Signature

Title

Date

04/09/2015

Client Name: Superior Watershed Partnership & Land Trust

Report #: 335866

Client Name: Superior Watershed Partnership & Land Trust

Report #: 335866

Sampling Point: 703DBA CEM-10010240

PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
---	Alkalinity, Bicarbonate	2320 B	---	1.00	56.3	mg/L as CaCO3	---	03/13/15 03:34	3202622
---	Alkalinity, Carbonate	2320 B	---	1.00	14.0	mg/L as CaCO3	---	03/13/15 03:34	3202622
---	Hardness, Total	2340 B	---	0.66	59	mg/L as CaCO3	---	03/22/15 16:11	3202623
16887-00-6	Chloride	300.0	250 ^	2.0	18	mg/L	---	03/11/15 19:26	3202622
14808-79-8	Sulfate	300.0	250 ^	5.0	14	mg/L	---	03/11/15 19:26	3202622
14797-55-8	Nitrate	353.2	10 *	0.1	< 0.1	mg/L	---	03/12/15 01:47	3202622
14797-65-0	Nitrite	353.2	1 *	0.01	< 0.01	mg/L	---	03/11/15 23:30	3202622
16984-48-8	Fluoride	4500-F- C	4 *	0.1	0.2	mg/L	---	03/16/15 18:51	3202622
7664-41-7	Nitrogen, Ammonia	4500-NH3 D	---	0.1	< 0.1	mg/L	---	03/11/15 22:51	3202624
18496-25-8	Sulfide, Total	4500-S2 D	---	0.05	0.33	mg/L	---	03/11/15 19:12	3202625

Metals									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
7440-70-2	Calcium	200.7	---	0.1	8.0	mg/L	03/19/15 17:45	03/20/15 13:21	3202623
7439-89-6	Iron	200.7	0.3 ^	0.020	0.13	mg/L	03/19/15 17:45	03/20/15 13:21	3202623
7439-95-4	Magnesium	200.7	---	0.1	9.4	mg/L	03/19/15 17:45	03/20/15 13:21	3202623
7440-09-7	Potassium	200.7	---	0.2	19	mg/L	03/19/15 17:45	03/20/15 13:21	3202623
7440-23-5	Sodium	200.7	---	0.1	14	mg/L	03/19/15 17:45	03/20/15 13:21	3202623
7429-90-5	Aluminum	200.8	50 ^	2.0	2.0	ug/L	03/19/15 17:45	03/20/15 12:33	3202623
7440-36-0	Antimony	200.8	6 *	1.0	< 1.0	ug/L	03/19/15 17:45	03/20/15 12:33	3202623
7440-38-2	Arsenic	200.8	10 *	1.0	< 1.0	ug/L	03/19/15 17:45	03/20/15 12:33	3202623
7440-39-3	Barium	200.8	2000 *	2.0	3.5	ug/L	03/19/15 17:45	03/20/15 12:33	3202623
7440-41-7	Beryllium	200.8	4 *	0.3	< 0.3	ug/L	03/19/15 17:45	03/20/15 12:33	3202623
7440-42-8	Boron	200.8	---	5.0	170	ug/L	03/19/15 17:45	03/20/15 12:33	3202623
7440-43-9	Cadmium	200.8	5 *	1.0	< 1.0	ug/L	03/19/15 17:45	03/20/15 12:33	3202623
7440-47-3	Chromium	200.8	100 *	0.9	< 0.9	ug/L	03/19/15 17:45	03/20/15 12:33	3202623
7440-48-4	Cobalt	200.8	---	2.0	< 2.0	ug/L	03/19/15 17:45	03/20/15 12:33	3202623
7440-50-8	Copper	200.8	1300 !	1.0	< 1.0	ug/L	03/19/15 17:45	03/20/15 12:33	3202623
7439-92-1	Lead	200.8	15 !	1.0	< 1.0	ug/L	03/19/15 17:45	03/20/15 12:33	3202623
7439-93-2	Lithium	200.8	---	2.0	15	ug/L	03/19/15 17:45	03/20/15 12:33	3202623
7439-96-5	Manganese	200.8	50 ^	2.0	3.5	ug/L	03/19/15 17:45	03/20/15 12:33	3202623
7439-98-7	Molybdenum	200.8	---	2.0	7.4	ug/L	03/19/15 17:45	03/20/15 12:33	3202623
7440-02-0	Nickel	200.8	---	1.0	< 1.0	ug/L	03/19/15 17:45	03/20/15 12:33	3202623
7782-49-2	Selenium	200.8	50 *	2.0	< 2.0	ug/L	03/19/15 17:45	03/20/15 12:33	3202623
7440-22-4	Silver	200.8	100 ^	2.0	< 2.0	ug/L	03/19/15 17:45	03/20/15 12:33	3202623
7440-28-0	Thallium	200.8	2 *	0.3	< 0.3	ug/L	03/19/15 17:45	03/20/15 12:33	3202623
7440-62-2	Vanadium	200.8	---	2.0	< 2.0	ug/L	03/19/15 17:45	03/20/15 12:33	3202623
7440-66-6	Zinc	200.8	5000 ^	5.0	< 5.0	ug/L	03/19/15 17:45	03/20/15 12:33	3202623

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
---	Alkalinity, Bicarbonate	2320 B	---	1.00	106	mg/L as CaCO3	---	03/13/15 03:41	3202626
---	Alkalinity, Carbonate	2320 B	---	1.00	11.2	mg/L as CaCO3	---	03/13/15 03:41	3202626
---	Hardness, Total	2340 B	---	0.66	93	mg/L as CaCO3	---	03/22/15 16:11	3202627
16887-00-6	Chloride	300.0	250 ^	2.0	2.0	mg/L	---	03/11/15 19:49	3202626
14808-79-8	Sulfate	300.0	250 ^	5.0	< 5.0	mg/L	---	03/11/15 19:49	3202626
14797-55-8	Nitrate	353.2	10 *	0.1	< 0.1	mg/L	---	03/12/15 01:56	3202626
14797-65-0	Nitrite	353.2	1 *	0.01	< 0.01	mg/L	---	03/11/15 23:39	3202626
16984-48-8	Fluoride	4500-F- C	4 *	0.1	0.3	mg/L	---	03/16/15 18:54	3202626
7664-41-7	Nitrogen, Ammonia	4500-NH3 D	---	0.1	< 0.1	mg/L	---	03/11/15 23:03	3202628
18496-25-8	Sulfide, Total	4500-S2 D	---	0.05	< 0.05	mg/L	---	03/11/15 19:15	3202629

Metals									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
7440-70-2	Calcium	200.7	---	0.1	20	mg/L	03/19/15 17:45	03/20/15 13:30	3202627
7439-89-6	Iron	200.7	0.3 ^	0.020	0.51	mg/L	03/19/15 17:45	03/20/15 13:30	3202627
7439-95-4	Magnesium	200.7	---	0.1	11	mg/L	03/19/15 17:45	03/20/15 13:30	3202627
7440-09-7	Potassium	200.7	---	0.2	2.8	mg/L	03/19/15 17:45	03/20/15 13:30	3202627
7440-23-5	Sodium	200.7	---	0.1	12	mg/L	03/19/15 17:45	03/20/15 13:30	3202627
7429-90-5	Aluminum	200.8	50 ^	2.0	4.7	ug/L	03/19/15 17:45	03/20/15 12:43	3202627
7440-36-0	Antimony	200.8	6 *	1.0	< 1.0	ug/L	03/19/15 17:45	03/20/15 12:43	3202627
7440-38-2	Arsenic	200.8	10 *	1.0	< 1.0	ug/L	03/19/15 17:45	03/20/15 12:43	3202627
7440-39-3	Barium	200.8	2000 *	2.0	< 2.0	ug/L	03/19/15 17:45	03/20/15 12:43	3202627
7440-41-7	Beryllium	200.8	4 *	0.3	< 0.3	ug/L	03/19/15 17:45	03/20/15 12:43	3202627
7440-42-8	Boron	200.8	---	5.0	180	ug/L	03/19/15 17:45	03/20/15 12:43	3202627
7440-43-9	Cadmium	200.8	5 *	1.0	< 1.0	ug/L	03/19/15 17:45	03/20/15 12:43	3202627
7440-47-3	Chromium	200.8	100 *	0.9	< 0.9	ug/L	03/19/15 17:45	03/20/15 12:43	3202627
7440-48-4	Cobalt	200.8	---	2.0	< 2.0	ug/L	03/19/15 17:45	03/20/15 12:43	3202627
7440-50-8	Copper	200.8	1300 !	1.0	< 1.0	ug/L	03/19/15 17:45	03/20/15 12:43	3202627
7439-92-1	Lead	200.8	15 !	1.0	< 1.0	ug/L	03/19/15 17:45	03/20/15 12:43	3202627
7439-93-2	Lithium	200.8	---	2.0	15	ug/L	03/19/15 17:45	03/20/15 12:43	3202627
7439-96-5	Manganese	200.8	50 ^	2.0	27	ug/L	03/19/15 17:45	03/20/15 12:43	3202627
7439-98-7	Molybdenum	200.8	---	2.0	2.8	ug/L	03/19/15 17:45	03/20/15 12:43	3202627
7440-02-0	Nickel	200.8	---	1.0	< 1.0	ug/L	03/19/15 17:45	03/20/15 12:43	3202627
7782-49-2	Selenium	200.8	50 *	2.0	< 2.0	ug/L	03/19/15 17:45	03/20/15 12:43	3202627
7440-22-4	Silver	200.8	100 ^	2.0	< 2.0	ug/L	03/19/15 17:45	03/20/15 12:43	3202627
7440-28-0	Thallium	200.8	2 *	0.3	< 0.3	ug/L	03/19/15 17:45	03/20/15 12:43	3202627
7440-62-2	Vanadium	200.8	---	2.0	< 2.0	ug/L	03/19/15 17:45	03/20/15 12:43	3202627
7440-66-6	Zinc	200.8	5000 ^	5.0	< 5.0	ug/L	03/19/15 17:45	03/20/15 12:43	3202627

Sampling Point: 704LLA CEM-10010242

PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
---	Alkalinity, Bicarbonate	2320 B	---	1.00	88.0	mg/L as CaCO ₃	---	03/13/15 03:48	3202630
---	Alkalinity, Carbonate	2320 B	---	1.0	3.5	mg/L as CaCO ₃	---	03/13/15 03:48	3202630
---	Hardness, Total	2340 B	---	0.66	85	mg/L as CaCO ₃	---	03/22/15 16:11	3202631
16887-00-6	Chloride	300.0	250 ^	2.0	2.4	mg/L	---	03/11/15 20:12	3202630
14808-79-8	Sulfate	300.0	250 ^	5.0	10	mg/L	---	03/11/15 20:12	3202630
14797-55-8	Nitrate	353.2	10 *	0.1	< 0.1	mg/L	---	03/12/15 01:58	3202630
14797-65-0	Nitrite	353.2	1 *	0.01	< 0.01	mg/L	---	03/11/15 23:41	3202630
16984-48-8	Fluoride	4500-F- C	4 *	0.1	< 0.1	mg/L	---	03/16/15 18:56	3202630
7664-41-7	Nitrogen, Ammonia	4500-NH ₃ D	---	0.1	< 0.1	mg/L	---	03/11/15 23:07	3202632
18496-25-8	Sulfide, Total	4500-S ₂ D	---	0.05	< 0.05	mg/L	---	03/11/15 19:16	3202633

Metals									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
7440-70-2	Calcium	200.7	---	0.1	14	mg/L	03/19/15 17:45	03/20/15 13:33	3202631
7439-89-6	Iron	200.7	0.3 ^	0.020	0.34	mg/L	03/19/15 17:45	03/20/15 13:33	3202631
7439-95-4	Magnesium	200.7	---	0.1	12	mg/L	03/19/15 17:45	03/20/15 13:33	3202631
7440-09-7	Potassium	200.7	---	0.2	7.3	mg/L	03/19/15 17:45	03/20/15 13:33	3202631
7440-23-5	Sodium	200.7	---	0.1	4.7	mg/L	03/19/15 17:45	03/20/15 13:33	3202631
7429-90-5	Aluminum	200.8	50 ^	2.0	< 2.0	ug/L	03/19/15 17:45	03/20/15 12:47	3202631
7440-36-0	Antimony	200.8	6 *	1.0	< 1.0	ug/L	03/19/15 17:45	03/20/15 12:47	3202631
7440-38-2	Arsenic	200.8	10 *	1.0	< 1.0	ug/L	03/19/15 17:45	03/20/15 12:47	3202631
7440-39-3	Barium	200.8	2000 *	2.0	2.2	ug/L	03/19/15 17:45	03/20/15 12:47	3202631
7440-41-7	Beryllium	200.8	4 *	0.3	< 0.3	ug/L	03/19/15 17:45	03/20/15 12:47	3202631
7440-42-8	Boron	200.8	---	5.0	48	ug/L	03/19/15 17:45	03/20/15 12:47	3202631
7440-43-9	Cadmium	200.8	5 *	1.0	< 1.0	ug/L	03/19/15 17:45	03/20/15 12:47	3202631
7440-47-3	Chromium	200.8	100 *	0.9	< 0.9	ug/L	03/19/15 17:45	03/20/15 12:47	3202631
7440-48-4	Cobalt	200.8	---	2.0	< 2.0	ug/L	03/19/15 17:45	03/20/15 12:47	3202631
7440-50-8	Copper	200.8	1300 !	1.0	< 1.0	ug/L	03/19/15 17:45	03/20/15 12:47	3202631
7439-92-1	Lead	200.8	15 !	1.0	< 1.0	ug/L	03/19/15 17:45	03/20/15 12:47	3202631
7439-93-2	Lithium	200.8	---	2.0	17	ug/L	03/19/15 17:45	03/20/15 12:47	3202631
7439-96-5	Manganese	200.8	50 ^	2.0	37	ug/L	03/19/15 17:45	03/20/15 12:47	3202631
7439-98-7	Molybdenum	200.8	---	2.0	< 2.0	ug/L	03/19/15 17:45	03/20/15 12:47	3202631
7440-02-0	Nickel	200.8	---	1.0	< 1.0	ug/L	03/19/15 17:45	03/20/15 12:47	3202631
7782-49-2	Selenium	200.8	50 *	2.0	< 2.0	ug/L	03/19/15 17:45	03/20/15 12:47	3202631
7440-22-4	Silver	200.8	100 ^	2.0	< 2.0	ug/L	03/19/15 17:45	03/20/15 12:47	3202631
7440-28-0	Thallium	200.8	2 *	0.3	< 0.3	ug/L	03/19/15 17:45	03/20/15 12:47	3202631
7440-62-2	Vanadium	200.8	---	2.0	< 2.0	ug/L	03/19/15 17:45	03/20/15 12:47	3202631
7440-66-6	Zinc	200.8	5000 ^	5.0	< 5.0	ug/L	03/19/15 17:45	03/20/15 12:47	3202631

† EEA has demonstrated it can achieve these report limits in reagent water, but can not document them in all sample matrices.

Reg Limit Type:	MCL	SMCL	AL
Symbol:	*	^	!

Lab Definitions

Continuing Calibration Check Standard (CCC) / Continuing Calibration Verification (CCV) / Initial Calibration Verification Standard (ICV) / Initial Performance Check (IPC) - is a standard containing one or more of the target analytes that is prepared from the same standards used to calibrate the instrument. This standard is used to verify the calibration curve at the beginning of each analytical sequence, and may also be analyzed throughout and at the end of the sequence. The concentration of continuing standards may be varied, when prescribed by the reference method, so that the range of the calibration curve is verified on a regular basis.

Internal Standards (IS) - are pure compounds with properties similar to the analytes of interest, which are added to field samples or extracts, calibration standards, and quality control standards at a known concentration. They are used to measure the relative responses of the analytes of interest and surrogates in the sample, calibration standard or quality control standard.

Laboratory Duplicate (LD) - is a field sample aliquot taken from the same sample container in the laboratory and analyzed separately using identical procedures. Analysis of laboratory duplicates provides a measure of the precision of the laboratory procedures.

Laboratory Fortified Blank (LFB) / Laboratory Control Sample (LCS) - is an aliquot of reagent water to which known concentrations of the analytes of interest are added. The LFB is analyzed exactly the same as the field samples. LFBs are used to determine whether the method is in control.

Laboratory Method Blank (LMB) / Laboratory Reagent Blank (LRB) - is a sample of reagent water included in the sample batch analyzed in the same way as the associated field samples. The LMB is used to determine if method analytes or other background contamination have been introduced during the preparation or analytical procedure. The LMB is analyzed exactly the same as the field samples.

Laboratory Trip Blank (LTB) / Field Reagent Blank (FRB) - is a sample of laboratory reagent water placed in a sample container in the laboratory and treated as a field sample, including storage, preservation, and all analytical procedures. The FRB/LTB container follows the collection bottles to and from the collection site, but the FRB/LTB is not opened at any time during the trip. The FRB/LTB is primarily a travel blank used to verify that the samples were not contaminated during shipment.

Matrix Spike Duplicate Sample (MSD) / Laboratory Fortified Sample Matrix Duplicate (LFSMD) - is a sample aliquot taken from the same field sample source as the Matrix Spike Sample to which known quantities of the analytes of interest are added in the laboratory. The MSD is analyzed exactly the same as the field samples. Analysis of the MSD provides a measure of the precision of the laboratory procedures in a specific matrix.

Matrix Spike Sample (MS) / Laboratory Fortified Sample Matrix (LFSM) - is a sample aliquot taken from field sample source to which known quantities of the analytes of interest are added in the laboratory. The MS is analyzed exactly the same as the field samples. The purpose is to demonstrate recovery of the analytes from a sample matrix to determine if the specific matrix contributes bias to the analytical results.

Quality Control Standard (QCS) / Second Source Calibration Verification (SSCV) - is a solution containing known concentrations of the analytes of interest prepared from a source different from the source of the calibration standards. The solution is obtained from a second manufacturer or lot if the lot can be demonstrated by the manufacturer as prepared independently from other lots. The QCS sample is analyzed using the same procedures as field samples. The QCS is used as a check on the calibration standards used in the method on a routine basis.

Reporting Limit Check (RLC) / Initial Calibration Check Standard (ICCS) - is a procedural standard that is analyzed each day to evaluate instrument performance at or below the minimum reporting limit (MRL).

Surrogate Standard (SS) / Surrogate Analyte (SUR) - is a pure compound with properties similar to the analytes of interest, which is highly unlikely to be found in any field sample, that is added to the field samples, calibration standards, blanks and quality control standards before sample preparation. The SS is used to evaluate the efficiency of the sample preparation process.

Parameters	Frequency of Analysis*	Sample Type	Analytical Methods	Quantitation/Reporting Limit	Quantitation Units
Field					
Static Water Elevation	Quarterly	Measured	Field	NA	ft/msl
Redox	Quarterly	Measured	Field	NA	meV
Temperature	Quarterly	Measured	Field	NA	°C
Dissolved Oxygen	Quarterly	Measured	Field	NA	mg/L
pH	Quarterly	Grab	Field	NA	su
Turbidity	Quarterly	Grab	Field	NA	NTU
Specific Conductance	Quarterly	Grab	Field	--	umhos/cm
Anions					
Alkalinity, Bicarbonate	Quarterly	Grab	310.2/SM 2320 B	2	mg/L
Alkalinity Carbonate	Quarterly	Grab	310.2/SM 2320 B	2	mg/L
Nitrate Nitrogen	Quarterly	Grab	353.2/4500 NO3F	0.05	mg/L
Nitrite Nitrogen	Quarterly	Grab	354.1/4500 NO3F or 353.2	0.05	mg/L
Nitrogen, Ammonia	Quarterly	Grab	350.1/4500 NH3 G	0.025	mg/L
Sulfate	Quarterly	Grab	ASTMD516-90(02)	100	mg/L
Sulfide	Quarterly	Grab	376.1/4500 S2-D	0.2	mg/L
Fluoride	Quarterly	Grab	SM 4500 F-C	1	mg/L
Chloride	Quarterly	Grab	325.2/4500-CLE	1	mg/L
Cations					
Sodium	Quarterly	Grab	EPA-6010B	0.5	mg/L
Calcium	Quarterly	Grab	EPA-6010B	0.5	mg/L
Potassium	Quarterly	Grab	EPA-6010B	0.5	mg/L
Magnesium	Quarterly	Grab	EPA-6010B	0.5	mg/L
Other					
Hardness (calculated) as CaCO3	Quarterly	Grab	SM2340B	NA	mg/L
Metals					
Aluminum	Annual	Grab	EPA-6010B	50	ug/L
Antimony	Annual	Grab	EPA-6020	2	ug/L
Arsenic	Quarterly	Grab	EPA-6020	2	ug/L
Barium	Annual	Grab	EPA-6020	20	ug/L
Beryllium	Annual	Grab	EPA-6020	1	ug/L
Boron	Annual	Grab	EPA-6010B	100	ug/L
Cadium	Annual	Grab	EPA-6020	0.5	ug/L
Chromium	Annual	Grab	EPA-6020	5	ug/L
Cobalt	Annual	Grab	EPA-6010B	10	ug/L
Copper	Quarterly	Grab	EPA-6020	4	ug/L
Iron	Quarterly	Grab	EPA-6010B	200	ug/L
Lead	Quarterly	Grab	EPA-6020	1	ug/L
Lithium	Annual	Grab	EPA-6010B	8	ug/L
Manganese	Quarterly	Grab	EPA-6020	20	ug/L
Mercury	Quarterly	Grab	EPA-1631E	0.0005	ug/L
Molybdenum	Annual	Grab	EPA-6020	10	ug/L
Nickel	Quarterly	Grab	EPA-6020	20	ug/L
Selenium	Annual	Grab	EPA-6020	1	ug/L
Silver	Annual	Grab	EPA-6020	0.2	ug/L
Thallium	Annual	Grab	EPA-200.8/6020	2	ug/L
Vanadium	Annual	Grab	EPA-200.8/6020	4	ug/L
Zinc	Quarterly	Grab	EPA-6020	10	ug/L

North Shore Analytical, Inc.

4511 W. 1st St., Suite #1, Duluth, MN 55807

MDH Lab # 027-137-389

WDNR Lab # 399017190

Analytical Report

Project: CEMP

Superior Watershed Partnership

Attn: Geri Grant

2 Peter White Dr.

Marquette, MI 49855

Chain of Custody # 18294

Report Date: 3/13/2015

Sample Receipt Date: 3/11/2015

Phone: 906-228-6095 ex 13

EPA Method 1631E

Fax: 906-228-6863

Method Blanks (ng/L): < 0.100, < 0.100, < 0.100

Sample #	Client Sample ID	Mercury (ng/L)	Collection Date	Collection Time	Sampled By	Date Analyzed	Analyzed by	LOD (ng/L)	LOQ (ng/L)
76094	703DBA CEM10010240M	< 0.100	3/10/2015	12:38	Hunter King	3/12/2015	LC	0.10	0.30
76095	704DBA CEM10010241M	< 0.100	3/10/2015	9:52	Hunter King	3/12/2015	LC	0.10	0.30
76096	704LLA CEM10010242M	< 0.100	3/10/2015	11:00	Hunter King	3/12/2015	LC	0.10	0.30

Reported by: _____

Reviewed by: _____

If you have any questions or feedback please call

Chris Gross or Linda Christensen at 218-729-4658.

Values in brackets represent results greater than the LOD but less than or equal to the LOQ and are within a region of "Less Certain Quantitation". Results greater than the LOQ are considered to be in the region of "Certain Quantitation".

LOD = Limit of Detection LOQ = Limit of Quantitation

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STF-COC-001
Revision Number: 5
Revision Date: 05/01/06

STF-COC-001
Revision Number: 5
Revision Date: 05/01/06

Record #: 18204

[illegible]

ADDITIONAL COMMENTS:

Low-level mercury bottles supplied by North Shore Analytical?			
KEY:	Matrix:	Containers:	Preservation:
	SW = Surface Water	P = Plastic	NA = None Added
	GW = Ground Water	T = Teflon/Fluoropolymer	H = Hydrochloric Acid
	WW = Wastewater	G = Glass	R = Bromine Monochloride
	P = Precipitation	B = Plastic Bag	B = Bromine Monochloride