

BRUCE MINES

SUPPLY SYSTEM

ANNUAL SUMMARY REPORT

2011



**Ontario Clean Water Agency
Agence Ontarienne Des Eaux**

SECTION 1: INTRODUCTION

This report is a summary of water quality information for the Bruce Mines Water Treatment Facility, published in accordance with Schedule 22 of Ontario's Drinking-Water Systems Regulation for the reporting period of January 1, 2011 to December 31, 2011. The Bruce Mines Water Treatment Facility is categorized as a Large Municipal Residential Drinking Water System.

This report is prepared by The Ontario Clean Water Agency on behalf of The Corporation of the Town of Bruce Mines. A copy of the Summary Report must be provided to the members of the municipal council by March 31, 2012.

SECTION 2: WHAT DOES THE REPORT CONTAIN

The report must list the requirements of the Act, the regulations, the system's approval and any order that the system **failed to meet** at any time during the period covered by the report. The report must also specify the duration of the failure, and for each failure referred to, describe the measures that were taken to correct the failure.

For the purpose of enabling the owner of the system to assess the rated capability of their system to meet existing and future planned water uses, the following information is required to be included in this report:

- A summary of the quantities and flow rates of the water supplied during the period covered by the report, including monthly average and maximum daily flows.
- A comparison of the summary to the rated capacity and flow rates approved in the systems approval.

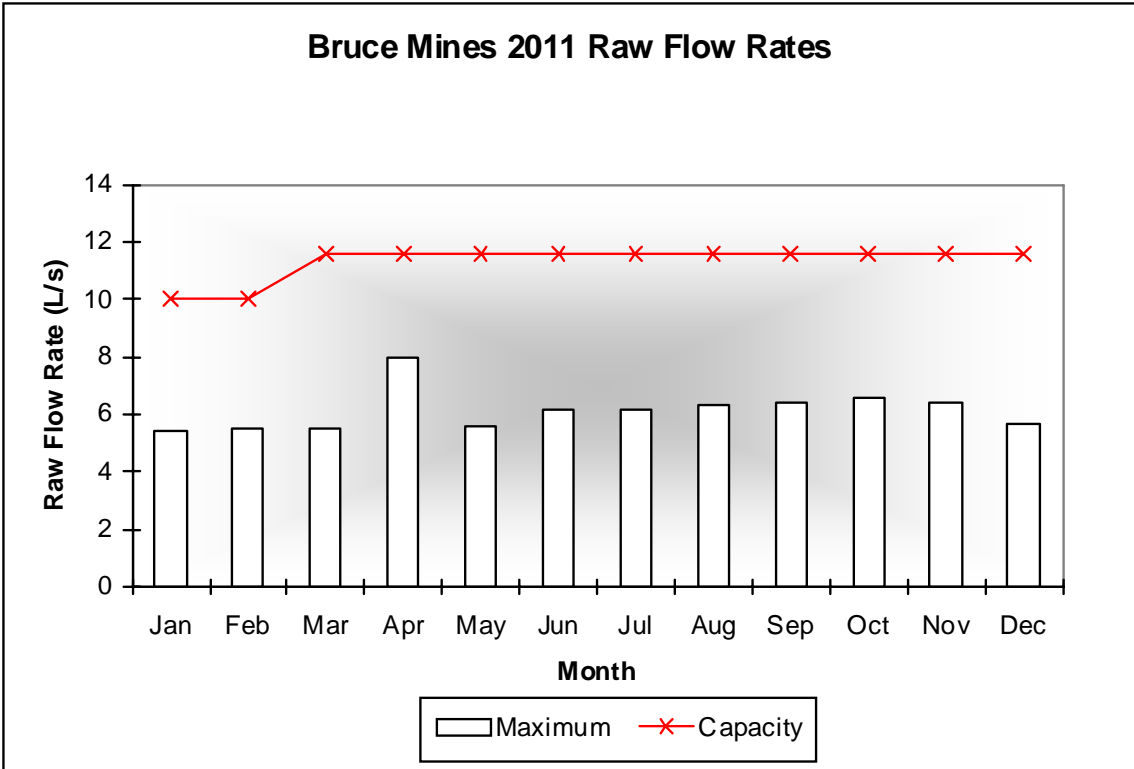
SECTION 3: DAILY FLOW RATES

In accordance with the Certificate of Approval Condition 4.1, the Bruce Mines water system shall not be operated to exceed a maximum rate of flow of 10.0 L/s and a maximum daily volume of 864.0 m³/d into the treatment system. As of March 11, 2011, the Municipal Drinking Water License # 270-101 replaces the C of A and sets the water taking limit to 864m³/d.

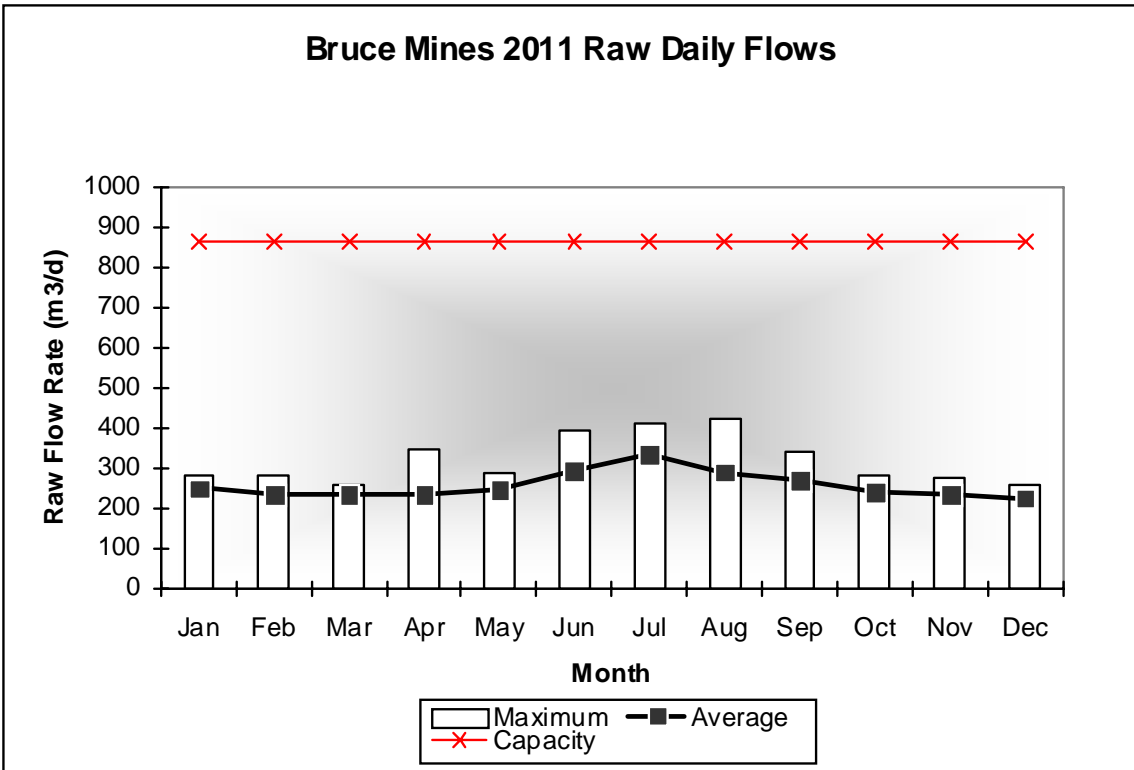
The monthly average raw water flow for this reporting period was 257 m³/d and the maximum daily flow for 2011 was 424 m³/d. Flow totals and comparison of flow rates to the rated capacity are included in the table and graphs below.

The quantity of water supplied during the reporting period **did not** exceed the rated maximum capacity.

2011	RAW WATER FLOW DATA - TOTAL ALL SOURCES						
	Month	Total Monthly Raw Flow (m ³)	Average Raw Flow (m ³ /d)	Maximum Raw Flow (m ³ /d)	Maximum Raw Flow Rate (L/s)	Maximum Rated Capacity	
						L/s	m ³ /d
January	7,760	250	280	5.4	10.0	864.0	
February	6,566	235	283	5.5	10.0	864.0	
March	7,283	235	259	5.5	11.57	864.0	
April	7,002	233	346	8.0	11.57	864.0	
May	7,689	248	286	5.6	11.57	864.0	
June	8,831	294	391	6.2	11.57	864.0	
July	10,303	332	411	6.2	11.57	864.0	
August	8,949	289	424	6.3	11.57	864.0	
September	8,131	271	339	6.4	11.57	864.0	
October	7,490	242	282	6.6	11.57	864.0	
November	7,050	235	276	6.4	11.57	864.0	
December	7,010	226	259	5.7	11.57	864.0	
2011 Total	94,063						
2011 Summary	7839	258	424	8.0	11.57	864.0	



Comparison of Monthly Maximum Flow Rates



Comparison of Monthly Average and Maximum Daily Flow

In accordance with the PTTW, the allowable rate of water taking is 11.57 L/s with a maximum daily volume of 1000.0 m³/d. Attached as Appendix A, is the Annual Record of Water Taking, a summary of water taking, including average and maximum flows.

SECTION 4: SYSTEM FAILURES AND CORRECTIONS

There was a Ministry of the Environment Drinking Water Inspection conducted on November 29, 2011 #1-9IE7P The facility received a **100%** rating and there were no Required Actions.

Attached as Appendix B is the MOE Inspection Report which includes the new Municipal Drinking Water License and the Drinking Water Works Permit.

There was one instance of adverse water quality (AWQI) reported for lead exceedance in the distribution system. The issue was determined to be due to the type of washer used within fire hydrants and not an issue with the water supply.

SECTION 5: CONCLUSION

The Bruce Mines WTP delivers water that, in all its treated and distribution samples, indicates the water to be free of bacteriological contamination.

For the 2011 operating year, the Bruce Mines WTP was able to meet the demand of water use within the town without exceeding the Permit to Take Water.

Attached as Appendix C, find the 2011 Annual Report as required by Drinking-Water System Regulation O. Reg. 170/03.

APPENDIX A

Annual Record of Water Taking

Personal information contained on this form is collected under the authority of the Ontario Water Resources Act, Section 20. The Purpose of the form is to record details and information about the taking of water annually. Questions should be directed to the respective hub office in your area.

Les renseignements personnels qui figurent dans le présent formulaire sont recueillis en vertu de l'article 20 de la Loi sur les ressources en eau de l'Ontario. Ce formulaire sert à dossiers les détails et les renseignements concernant la prise d'eau annuelle. Prière d'adresser toutes questions au personnel du bureau régional de votre secteur.

Year(Année): 2011 Permit No.(N° de permis): Source: Lake Huron, St. Joseph Channel
 Location: RW - Raw Water

Name of Permittee: Mailing Address:
Nom du titulaire du permis Adresse postale

Location Of Taking: Twp. or Municipality: Concession: Lot:
Lieu de la prise d'eau Canton ou municipalité

	Jan/2011	Feb/2011	Mar/2011	Apr/2011	May/2011	Jun/2011	Jul/2011	Aug/2011	Sep/2011	Oct/2011	Nov/2011	Dec/2011	<-- Total -->	<-- Avg. -->	<-- Max. -->	<-- Criteria-->
Avg Daily Taking(m3)	250.32	234.5	234.94	233.4	248.03	294.37	332.35	288.67	271.03	241.61	235.0	226.13		257.53		1,000.0
Total Amt of Taking(m3)	7,760.0	6,566.0	7,283.0	7,002.0	7,689.0	8,831.0	10,303.0	8,948.9	8,131.0	7,490.0	7,050.0	7,010.0	94,063.9			
Max Daily Flow(m3)	280.0	283.0	259.0	346.0	286.0	391.0	411.0	424.0	339.0	282.0	276.0	259.0			424.0	1,000.0
Peak Daily Rate of Taking(L/sec)	5.4	5.5	5.5	8.0	5.6	6.2	6.2	6.3	6.4	6.6	6.4	5.7			8.0	11.57

APPENDIX B

Ministry of Environment Inspection Report #1-9IE7P

Ministry of the Environment

Safe Drinking Water Branch

Sault Ste. Marie Area Office
3rd floor, 289 Bay St
Sault Ste. Marie ON P6A 1W7
Tel.: 705 942-6354
Fax: 705 942-6327
Toll Free: 1 800 965-9990

Ministère de l'Environnement

Direction du contrôle de la qualité de
l'eau potable

Bureau du secteur de Sault Ste. Marie
3^e étage
289, rue Bay
Sault Ste. Marie (Ontario) P6A 1W7
Tél. : 705 942-6354
Télééc. : 705 942-6327
Sans frais : 1 800 965-9990



February 2, 2012

The Corporation of the Town of Bruce Mines
9126 Highway 17
Bruce Mines ON P0R 1C0

Attention: Donna Brunke, Clerk

Dear Ms. Brunke

**Re: Drinking Water System Inspection Report # 1-9IE7P
Bruce Mines Drinking Water System (DWS# 210000933)
Date of Inspection November 29, 2011**

Please find attached the Ministry of the Environment's final inspection report for the Bruce Mines Drinking Water System (DWS# 210000933). The primary focus of this inspection is to confirm compliance with the Ministry of the Environment legislation and authorizing documents, as well as evaluating conformance with Ministry drinking water related policies and guidelines during the inspection review period. This report is based on a "focused" inspection of the Spanish Drinking Water System. Although the inspection involved fewer activities than those normally undertaken by a detailed inspection, it contained most of the elements required to assess key compliance issues.

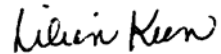
No instances of non-compliance were identified during the current inspection period. Other minor issues encountered have been highlighted in the inspection report's "Summary of Best Practices Issues and Recommendations" section for your action.

Results of Ministry audit samples are included in Appendix E of the inspection report.

In order to measure individual inspection results, the Ministry has established an inspection compliance risk framework based on the principles of the Inspection, Investigation and Enforcement Secretariat and advice of the internal/external risk experts. The Inspection Rating Record (IRR) included in Appendix G of the inspection report provides the Ministry, the system owner and the local Public Health Units with a summarised quantitative measure of the drinking water system's annual inspection and regulated water quality testing performance.

Should you have any questions or concerns regarding the content of the attached report or associated appendices, please do not hesitate to contact me at (705) 942-6309.

Yours truly,



Lilian Keen

Provincial Officer

Drinking Water Inspection Program, Safe Drinking Water Branch

Sault Ste Marie Area Office, Ministry of the Environment

Enclosure

cc: Jeff St. Pierre, Cluster Manager, OCWA, Espanola Hub
Dan Clark, Process and Compliance Technician (A) OCWA, Espanola Hub
Sherrri Cleaves, Director, Algoma Public Health Unit
Martin Blake, District Manager, Ministry of Natural Resources

Table of Contents

OWNER INFORMATION.....	02
INSPECTION DETAILS.....	03
DWS COMPONENTS AND DESCRIPTION.....	03
INTRODUCTION.....	05
CAPACITY ASSESSMENT.....	05
TREATMENT PROCESSES.....	06
DISTRIBUTION SYSTEM.....	07
OPERATIONS MANUAL.....	07
LOG BOOKS.....	08
CONTINGENCY /EMERGENCY PLANNING.....	08
SECURITY.....	08
CERTIFICATION AND TRAINING.....	08
WATER QUALITY MONITORING.....	09
WATER QUALITY ASSESSMENT.....	12
REPORTING AND CORRECTIVE ACTION.....	12
OTHER INSPECTION FINDINGS.....	13
NON COMPLIANCE WITH REGULATORY REQUIREMENTS.....	14
& ACTIONS REQUIRED	
SUMMARY OF BEST PRACTICE ISSUES & RECOMMENDATIONS.....	15
SIGNATURES.....	16

APPENDICES

- APPENDIX A DRINKING WATER SYSTEM (DWS) PROFILE
- APPENDIX B MUNICIPAL DRINKING WATER LICENCE AND DRINKING WATER WORKS PERMIT
- APPENDIX C PERMIT TO TAKE WATER
- APPENDIX D DRINKING WATER SYSTEM PROCESS SCHEMATIC
- APPENDIX E MINISTRY OF THE ENVIRONMENT AUDIT SAMPLE RESULTS
- APPENDIX F INSPECTION RATING RECORD



Ministry of the Environment

**BRUCE MINES DRINKING WATER SYSTEM
Drinking Water System Inspection Report**

DWS Number:	210000933
Inspection Number:	1-9IE7P
Date of Inspection:	Nov 29, 2011
Inspected By:	Lilian Keen

OWNER INFORMATION:

Company Name:	BRUCE MINES, THE CORPORATION OF THE TOWN OF		
Street Number:	9180	Unit Identifier:	
Street Name:	HIGHWAY 17 Hwy E		
City:	BRUCE MINES		
Province:	ON	Postal Code:	P0R 1C0

CONTACT INFORMATION

Type:	Owner Contact	Name:	Donna Brunke
Phone:	(705) 785-3493	Fax:	(705) 785-3170
Email:	dbrunke@bellnet.ca		
Title:	Clerk		

Type:	Operating Authority	Name:	Jeff St. Pierre
Phone:	(705) 943-5578	Fax:	(705) 575-2247
Email:	jst.pierre@ocwa.com		
Title:	Cluster Manager, OCWA		

Type:	Operating Authority	Name:	Dan Clark
Phone:	(705) 869-5578	Fax:	(705) 869-4374
Email:	dclark@ocwa.com		
Title:	Process & Compliance Technician, OCWA		

Type:	Operating Authority	Name:	Charles O'Kane
Phone:	(705) 785-3445	Fax:	
Email:	co'kane@ocwa.com		
Title:	Operator, OCWA		

Type:	Operating Authority	Name:	Mark Witty
Phone:	(705) 785-3445	Fax:	
Email:	mwitty@ocwa.com		
Title:	Operator, OCWA		

Type:	Public Health Authority	Name:	Sherri Cleaves
Phone:	(705) 942-4646	Fax:	(705) 541-7346
Email:	scleaves@algomapublichealth.com		
Title:	Director, Environmental Health APH		

Type:	Ministry of Natural Resources	Name:	Martin Blake
Phone:	(705) 949-5120	Fax:	(705) 949-6450
Email:	marty.blake@ontario.ca		
Title:	District Manager		

CONTACT INFORMATION

Type:	Ministry of the Environment	Name:	Brian McMahon
Phone:	(705) 564-3218	Fax:	(705) 564-4180
Email:	brian.mcmahon@ene.gov.on.ca		
Title:	Sudbury District SDWB Supervisor		

Type:	Ministry of the Environment	Name:	Lilian Keen
Phone:	(705) 942-6309	Fax:	(705) 942-6327
Email:	lilian.keen@ontario.ca		
Title:	Safe Drinking Water Inspector		

INSPECTION DETAILS:

DWS Name:	BRUCE MINES DRINKING WATER SYSTEM
DWS Address:	75 BRUCE BAY RD BRUCE MINES ON P0R 1C0
County/District:	Bruce Mines
MOE District/Area Office:	Sault Ste. Marie Area Office
Health Unit:	ALGOMA PUBLIC HEALTH
Conservation Authority	N/A
MNR Office:	N/A
DWS Category:	Large Municipal Residential
DWS Number:	210000933
Inspection Type:	Unannounced
Inspection Number:	1-9IE7P
Date of Inspection:	Nov 29, 2011
Date of Previous Inspection:	Dec 14, 2010

DRINKING WATER SYSTEM COMPONENTS DESCRIPTION

Site (Name):	INTAKE	
Type:	Source	Sub Type:
Comments:		

The raw water source for the Bruce Mines WTP is the St. Joseph's Channel of Lake Huron. The intake is a 300 mm gravity line approximately 366 meters off shore in 7 metres of water. Repairs to the intake were carried out during the plant upgrade in 2003.

Site (Name):	TREATED WATER	
Type:	Treated Water POE	Sub Type:

Comments:

The treatment plant was upgraded in 2003 with membrane filtration. Two submersible low lift pumps supply raw water to two parallel micro filtration units. Each filtration unit has fibre membranes having a 0.1 micron pore size, and is rated for a gross production of 10 L/s. Turbidity meters and continuous particle counters monitor the discharge from each filter train. Compressed air and sodium hypochlorite are used for the frequent cleaning of the membranes. Sodium hydroxide, sodium hypochlorite and citric acid are used for periodic deep cleaning. Waste from the deep cleaning process is directed to the municipal sanitary system, while backwash water is discharged to Lake Huron following dechlorination and dilution to ensure a maximum suspended solids level of 25 mg/l.

Sodium hypochlorite is used for prechlorination at the intake for zebra mussel control as well as primary and secondary disinfection.

Three vertical turbine high lift pumps with variable frequency drives supply the distribution system.

One fixed speed 38 L/s high capacity pump is available for emergency situations. A diesel generator is available to supply emergency power.

Site (Name): DISTRIBUTION (WATER INSPECTION)

Type: Other

Sub Type:

Comments:

The distribution system serves a population of approximately 654 in the Town of Bruce Mines and the Township of Plummer Additional. The system is equipped with hydrants for fire protection and flushing purposes. Water storage consists of in-ground reservoirs at the treatment plant which also provide the necessary contact time for disinfection. There is a booster station with re-chlorination capability for servicing the Gimby subdivision and the community of Bruce Station (Twp. of Plummer Additional).

INSPECTION SUMMARY

INTRODUCTION

- * The primary focus of this inspection is to confirm compliance with Ministry of the Environment legislation and authorizing documents such as Orders and Certificates of Approval, as well as evaluating conformance with Ministry drinking water related policies and guidelines during the inspection period.

The Ministry is implementing a rigorous and comprehensive approach in the inspection of drinking water systems that keys on the source, treatment and distribution components of the system as well as management practices.

This drinking water system is subject to the legislative requirements of the Safe Drinking Water Act, 2002 (SDWA) and regulations made therein, including Ontario Regulation 170/03, "Drinking Water Systems" (O.Reg.170/03). This inspection has been conducted pursuant to Section 81 of the SDWA.

This report is based on a "focused" inspection of your system. Although the inspection involved fewer activities than those normally undertaken by a detailed inspection, it contained most of the elements required to assess key compliance issues.

Your system was chosen for a focused inspection during this inspection cycle because inspection findings over the past three years were such that the number of violations were minimal or non-existent, there were few or no orders issued to you that were of significance in the maintenance of water potability and there were no deficiencies as defined in O. Reg. 172/03. The undertaking of a focused inspection at your drinking water system during this year's inspection cycle does not ensure that a similar type of inspection will be conducted at any point in the future.

****Unless otherwise stated, the inspection period for this inspection is from December 1, 2010 to November 29, 2011.**

CAPACITY ASSESSMENT

- * There was sufficient monitoring of flow as required by the Permit and Licence or Approval issued under Part V of the SDWA

Condition 2.0 of Schedule C of Municipal Drinking Water Licence #270-101 requires a sufficient number of flow-measuring devices within the drinking water system to permit continuous measurement and recording of flow rates and daily volumes of water conveyed into the treatment and distribution systems. Furthermore, it is required under Condition 3.0 of the drinking water licence that all flow measuring devices must be checked and calibrated in accordance with manufacturer's instruction or at least once every year during which the drinking water system is in operation.

Continuous flow measuring devices are in place to monitor raw water flow into each filtration unit, treated water flow leaving the plant and influent flow to the Plummer Additional booster station.

A review of records at the time of inspection indicate that flow meters were last calibrated on February 11, 2011.

CAPACITY ASSESSMENT

- * **The owner was in compliance with the conditions associated with maximum flow rate or the rated capacity conditions in the Permit and Licence or Approval issued under Part V of the SDWA.**

The Bruce Mines Drinking Water System operates under Permit To Take Water #6413-7FPND7, issued June 20, 2008. This permit restricts the maximum taking per day to 1,000,000 litres/day.

The system's rated capacity is 864 m³/day as identified in Condition 1.1 Schedule C of Municipal Drinking Water Licence #270-101.

Raw water and treated water flows were reviewed for the period of December 1, 2010 to October 31, 2011. There were no incidents of exceedances noted during the review period.

TREATMENT PROCESSES

- * **The owner had ensured that all equipment was installed in accordance with the Permit and Licence or Approval issued under Part V of the SDWA.**

The Bruce Mines Drinking Water System operates under Municipal Drinking Water Licence #270-101 and Drinking Water Works Permit #270-201. The equipment as identified in the permit was reviewed at the time of inspection, and found to be in order.

- * **Records indicated that the treatment equipment was operated in a manner that achieved the design capabilities required under Ontario Regulation 170/03 or a Permit, Licence or Approval issued under Part V of the SDWA at all times that water was being supplied to consumers.**

This plant achieves primary disinfection through the use of membrane filtration and chlorination. The source is surface water, therefore the plant is required to provide 2 log removal of Cryptosporidium, 3 log removal of Giardia and 4 log removal of Viruses. A minimum of 0.5 log removal of Giardia must be achieved through chemical disinfection.

The removal credits are assigned as follows:

	Crypto	Giardia	Viruses
Membrane Filtration	2 log removal	3 log removal	2 log removal
Chlorination	0 log removal	0.5 log removal	2 log removal
<hr/>			
Total	2 log removal	3.5 log removal	4 log removal

The filtration system was being operated in a manner that fulfilled the requirements of the "Disinfection Procedures for Drinking Water in Ontario". Filters were backwashed effectively; backwash water was wasted and not recycled. Continuous particle counters and turbidimeters were installed at the effluent line of each unit. Trans-membrane pressure was also continuously monitored for both units. Turbidity data reviewed since the last inspection confirmed that the filtered water turbidity was less than or equal to 0.1 NTU for 99% of the measurements each month.

The operations manual provided sample calculations outlining the CT requirements for the plant. The sample calculation outlined that CT conditions are met under normal high lift conditions (2 high lift pumps running - treated water flow of 16 L/s) provided that the chlorine residual is maintained at 0.6 mg/L and clearwell levels are maintained above 39% (CT of 48). The established free chlorine residual objective leaving the plant is 1.0 mg/L. A minimum free chlorine alarm has been set at 0.7 mg/L; and clearwell low level alarm set point is 70%. These alarm set points are reportedly established to allow operational staff sufficient time to respond to call outs and also ensure that CT is maintained under varying conditions.

TREATMENT PROCESSES

Data reviewed on the Daily Process Data Reports since the last inspection revealed that the lowest recorded chlorine residual was 0.74 mg/L. Data from the facility's Daily Logs demonstrated that clearwell levels have been maintained near or above 70% (68% in September 2011 and 69% in April 2011). Higher flows and lower clearwell levels experienced in September and April occurred in conjunction with scheduled hydrant flushing. These were monitored and chlorine residuals adjusted accordingly to ensure that CT requirements were maintained during these higher flow conditions. Based on treated flow, chlorine residual and clearwell data reviewed, CT requirements at the Bruce Mines water plant have been met for this inspection period.

- * **Records confirmed that the water treatment equipment which provides chlorination or chloramination for secondary disinfection purposes was operated so that at all times and all locations in the distribution system the chlorine residual was never less than 0.05 mg/l free or 0.25 mg/l combined.**

Subsection 1-2(2) paragraph 4 of Schedule 1 of O.Reg 170/03 states that if chlorination is provided for secondary disinfection, the owner shall ensure that the equipment is operated so that at all times and at all locations within the distribution system, the free chlorine is never less than 0.05 mg/L.

Records provided by the operating authority for the period of December 1, 2010 to October 31, 2011 were reviewed and indicate that the chlorine residual in the distribution system was never less than 0.05 mg/L. The lowest recorded residual from a distribution grab sample was 0.65 mg/L recorded in June 2011.

- * **The primary disinfection equipment was equipped with alarms or shut-off mechanisms that satisfied the standards described in Section 1-6 (1) of Schedule 1 of Ontario Regulation 170/03.**

The facility uses membrane filtration and chlorination equipped with alarms and shut-off mechanisms which satisfy the standards.

- * **The Operator-in-Charge had ensured that all equipment used in the processes was monitored, inspected, and evaluated.**

All equipment used in the process are reported to be monitored, inspected, tested, and evaluated by the operating authority using an electronic tracking system. Facility Work Order Summaries were provided prior to the inspection. The operator carries out a routine which involves visual inspection of the plant, completion of daily record sheet, review of SCADA logs, periodic transfer of hand written record sheets into the operating authority's database. Entry in the logbook is undertaken and any variations from normal conditions are noted.

DISTRIBUTION SYSTEM

- * **Backflow preventers were not installed at each service connection to Industrial/Commercial/Institutional and agricultural process that were considered high hazard facilities.**

The municipality is not aware if backflow preventors are installed at each service connection to industrial, commercial, institutional and agricultural process that are high hazard facilities. A review of these facilities serviced by the system may identify higher risk connections which may warrant the installation of backflow preventors. The owner may wish to use the following InfraGuide as a reference in developing a backflow prevention strategy:

"Innovations and Best Practices-Potable Water-Methodology for Setting a Cross-Connection Control Program" available at http://gmf.fcm.ca/InfraGuide/Potable_Water.asp

OPERATIONS MANUALS

OPERATIONS MANUALS

- * **The operations and maintenance manuals contained plans, drawings and process descriptions sufficient for the safe and efficient operation of the system.**

Operations and Maintenance manuals for the Bruce Mines Water Treatment Plant were reviewed at the time of inspection and found to contain the required information such as, plans, drawings, and process descriptions sufficient for the safe and efficient operation of the system. The manuals are kept at the water treatment plant.

- * **The operations and maintenance manuals did meet the requirements of the Permit and Licence or Approval issued under Part V of the SDWA.**

LOGBOOKS

- * **Records or other record keeping mechanisms confirmed that operational testing not performed by continuous monitoring equipment was being done by a certified operator, water quality analyst, or person who suffices the requirements of O. Reg. 170/03 7-5.**

A review of operational logs, demonstrate that only certified operators make adjustments to the treatment equipment for the Bruce Mines Drinking Water System. There are currently two main operators for the Bruce Mines Drinking Water System, and both have the required certifications.

CONTINGENCY/EMERGENCY PLANNING

- * **The contingency/emergency plan was available for reference by all staff as required by the Permit and Licence or Approval issued under Part V of the SDWA.**

At the time of inspection, a hard copy of the contingency/emergency plan specific to the plant was available for reference at the water treatment plant and readily available to all staff.

SECURITY

- * **All storage facilities were completely covered and secure.**
- * **Air vents and overflows associated with reservoirs and elevated storage structures were equipped with screens.**
- * **The owner had provided security measures to protect components of the drinking-water system.**

A security system is in place at the facility.

CERTIFICATION AND TRAINING

- * **The overall responsible operator had been designated for each subsystem.**

Section 23(1) of O.Reg 128/04 ("Certification of Drinking-Water System Operators and Water Quality Analysts") states that a municipal residential drinking water system must have a designated overall responsible operator (ORO). The ORO shall be an operator who holds a certificate for that type of subsystem and that is of the same class or higher than the class of that subsystem.

The following two certificates have been issued for the Bruce Mines Drinking Water System:

Class 2 Water Treatment Subsystem – Certificate # 249 issued on October 25, 2005 and;

Class 2 Water Distribution – Certificate # 251 issued on March 16, 2006.

The ORO duties for the treatment plant have been designated to two operators which alternate the duties of ORO. Both operators possess the appropriate certification to serve in this capacity.

CERTIFICATION AND TRAINING

- * **Operators in charge had been designated for all subsystems which comprised the drinking-water system.**

Section 25(1) of O.Reg 128/04 states that one or more operators shall be designated as the Operators in Charge (OIC) of the drinking water system. Duties of the OIC are stipulated in section 26 of O.Reg 128/04. A review of the logbooks demonstrates that the designated OIC is recorded on the daily log sheets by a checkmark. At the Bruce Mines water treatment plant, two operators, who are also designed OROs, alternate the duties of OIC.

Both OICs have the required certifications and certificates which were properly displayed at both well locations.

- * **Only certified operators made adjustments to the treatment equipment.**

WATER QUALITY MONITORING

- * **All microbiological water quality monitoring requirements for distribution samples were being met.**

The Bruce Mines Drinking Water System is reported to serve an estimated population of approximately 654 individuals. Based on this service population, subsection 11-2(1) of Schedule 10 of O.Reg 170/03 requires that a minimum of 8 samples be collected within the Bruce Mines distribution system on a monthly basis, with at least one of the samples collected each week. Subsection 10-2(2) further requires that each of the distribution system samples is tested for *Escherichia coli* (E. coli) and total coliforms; additionally, at least 25 percent of the distribution system shall be tested for general bacteria populations expressed as colony counts on a heterotrophic plate count (HPC).

In general, during the inspection review period, three samples were collected from the distribution system each week, with a range of 12 to 15 samples collected each month. Each of the distribution system samples collected during the review period were submitted to an accredited laboratory and analysed for E.coli and total coliform; HPC analysis was conducted on at least 25 percent of the distribution system samples.

- * **All microbiological water quality monitoring requirements for treated samples were being met.**

Section 10-3 of Schedule 10 of O.Reg 170/03 states that a water sample must be collected at least once every week and tested for E.coli, total coliforms and HPC. A review of the water quality monitoring data for the period in question, confirmed that microbiological requirements were met.

- * **All inorganic water quality monitoring requirements prescribed by legislation were conducted within the required frequency.**

The source for the Bruce Mines Drinking Water System is surface water. As such, section 13-2 of Schedule 13, O. Reg. 170/03 requires that at least one sample be taken every 12 months and tested for the required inorganic parameters identified under Schedule 23. A review of the inorganic water quality monitoring data for the period in question, confirmed that the required samples were collected on January 11, 2011 and that the monitoring requirements prescribed by the legislation were met.

- * **All organic water quality monitoring requirements prescribed by legislation were conducted within the required frequency.**

The source for the Bruce Mines Drinking Water System is surface water. As such, Section 13-4 of Schedule 13, O. Reg. 170/03 requires that at least one sample be taken every 12 months and tested for the required organic parameters identified under Schedule 24. A review of the organic water quality monitoring data for the period in question, confirmed that the required samples were collected on January 11, 2011, and that the monitoring requirements prescribed by the legislation were met.

WATER QUALITY MONITORING

- * **All trihalomethanes water quality monitoring requirements prescribed by legislation were conducted within the required frequency.**

Section 13-6 of Schedule 13, O. Reg. 170/03 requires that at least one sample be taken every 3 months and tested for trihalomethanes. A review of the water quality monitoring data for the period in question, confirmed that trihalomethane samples were collected in accordance with the monitoring requirements prescribed by the legislation. As of October 11, 2011 the running average for THMs was 79.5 ug/L, below the Ontario Drinking Water Standard of 100 ug/L.

- * **All nitrate/nitrite water quality monitoring requirements prescribed by legislation were conducted within the required frequency for the DWS.**

Section 13-7 of Schedule 13, O. Reg. 170/03 requires that at least one sample be taken every 3 months and tested for nitrates/nitrites. A review of the water quality monitoring data for the period in question, confirmed that the nitrate/nitrite samples were collected in accordance with the monitoring requirements prescribed by the legislation.

- * **All sodium water quality monitoring requirements prescribed by legislation were conducted within the required frequency.**

Section 13-8 of Schedule 13, O. Reg. 170/03 requires that at least one sample be taken every 60 months and tested for sodium. A review of the water quality monitoring data for the period in question, confirmed that sodium samples are collected in accordance with the monitoring requirements prescribed by the legislation. The last record of a sodium sample collected was on January 11, 2011, with results of 4.46 mg/L.

- * **All fluoride water quality monitoring requirements prescribed by legislation were conducted within the required frequency.**

Section 13-9 of Schedule 13, O. Reg. 170/03 requires that at least one sample be taken every 60 months and tested for fluoride. A review of the water quality monitoring data for the period in question, confirmed that fluoride samples were collected in accordance with the monitoring requirements prescribed by the legislation.

The last record of a fluoride sample collected was on January 11, 2011, with results of 0.06 mg/L.

- * **All water quality monitoring requirements imposed by the Permit and Licence or Approval issued under Part V of the SDWA were being met.**

Schedule C Condition 4.0 of the Municipal Drinking Water Licence 207-101 requires that free chlorine residual be monitored weekly by grab samples within the Plummer Additional distribution system. Furthermore, Condition 4.4 requires that and that backwash water be tested for suspended solids on a monthly basis, and free chlorine on a weekly basis. A review of the water quality monitoring data for the period in question, confirmed that the these parameters have been monitored in accordance with the monitoring requirements prescribed by the licence.

- * **All sampling requirements for lead prescribed by schedule 15.1 of O. Reg. 170/03 were being met.**

Schedule 15.1 of O.Reg 170/03 sets out the requirements for lead sampling and testing, including the selection of sampling points; the number of samples collected; sample collection protocol; reporting of results; and corrective actions for adverse test results.

It was identified in the last inspection that the Bruce Mines Drinking Water System was eligible for reduced sampling.

Based on the current population of Bruce Mines (approx. 654), section 15.1-6 of Schedule 15.1 requires that a series of samples be collected from the plumbing of 10 private residences, 1 non-residential sites (such as commercial properties) and 2 distribution system sites.

Lead sampling for the Bruce Mines Drinking Water System was undertaken in April 2011.

A review of the results demonstrate that the Bruce Mines Drinking Water System is in compliance with the requirements as prescribed under Schedule 15.1 of O.Reg. 170/03.

WATER QUALITY MONITORING

- * **All sampling requirements for alkalinity and pH prescribed by schedule 15.1 of O. Reg. 170/03 were being met.**

A review of records indicate that alkalinity and pH were recorded during the collection of lead samples in the distribution system.

- * **All continuous monitoring equipment utilized for sampling and testing required by O.Reg.170/03, or approval or order, were equipped with alarms or shut-off mechanisms that satisfied the standards described in Schedule 6.**

The operating authority reports that all continuous monitoring equipment utilized for sampling and testing, is equipped with alarms and shut-offs as required by O.Reg.170/03

- * **All continuous analysers were calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation.**

It was reported at the time of inspection that all continuous analyzers are calibrated, maintained, and operated in accordance with the manufacturers instructions or the Regulation. Calibration records and work order summaries were provided and reviewed.

- * **Operators were examining continuous monitoring test results and they were examining the results within 72 hours of the test.**

The facility is attended by operating authority staff a minimum of three times a week during which test results are reviewed. This is supported by Facility Log Books, maintained by staff.

- * **Primary disinfection chlorine monitoring was being conducted at a location approved by Permit, Licence or Approval issued under Part V of the SDWA, or at/near a location where the intended CT had just been achieved.**

Primary disinfection chlorine monitoring at Bruce Mines Drinking Water System was being conducted at the location where the intended CT had just been achieved (after the clear well). Chlorine residual data for the inspection period was reviewed and found to be in order.

- * **The secondary disinfectant residual was measured as required for the distribution system.**

- * **Records confirmed that chlorine residual tests were being conducted at the same time and at the same location that microbiological samples were obtained.**

A review of the microbiological water quality monitoring data for the inspection period, confirmed that chlorine residual tests were being conducted at the same time and at the same locations that microbiological samples were obtained.

- * **Continuous monitoring equipment that was being utilized to fulfill O. Reg. 170/03 requirements was performing tests for the parameters with at least the minimum frequency specified in the Table in Schedule 6 of O. Reg. 170/03.**

- * **All continuous monitoring equipment that was being utilized to fulfill O. Reg. 170/03 requirements was recording data with the prescribed format.**

- * **Continuous monitoring of each filter effluent line was being performed for turbidity.**

The Bruce Mines Drinking Water System is equipped with two membrane filtration units where effluent from each filter is monitored by an on-line turbidity meter and on-line particle counter.

Filter effluent turbidity data for the Bruce Mines Drinking Water System was reviewed for the inspection period, and demonstrated that the filter effluent was maintained at < 0.1 NTU, 99% of the time.

WATER QUALITY MONITORING

- * **Testing for parameters required by legislation, Order, or a Permit, Licence or Approval issued under Part V of the SDWA was conducted by laboratories in Ontario licenced to test for that parameter, or by eligible laboratories outside Ontario.**

WATER QUALITY ASSESSMENT

- * **The inspector collected audit samples during the inspection.**

As part of the physical inspection, one distribution end sample and one treated sample were collected from the Bruce Mines Drinking Water System and submitted to the Ministry's laboratory for analysis. The samples collected at the treated water sampling location were analysed for: microbiological parameters, metals, mercury, dissolved nutrients, fluoride and volatile organic compounds (VOC).

The distribution and distribution end samples were analysed for: microbiological parameters, lead and volatile organic compounds (VOC).

All samples collected during the physical inspection were found to meet the Ontario Drinking Water Quality Standards – Ontario Regulation 169/03 for the parameters analysed.

Along with the grab samples, chlorine residuals were measured with a portable hand-held chlorine analyser at each of the sampling locations. The results are as follows:

Water Treatment Plant - Treated: 0.91 mg/L

Home Hardware - Distribution End: 0.55 mg/L

- * **Records show that all water sample results taken during the review period met the Ontario Drinking Water Quality Standards (O.Reg. 169/03).**

REPORTING & CORRECTIVE ACTIONS

- * **Corrective actions (as per Schedule 17) were taken to address adverse conditions, including any other steps that were directed by the Medical Officer of Health.**

The following Adverse Water Quality Incidents (AWQIs) were reported during the inspection period. The operating authority acted quickly and reported the incidents as per requirements of the regulation. The corrective actions were appropriate and Medical Officer of Health notified.

#100653 - April 14, 2011 - Lead exceedance 38 mg/L at Hydrant #26- Health Unit Notified - Resampled on April 26, 2011 - Results 69.5 ug/L

#100720 created for lead resample exceedance - Hydrant #26 resampled a second time on May 2, 2011. Results 0.06 ug/L.

- * **Corrective actions as directed by the Medical Officer of Health had been taken by the owner and operating authority to address exceedances of the lead standard.**

The following Adverse Water Quality Incidents (AWQIs) were reported during the inspection period. The operating authority acted quickly and reported the incidents as per requirements of the regulation. The corrective actions were appropriate and Medical Officer of Health notified.

#100653 - April 14, 2011 - Lead exceedance 38 mg/L at Hydrant #26- Health Unit Notified - Resampled on April 26, 2011 - Results 69.5 ug/L

#100720 created for lead resample exceedance - Hydrant #26 resampled a second time on May 2, 2011. Results 0.06 ug/L.

- * **All required notifications of adverse water quality incidents were immediately provided as per O.Reg. 170/03 16-6.**

REPORTING & CORRECTIVE ACTIONS

- * All reporting requirements for lead sampling were complied with as per schedule 15.1-9 of O.Reg. 170/03.

- * **Where required continuous monitoring equipment used for the monitoring of chlorine residual and/or turbidity triggered an alarm or an automatic shut-off, a qualified person responded in a timely manner and took appropriate actions.**

According to a review of the facility's logbooks and Work Orders, all alarm and automatic shut-off events were attended to by a certified operator in a timely manner and appropriate actions were taken to rectify the situation.

- * **When the primary disinfection equipment, other than that used for chlorination or chloramination, has failed causing an alarm to sound or an automatic shut-off to occur, a certified operator responded in a timely manner and took appropriate actions.**

According to a review of the facility's logbooks and Word Orders, all alarm and automatic shut-off events were attended to by a certified operator in a timely manner and appropriate actions were taken to rectify the situation.

OTHER INSPECTION FINDINGS

- * **The following issues were also noted during the inspection:**

1) DRINKING WATER SYSTEM (DWS) PROFILE INFORMATION:

Address information on the Bruce Mine's Drinking Water System Profile was not up to date.

It is recommended that the municipality update the address information on the DWS Profile to reflect the municipal office change in location.

2) MAXIMUM PEAK FLOW READING:

During the review of flow data listed in the monthly and daily Process Data Report (PDR), a reoccurring maximum reading for treated peak flow of 41.2 L/s was observed. This reading was also observed in prior year's PDR. This flow reading is said to be associated with regularly scheduled hydrant flushing.

It is requested that the operating authority provide additional information on how this specific reading of 41.2 L/s is derived and recorded (ie: max pump rate, max flow meter reading, SCADA etc.).

NON-COMPLIANCE WITH REGULATORY REQUIREMENTS AND ACTIONS REQUIRED

This section provides a summary of all non-compliance with regulatory requirements identified during the inspection period, as well as actions required to address these issues. Further details pertaining to these items can be found in the body of the inspection report.

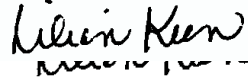
Not Applicable

SIGNATURES

Inspected By:

Lilian Keen

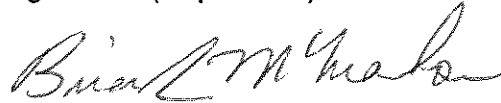
Signature: (Provincial Officer):



Reviewed & Approved By:

Brian McMahon

Signature: (Supervisor):



Review & Approval Date:

Feb 2/12

Note: This inspection does not in any way suggest that there is or has been compliance with applicable legislation and regulations as they apply or may apply to this facility. It is, and remains, the responsibility of the owner and/or operating authority to ensure compliance with all applicable legislative and regulatory requirements.



Drinking Water System Profile

DRINKING WATER SYSTEM PROFILE INFORMATION

as of 26-JAN-2012

Drinking Water System Name: Bruce Mines Drinking Water System
Drinking Water System Number: 210000933
Drinking Water System Category: Large Municipal Residential System (LMRS)
Municipality: Bruce Mines
Physical Location: 75 Bruce Bay Road, Bruce Mines, Ontario, P0R 1C0

OWNER INFORMATION

Owner Legal Name: Bruce Mines, The Corporation Of The Town Of
Owner Address: 9180 Highway 17 Hwy E, Post Office Box Delivery 220, Bruce Mines, Ontario P0R 1C0

Primary Contact Name: Mrs. Donna Brunke
Primary Contact Job Title: Clerk-Administrator
Primary Contact Phone: (705)7853493
Primary Contact Fax: (705)7853170
Primary Contact Email Address: brucemines@bellnet.ca

Alternate Contact Name: Mr. Jim Phippen
Alternate Contact Job Title: Operations Manager
Alternate Contact Phone: (705)8695578 x2222
Alternate Contact Fax: (705)8694374
Alternate Contact Email Address: jhippen@ocwa.com

OPERATING AUTHORITY INFORMATION

Operating Authority Legal Name: Ontario Clean Water Agency
Operating Authority Business Name: Ontario Clean Water Agency
Operating Authority Address: 86 Centre St, Espanola, Ontario P5E 1S4

Primary Contact Name: Mr. Jeff St. Pierre
Primary Job Title: Cluster Manager
Primary Contact Phone: (705)9435578
Primary Contact Fax: (705)5752246
Primary Contact Email Address: jst.pierre@ocwa.com

Alternate Contact Name: Mr. Jim Phippen
Alternate Contact Job Title: Operations Manager
Alternate Contact Phone: (705)8695578 x2222
Alternate Contact Fax: (705)8694374
Alternate Contact Email Address: jhippen@ocwa.com

OPERATIONAL INFORMATION

24/7 Contact Name: Mr. Jim Phippen
24/7 Job Title: Operations Manager
24/7 Contact Phone: (705)8695578 x2222
24/7 Contact Fax: (705)8694374
24/7 Contact Email Address: jhippen@ocwa.com
24/7 Contact Mobile: (705)6265578
24/7 Contact Pager: N/A

Population: 654
Number of Private Residences:
Number of Service Connections:

DRINKING WATER SYSTEM PROFILE INFORMATION

Design Rated Capacity: 10 L/S

Number of Designated Facilities Served: 0

DESIGNATED FACILITY:

Number of Wells: 0

GROUND WATER SOURCE:

Surface Water Source

Waterbody Name	Point of Entry
ST.JOSEPH'S CHANNEL	TREATED: BRUCE MINES WTP

Treatment Processes

Point of Entry / Distribution	Treatment Type	Treatment Process
DISTRIBUTION:BRUCE MINES DRINKING WATER SYSTEM	Primary Disinfection	CHLORINATION
	Secondary Disinfection	CHLORINATION
TREATED: BRUCE MINES WTP	Primary Disinfection	CHLORINATION
	Secondary Disinfection	CHLORINATION
	Other Treatments	MICROFILTRATION ZEBRA MUSSEL CONTROL

RECEIVING DWS:

SUPPLYING DWS:

Permit To Take Water

PERMIT TO TAKE WATER
Surface Water
NUMBER 6413-7FPND7

Reference Number 5608-7DJPVV

Pursuant to Section 34 of the Ontario Water Resources Act, R.S.O. 1990 this Permit To Take Water is hereby issued to:

The Corporation of the Town of Bruce Mines
Post Office Box 220
Bruce Mines, Ontario, P0R 1C0
Canada

For the water taking from: St. Joseph's Channel
Located at: 75 Bruce Bay Rd
Bruce Mines, District of Algoma

For the purposes of this Permit, and the terms and conditions specified below, the following definitions apply:

DEFINITIONS

- (a) "Director" means any person appointed in writing as a Director pursuant to section 5 of the OWRA for the purposes of section 34, OWRA.
- (b) "Provincial Officer" means any person designated in writing by the Minister as a Provincial Officer pursuant to section 5 of the OWRA.
- (c) "Ministry" means Ontario Ministry of the Environment.
- (d) "District Office" means the Sault Ste. Marie District Office.
- (e) "Permit" means this Permit to Take Water No. 6413-7FPND7 including its Schedules, if any, issued in accordance with Section 34 of the OWRA.
- (f) "Permit Holder" means The Corporation of the Town of Bruce Mines.
- (g) "OWRA " means the *Ontario Water Resources Act*, R.S.O. 1990, c. O. 40, as amended.

You are hereby notified that this Permit is issued subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. Compliance with Permit

- 1.2 The Permit Holder shall ensure that any person authorized by the Permit Holder to take water under this Permit is provided with a copy of this Permit and shall take all reasonable measures to ensure that any such person complies with the conditions of this Permit.
- 1.3 Any person authorized by the Permit Holder to take water under this Permit shall comply with the conditions of this Permit.
- 1.4 This Permit is not transferable to another person.
- 1.5 This Permit provides the Permit Holder with permission to take water in accordance with the conditions of this Permit, up to the date of the expiry of this Permit. This Permit does not constitute a legal right, vested or otherwise, to a water allocation, and the issuance of this Permit does not guarantee that, upon its expiry, it will be renewed.
- 1.6 The Permit Holder shall keep this Permit available at all times at or near the site of the taking, and shall produce this Permit immediately for inspection by a Provincial Officer upon his or her request.
- 1.7 The Permit Holder shall report any changes of address to the Director within thirty days of any such change. The Permit Holder shall report any change of ownership of the property for which this Permit is issued within thirty days of any such change. A change in ownership in the property shall cause this Permit to be cancelled.

2. General Conditions and Interpretation

- 2.1 Inspections
The Permit Holder must forthwith, upon presentation of credentials, permit a Provincial Officer to carry out any and all inspections authorized by the OWRA, the *Environmental Protection Act*, R.S.O. 1990, the *Pesticides Act*, R.S.O. 1990, or the *Safe Drinking Water Act*, S. O. 2002.
- 2.2 Other Approvals
The issuance of, and compliance with this Permit, does not:
 - (a) relieve the Permit Holder or any other person from any obligation to comply with any other applicable legal requirements, including the provisions of the *Ontario Water Resources Act*, and the *Environmental Protection Act*, and any regulations made thereunder; or

(b) limit in any way any authority of the Ministry, a Director, or a Provincial Officer, including the authority to require certain steps be taken or to require the Permit Holder to furnish any further information related to this Permit.

2.2.1 Prior to the taking of any water under the authorization of the Permit to Take Water, the Permit Holder shall ensure full compliance with the *Safe Drinking Water Act*, 2002 and its regulations. At no time does this permit authorize the taking of water when out of compliance with the *Safe Drinking Water Act*, 2002 and its regulations.

2.3 Information

The receipt of any information by the Ministry, the failure of the Ministry to take any action or require any person to take any action in relation to the information, or the failure of a Provincial Officer to prosecute any person in relation to the information, shall not be construed as:

(a) an approval, waiver or justification by the Ministry of any act or omission of any person that contravenes this Permit or other legal requirement; or

(b) acceptance by the Ministry of the information's completeness or accuracy.

2.4 Rights of Action

The issuance of, and compliance with this Permit shall not be construed as precluding or limiting any legal claims or rights of action that any person, including the Crown in right of Ontario or any agency thereof, has or may have against the Permit Holder, its officers, employees, agents, and contractors.

2.5 Severability

The requirements of this Permit are severable. If any requirements of this Permit, or the application of any requirements of this Permit to any circumstance, is held invalid or unenforceable, the application of such requirements to other circumstances and the remainder of this Permit shall not be affected thereby.

2.6 Conflicts

Where there is a conflict between a provision of any submitted document referred to in this Permit, including its Schedules, and the conditions of this Permit, the conditions in this Permit shall take precedence.

3. Water Takings Authorized by This Permit

3.1 Expiry

3.2 Amounts of Taking Permitted

The Permit Holder shall only take water from the source, during the periods and at the rates and amounts of taking specified in Table A. Water takings are authorized only for the purposes specified in Table A.

Table A

	Source Name / Description:	Source: Type:	Taking Specific Purpose:	Taking Major Category:	Max. Taken per Minute (litres):	Max. Num. of Hrs Taken per Day:	Max. Taken per Day (litres):	Max. Num. of Days Taken per Year:	Zone/ Easting/ Northing:
1	St. Joseph's Channel	Lake	Municipal	Water Supply	694	24	1,000,000	365	17 284522 5130081
						Total Taking:	1,000,000		

4. Monitoring

4.1 The Permit Holder shall maintain a record of all water takings. This record shall include the dates and times of water takings, and the total measured or calculated amounts of water pumped per day for each day that water is taken under the authorization of this Permit. The Permit Holder shall keep all required records up to date and available at or near the site of the taking and shall produce the records immediately for inspection by a Provincial Officer upon his or her request.

5. Impacts of the Water Taking

5.1 Notification

The Permit Holder shall immediately notify the local District Office of any complaint arising from the taking of water authorized under this Permit and shall report any action which has been taken or is proposed with regard to such complaint. The Permit Holder shall immediately notify the local District Office if the taking of water is observed to have any significant impact on the surrounding waters. After hours, calls shall be directed to the Ministry's Spills Action Centre at 1-800-268-6060.

5.2 For Surface-Water Takings

The taking of water (including the taking of water into storage and the subsequent or simultaneous withdrawal from storage) shall be carried out in such a manner that streamflow is not stopped and is not reduced to a rate that will cause interference with downstream uses of water or with the natural functions of the stream.

6. Director May Amend Permit

The Director may amend this Permit by letter requiring the Permit Holder to suspend or reduce the taking to an amount or threshold specified by the Director in the letter. The suspension or reduction in taking shall be effective immediately and may be revoked at any time upon notification by the Director. This condition does not affect your right to appeal the suspension or reduction in taking to the Environmental Review Tribunal under the *Ontario Water Resources Act*, Section 100 (4).

The reasons for the imposition of these terms and conditions are as follows:

1. Condition 1 is included to ensure that the conditions in this Permit are complied with and can be enforced.
2. Condition 2 is included to clarify the legal interpretation of aspects of this Permit.
3. Conditions 3 through 6 are included to protect the quality of the natural environment so as to safeguard the ecosystem and human health and foster efficient use and conservation of waters. These conditions allow for the beneficial use of waters while ensuring the fair sharing, conservation and sustainable use of the waters of Ontario. The conditions also specify the water takings that are authorized by this Permit and the scope of this Permit.

In accordance with Section 100 of the Ontario Water Resources Act, R.S.O. 1990, you may by written Notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 101 of the Ontario Water Resources Act, R.S.O. 1990, as amended, provides that the Notice requiring the hearing shall state:

1. The portions of the Permit or each term or condition in the Permit in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

In addition to these legal requirements, the Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The Permit to Take Water number;
6. The date of the Permit to Take Water;
7. The name of the Director;
8. The municipality within which the works are located;

This notice must be served upon:

*The Secretary
Environmental Review Tribunal
655 Bay
Street, 15th
Floor
Toronto ON
M5G 1E5*

AND

*The Director, Section 34
Ministry of the Environment
331-435 James St S
Thunder Bay ON P7E 6S7
Fax: (807)475-1754*

Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal:

by telephone at (416) 314-4600 by fax at (416) 314-4506 by e-mail at www.ert.gov.on.ca

This Permit cancels and replaces Permit Number 03-P-5002, issued on 2008/05/31.

Patrick Morash
Director, Section 34
Ontario Water Resources Act, R.S.O. 1990

Schedule A

This Schedule "A" forms part of Permit To Take Water 6413-7FPND7, dated June 20, 2008.

Reference Number:	5153-7FPND8	Document Created by:	Donald J Gibb
Main Document Reference Number:	5608-7DJPVV	Main Document Link:	Notes Link



Ministry of the Environment Audit Sample Results

APPENDIX AUDIT SAMPLE RESULTS
TABLE 3
BRUCE MINES DRINKING WATER SYSTEM
AUDIT SAMPLE RESULTS - 29-NOV-2011
SUMMARY OF MICROBIOLOGICAL PARAMETERS - HEALTH RELATED

Sample Legend:

Sample # 1 - TREATED WATER

Sample # 2 - HOME HARDWARE DISTRIBUTION

Parameter	Units	MC ¹	SAMPLE	SAMPLE
			# 1	# 2
NT: ESCHERICHIA COLI	C/100ML	0	ABSENT	ABSENT
NT: TOTAL COLIFORMS	C/100ML	0	ABSENT	ABSENT

Notes:

- Escherichia coli is a more definitive indicator of fecal contamination than fecal coliforms or total coliforms.
- At elevated levels, the general bacterial population may interfere with the detection of coliforms. This general population can be estimated from either background colony counts on the total coliform membrane filters or heterotrophic plate counts (HPC).

Shortforms:

C/100mL - Count per 100 millilitre

C/mL - Count per millilitre

Footnotes:

- 1 Maximum Concentration as per O.Reg 169/03.
- 2 Aesthetic Objective.

APPENDIX AUDIT SAMPLE RESULTS

TABLE 4

BRUCE MINES DRINKING WATER SYSTEM

AUDIT SAMPLE RESULTS - 29-NOV-2011

SUMMARY OF CHEMICAL / PHYSICAL PARAMETERS - HEALTH RELATED

Sample Legend:

Sample # 1 - TREATED WATER

Sample # 2 - HOME HARDWARE DISTRIBUTION

Parameter	Units	MC ¹	SAMPLE	
			# 1	# 2
1,1-DICHLOROETHENE	UG/L	14	.05 <=W	.05 <=W
1,2-DICHLOROBENZENE	UG/L	200	.05 <=W	.05 <=W
1,2-DICHLOROETHANE	UG/L	5	.05 <=W	.05 <=W
1,4-DICHLOROBENZENE	UG/L	5	.05 <=W	.05 <=W
ANTIMONY	UG/L	6	.7 +/-0.18	
ARSENIC	UG/L	25	.3 +/-0.27	
BARIUM	UG/L	1000	10.2 +/-1.70	
BENZENE	UG/L	5	.05 <=W	.05 <=W
BORON	UG/L	5000	6.9 +/-1.40	
CADMIUM	UG/L	5	0 +/-0.13	
CARBON TETRACHLORIDE	UG/L	5	.2 <=W	.2 <=W
CHLOROBENZENE	UG/L	80	.05 <=W	.05 <=W
CHLOROETHENE	UG/L	2	.05 <=W	.05 <=W
CHROMIUM	UG/L	50	.1 +/-0.34	
DICHLOROMETHANE	UG/L	50	.2 <=W	.2 <=W
FLUORIDE	MG/L	1.5 b	.05	
LEAD	UG/L	10 c	.4 +/-0.16	.2 +/-0.16
MERCURY	UG/L	1	.02 <=W	
NITROGEN; NITRATE+NITRITE	MG/L	10 d	.307	
NITROGEN; NITRITE	MG/L	1 d	.001 <=W	
SELENIUM	UG/L	10	.2 +/-0.50	
TETRACHLOROETHENE	UG/L	30	.05 <=W	.05 <=W
TRICHLOROETHENE	UG/L	5	.05 <=W	.05 <=W
TRIHALOMETHANES; TOTAL	UG/L	100 e	32.5	67.5
URANIUM	UG/L	20	.1 +/-0.18	

Shortforms:

<T	-	A measurable trace amount; interpret with caution	NA	-	Result not available
<W	-	No measurable response (zero) : < Reported value	NS	-	Not sampled
<=W	-	No measurable response (zero) : < Reported value	NG/L	-	Nanograms per litre
<	-	Actual result is less than reported value	UG/L	-	Micrograms per litre
ND	-	Not detected	MG/L	-	Milligrams per litre
!NP	-	No appropriate procedure available			

Footnotes:

- 1 Maximum Concentration as per O.Reg 169/03.
 - 2 Aesthetic Objective.
 - 3 Operational Guideline.
 - 4 Includes *alpha*-chlordane, *gamma*-Chlordane and Oxychlordane.
 - 5 Includes *p,p'*-DDE, *o,p'*-DDT, *p,p'*-DDD and *p,p'*-DDT.
- a Total toxic equivalents when compared with 2,3,7,8,-TCDD (tetrachlorodibenzo-p-dioxin).
 - b Where fluoride is added to drinking water, it is recommended that the concentration be adjusted to 0.5 - 0.8 mg/L, the optimum level for control of tooth decay. Where supplies contain naturally occurring fluoride at levels higher than 1.5 mg/L but less than 2.4 mg/L the Ministry of Health and Long Term Care recommends an approach through local boards of health to raise public and professional awareness to control excessive exposure to fluoride from other sources.
 - c This standard applies to water at the point of consumption. Since lead is a component in some plumbing systems, first flush water may contain higher concentrations of lead than water that has been flushed for five minutes.
 - d Where both nitrate and nitrite are present, the total of the two should not exceed 10 mg/L (as nitrogen).
 - e The standard is expressed as a running annual average of quarterly samples measured at a point reflecting the maximum residence time in the distribution system.
 - f An aesthetic objective of 5 NTU for Turbidity has been set for all waters at the point of consumption.

ADVERSE RESULTS OF A DRINKING-WATER TEST UNDER O.REG. 170/03

According to section 16-3 of O.Reg. 170/03, the following are prescribed as adverse results of a drinking-water test for the purpose of section 18 of the Safe Drinking Water Act 2002:

1. A result that exceeds any of the standards prescribed by Schedule 1, 2 or 3 to the Ontario Drinking-Water Quality Standards, other than the standard for fluoride, if the result is from a sample of drinking water.
2. A result indicating the presence of *Aeromonas* spp., *Pseudomonas aeruginosa*, *Staphylococcus aureus*, *Clostridium* spp. or fecal streptococci (Group D streptococci) in a sample of drinking water.
3. A result indicating the presence of a pesticide not listed in Schedule 2 to the Ontario Drinking-Water Quality Standards in a sample of drinking water, at any concentration.
4. If the drinking-water system is required to provide secondary disinfection in accordance with section 1-5 of Schedule 1 or section 2-5 of Schedule 2, the system provides chlorination, the system does not provide chloramination and a report under subsection 18(1) of the Act has not been made in respect of free chlorine residual in the preceding 24 hours, a result indicating that the concentration of free chlorine residual in the preceding 24 hours, a result indicating that the concentration of free chlorine residual is less than 0.05 milligrams per litre in,
 - i. a distribution sample that is a grab sample, or
 - ii. two distribution samples that are tested by continuous monitoring equipment, if the two samples were taken 15 minutes or more apart and the later of the two samples was the first sample that was taken 15 minutes or more after the earlier sample.
5. If the drinking -water system is required to provide secondary disinfection in accordance with section 1-5 of Schedule 1 or section 2-5 of Schedule 2, the system provides chloramination and a report under subsection 18(1) of the Act has not been made in respect of combined chlorine residual in the preceding 24 hours, a result indicating that the concentration of combined chlorine residual is less than 0.25 milligrams per litre and the concentration of free chlorine residual is less than 0.05 milligrams per litre in,
 - i. a distribution sample that is a grab sample, or
 - ii. two distribution samples that are tested by continuous monitoring equipment, if the two samples were taken 15 minutes or more apart and the later of the two samples was the first sample that was taken 15 minutes or more after the earlier sample.
6. If the drinking-water system is required to provide filtration and a report under subsection 18 (1) of the Act has not been made in respect of turbidity in the preceding 24 hours, a result indicating that turbidity exceeds 1.0 Nephelometric Turbidity Units (NTU) in,
 - i. a grab sample of water taken from a filter effluent line, or
 - ii. two samples of water from a filter effluent line that are tested by continuous monitoring equipment, if,
 - A. two samples were taken 15 minutes or more apart and the later of the two samples was the first sample that was taken 15 minutes or more after the earlier sample, and
 - B. the filter effluent line is directing water to the next stage of the treatment process.
7. If an approval or order, including an OWRA order, identifies a parameter as a health-related parameter and establishes a maximum concentration for the parameter, a result indicating that the parameter exceeds the maximum concentration in a sample of drinking water.
8. A result indicating that the concentration of sodium exceeds 20 milligrams per litre in a sample of drinking water, if a report under subsection 18 (1) of the Act has not been made in respect of sodium in the preceding 60 months.
9. A result indicating that the concentration of fluoride exceeds 1.5 milligrams per litre in a sample of drinking water, if,
 - i. the drinking-water system provides fluoridation and a report under subsection 18 (1) of the Act has not been made in respect of fluoride in the preceding 24 hours, or
 - ii. the drinking-water system does not provide fluoridation and a report under subsection 18 (1) of the Act has not been made in respect of fluoride in the preceding 60 months.

APPENDIX AUDIT SAMPLE RESULTS

TABLE 5

**BRUCE MINES DRINKING WATER SYSTEM
AUDIT SAMPLE RESULTS - 29-NOV-2011**

SUMMARY OF MICRO, CHEMICAL / PHYSICAL PARAMETERS - NOT HEALTH RELATED

Sample Legend:

Sample # 1 - TREATED WATER

Sample # 2 - HOME HARDWARE DISTRIBUTION

Parameter	Units	OBJECTIVE	TYPE OF OBJECTIVE	SAMPLE	
				# 1	# 2
1,2-DICHLOROBENZENE	UG/L	3	AO	.05 <=W	.05 <=W
ALUMINUM	UG/L	100	OG	3.2 +/-0.60	
COPPER	UG/L	1000	AO	29 +/-3.20	
ETHYLBENZENE	UG/L	2.4	AO	.05 <=W	.05 <=W
IRON	UG/L	300	AO	0 +/-18.42	
M- AND P-XYLENE	UG/L	300	AO	.05 <=W	.05 <=W
MANGANESE	UG/L	50	AO	.4 +/-0.24	
NT: DETERIORATION INDICATORS	C/100ML	0	AO	NOT DETECTED	NOT DETECTED
O-XYLENE	UG/L	300	AO	.05 <=W	.05 <=W
TOLUENE	UG/L	24	AO	.05 <=W	.05 <=W
ZINC	UG/L	5000	AO	4.4 +/-0.60	

Shortforms:

<T	- A measureable trace amount; interpret with caution	AO	- Aesthetic Objective
<W	- No measurable response (zero). <Reported value	OG	- Operational Guideline
<=W	- No measurable response (zero). <Reported value	FTU = NTU	- Nephelometric Turbidity Unit
<	- Actual result is less than reported value	TCU	- True Colour Units
ND	- Not detected	NG/L	- Nanograms per litre
NA	- Result not available	UG/L	- Micrograms per litre
NS	- Not sampled	MG/L	- Milligrams per litre
DEG	- Degree celsius		

Footnotes:

- a Organic Nitrogen = (Total Kjeldahl Nitrogen - (Ammonia + Ammonium))
- b The aesthetic objective for sodium in drinking water is 200 mg/L. The local Medical Officer of Health should be notified when the sodium concentration exceeds 20 mg/L so that this information may be communicated to local physicians for their use with patients on sodium restricted diets.
- c When sulphate levels exceed 500 mg/L, water may have a laxative effect on some people.
- d Applicable for all water at the point of consumption.

APPENDIX AUDIT SAMPLE RESULTS
TABLE 6
BRUCE MINES DRINKING WATER SYSTEM
AUDIT SAMPLE RESULTS - 29-NOV-2011
SUMMARY OF PARAMETERS WITH NO ODWQS

Sample Legend:

Sample # 1 - TREATED WATER

Sample # 2 - HOME HARDWARE DISTRIBUTION

Parameter	Units	SAMPLE	
		# 1	# 2
1,1,1-TRICHLOROETHANE	UG/L	.05 <=W	.05 <=W
1,1,2,2-TETRACHLOROETHANE	UG/L	.2 <=W	.2 <=W
1,1,2-TRICHLOROETHANE	UG/L	.1 <=W	.1 <=W
1,1-DICHLOROETHANE	UG/L	.05 <=W	.05 <=W
1,2-DIBROMOETHANE	UG/L	.1 <=W	.1 <=W
1,2-DICHLOROPROPANE	UG/L	.05 <=W	.05 <=W
1,3-DICHLOROBENZENE	UG/L	.05 <=W	.05 <=W
BERYLLIUM	UG/L	0 +/-0.25	
BROMODICHLOROMETHANE	UG/L	3.6	7.4
BROMOFORM	UG/L	.5 <=W	.5 <=W
CHLOROFORM	UG/L	28.6	59.3
CIS-1,2-DICHLOROETHENE	UG/L	.05 <=W	.05 <=W
COBALT	UG/L	.1 +/-0.18	
DIBROMOCHLOROMETHANE	UG/L	.4 <T	1 <T
DICHLOROACETONITRILE	UG/L	1 <T	.5 <T
DIISOPROPYLETHER	UG/L	.05 <=W	.05 <=W
MOLYBDENUM	UG/L	.2 +/-0.15	
NICKEL	UG/L	.3 +/-0.32	
NITROGEN; AMMONIA+AMMONIUM	MG/L	.014	
PHOSPHORUS; PHOSPHATE	MG/L	.0017 <T	
SILVER	UG/L	0 +/-0.17	
STRONTIUM	UG/L	37.7 +/-3.70	
STYRENE	UG/L	.05 <=W	.05 <=W
TERT-BUTYL METHYL ETHER	UG/L	.05 <=W	.05 <=W
THALLIUM	UG/L	0 +/-0.11	
TITANIUM	UG/L	.1 +/-0.25	
TRANS-1,2-DICHLOROETHENE	UG/L	.05 <=W	.05 <=W
VANADIUM	UG/L	.2 +/-0.23	

Shortforms:

<T	-	A measurable trace amount; interpret with caution	NA	-	Result not available
<W	-	No measurable response (zero) : < Reported value	NS	-	Not sampled
<=W	-	No measurable response (zero) : < Reported value	NG/L	-	Nanograms per litre
<	-	Actual result is less than reported value	UG/L	-	Micrograms per litre
ND	-	Not detected	MG/L	-	Milligrams per litre
!NP	-	No appropriate procedure available			

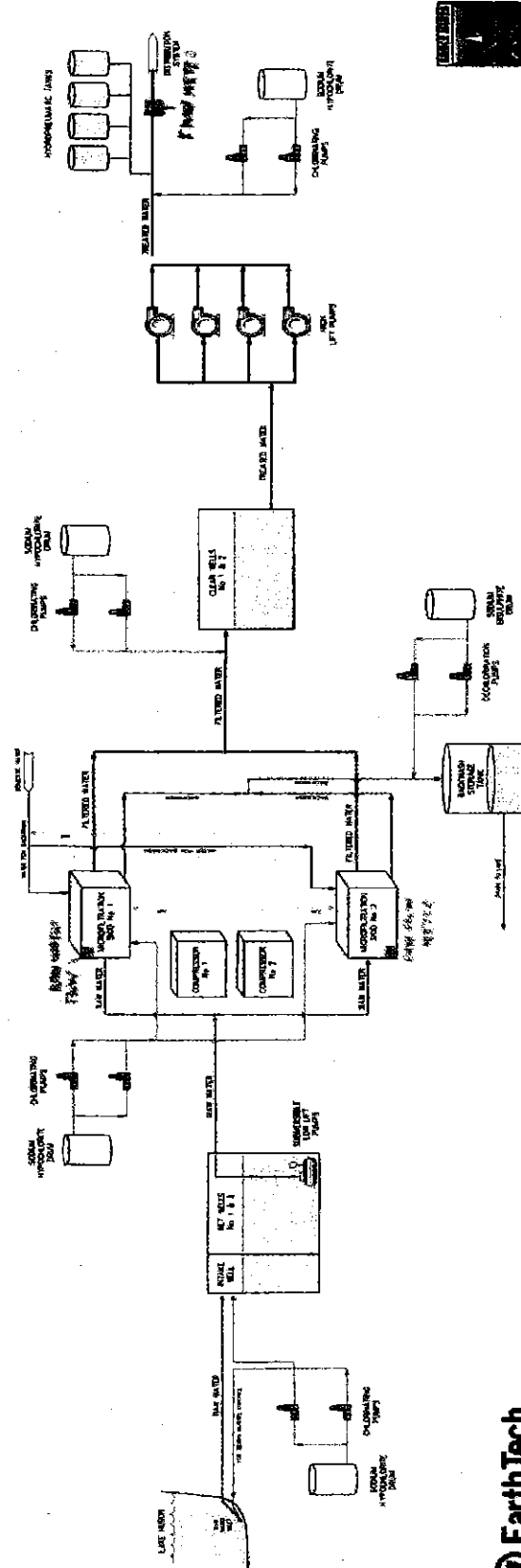
NO DATUM FOUND FOR THE FOLLOWING TABLE(S):

-TABLE 1 - SUMMARY OF PARAMETERS EXCEEDING ODWQS

-TABLE 2 - SUMMARY OF PARAMETERS EXCEEDING HALF OF THEIR HEALTH-RELATED ODWQS

Drinking Water System Process Schematic

BRUCE MINES WATER TREATMENT PLANT PROCESS





Inspection Rating Record

Ministry of the Environment - Inspection Summary Rating Record (Reporting Year - 2011-2012)

DWS Name:	BRUCE MINES DRINKING WATER SYSTEM
DWS Number:	210000933
DWS Owner:	Bruce Mines, The Corporation Of The Town Of
Municipal Location:	Bruce Mines

Regulation: O.REG 170/03
Category: Large Municipal Residential System
Type Of Inspection: Focused
Inspection Date: November 29, 2011
Ministry Office: Sault Ste. Marie Area Office

Maximum Question Rating: 603

Inspection Module	Non-Compliance Rating
Capacity Assessment	0 / 30
Treatment Processes	0 / 98
Operations Manuals	0 / 28
Logbooks	0 / 14
Contingency/Emergency Planning	0 / 7
Certification and Training	0 / 28
Water Quality Monitoring	0 / 289
Reporting & Corrective Actions	0 / 109
Other Inspection Findings	0 / 0
TOTAL	0 / 603

Inspection Risk Rating	0.00%
-------------------------------	--------------

FINAL INSPECTION RATING:	100.00%
---------------------------------	----------------

Ministry of the Environment - Detailed Inspection Rating Record (Reporting Year - 2011-2012)

DWS Name: BRUCE MINES DRINKING WATER SYSTEM
DWS Number: 210000933
DWS Owner: Bruce Mines, The Corporation Of The Town Of
Municipal Location: Bruce Mines

Regulation: O.REG 170/03
Category: Large Municipal Residential System
Type Of Inspection: Focused
Inspection Date: November 29, 2011
Ministry Office: Sault Ste. Marie Area Office

Maximum Question Rating: 603

Inspection Risk Rating | 0.00%

FINAL INSPECTION RATING: | 100.00%

APPENDIX C

**Annual Report:
2011 Operating Year**

**Part III Form 2
Section 11. ANNUAL REPORT.**

Drinking-Water System Number:	210000933
Drinking-Water System Name:	Bruce Mines Water Treatment Facility
Drinking-Water System Owner:	The Corporation of the Town of Bruce Mines
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 1, 2011 – December 31, 2011

<p><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></p> <p>Does your Drinking-Water System serve more than 10,000 people? Yes [] No [X]</p> <p>Is your annual report available to the public at no charge on a web site on the Internet? Yes [X] No []</p> <p>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</p> <div style="border: 1px solid black; padding: 5px;"> Town of Bruce Mines, Municipal Office 9180 HWY 17 East Bruce Mines, Ontario P0R 1C0 </div>	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served: <input style="width: 100px; height: 20px;" type="text"/></p> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [] No []</p> <p>Number of Interested Authorities you report to: <input style="width: 100px; height: 20px;" type="text"/></p> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [] No []</p>
---	--

Note: For the following tables below, additional rows or columns may be added or an appendix may be attached to the report

List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:

Drinking Water System Name	Drinking Water System Number
Township of Plummer Additional	220013599

Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water?
 Yes [**X**] No []

Indicate how you notified system users that your annual report is available, and is free of charge.

- Public access/notice via the web**
 Public access/notice via Government Office
 Public access/notice via a newspaper
 Public access/notice via Public Request
 Public access/notice via a Public Library
 Public access/notice via other method

Describe your Drinking-Water System

The Bruce Mines Water Treatment Plant provides water to 600 residents of Bruce Mines, and sells water to 250 people of the Township of Plumber Additional. The Bruce Mines Water Treatment Plant obtains its water from the North Shore of Lake Huron at St. Joseph's Channel., with a rated capacity of 864.0 m3/d. The average daily flow in 2010 was 291.984 m3/d. The Bruce Mines plant treats water using a PALL membrane filtration system, which was completed and operational in the Spring of 2004. The plant consists of various chemical feed systems and utilizes sodium hypochlorite for disinfection. Upgrades included installing a sewage force main to eliminate the need for a septic system. The Ontario Clean Water Agency operates the Bruce Mines facility. The contract is to provide operational and maintenance services to the water plant and appurtenances as well as the distribution system.

List all water treatment chemicals used over this reporting period

Sodium Hypochlorite 12% - Disinfection
 Sodium Meta -bisulphate – De-chlorination of wastewater
 Citric Acid – Cleaner for membranes
 Sodium Hydroxide – Neutralize the citric acid before disposal

Were any significant expenses incurred to?

- Install required equipment
 Repair required equipment
 Replace required equipment

Please provide a brief description and a breakdown of monetary expenses incurred

1. New electrical overload and wall pack installation \$1611
2. PALL system SCADA programming \$533
3. Intake inspection \$ 4084
4. Repairs to zebra mussel chlorination line \$550
5. Replace 2 UPS' \$550
6. Cl2 and pH electrodes \$620
7. SCADA program modifications \$1670
8. UPS for Plummer booster station \$525

Provide details on the notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
Apr 26, 2011	Lead in Distribution	38	ug/L	Resampled and results OK	May 12, 2011

Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period

	Number of Samples	Range of E.Coli Or Fecal Results (min #)-(max #)	Range of Total Coliform Results (min #)-(max #)	Number of HPC /Background Samples	Range of HPC Results (min #)-(max #)
Raw	52	0-6	0-600		
Treated	52	0-0	0-0	52	0-2
Distribution	156	0-0	0-0	104	0-2

Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report

	Number of Grab Samples	Range of Results (min #)-(max #)
Turbidity (Filter A)	8760	0.02-0.22NTU
Turbidity (Filter B)	8760	0.02-0.23 NTU
Chlorine (Plant-TW)	8760	0.74-1.775
Chlorine (Distribution)	8760	0.65-1.43

NOTE: For continuous monitors use 8760 as the number of samples.

NOTE: Record the unit of measure if it is not milligrams per litre.

Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument

Date of legal instrument issued	Parameter	Date Sampled	Result 2011 Average	Unit of Measure
03/24/2006	Suspended Solids	Monthly	9.5	mg/L

Summary of lead testing under Schedule 15.1 during this reporting period

(applicable to the following drinking water systems; large municipal residential systems, small municipal residential systems, and non-municipal year-round residential systems)

Location Type	Number of Samples	Range of Lead Results (min#) – (max #)	Unit of Measure	Number of Exceedances
Plumbing	22	0.12-3.22	ug/L	0
Distribution	2	0.06-38	ug/L	1*

MAC for Lead: 10 ug/L

*Hydrant was resampled, results were 0.06ug/L. Suspect lead washers in hydrant.

Location Type	Number of Samples	Range of pH Results (min#) – (max #)	Range of Alkalinity Results mg/L as CaCO ₃ (min#) – (max#)
Plumbing	22	7.81 – 8.1	N/A
Distribution	4	7.81 – 7.97	47-58

Summary of Inorganic parameters tested during this reporting period or the most recent sample results

Parameter	Sample Date (mm/dd/yyyy)	Result Value	Unit of Measure	Exceedance
Antimony	01/11/2011	0.02	ug/L	No
Arsenic	01/11/2011	0.3	ug/L	No
Barium	01/11/2011	10.9	ug/L	No
Boron	01/11/2011	9.3	ug/L	No
Cadmium	01/11/2011	<0.003	ug/L	No
Chromium	01/11/2011	<0.5	ug/L	No
*Lead (Dist)	N/A			
Mercury	01/11/2011	<0.02	ug/L	No
Selenium	01/11/2011	<1	ug/L	No
Sodium	01/11/2011	4.46	mg/L	No
Uranium	01/11/2011	0.096	ug/L	No
Fluoride	01/11/2011	<0.06	mg/L	No
Nitrite	10/18/2011	< 0.005	mg/L	No
Nitrate	10/18/2011	0.236	mg/L	No

*only for drinking water systems testing under Schedule 15.2; this includes large municipal non-residential systems, small municipal non-residential systems, non-municipal seasonal residential systems, large non-municipal non-residential systems, and small non-municipal non-residential systems

Summary of Organic parameters sampled during this reporting period or the most recent sample results

Parameter	Sample Date (mm/dd/yyyy)	Result Value	Unit of Measure	Exceedance
Alachlor	01/11/2011	<0.02	ug/L	No
Aldicarb	01/11/2011	<0.01	ug/L	No
Aldrin + Dieldrin	01/11/2011	<0.01	ug/L	No
Atrazine + N-dealkylated metabolites	01/11/2011	<0.01	ug/L	No
Azinphos-methyl	01/11/2011	<0.02	ug/L	No
Bendiocarb	01/11/2011	<0.01	ug/L	No
Benzene	01/11/2011	<0.32	ug/L	No
Benzo(a)pyrene	01/11/2011	<0.004	ug/L	No
Bromoxynil	01/11/2011	<0.33	ug/L	No
Carbaryl	01/11/2011	<0.01	ug/L	No
Carbofuran	01/11/2011	<0.01	ug/L	No
Carbon Tetrachloride	01/11/2011	<0.16	ug/L	No
Chlordane (Total)	01/11/2011	<0.01	ug/L	No
Chlorpyrifos	01/11/2011	<0.02	ug/L	No
Cyanazine	01/11/2011	<0.03	ug/L	No
Diazinon	01/11/2011	<0.02	ug/L	No
Dicamba	01/11/2011	<0.20	ug/L	No
1,2-Dichlorobenzene	01/11/2011	<0.41	ug/L	No
1,4-Dichlorobenzene	01/11/2011	<0.36	ug/L	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites	01/11/2011	<0.01	ug/L	No
1,2-Dichloroethane	01/11/2011	<0.35	ug/L	No
1,1-Dichloroethylene (vinylidene chloride)	01/11/2011	<0.33	ug/L	No
Dichloromethane	01/11/2011	<0.35	ug/L	No
2,4 Dichlorophenol	01/11/2011	<0.15	ug/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	01/11/2011	<0.19	ug/L	No
Diclofop-methyl	01/11/2011	<0.40	ug/L	No
Dimethoate	01/11/2011	<0.03	ug/L	No
Dinoseb	01/11/2011	<0.36	ug/L	No
Diquat	01/11/2011	<1.0	ug/L	No
Diuron	01/11/2011	<0.03	ug/L	No
Glyphosate	01/11/2011	<6.0	ug/L	No
Heptachlor + Heptachlor Epoxide	01/11/2011	<0.01	ug/L	No
Lindane (Total)	01/11/2011	<0.01	ug/L	No
Malathion	01/11/2011	<0.02	ug/L	No
Methoxychlor	01/11/2011	<0.01	ug/L	No
Metolachlor	01/11/2011	<0.01	ug/L	No
Metribuzin	01/11/2011	<0.02	ug/L	No
Monochlorobenzene	01/11/2011	<0.30	ug/L	No
Paraquat	01/11/2011	<1.0	ug/L	No
Parathion	01/11/2011	<0.02	ug/L	No
Pentachlorophenol	01/11/2011	<0.15	ug/L	No
Phorate	01/11/2011	<0.01	ug/L	No
Picloram	01/11/2011	<0.25	ug/L	No
Polychlorinated Biphenyls(PCB)	01/11/2011	<0.04	ug/L	No
Prometryne	01/11/2011	<0.03	ug/L	No

Parameter	Sample Date (mm/dd/yyyy)	Result Value	Unit of Measure	Exceedance
Simazine	01/11/2011	<0.01	ug/L	No
THM (Dist) (NOTE: show latest annual average)	2011	79.5	ug/L	No
Temephos	01/11/2011	<0.01	ug/L	No
Terbufos	01/11/2011	<0.01	ug/L	No
Tetrachloroethylene	01/11/2011	<0.35	ug/L	No
2,3,4,6-Tetrachlorophenol	01/11/2011	<0.14	ug/L	No
Triallate	01/11/2011	<0.01	ug/L	No
Trichloroethylene	01/11/2011	<0.43	ug/L	No
2,4,6-Trichlorophenol	01/11/2011	<0.25	ug/L	No
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	01/11/2011	<0.22	ug/L	No
Trifluralin	01/11/2011	<0.02	ug/L	No
Vinyl Chloride	01/11/2011	<0.17	ug/L	No

List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.

Parameter	Result Value	Unit of Measure	Date of Sample
Distribution THM	98	ug/L	Jan 11, 2011
Distribution THM	59	ug/L	Apr 18-2011
Distribution THM	94	ug/L	July 12-2011
Distribution THM	67	ug/L	Oct 18, 2011

(Only if DWS category is large municipal residential, small municipal residential, large municipal non residential, non municipal year round residential, large non municipal non residential)