

Ministry of the Environment

Safe Drinking Water Branch

Sudbury District Office
199 Larch Street
Suite 1201
Sudbury ON P3E 5P9
Tel.: 705 564-3237
Fax: 705 564-4180
Toll Free: 1 800 890-8516

Ministère de l'Environnement

Direction du contrôle de la qualité de
l'eau potable

Bureau du district de Sudbury
199, rue Larch
Bureau 1201
Sudbury (Ontario) P3E 5P9
Tél. : 705 564-3237
Télééc. : 705 564-4180
Sans frais : 1 800 890-8516



September 16, 2015

Ms. Ruth Frawley
CAO/Clerk,
Municipality of Central Manitoulin,
Mindemoya, Ontario P0P 1S0

Dear Ms. Frawley:

RE: Mindemoya Drinking Water System Annual Inspection Report

With regard to the 2015, annual inspection of the Mindemoya drinking water system, please find enclosed the resulting inspection report.

Please note there are two items of non-compliance identified in the report, one of which requires a response by October 9, 2015. Also, there are recommendations outlined in the report which may be found in the section entitled Summary of Recommendations and Best Practice Issues.

Section 19 of the Safe Drinking Water Act (Standard of Care) creates a number of obligations for individuals who exercise decision-making authority over municipal drinking water systems. Please be aware that the Ministry has encouraged such individuals, particularly municipal councillors, to take steps to be better informed about the drinking water systems over which they have decision-making authority. These steps could include asking for a copy of this inspection report and a review of its findings. Further information about Section 19 can be found in "*Taking Care of Your Drinking Water: A guide for members of municipal council*" found under "Resources" on the Drinking Water Ontario website at www.ontario.ca/drinkingwater."

Your staff's cooperation during the inspection was appreciated. Please feel free to contact me at 564-7174, should you have questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Maureen Spinney".

Maureen Spinney
Drinking Water Inspector
Sudbury District Office

cc. Mr. Burgess Hawkins, Manager Health Protection Division, Sudbury District Health Unit



Ministry of the Environment and Climate Change

**MINDEMOYA DRINKING WATER SYSTEM
Inspection Report**

Site Number:	220008382
Inspection Number:	1-C2MUL
Date of Inspection:	Jun 16, 2015
Inspected By:	Maureen Spinney

TABLE OF CONTENTS

OWNER INFORMATION.....	02
CONTACT INFORMATION.....	02
INSPECTION DETAILS.....	03
DWS COMPONENTS DESCRIPTION.....	03
INSPECTION SUMMARY.....	05
INTRODUCTION.....	05
CAPACITY ASSESSMENT.....	06
TREATMENT PROCESSES.....	06
TREATMENT PROCESS MONITORING.....	08
PROCESS WASTEWATER.....	10
DISTRIBUTION SYSTEM.....	10
OPERATIONS MANUALS	11
LOGBOOKS	11
CONTINGENCY/EMERGENCY PLANNING.....	12
SECURITY.....	12
CERTIFICATION AND TRAINING.....	13
WATER QUALITY MONITORING.....	13
WATER QUALITY ASSESSMENT.....	15
REPORTING & CORRECTIVE ACTIONS.....	16
OTHER INSPECTION FINDINGS.....	16
NON COMPLIANCE WITH REGULATORY REQUIREMENTS & ACTIONS REQUIRED.....	17
SUMMARY OF RECOMMENDATIONS AND BEST PRACTICE ISSUES.....	18
SIGNATURES.....	19
APPENDICES	
APPENDIX A	MUNICIPAL REFERENCE GUIDE
APPENDIX B	AUDIT SAMPLING RESULTS
APPENDIX C	INSPECTION RATING RECORD

OWNER INFORMATION:

Company Name: CENTRAL MANITOULIN, THE MUNICIPALITY OF
Street Number: 6020 **Unit Identifier:**
Street Name: HIGHWAY 542 Hwy
City: MINDEMOYA
Province: ON **Postal Code:** P0P 1S0

CONTACT INFORMATION

Type: Owner **Name:** Ruth Frawley
Phone: (705) 377-5726 **Fax:** (705) 377-5585
Email: centralm@amtelecom.net
Title: CAO/Clerk - Municipality of Central Manitoulin

Type: Owner **Name:** Denise Deforge
Phone: (705) 377-5726 **Fax:** (705) 377-5585
Email: centraldc@amtelecom.net
Title: Treasurer - Municipality of Central Manitoulin

Type: Operating Authority **Name:** Keith Stringer
Phone: (705) 368-0922 **Fax:** (705) 869-4374
Email: kstringer@ocwa.com
Title: OCWA Espanola Hub, Operations Manager

Type: Other - Health Unit Contact **Name:** Burgess Hawkins
Phone: (705) 522-9200 **Fax:** (705) 522-5182
Email: hawkinsb@sdhu.com
Title: Sudbury and District Health Unit, Manager - Health Protection Division

Type: Operating Authority **Name:** Natalie Wagar
Phone: (705) 936-6713 **Fax:** (705) 869-4374
Email: nwagar@ocwa.com
Title: Process Compliance Technician

Type: Operator **Name:** Garry Quakenbush
Phone: (705) 377-4486 **Fax:**
Email: gquakenbush@ocwa.com
Title: OCWA, Operator

INSPECTION DETAILS:

Site Name: MINDEMOYA DRINKING WATER SYSTEM
Site Address: Central Manitoulin ON
County/District: Central Manitoulin
MOECC District/Area Office: Sudbury District
Health Unit: SUDBURY AND DISTRICT HEALTH UNIT
Conservation Authority: N/A
MNR Office: Espanola Regional Office
Category: Large Municipal Residential
Site Number: 220008382
Inspection Type: Unannounced
Inspection Number: 1-C2MUL
Date of Inspection: Jun 16, 2015
Date of Previous Inspection: Jun 02, 2014

COMPONENTS DESCRIPTION

Site (Name): MOE DWS Mapping
Type: DWS Mapping Point **Sub Type:**
Comments:
 Not Applicable

Site (Name): RAW WATER SOURCE
Type: Source **Sub Type:** Surface
Comments:

The Mindemoya water treatment plant intake is located in a bay on the east side of Mindemoya Lake, on Manitoulin Island. According to the Drinking Water Works Permit, the raw water intake is a 250 mm diameter polyethylene pipe approximately 890 meters in length with an adjustable riser intake. The intake has two chemical feed lines and diffuser rings for injection of sodium hypochlorite for zebra mussel control, if/when it becomes necessary.

Mindemoya Lake supports a number of trailer parks, a nearby golf course, smaller resorts and homes complete with field beds and private boat docking facilities. Also M'Chigeeng First Nations Lands are located on the northeastern shoreline, north of the intake. The M'Chigeeng sewage lagoons, located at the opposite end of the lake, are discharged into Mindemoya Lake as necessary.

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

This facility is classified, as of July 2005, as a Class 2 water treatment plant.

The plant and distribution system were originally constructed between 1994 and 1996. Treatment of surface water is through conventional filtration using two Ecodyne package units consisting of coagulation, flocculation, sedimentation and filtration. Raw water is gravity fed to a low lift pumping station located within the main plant. Coagulant and sodium hypochlorite are injected in the raw water pump discharge line, prior to the filtration units. Treated water is pumped via four high lift pumps to a

common header then to the distribution system. Three pressure tanks are connected to the header to maintain pressure. There is also one fire pump available for use at the plant. All process waste water is pumped to the sanitary sewage system. A soda ash injection system is available for pH control of the treated water, however it is not currently required. Standby power is provided by a 250kW diesel generator set.

Site (Name): DISTRIBUTION

Type: Other

Sub Type: Other

Comments:

This distribution system is classified, as of October 2005, as a Class 1 system.

The Town of Mindemoya has a serviced population of approximately 450 with approximately 200 connections to the distribution system. The distribution system was installed in 1995 and is comprised entirely of PVC lines. There are 52 hydrants located within the system as well as 2 dead end areas. There are reportedly no private distribution lines connected to the system.

The water treatment and distribution subsystems are both owned by the Municipality of Central Manitoulin, and operated under contract by the Ontario Clean Water Agency.

INSPECTION SUMMARY

INTRODUCTION

- * The primary focus of this inspection is to confirm compliance with Ministry of the Environment and Climate Change (MOECC) legislation as well as evaluating conformance with ministry drinking water policies and guidelines during the inspection period. The ministry utilizes a comprehensive, multi-barrier approach in the inspection of water systems that focuses on the source, treatment, and distribution components 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 inspection report does not suggest that all applicable legislation and regulations were evaluated. It remains the responsibility of the owner to ensure compliance with all applicable legislative and regulatory requirements.

The data review period for this inspection includes June 2014 to May 2015.

SOURCE

- * There were no obvious potential sources of pollution or activities in or around the source that could impair source water quality.

Potential sources or activities which may impact the drinking water source:

1. First nations lagoon discharges into Lake Mindemoya.
2. Future lakeside development. Currently there is a mix of recreational and residential development.
3. The Deputy Chief Drinking Water Inspector for the province provided a letter to all municipalities in May 2015, requiring "that system owners be extremely diligent with the proactive identification and response to algal blooms". Where systems are known to be affected by blooms every season, he advises owners/operators to collect weekly water samples and test for presence of blue green algae. During the inspection municipal staff noted that algal blooms had not been found in Lake Mindemoya. However ministry staff have identified blue green algae in this lake in the past. In September 2012, the area Environmental Officer (EO) took samples (later confirmed to be positive) on the shoreline of Treasure Island. In his report the EO notes that the bloom was not localized to the island, but was also sited along the northeast shoreline at the public boat launch. Thus proactive blue green algae monitoring is recommended from June to October 2015. It is noted that a site specific SOP for presence of algal blooms is located at the water treatment plant.

PERMIT TO TAKE WATER

PERMIT TO TAKE WATER

- * **The owner did not have a valid PTTW for all of the production sources.**

Permit to take Water (PTTW) Number 7806-6CVKYJ expired on June 1, 2015.

-Maximum rating in litres per minute: 862 (or 14.4 litres per second)

-Maximum rating in litres per day: 1,241,000 (or 1241 cubic metres per day)

On April 9, 2015, an application for renewal was received at Approvals Branch and reference #7426-9VJSUE attached to file. On July 16, 2015, PTTW #0565-9Y8Q5P was issued allowing for the same takings as the old permit. Given the submission process, a valid PTTW was not in place from June 2, 2015 to July 16, 2015. Applications should be provided at least 90 days prior to expiry date.

- * **The maximum water takings were in accordance with those allowed under the PTTW.**

-Permit Number 7806-6CVKYJ

-Maximum rating in litres per minute: 862 (or 14.4 litres per second). Data provided indicates maximum raw water flow rates of 12.5L/sec in September, while average instantaneous flow was 3.5L/sec.

-Maximum rating in litres per day: 1,241,000 (or 1241 cubic metres per day). Data provided indicates maximum raw water flow of 930.3m³/day in July, while average raw water flow was 292m³/day.

CAPACITY ASSESSMENT

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

Flow meters are required at two locations in the plant:

At entrance to treatment system

At entrance to the distribution system.

- * **Flow measuring devices were calibrated or verified in accordance with the requirements of a Permit and Licence or Approval issued under Part V of the SDWA.**

Calibration certificates for raw and treated water flow meters were completed in April 2014 and May 2015.

- * **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.**

Flow levels in treated water during the review period (June 2014 to May 2015) are below rated capacity of 1240m³/day. Peak demand occurred in July 2014 at 1217.7m³/day during a main break.

TREATMENT PROCESSES

- * **The owner had ensured that all equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit.**
- * **The owner/operating authority was in compliance with the requirement to prepare Form 1 documents as required by their Drinking Water Works Permit during the inspection period.**

The Municipality indicates that the distribution system changes stemming from 2014 storm sewer construction activities are not yet completed. The owner/operating authority is reminded that Form 1 must be completed and as-builts updated within 12 months of completion.

TREATMENT PROCESSES

- * **The owner/operating authority was in compliance with the requirement to prepare Form 2 documents as required by their Drinking Water Works Permit during the inspection period.**

A Form 2 will be required for changes to the chlorine chemical board switch over including the new peristaltic pumps, following installation.

- * **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.**

The "Procedure for Disinfection of Drinking Water in Ontario" (the Disinfection Procedure) states that a drinking water system that obtains water from a surface water supply must provide treatment that includes chemically assisted filtration and chemical disinfection. To satisfy the requirements of the Disinfection Procedure, treatment must provide a minimum log removal/inactivation of cryptosporidium, giardia and viruses.

The Mindemoya WTP uses conventional filtration, provided by a duplex prefabricated system using conventional filtration processes (coagulation, flocculation, sedimentation and filtration, followed by chemical disinfection)

The following table summarizes the log removal/inactivation credits assigned to each part of the treatment, based on information in the Disinfection Procedure and the First Engineer's Report for the drinking water system:

EQUIPMENT	LOG REMOVAL CREDITS		
	CRYPTO	GIARDIA	VIRUSES
Conventional Filtration	2	2.5	2
Chlorination	0	0.5	2

TOTAL	2	3	4
REQUIRED	2	3	4

CONVENTIONAL FILTRATION

In order to achieve the log removal credits for the filtration portion of the treatment process, the following criteria must be met:

1. Use of a chemical coagulant at all times. Lowlift lockouts are automated when both coagulant pumps fail. This system is tested.
2. Monitor and adjust chemical dosages in response to variations in raw water quality. Operator does test and adjust chemical dosages.
3. Maintain effective backwash procedures, including filter to waste or an equivalent procedure during filter ripening to ensure the effluent turbidity requirements are met at all times. Data presented indicates compliance.
4. Continuously monitor filtrate turbidity. Data presented indicates compliance.
5. Meet the performance criterion for filtered water of less than or equal to 0.3 NTU in 95% of the measurements each month. F.E.R. data submitted establish filter efficiencies are being met.

CHLORINATION

TREATMENT PROCESSES

The Disinfection Procedure defines the CT concept as using a combination of disinfection residual concentration and effective disinfection contact time in quantifying the capability of a chemical disinfection system in providing pathogen inactivation. Using this concept involves the determination of CT values required at variable operating conditions (i.e. flow, temperature, pH, chlorine residual) and ensuring that the disinfection process achieves the required value at all times.

At the Mindemoya plant, chemical disinfection must account for 0.5 log inactivation of giardia and 2 log inactivation of viruses. The Engineer's report indicates that at the plant's designed pumping rate with a low water level in the clearwell, a pH of 7.5, a water temperature of 0.5 degrees Celsius and a minimum chlorine residual of 0.6 mg/L in water leaving the plant, the required inactivation of giardia and viruses can be consistently achieved.

The set point for the chlorine alarm is 0.8mg/l, with an associated lowlift pump lockout.

A new SCADA system was installed in November of 2013, resulting in automated realtime CT calculations with access to history screens.

- * **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.**

- * **The owner had evidence indicating that all chemicals and materials that come in contact with water within the drinking water system met the AWWA and ANSI standards in accordance with the Permit and Licence issued under Part V of the SDWA.**

The Operator attends main breaks and repairs to ensure AWWA standards are maintained. It is recommended that the Municipality include requirements for meeting AWWA standards in water system contracts.

- * **Up-to-date plans for the drinking-water system were available in accordance with the Permit and Licence issued under Part V of the SDWA.**

- * **The facility and equipment appeared to be maintained and in a fit state of repair.**

Within the last inspection report non-compliance was cited for incidents where both coagulant pumps were malfunctioning. The operator is aware of the associated problems with achieving disinfection and has activated low lift lockouts based on both pumps failing. Also the operator ensured the alarm system was tested.

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

An inspection of the water intake occurred in 2014. The resulting report recommends that intake facilities be inspected in two years time.

- * **Based on information provided by the owner/operator, it was not likely that contaminants entering the floor drains would have come in contact with the source water or treated water.**

Floor drains are linked to the waste tank and clarifier. All supernatant and sludge are pumped to the lift station and on to the sewage plant.

- * **Measures were taken to ensure that pesticides were not applied, stored, or mixed in the immediate vicinity of source(s), treatment, and storage facilities.**

TREATMENT PROCESS MONITORING

TREATMENT PROCESS MONITORING

- * **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.**

The chlorine analyzer used in calculating CT, draws from a point just past the pressure tanks, prior to treated water entering the distribution system. Though a pre chlorine system is in use, there is no associated chlorine analyzer.

- * **Operators were aware of the operational criteria necessary to achieve primary disinfection within the drinking water system.**

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

- * **The secondary disinfectant residual was not measured as required for the distribution system.**

Free chlorine residual levels were generally between 1.0 and 1.4mg/l in the distribution system.

Free chlorine residual is required to be sampled at least seven times each week, either daily or four samples taken one day and three samples on another, at least 48 hours apart.

During the month of June 2014, four samples were taken on June 16th(Monday) but it appears that no other chlorine residuals were taken that week. Log book records indicate the next round of samples were taken on June 23(Monday).

- * **Records confirmed that the maximum free chlorine residual in the distribution system was less than 4.0 mg/L or that the combined chlorine residual was less than 3.0 mg/L.**

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

Operators note review in logbook.

- * **Samples for chlorine residual analysis were tested using an acceptable portable device.**

- * **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.**

Turbidity levels are alarmed at 0.6NTU after a set delay of 60 seconds, with an associated lowlift pump lockout at 0.8NTU.

Chlorine residual in treated water is alarmed at 0.9mg/l with 0 minutes set delay and an associated lowlift pump lockout at 0.8mg/l. This meets minimum requirements of at least 0.1mg/l less than 0.6mg/l.

- * **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 and recording data with the prescribed format.**

Continuous monitoring equipment analyzes for parameter of concern every millisecond, however recording of the parameter occurs every 30 seconds.

TREATMENT PROCESS MONITORING

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

Work order records indicate that chlorine analyzers and turbidimeters are calibrated at least monthly.

PROCESS WASTEWATER

- * **The process wastewater and residual solids/sludges were being treated, handled and disposed of in accordance with the design requirements approved under the Permit and Licence or Approval issued under Part V of the SDWA.**

Waste water and sludges are sent to the surge tank then clarifier then to the sanitary sewer in accordance with the Permit and Licence.

DISTRIBUTION SYSTEM

- * **The owner had up-to-date documents describing the distribution components as required.**

The Municipality is reminded to update distribution system plans when work is completed by contractors. Such plans need to be made available to operators.

- * **There is no backflow prevention program, policy and/or bylaw in place.**

A backflow prevention device is located at the local carwash. It is recommended that the device be inspected periodically. The Municipality should consider a comprehensive backflow prevention program or as a minimum ensure such devices are installed on all higher risk non residential connections and all new connections.

- * **The owner had a program or maintained a schedule for routine cleanout, inspection and maintenance of reservoirs and elevated storage tanks within the distribution system.**

The clearwell is regularly maintained.

- * **Existing parts of the distribution system that were taken out of service for inspection, repair or other activities that may lead to contamination, and all new parts of the distribution system that came in contact with drinking water, were disinfected in accordance with Schedule B, Condition 2.3 of the Drinking Water Works Permit.**

The operator attends main breaks/repairs and ensures AWWA standards are maintained.

- * **The owner had implemented a program for the flushing of watermains as per industry standards.**

OCWA maintains an annual program of flushing last occurring in September 2014.

- * **Records confirmed that disinfectant residuals were routinely checked at the extremities and "dead ends" of the distribution system.**

- * **A program was in place for inspecting and exercising valves.**

OCWA maintains an annual program last occurring in September 2014.

- * **There was a program in place for inspecting and operating hydrants.**

OCWA maintains an annual program last occurring in September 2014.

DISTRIBUTION SYSTEM

- * **There was no by-law or policy in place limiting access to hydrants.**

Municipality indicates no problems with unauthorized access to hydrants to date.

- * **The owner has undertaken efforts to identify, quantify and reduce sources of apparent water loss.**

Both the operating authority and Public Works staff actively look for leaks in the distribution system. A formal water balance is not performed.

- * **The distribution system pressure was monitored to alert the operator of conditions which may have lead to loss of pressure below the value under which the system is designed to operate.**

Operator indicates pressure is monitored and recorded. He is not aware of low pressure areas/problems in the distribution system.

- * **Based on the records available the owner was able to maintain proper pressures in the distribution system.**

OPERATIONS MANUALS

- * **Operators and maintenance personnel had ready access to operations and maintenance manuals.**
- * **The operations and maintenance manuals contained plans, drawings and process descriptions sufficient for the safe and efficient operation of the system.**
- * **The operations and maintenance manuals did meet the requirements of the Permit and Licence or Approval issued under Part V of the SDWA.**

LOGBOOKS

- * **Logs for the drinking water subsystem(s) contained the required information.**
- * **Logbook entries were made in chronological order.**
- * **The record system allowed the reader to unambiguously identify the person who made the logbook entry.**
- * **Entries in the logbook were made only by appropriate and authorized personnel.**
- * **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.**

LOGBOOKS

- * **For every required operational test and every required sample, a record was made of the date, time, location, name of the person conducting the test and result of the test.**

Records indicate bench testing and the resulting entries on round sheets did not occur while two operators were present at the facility. However as indicated within numerous inspection reports, the round sheets do not provide space for operator initials or time of sample. Operators may provide information in the main logbook to augment the round sheets but it is strongly recommended that the round sheets be updated to avoid confusion and to avoid noncompliance with record keeping requirements.

- * **The operator-in-charge ensured that records were maintained of all adjustments made to the processes within his or her responsibility.**
- * **Logs or other record keeping mechanisms were available for at least five (5) years.**

CONTINGENCY/EMERGENCY PLANNING

- * **Spill containment was provided for process chemicals and/or standby power generator fuel.**
- * **Clean-up equipment and materials were in place for the clean up of spills.**
- * **Standby power generators were tested under normal load conditions.**

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.**

CONSUMER RELATIONS

- * **Water conservation was being practiced by the owner or operating authority.**
- * **Required documents were available free-of-charge during normal business hours at a location accessible to the public.**
- * **The owner did take effective steps to advise users of the water system of the availability of Annual Reports, including posting a copy on a web site, if applicable.**

CERTIFICATION AND TRAINING

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

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

- * All activities that were undertaken by uncertified persons in the DW subsystems were overseen by persons having the prescribed qualifications.

- * All operators possessed the required certification.

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

- * Operator certificates or water quality analyst certificates were displayed in a conspicuous location at the workplace or at the premises from which the subsystem was managed.

- * The classification certificates of the subsystems were conspicuously displayed at the workplace or at premises from which the subsystem was managed.

- * An adequately licenced operator was designated to act in place of the overall responsible operator when the overall responsible operator was unable to act.

- * The owner/operating authority was aware of the operator training and record keeping requirements, and they were taking reasonable steps to ensure that all operators receive the required training.

WATER QUALITY MONITORING

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

The operating authority pursues the following minimum sampling:

Minimum of one sample per week tested/analyzed for Ecoli and Total Coliforms.

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

The operating authority pursues the following minimum sampling:

Based on a population of 450, minimum eight samples per month plus one per 1000 residents, tested/analyzed for Ecoli, total coliforms and a minimum of 25% of samples (2) tested/analyzed for general bacteria population.

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

The operating authority pursues the following minimum sampling:

Minimum of one sample per week tested/analyzed for Ecoli, Total Coliforms and general bacteria population expressed by heterotrophic plate count(HPC).

WATER QUALITY MONITORING

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

The operating authority pursues sampling once every 12 months, last occurring on January 13, and January 20, 2014 and January 6, 2015.

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

The operating authority pursues sampling once every 12 months, last occurring on January 11, 2013, and, January 2, 2014.

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

2013 THM results:

Jan 7, 2013 - 48ug/l

Apr 4, 2013 - 71ug/l

July 3, 2013 - 126ug/l

Oct 7, 2013 - 121ug/l Running Average = 91.5ug/l

2014 THM results:

Jan 13, 2014 - 68ug/l Running Average =96.5ug/l

Apr 2, 2014 - 68ug/l Running Average = 95.75ug/l

July 8, 2014 - 95ug/l Running Average =88ug/l

Oct 7, 2014 - 83ug/l Running Average =78.5ug/l

2015 THM results:

Jan 6, 2015 - 67ug/l Running Average =78.25ug/l

Apr 9, 2015 - 47ug/l Running Average =73ug/l

The Operating Authority indicates they reduced the level of secondary disinfectant by small amounts in order to optimize processes and reduce the amount of THMs.

- * **Trihalomethane samples were being collected from a point in the distribution system or connected plumbing system that was likely to have an elevated potential for the formation of trihalomethanes.**

Samples for THMs are taken at the Home Hardware store, which is located at the end of the distribution system, allowing for the longest retention time.

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

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

The Operating Authority pursues sampling once every 60 months, occurring on January 10, 2011, with levels at 5.06mg/l.

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

The Operating Authority pursues sampling once every 60 months, last occurring on January 10, 2011, with levels at .06mg/l.

WATER QUALITY MONITORING

- * The owner ensured that water samples were taken at the prescribed location.

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

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

The Mindemoya DWS is exempt from residential lead sampling based on four consecutive sampling periods since 2007, therefore meeting the requirements of reduced sampling.

In 2012, one distribution sample was collected for lead analysis in each of the two sampling periods (December 15, 2011 to April 15, 2012 and June 15, 2012 to October 15, 2012). Both results, 0.51 ug/L and 0.72 ug/L respectively, were below Regulation 169 limits of 10 ug/L.

Samples have been taken in the distribution system for pH and alkalinity in March 2013, October 2013, April 2014, October 2014.

Lead, pH, alkalinity samples were taken in the distribution system (hydrant) in April 2015 (results of 1.76ug/l) and will be required again in the summer period (June to October 2015) to fulfill the once every 36 month requirement for sampling lead.

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

- * The drinking water system owner had submitted written notices to the Director that identified the laboratories that were conducting tests for parameters required by legislation, Order Certificate of Approval (OWRA) or a Permit, Licence or Approval issued under Part V of the SDWA.

- * Based on information provided by the owner/operator, samples were being taken and handled in accordance with instructions provided by the drinking-water system's laboratories.

- * The owner indicated that the required records are kept and will be kept for the required time period.

WATER QUALITY ASSESSMENT

- * The audit samples collected by the inspector met the applicable Ontario Drinking Water Quality Standards and/or the aesthetic objectives or operation guidelines. The results of the audit sampling are summarized as follows:

During the inspection pesticide samples were taken. Results attached.

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

On July 25, 2014, a Total Coliform count of 6 was found in the distribution system following a water main break repair. Response included increasing chlorine levels, flushing lines and resampling.

REPORTING & CORRECTIVE ACTIONS

REPORTING & CORRECTIVE ACTIONS

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

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

- * **All required written notices of adverse water quality incidents were provided as per O. Reg. 170/03 16-7.**

- * **In instances where written notice of issue resolution was required by regulation, the notice was provided as per O. Reg. 170/03 16-9.**

- * **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.**

- * **The Annual Report containing the required information was prepared by February 28th of the following year.**

Both the Annual and Summary 2014 reports were sent to Council on February 26, 2015.

- * **Summary Reports for municipal council were completed on time, included the required content, and were distributed in accordance with the regulatory requirements.**

OTHER INSPECTION FINDINGS

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

Please see Recommendations and Best Management Practices Section.

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.

1. The owner did not have a valid PTTW for all of the production sources.

On April 9, 2015, an application for renewal was received at Approvals Branch and reference #7426-9VJSUE attached to file. On July 16, 2015, PTTW #0565-9Y8Q5P was issued allowing for the same takings as the old permit. Given the submission process, a valid PTTW was not in place from June 2, 2015 to July 16, 2015.

Action(s) Required:

Applications should be provided at least 90 days prior to expiry date. No further action is necessary.

2. The secondary disinfectant residual was not measured as required for the distribution system.

Free chlorine residual levels were generally between 1.0 and 1.4mg/l in the distribution system.

Free chlorine residual is required to be sampled at least seven times each week, either daily or four samples taken one day and three samples on another, at least 48 hours apart.

During the month of June 2014, four samples were taken on June 16th(Monday) but it appears that no other chlorine residuals were taken that week. Log book records indicate the next round of samples were taken on June 23(Monday).

Action(s) Required:

By October 9, 2015, the operating authority is required to provide logbook copies indicating that such chlorine residuals were taken in the distribution system or an explanation as to why the samples were not taken, or alternatively why records were not maintained.

SUMMARY OF RECOMMENDATIONS AND BEST PRACTICE ISSUES

This section provides a summary of all recommendations and best practice issues identified during the inspection period. Details pertaining to these items can be found in the body of the inspection report. In the interest of continuous improvement in the interim, it is recommended that owners and operators develop an awareness of the following issues and consider measures to address them.

1. There is no backflow prevention program, policy and/or bylaw in place.

The Municipality should consider a comprehensive backflow prevention program or as a minimum ensure such devices are installed on all higher risk non residential connections and all new connections.

Recommendation:

A backflow prevention device is located at the local carwash. It is recommended that the device be inspected periodically.

2. There was no by-law or policy in place limiting access to hydrants.

Municipality indicates no problems with unauthorized access to hydrants to date.

Recommendation:

No further action is required.

3. The following issues were also noted during the inspection:

Please see the following summary of best management practices listed below.

Recommendation:

1. The Deputy Chief Drinking Water Inspector for the province provided a letter to all municipalities in May 2015, requiring "that system owners be extremely diligent with the proactive identification and response to algal blooms". Where systems are known to be affected by blooms every season, he advises owners/operators to collect weekly water samples and test for presence of blue green algae. During the inspection municipal staff noted that algal blooms had not been found in Lake Mindemoya. However ministry staff have identified blue green algae in this lake in the past. In September 2012, the area Environmental Officer(EO) took samples (later confirmed to be positive) on the shoreline of Treasure Island. In his report the EO notes that the bloom was not localized to the island, but was also sited along the northeast shoreline at the public boat launch. Proactive weekly sampling in raw and treated water for blue green algae is recommended from June to October 2015.

2. Alum levels reported on daily round sheets were all below the operational guideline of 100ug/l, except for June 2015, when levels were measured at 110ug/l. Continued efforts are required to maintain levels below 100ug/l.

3. Round sheets do not provide space for operator initials or time of sample. Operators may provide information in the main logbook to augment the round sheets but it is strongly recommended that the round sheets be updated to avoid confusion and to avoid noncompliance with record keeping requirements.

4. The owner/operating authority is reminded that Form 1 must be completed and as-builts updated within 12 months of completion for 2014 storm sewer changes.

5. A Form 2 will be required for changes to the chlorine chemical board switch over including the new peristaltic pumps, following installation.

SIGNATURES

Inspected By:

Maureen Spinney

Signature: (Provincial Officer):



Reviewed & Approved By:

Marnie Managhan

Signature: (Supervisor):



Review & Approval Date:

Sept 16/15

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.

Appendix A

Key Reference and Guidance Material for Municipal Residential Drinking Water Systems

Many useful materials are posted on the Ministry of the Environment's **Drinking Water Ontario** website at www.ontario.ca/drinkingwater to help in the operation of your drinking water system.

Below is a list of key materials frequently used by owners and operators of municipal drinking water systems. To read or download these materials, go to **Drinking Water Ontario** and search in the **Resources** section by **Publication Number**.

Visit **Drinking Water Ontario** for more useful materials. Contact the Public Information Centre if you need assistance or have questions at 1-800-565-4923/416-325-4000 or picemail.moe@ontario.ca.



PUBLICATION NUMBER	PUBLICATION TITLE
4448e01	Procedure for Disinfection of Drinking Water in Ontario
7152e	Strategies for Minimizing the Disinfection Products Trihalomethanes and Haloacetic Acids
7467	Filtration Processes Technical Bulletin
7685	Ultraviolet Disinfection Technical Bulletin
8215	Total Trihalomethane (TTHM) Reporting Requirements Technical Bulletin (February 2011)
2601e	Overview Guide: Municipal Drinking Water Licensing Program
0000	Municipal Drinking Water Licensing Program Bulletin, Issue 1, January 2011
0000	Certification Guide for Operators and Water Quality Analysts
6560e	Taking Samples for the Community Lead Testing Program
7423e	Community Sampling and Testing for Lead: Standard and Reduced Sampling and Eligibility for Exemption
7128e	Drinking Water System Contact List
4449e01	Technical Support Document for Ontario Drinking Water Quality Standards

Appendix B

Login: **C220571**

Print Date: Aug. 06, 2015 03:35 PM By REPORTADMIN

**** FINAL ****

Program Code 130075201 Program: MOE OPERATIONS DIVISION
 Study: WATER, COMMUNAL
 Project: NORTHERN REG. - SUDBURY DIST
 Activity: WTP MUNIC INSPECT/ADVERS NOTIF
 Organization: District Manager - Toronto

Org. Id: 4520

Mail this copy to :

SPINNEY, MAUREEN
MOE - SUDBURY DISTRICT OFFICE
199 LARCH STREET, SUITE 1201
SUDBURY,ONT
P3E 5P9

Final reports to : POCHOPSKY, KERRY
 SPINNEY, MAUREEN
 MCMAHON, BRIAN

Approved for release by :

Inquiries to : TERESA SWITZER
 PETER DROUIN

Telephone : 416-235-5863
Telephone : 416-235-5850

LOGIN DESCRIPTION: 220008382 MINDEMOYA DWS. SPINNEY MAUREEN 705-564-7174

The results relate only to items tested.

To provide customer service feedback on this report and/or other services provided by LaSB, please contact the LaSB HelpDesk at 416-235-6030 or the Customer Service Manager at 416-235-5831

This report contains confidential information intended only for the person(s) to whom it is addressed. Any unauthorized disclosure, copying, other distribution of this report, or taking any action on its content is strictly prohibited. If you have received this report in error, please contact the LaSB HelpDesk at 416-235-6030 or the Customer Service Manager at 416-235-5831

Login: **C220571**

Print Date: Aug. 06, 2015 03:35 PM By REPORTADMIN

**** FINAL ****

Field Id	Station ID	Sample Location Description	Sampling			Sampler Information		
MS-2	220008382	WW TREATED WATER	Date	Time	Zone			
	Sample ID C220571-0001	Sample Comment Description	16 JUN 2015	14:04	5			
MOE*LIMS Products Requested:								
WD	E3060B	HG3060	WD	E3119A	CPA3119	WD	E3144B	VOL3144
WD	E3172A	F3172	WD	E3196A	IBC3196	WD	E3274A	LIC3274
WD	E3364A	DISNUT3364	WD	E3400A	OCS3400	WD	E3435	TRI3435
WD	E3473	MET3473	WD	E3480	PAH3480	WD	E3500	GLY3500
WD	E3501	CAPH3501	WD	E3502	OPS3502	WD	E3503	QUAT3503

Login: C220571

Print Date: Aug. 06, 2015 03:35 PM By REPORTADMIN

**** FINAL ****

Field ID:
 Sample ID:
 MOE*LIMS ID:
 Station ID:
 Collect Date:
 Sample Location Description:

MS-2
 C220571-0001
 2015WD24-00121
 220008382
 16 JUN 2015
 WW TREATED WATER

Sample Comments Description:

Listid	Parmname	Value	Units	Qual	Rmk1	Rmk2
3060L1	Mercury	.02	ug/L	<=W		
3119L1	2,4-dichlorophenol	.1	ug/L	<MDL		
	2,4,6-trichlorophenol	.05	ug/L	<MDL		
	2,4,5-trichlorophenol	.05	ug/L	<MDL		
	Dicamba	.05	ug/L	<MDL		
	2,3,4-trichlorophenol	.05	ug/L	<MDL		
	2,3,4,6-tetrachlorophenol	.05	ug/L	<MDL		
	MCPP,2-4Cl2MePhenoxy-PropAcid	.05	ug/L	<MDL		
	MCPA,4Cl2MePhenoxy-AceticAcid	.05	ug/L	<MDL		
	2,4-D-propionic acid	.05	ug/L	<MDL		
	Bromoxynil	.05	ug/L	<MDL		
	2,4-D	.05	ug/L	<MDL		
	2,3,4,5-tetrachlorophenol	.05	ug/L	<MDL		
	Pentachlorophenol	.05	ug/L	<MDL		
	Silvex	.05	ug/L	<MDL		
	MCPB,4Cl2MePhenoxy-ButyricAcid	.1	ug/L	<MDL		
	2,4,5-T	.05	ug/L	<MDL		
	2,4-DB	.05	ug/L	<MDL		
	Dinoseb	.05	ug/L	<MDL		
	Picloram	.05	ug/L	<MDL		
	Diclofop-methyl	.05	ug/L	<MDL		
3144L1	Chloroethene	.05	ug/L	<=W		
	1,1-dichloroethene	.05	ug/L	<=W		
	Dichloromethane	.2	ug/L	<=W		
	Tert-butyl methyl ether	.05	ug/L	<=W		
	trans-1,2-dichloroethene	.05	ug/L	<=W		
	Diisopropylether	.05	ug/L	<=W		
	1,1-dichloroethane	.05	ug/L	<=W		
	cis-1,2-dichloroethene	.05	ug/L	<=W		
	Chloroform	57.6	ug/L			
	1,1,1-trichloroethane	.05	ug/L	<=W		
	Carbon tetrachloride	.2	ug/L	<=W		
	1,2-dichloroethane	.05	ug/L	<=W		
	Benzene	.05	ug/L	<=W		
	Trichloroethene	.05	ug/L	<=W		
	1,2-dichloropropane	.05	ug/L	<=W		
	Bromodichloromethane	10.2	ug/L			
	Dichloroacetoneitrile	.5	ug/L	<=W		

Login: **C220571**

Print Date: Aug. 06, 2015 03:35 PM By REPORTADMIN

**** FINAL ****

Field ID:
 Sample ID:
 MOE*LIMS ID:
 Station ID:
 Collect Date:
 Sample Location Description:

MS-2
 C220571-0001
 2015WD24-00121
 220008382
 16 JUN 2015
 WW TREATED WATER

Sample Comments Description:

Parmname	Value	Units	Qual	Rmk1	Rmk2
3144L1 cis-1,3-dichloropropene	.05	ug/L	<=W		
Toluene	.05	ug/L	<=W		
trans-1,3-dichloropropene	.05	ug/L	<=W		
1,1,2-trichloroethane	.1	ug/L	<=W		
Tetrachloroethene	.05	ug/L	<=W		
Dibromochloromethane	1.6	ug/L	<T		
1,2-dibromoethane	.1	ug/L	<=W		
Chlorobenzene	.05	ug/L	<=W		
Ethylbenzene	.05	ug/L	<=W		
m- and p-xylene	.05	ug/L	<=W		
o-xylene	.05	ug/L	<=W		
Styrene	0.05	ug/L	<T		
Bromoform	.5	ug/L	<=W		
1,1,1,2-tetrachloroethane	.2	ug/L	<=W		
1,3-dichlorobenzene	.05	ug/L	<=W		
1,4-dichlorobenzene	.05	ug/L	<=W		
1,2-dichlorobenzene	.05	ug/L	<=W		
Trihalomethanes; total	69.4	ug/L			
3172L3 Fluoride	0.08	mg/L			
3364L1 Nitrogen; ammonia+ammonium	0.018	mg/L	<T		
Nitrogen; nitrite	.001	mg/L	<=W		
Nitrogen; nitrate+nitrite	0.093	mg/L	<T		
Phosphorus; phosphate	0.0013	mg/L	<T		
3400L4 Hexachloroethane	1	ng/L	<=W		
1,3,5-trichlorobenzene	5	ng/L	<=W		
1,2,4-trichlorobenzene	5	ng/L	<=W		
Hexachlorobutadiene	1	ng/L	<=W		
1,2,3-trichlorobenzene	5	ng/L	<=W		
2,4,5-trichlorotoluene	5	ng/L	<=W		
2,3,6-trichlorotoluene	5	ng/L	<=W		
1,2,3,5-tetrachlorobenzene	2	ng/L	<=W		
1,2,4,5-tetrachlorobenzene	1	ng/L	<=W		
2,6-dichlorobenzyl chloride	10	ng/L	<=W		
1,2,3,4-tetrachlorobenzene	1	ng/L	<=W		
Pentachlorobenzene	1	ng/L	<=W		
Hexachlorobenzene	1	ng/L	<=W		
Heptachlor	1	ng/L	<=W		
Heptachlor epoxide	2	ng/L	<=W		

Login: C220571

Print Date: Aug. 06, 2015 03:35 PM By REPORTADMIN

**** FINAL ****

Field ID:
 Sample ID:
 MOE*LIMS ID:
 Station ID:
 Collect Date:
 Sample Location Description:

MS-2
 C220571-0001
 2015WD24-00121
 220008382
 16 JUN 2015
 WW TREATED WATER

Sample Comments Description:

Parmname	Value	Units	Qual	Rmk1	Rmk2
3400L4 Heptachlor+Heptachlor Epoxide	3	ng/L	<=W		
Aldrin	1	ng/L	<=W		
Dieldrin	2	ng/L	<=W		
Aldrin+Dieldrin	3	ng/L	<=W		
Mirex	5	ng/L	<=W		
a-BHC (hexachlorocyclohexane)	1	ng/L	<=W		
Trifluralin	5	ng/L	<=W		
g-BHC (hexachlorocyclohexane)	1	ng/L	<=W		
a-Chlordane	2	ng/L	<=W		
g-Chlordane	2	ng/L	<=W		
Oxychlordane	2	ng/L	<=W		
Chlordane; total	6	ng/L	<=W		
pp-DDE	2	ng/L	<=W		
op-DDT	5	ng/L	<=W		
pp-DDT	5	ng/L	<=W	AQH	
pp-DDD	5	ng/L	<=W		
DDT; total	17	ng/L	<=W		
Methoxychlor	5	ng/L	<=W	AQH	
Endosulphan I	2	ng/L	<=W		
Endrin	5	ng/L	<=W		
Endosulphan II	5	ng/L	<=W		
Endosulphan sulphate	5	ng/L	<=W		
Octachlorostyrene	1	ng/L	<=W		
Toxaphene	500	ng/L	<=W		
PCB; total	20	ng/L	<=W		
Hexachlorocyclopentadiene	126.	ng/L		AQL	
b-BHC (hexachlorocyclohexane)	2	ng/L	<=W		
Pyrethrin 1	100	ng/L	<=W		
Piperonyl Butoxide	100	ng/L	<=W		
Permethrin	100	ng/L	<=W		
Pyrethrin 2	100	ng/L	<=W		
3435L1 Cyanazine	100	ng/L	<=W		
Prometone	50	ng/L	<=W		
Propazine	50	ng/L	<=W		
Atrazine	50	ng/L	<=W		
Metribuzin	100	ng/L	<=W		
Prometryne	20	ng/L	<=W		
Atraton	50	ng/L	<=W		

Login: C220571

Print Date: Aug. 06, 2015 03:35 PM By REPORTADMIN

**** FINAL ****

Field ID:
 Sample ID:
 MOE*LIMS ID:
 Station ID:
 Collect Date:
 Sample Location Description:

MS-2
 C220571-0001
 2015WD24-00121
 220008382
 16 JUN 2015
 WW TREATED WATER

Sample Comments Description:

Parmname	Value	Units	Qual	Rmk1	Rmk2
3435L1 Ametryne	50	ng/L	<=W		
Simazine	50	ng/L	<=W		
Metolachlor	100	ng/L	<=W		
Alachlor	100	ng/L	<=W		
De-ethylated atrazine	100	ng/L	<=W		
De-ethylated simazine	100	ng/L	<=W		
Atrazine+de-alkylatedatrazine	100	ng/L	<=W		
Butachlor	100	ng/L	<=W		
Terbutryne	100	ng/L	<=W		
3473L1 Aluminum	82.6	ug/L	+/-13.60		
Antimony	.6	ug/L	+/-0.18		
Arsenic	.2	ug/L	+/-0.27		
Barium	6.5	ug/L	+/-1.10		
Beryllium	0	ug/L	+/-0.25		
Boron	14.8	ug/L	+/-2.80		
Cadmium	0	ug/L	+/-0.13		
Chromium	.1	ug/L	+/-0.34		
Cobalt	.1	ug/L	+/-0.18		
Copper	5.5	ug/L	+/-0.60		
Iron	10	ug/L	+/-18.42		
Lead	.2	ug/L	+/-0.16		
Manganese	.2	ug/L	+/-0.24		
Molybdenum	.2	ug/L	+/-0.15		
Nickel	.3	ug/L	+/-0.32		
Selenium	.2	ug/L	+/-0.50		
Silver	0	ug/L	+/-0.17		
Strontium	71.9	ug/L	+/-7.10		
Thallium	0	ug/L	+/-0.11		
Titanium	0	ug/L	+/-0.25		
Uranium	0	ug/L	+/-0.18		
Vanadium	.2	ug/L	+/-0.23		
Zinc	2.7	ug/L	+/-0.49		
3480L1 Phenanthrene	10	ng/L	<=W		
Anthracene	10	ng/L	<=W		
Fluoranthene	10	ng/L	<=W		
Pyrene	10	ng/L	<=W		
Benzo(a)anthracene	20	ng/L	<=W		
Chrysene	10	ng/L	<=W		

Login: C220571

Print Date: Aug. 06, 2015 03:35 PM By REPORTADMIN

**** FINAL ****

Field ID:
 Sample ID:
 MOE*LIMS ID:
 Station ID:
 Collect Date:
 Sample Location Description:

MS-2
 C220571-0001
 2015WD24-00121
 220008382
 16 JUN 2015
 WW TREATED WATER

Sample Comments Description:

Parmname	Value	Units	Qual	Rmk1	Rmk2
3480L1 7,12-dimethylbenz(a)anthracene	10	ng/L	<=W		
Benzo(b)fluoranthene	10	ng/L	<=W		
Benzo(k)fluoranthene	10	ng/L	<=W		
Benzo(e)pyrene	10	ng/L	<=W		
Benzo(a)pyrene	1	ng/L	<=W		
Perylene	10	ng/L	<=W		
Indeno(1,2,3-c,d)pyrene	20	ng/L	<=W		
Dibenzo(a,h)anthracene	20	ng/L	<=W		
Benzo(g,h,i)perylene	20	ng/L	<=W		
Naphthalene	10	ng/L	<=W		
2-methylnaphthalene	10	ng/L	<=W		
1-methylnaphthalene	10	ng/L	<=W		
Acenaphthylene	10	ng/L	<=W		
Acenaphthene	10	ng/L	<=W		
Fluorene	10	ng/L	<=W		
3500L1 Glyphosate	2	ug/L	<=W		
Aminomethylphosphonic acid	5	ug/L	<=W		
Glufosinate	2	ug/L	<=W		
3501L1 Metoxuron	.5	ug/L	<MDL		
Monuron	.5	ug/L	<MDL		
Fluometuron	.5	ug/L	<MDL		
Chlorotoluron	.5	ug/L	<MDL		
Monolinuron	.5	ug/L	<MDL		
Difenoxuron	.5	ug/L	<MDL		
Metobromuron	.5	ug/L	<MDL		
Siduron	.5	ug/L	<MDL		
Linuron	1	ug/L	<MDL		
Chlorobromuron	.5	ug/L	<MDL		
Neburon	1	ug/L	<MDL		
Diuron	.5	ug/L	<MDL		
Aldicarb	1	ug/L	<MDL		
Propoxur	.5	ug/L	<MDL		
Carbofuran	.5	ug/L	<MDL		
Bendiocarb	.5	ug/L	<MDL		
Carbaryl	.2	ug/L	<MDL		
Propham	.5	ug/L	<MDL		
Chlorpropham	1	ug/L	<MDL		
Barban	5	ug/L	<MDL		

Login: C220571

Print Date: Aug. 06, 2015 03:35 PM By REPORTADMIN

**** FINAL ****

Field ID:
 Sample ID:
 MOE*LIMS ID:
 Station ID:
 Collect Date:
 Sample Location Description:

MS-2
 C220571-0001
 2015WD24-00121
 220008382
 16 JUN 2015
 WW TREATED WATER

Sample Comments Description:

Parmname	Value	Units	Qual	Rmk1	Rmk2
3501L1 Eptam	1	ug/L	<MDL		
Diallate	1	ug/L	<MDL		
Butylate	1	ug/L	<MDL		
Triallate	1	ug/L	<MDL		
3502L1 Dimethoate	.5	ug/L	<MDL		
Mevinphos	.2	ug/L	<MDL		
Dichlorvos	1	ug/L	<MDL		
Azinphos-methyl	.1	ug/L	<MDL		
Methylparathion	.5	ug/L	<MDL		
Malathion	1	ug/L	<MDL		
Parathion	.2	ug/L	<MDL		
Diazinon	.5	ug/L	<MDL		
Phorate	.1	ug/L	<MDL		
Reldan	1	ug/L	<MDL		
Ronnel	.5	ug/L	<MDL		
Terbufos	.2	ug/L	<MDL		
Temephos	.1	ug/L	<MDL		
Chlorpyrifos	.1	ug/L	<MDL		
Ethion	.5	ug/L	<MDL		
3503L1 Paraquat	.1	ug/L	<=W		
Diquat	.1	ug/L	<=W		
Chlormequat	.02	ug/L	<=W		
Mepiquat	.02	ug/L	<=W		
Difenzoquat	.02	ug/L	<=W		
Cyperquat	.05	ug/L	<=W		

Login: C220571

Print Date: Aug. 06, 2015 03:35 PM By REPORTADMIN

**** FINAL ****

CODE	DESCRIPTION
<=W	NO MEASURABLE RESPONSE (ZERO): <REPORTED VALUE
<T	A MEASURABLE TRACE AMOUNT:INTERPRET WITH CAUTION
AQL	RESULT BIASED LOW, QC OUT OF RANGE
NDID	NO DATA: INSUFFICIENT DATA TO PERFORM CALC.
<MDL	LESS THAN METHOD DETECTION LIMIT
AQH	RESULT BIASED HIGH, QC OUT OF RANGE

TEXT COMMENT

Product Completion

Sample ID	Matrix	Method	Product	Analytical Department	Completion Date
C220571-0001	WD	E3060B	HG3060	6314	23-JUN-15
C220571-0001	WD	E3119A	CPA3119	3340	25-JUN-15
C220571-0001	WD	E3144B	VOL3144	4410	16-JUL-15
C220571-0001	WD	E3172A	F3172	5216	26-JUN-15
C220571-0001	WD	E3364A	DISNUT3364	5313	30-JUN-15
C220571-0001	WD	E3400A	OCS3400	3340	15-JUL-15
C220571-0001	WD	E3435	TRI3435	3340	06-JUL-15
C220571-0001	WD	E3473	MET3473	6410	09-JUL-15
C220571-0001	WD	E3480	PAH3480	3340	05-AUG-15
C220571-0001	WD	E3500	GLY3500	3341	25-JUN-15
C220571-0001	WD	E3501	CAPH3501	3341	08-JUL-15
C220571-0001	WD	E3502	OPS3502	3341	08-JUL-15
C220571-0001	WD	E3503	QUAT3503	3341	30-JUN-15

LaSB Method Summary

Method	Method Description	Status	Status Description
E3060B	THE DETERMINATION OF MERCURY IN WATER, LIQUID INDUSTRIAL WASTE AND LANDFILL LEACHATE SAMPLES BY COLD VAPOUR-FLAMELESS ATOMIC ABSORPTION SPECTROPHOTOMETRY (CV-FAAS)	ROUTINE	Method has been fully validated, is deemed fit for purpose and has the associated Uncertainty information available upon request
E3119A	THE DETERMINATION OF CHLOROPHENOLS (CPS) AND CHLOROPHENOXYACID HERBICIDES (PAS) IN ENVIRONMENTAL MATRICES BY GAS CHROMATOGRAPHY-MASS SPECTROMETRIC (GC-MS) ANALYSIS	ROUTINE	Method has been fully validated, is deemed fit for purpose and has the associated Uncertainty information available upon request
E3144B	THE DETERMINATION OF VOLATILE ORGANIC COMPOUNDS IN RAW AND TREATED DRINKING WATER BY PURGE AND TRAP CAPILLARY GAS CHROMATOGRAPHY-FLAME IONIZATION/MASS SELECTIVE (PT/GC-FID/MSD) DETECTION	ROUTINE	Method has been fully validated, is deemed fit for purpose and has the associated Uncertainty information available upon request

Login: C220571

Print Date: Aug. 06, 2015 03:35 PM By REPORTADMIN

**** FINAL ****

E3172A	THE DETERMINATION OF FLUORIDE AND SULPHATE IN WATER, LEACHATES AND EFFLUENTS BY AUTOMATED ION CHROMATOGRAPHY (IC)	ROUTINE	Method has been fully validated, is deemed fit for purpose and has the associated Uncertainty information available upon request
E3196A	LIMS CALCULATIONS-ION BALANCE	ROUTINE	Method has been fully validated, is deemed fit for purpose and has the associated Uncertainty information available upon request
E3274A	LIMS CALCULATIONS-LANGELIERS INDEX	ROUTINE	Method has been fully validated, is deemed fit for purpose and has the associated Uncertainty information available upon request
E3364A	THE DETERMINATION OF AMMONIA NITROGEN, NITRITE NITROGEN, NITRITE PLUS NITRATE NITROGEN AND REACTIVE ORTHO-PHOSPHATE IN SURFACE WATER, DRINKING WATER AND PRECIPITATION BY COLOURIMETRY	ROUTINE	Method has been fully validated, is deemed fit for purpose and has the associated Uncertainty information available upon request
E3400A	THE DETERMINATION OF ORGANOCHLORINE PESTICIDES, CHLOROBENZENES (CBS), AROCLORS AND TOXAPHENES IN WATER, EFFLUENT AND WASTEWATER BY HEXANE MICROEXTRACTION AND GAS CHROMATOGRAPHY - MASS SPECTROMETRY (GC-MS)	ROUTINE	Method has been fully validated, is deemed fit for purpose and has the associated Uncertainty information available upon request
E3435	THE DETERMINATION OF TRIAZINE PESTICIDES IN WATER BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY	ROUTINE	Method has been fully validated, is deemed fit for purpose and has the associated Uncertainty information available upon request
E3473	THE DETERMINATION OF TRACE METALS IN POTABLE WATERS BY DYNAMIC REACTION CELL (DRC) INDUCTIVELY COUPLED PLASMA-MASS SPECTROMETRY (ICP-MS)	ROUTINE	Method has been fully validated, is deemed fit for purpose and has the associated Uncertainty information available upon request
E3480	THE DETERMINATION OF POLYCYCLIC AROMATIC HYDROCARBONS IN WATER BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY	ROUTINE	Method has been fully validated, is deemed fit for purpose and has the associated Uncertainty information available upon request
E3500	THE DETERMINATION OF GLYPHOSATE, GLUFOSINATE AND AMINOMETHYL-PHOSPHONIC ACID IN WATER BY DIRECT AQUEOUS INJECTION LIQUID CHROMATOGRAPHY- TANDEM MASS SPECTROMETRY (LC-MS/MS) ANALYSIS	ROUTINE	Method has been fully validated, is deemed fit for purpose and has the associated Uncertainty information available upon request
E3501	THE DETERMINATION OF CARBAMATES AND PHENYL UREA IN WATER BY DIRECT AQUEOUS INJECTION LIQUID CHROMATOGRAPHY -TANDEM MASS SPECTROMETRY (LC-MS/MS) ANALYSIS	ROUTINE	Method has been fully validated, is deemed fit for purpose and has the associated Uncertainty information available upon request
E3502	DETERMINATION OF ORGANOPHOSPHORUS PESTICIDES IN WATER BY DIRECT AQUEOUS INJECTION-LCMSMS	ROUTINE	Method has been fully validated, is deemed fit for purpose and has the associated Uncertainty information available upon request
E3503	THE DETERMINATION OF QUATERNARY AMMONIUM PESTICIDES (QUATS) IN WATER BY DIRECT AQUEOUS INJECTION LIQUID CHROAMTOGRAPHY-TANDEM MASS SPECTROMETRY (LC-MS/MS) ANALYSIS	ROUTINE	Method has been fully validated, is deemed fit for purpose and has the associated Uncertainty information available upon request

*** End of Report ***

Appendix C

Ministry of the Environment - Inspection Summary Rating Record (Reporting Year - 2015-2016)

DWS Name:	MINDEMOYA DRINKING WATER SYSTEM
DWS Number:	220008382
DWS Owner:	Central Manitoulin, The Municipality Of
Municipal Location:	Central Manitoulin

Regulation: O.REG 170/03
Category: Large Municipal Residential System
Type Of Inspection: Detailed
Inspection Date: June 16, 2015
Ministry Office: Sudbury District

Maximum Question Rating: 744

Inspection Module	Non-Compliance Rating
Permit To Take Water	6 / 18
Capacity Assessment	0 / 38
Treatment Processes	0 / 111
Process Wastewater	0 / 10
Distribution System	0 / 25
Operations Manuals	0 / 42
Logbooks	0 / 42
Consumer Relations	0 / 8
Certification and Training	0 / 65
Water Quality Monitoring	0 / 160
Reporting & Corrective Actions	0 / 84
Other Inspection Findings	0 / 0
Treatment Process Monitoring	21 / 141
TOTAL	27 / 744

Inspection Risk Rating	3.63%
-------------------------------	--------------

FINAL INSPECTION RATING:	96.37%
---------------------------------	---------------

Ministry of the Environment - Detailed Inspection Rating Record (Reporting Year - 2015-2016)

DWS Name:	MINDEMOYA DRINKING WATER SYSTEM
DWS Number:	220008382
DWS Owner:	Central Manitoulin, The Municipality Of
Municipal Location:	Central Manitoulin
Regulation:	O.REG 170/03
Category:	Large Municipal Residential System
Type Of Inspection:	Detailed
Inspection Date:	June 16, 2015
Ministry Office:	Sudbury District

Non-compliant Question(s)	Question Rating
Permit To Take Water	
If a PTTW is required, does the owner have a valid PTTW for all of the production sources?	6
Treatment Process Monitoring	
Is the secondary disinfectant residual measured as required for the distribution system?	21
TOTAL QUESTION RATING	27

Maximum Question Rating: 744

Inspection Risk Rating	3.63%
-------------------------------	--------------

FINAL INSPECTION RATING:	96.37%
---------------------------------	---------------