COMPLIANCE INSPECTION REPORT

MOOSE CREEK
WELL SUPPLY

Ministry of the Environment

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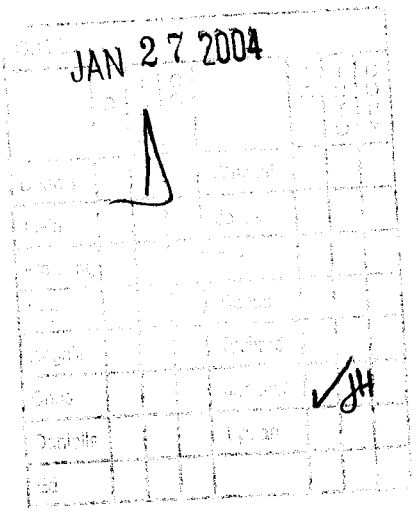
Ontario

2004-NST-MD



January 26, 2004

Mr. Rheal Charbonneau, Clerk-Treasurer
Township of North Stormont
PO Box 99
2 Victoria Street
Berwick, Ontario K0C 1G0

Dear Sir:

Re: Compliance Inspection - 2003/2004
Moose Creek Well Supply

The Moose Creek Well Supply was inspected on June 17, 2003, by Jan Franssen, Inspector, Drinking Water Inspection Program, Eastern Region. Enclosed is a copy of the inspection report.

Also enclosed is a Provincial Officer's Order (No.4758-5V9R4X) and associated Report, that requires the Township to submit a workplan that describes how and when the Well Head Protection Plan will be implemented as per Condition 5.1 of the facility's Certificate of Approval.

A copy of the Compliance Inspection Report will be sent to Mr. Blair Henderson, who is designated as the Operations Manager for the waterworks. Copies will also be sent to Dr. Robert Bourdeau, Medical Officer of Health for the Eastern Ontario Health Unit, Mr. Mirek Tybinkowski, MOE Environmental and Approvals Branch, and Mr. Richard Pilon of the South Nation Conservation Authority.

Your attention is directed to Section 6 "Summary of Non-Compliance Issues and Required Actions" and Section 7 "Summary of Best Practice Recommendations" of this report. **Please provide a response by February 29, 2004** detailing how the Township plans to address the recommendations provided in Section 7.

Should you have any questions pertaining to the Compliance Inspection Report, the Provincial Officer's Order or associated Report, please do not hesitate to contact me at (613) 933-7402 extension 234.

Yours truly,

Jan Franssen
Inspector

Drinking Water Inspection Program
Eastern Region

cc:dhm
enclosure

cc: Mr. Blair Henderson, Operations Manager-Chesterville Hub, Ontario Clean Water Agency
Dr. Robert Bourdeau, Medical Officer of Health, Eastern Ontario Health Unit
Mr. Mirek Tybinkowski, Director of Environmental Assessment and Approvals Branch
Mr. Richard Pilon, South Nation Conservation Authority
Cornwall District File - SI ST RX C6 241

Ontario

Ministry of the Environment
Drinking Water Inspection Report

Moose Creek Well Supply

INSPECTION DETAILS	
Location:	16950 McNeil Road, Lot 19, Concession 6 Township of North Stormont
Water Works Type:	Treatment With Distribution
Water Works Number:	220008033
Inspection Type:	Announced
Date of Inspection:	June 17, 2003
Date of Previous Inspection:	July 24, 2002
Inspection Number:	357
CONTACT INFORMATION	
Municipality/Owner Township of North Stormont PO Box 99 2 Victoria Street Berwick, Ontario K0C 1G0 Attention: Rheal Charbonneau Clerk-Treasurer Phone: 613-984-2821 Fax: 613-984-2908	**Operating Authority** Ontario Clean Water Agency (OCWA) Chesterville Hub 5 Industrial Drive Chesterville, Ontario K0B 1J0 Attention: Blair Henderson Operations Manager Phone: 613-448-3098 Fax: 613-448-1616
Inspector: Jan Franssen Cornwall Office Eastern Region 613-933-7402 ext 234	Distribution Date: January 26, 2004

Name and address of other contacts can be found in **Appendix E.**

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SECTION 1 INTRODUCTION

1.1 INSPECTION OBJECTIVES

The primary focus of this inspection is to confirm compliance with Ministry of the Environment legislation and control documents, as well as conformance with Ministry drinking water-related policies for the inspection period. Specifically, this includes a review and assessment of operating practices in relation to the following documents:

- The Safe Drinking Water Act, 2002
- Drinking Water Systems Regulation (O. Reg. 170/03)
- The Well Regulation (Wells - O. Reg. 903)
- Operator Certification Regulation (Water Works and Sewage Works - O. Reg. 435/93)
- Certificates of Approval
- Permits to Take Water
- Previous Ministry Compliance Inspection report
- Engineer's Report dated March, 2001

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

Table 1 AUTHORIZING AND CONTROL DOCUMENTS REVIEWED

CERTIFICATES OF APPROVAL		
Certificate #	**Date Issued**	**Description**
9727-5DMJAA	September 10, 2002	Amended Certificate of Approval
PERMIT TO TAKE WATER		
Permit #	**Expiry Date**	**Description**
93-P-4064	August 30, 2003	Permit to Take Water
PREVIOUS ORDERS		
Order #	**Date Issued**	**Description**
--	--	None Issued

SECTION 2 EXISTING WATER SYSTEM DESCRIPTION

The Moose Creek Well Supply is owned by the Township of North Stormont and is operated by the Ontario Clean Water Agency (OCWA). The supply and treatment works are situated on Lot 19, Concession 6 of the Township of North Stormont. The system was brought into service in 1995.

The system was designed to supply a population of 724 with an average consumption of 450 L/day, with an average daily demand of 356 m^3/day and a maximum daily demand of 896 m^3/day.

2.1 WATER SOURCE

The Moose Creek Well Supply draws water from three drilled groundwater wells located west of the treatment plant. Wells 1, 2 and 3 consist of a 150 mm diameter well drilled to depths of 30.5 m, 30.8 m, and 32.0 m respectively. A review of the well construction records indicates that all three wells were drilled and grouted into bedrock. Bedrock depths ranged from 12.2 m to 13.0 m below ground surface. GPS coordinates for the groundwater wells are provided in Appendix C.

Each well is equipped with a submersible pump that conveys groundwater via a pitless adapter to the adjacent pumphouse. Inside the pumphouse each of the three raw water supply lines is equipped with a raw water sampling valve located upstream of the three dedicated raw water flow meters.

The Engineer's Report fails to assess whether or not the source water is Groundwater under the Direct Influence of surface water (GUDI), although an Assessment by the MOE's Environmental Assessment and Approvals Branch concluded that the source water is <u>not</u> GUDI.

2.2 TREATMENT PROCESSES

Water is pumped into the pumphouse from each of the three production wells where it is combined into a 100 mm diameter common header downstream of the raw water flow meters.

Sodium hypochlorite is injected into the common header upstream of the mixing chamber. The sodium hypochlorite disinfection system consists of one 100L sodium hypochlorite storage tank, and three chemical metering pumps (two duty and one standby).

Water flows through the "L" shaped baffled mixing chamber and into two rectangular clearwells. The dimensions of the mixing chamber are 5.6 m by 2.0 m and 5.35 m and 1.0 m, with a minimum depth of water of 0.5 m. Clearwell 1 measures 6.6 m by 3.0 m and Clearwell 2 measures 5.2 by 3.0 m with a low water depth of 0.5 m and a maximum water depth of 1.5 m. Gate valves connect the mixing chamber to the clearwells, and a single gate valve connects the two clearwells.

Two centrifugal high lift pumps (one situated above each of the two clearwells) draw water from the clearwells and pump water into the distribution system via a 200 mm diameter feeder main. Water for the pump station plumbing (safety station, outside hose and inside hose) and the online chlorine analyzer and turbidimeter are drawn from the treated water discharge line upstream of the treated water flow meter and feeder main.

A Depolox 3 online chlorine analyzer manufactured by Wallace & Tiernan, provides a continuous measure of free chlorine residual in the treated water. A Hach 1720D Turbidimeter provides a continuous measure of treated water turbidity, and a magnetic flow meter measures the volume of treated water discharged into the feedermain.

The plant is classified as a Class 1 water treatment facility. Certification details are provided in Appendix D. Additional details on the treatment process can be found in the facility's amended CofA; a copy is provided in Appendix A. GPS coordinates for the treatment facility are provided in Appendix C.

2.3 DISTRIBUTION SYSTEM

The distribution system consists of approximately 6.8 km of watermain that were installed in 1993 and 1994. The system supplies water to 216 service connections with a population of approximately 300. Approximately 51 hydrants are installed on the system. An elevated storage tank with a capacity of 622 cubic meters is located on the south side of County Road 15 west of the Village of Moose Creek.

The distribution system is classified as a Class 1 facility. Certification details are provided in Appendix D. GPS coordinates for the elevated storage tank are provided in Appendix C.

2.4 SYSTEM DIAGRAM

The system diagram supplied by the operating authority is provided in Appendix F.

SECTION 3 INSPECTION FINDINGS

3.1 OPERATIONS

3.1.1 Source/Supply

All three wells are centrally located on Lot 19, Concession 6 of the Township of North Stormont. The Township of North Stormont owns the lot. Each well is situated at least 70 m from the nearest property boundary and there were no potential sources of contamination observed within the property boundaries. The surrounding landuse is primarily agricultural with the Village of Moose Creek situated to the northwest. At the time of the inspection there was no Wellhead or Source Protection Plan in place.

Wellhead Assessment

The well casings on all three wells extended a minimum of 30 cm above the ground surface and are equipped with a pitless adapter. Wells are equipped with a vented locking well cap that provides an effective seal against the entry of foreign material.

An inspection of the well head locations indicated that surface water is unlikely to pond in the vicinity of the wells. A review of the construction drawings indicated that the annular space around each of the wells was sealed with grout and that this grout extended from ground surface into the bedrock aquifer. Condition 5.1 of the amended CofA required the owner to implement a Wellhead Protection Program by July 01, 2003. WESA has informed the Township that they have completed the field investigation portion of the Well Field Protection Plan but are awaiting the release of the Raisin River Conservation Authority's report on Wellhead Protection Areas in the Township of North Stormont.

The operating authority confirmed that a GUDI study has not been completed for the source wells. Although such a study has not been completed, the MOE's Engineering Assessment (Ref No: 0345-4VPK7Y) concluded that the source well is <u>not</u> GUDI based on the following:

i) The raw water data indicates a water source of good quality with very few occurrences of total coliforms and background bacteria, and no occurrences of fecal coliforms or *E.Coli*;
ii) The wells are relatively deep (+30 m); and
iii) There is a thick low permeability confining layer above the aquifer.

A smooth nozzle raw water sample tap is located on each of the raw water supply lines that allows for the collection of a sample prior to the injection of disinfectant. The MOE Inspector collected a raw water sample from Well 2 and Well 3 and submitted the samples to the MOE Laboratory in Toronto for analyses of Total Coliforms, *E. Coli*, and Heterotrophic Plate Count. The results of the laboratory analyses are presented in Section 4.2.

Permit to Take Water Assessment

Three magnetic flow meters manufactured by Endress & Hauser measure the raw water flow from each of the three source wells. The readings from the flow meters are recorded on an electronic data recorder that records the daily quantity and flow rate from each well. A review of an equipment work order provided by the operating authority indicated that the raw flow meters were calibrated on July 30, 2002 and again on June 25, 2003. The equipment work order does not provide a clear summary of the calibration event. The operating authority indicated that they are in the process of improving their calibration documentation.

The Permit To Take Water (PTTW) states that the rate of taking shall not exceed a total of 298,656 L/ day from each of the wells. A review of the Annual Records of Water Taking for 2002 and 2003 (to June) indicated that the highest maximum daily flow was calculated to be: 26,000 L/day from Well 1 (May 2002); 193,000 L/day from Well 2 (August 2002); 277,000 L/day from Well 3 (June 2003). The maximum rates of taking were below those specified in the PTTW. A copy of the PTTW is provided in **Appendix B**.

PERMIT TO TAKE WATER ASSESSMENT				
PERMIT NUMBER	**RENEWAL DATE**	**SOURCE**	**PERMITTED AMOUNT OF TAKING**	**UNITS**
93-P-4064	August 30, 2003	Groundwater (3 Wells)	298,656	L/day per well

The operating authority indicated that throughout 2002 the rate of taking of water from Well 1 was reduced and that the well was taken offline in June 2002 and is presently offline. On May 23, 2003 an unsuccessful attempt was made to try and rehabilitate Well 1.

Upgrade requirements included in Condition 5.1 of the amended CofA require the owner to conduct well capacity testing for all three production wells by July 1, 2003 and, if warranted by the findings, applying for an amendment to the CofA and the PTTW to revise the rated well capacities.

In July 2003, Water and Earth Science Associates (WESA) of Ottawa, ON conducted well capacity testing on Moose Creek Well 2 and Well 3. Tests were not performed on Well 1 because the attempt to rehabilitate this well was unsuccessful. A letter report titled "Well Yield Re-rating Results" was sent to the attention of the Township of North Stormont. Results of the aquifer testing indicated that the 20 year sustainable yields for Well 2 and Well 3 were 228.7 m^3/day and 228.3 m^3/day respectively.

The operating authority records static water levels using pressure transducers located in each of the three wells. The level reading is recorded each facility visit and identified as static level or pumping level if the pumps are operating. The operating authority indicated that there were no complaints or notices given with regard to interference with adjacent water systems.

The Township indicated that there are no water conservation by-laws in place for the Moose Creek drinking water system.

3.1.2 Treatment Processes

The volume of treated water discharge from the facility is measured with a magnetic flow meter manufactured by Endress & Hauser. The calibration report shows that the unit was calibrated on July 30, 2002 and June 25, 2003. The flow meters transmit data to a flow data recorder (installed on August 6, 2003) that is capable of recording daily total and peak flows.

The treatment equipment is installed in accordance with the description provided in the amended CofA. The operating authority indicated that the system was operated without interruption since the previous MOE compliance inspection. The inspection revealed that the facility and equipment appear to be very well maintained.

A review of OCWA's Performance Assessment Reports indicate that the maximum recorded flow rate from July 2002 through June 2003 was 372 m3/day, or approximately 42% of the rated capacity of the drinking water system. The following table summarizes the follow data from the previous three years.

TREATED WATER CAPACITY ASSESSMENT			
ITEM	**2000**	**2001**	**2002**
Avg. Daily Flow (m3/day)	151	158	166
Max. Daily Flow (m3/day)	208	346	372
Rated Capacity (m3/day)	896	896	896
% (Max. Daily / Rated Capacity)	29%	23%	42%

Note: Data obtained from OCWA's performance assessment reports

Disinfection

The disinfection system consists of a solution tank and three metering pumps (2 duty, 1 standby) manufactured by Wallace and Tiernan. A 12% solution of sodium hypochlorite is pumped to an injection point upstream of the clearwell. Sodium hypochlorite can be directly injected into each well, but the operating authority indicated that this feature is not used due to the raw water sampling requirements.

The operating authority provided documentation confirming that the sodium hypochlorite used at the Moose Creek Water Treatment Plant meets the applicable American Water Works Association (AWWA) and American National Standards Institute (ANSI) standards.

In its 2002 Annual Performance Report, the operating authority stated that a total of 3533 kg of 12% sodium hypochlorite was injected in 2002, and that there was no abnormal usage encountered.

A review of the Engineer's Report (Kotusch, 2001) indicated that the Engineer concluded that facility was capable of:

i) maintaining a minimum chlorine residual, measured as free chlorine after 15 minutes contact time (determined as T_{10} at maximum flow) and before the first consumer, of 0.2 mg/L in all disinfected water entering the distribution system; and

ii) maintaining a minimum free chlorine residual in the water distribution system of 0.2 mg/L.

Upgrade requirements included in Condition 5.1 of the amended CofA included the following items which were to be completed by July 1, 2003:

- Controls to automatically switch over the sodium hypochlorite metering pumps and alarm in the event of the failure of one pump; and
- Standby-hypochlorite solution tank with an automatic switch-over when one of the connected tanks is empty or alternative approved by the Ministry.

The inspection revealed that secondary containment for sodium hypochlorite solution tank is not provided. The Inspector observed that a standby solution tank and containment were present at the treatment plant but had not yet been installed. Subsequent to the site visit the operating authority confirmed that the solution tanks and containment were installed, but that the automatic switchover was not yet operational. The operating authority indicated that the automatic switchover should be fully functional by January 31, 2004.

Water from the treated water discharge line is directed to a Wallace and Tiernan Depolox 3 continuous chlorine analyzer. Water discharged from the analyzer is directed back into the clearwell. This model of analyzer does not add reagents to the water.

The analyzer is connected to a SCADA system that provides a continuous record of the chlorine residuals in the treated water as it is discharged from the plant. The operating authority confirmed that the results are checked at least once every 72 hours. The chlorine analyzer is equipped with an alarm system that provides electronic notification to the operating authority if the test result indicates that the free chlorine residual is above the maximum alarm setting of 3.0 mg/L free chlorine or below the minimum alarm setting of 0.5 mg/L free chlorine. The disinfection system is equipped with a pump lockout that is activated when the low alarm is triggered.

The alarm settings are consistent with the maximum concentration of 4.0 mg/L specified in the MOE document "Procedure for Disinfection of Drinking Water in Ontario" (March 17, 2003), and the minimum alarm standard of 0.21 mg/L as calculated based on the requirements of O.Reg. 170/03 Schedule 6-5(10). The minimum alarm standard was derived from subtracting 0.1 mg/L from the concentration of free chlorine residual required to achieve primary disinfection.

The concentration of free chlorine residual required to achieve primary disinfection was derived from the following equation:

$$Concentration\ (mg/L) = CT \div Time$$
$$Concentration\ (mg/L) = 6 \div 19.5$$
$$Concentration\ (mg/L) = 0.31$$

Where:

Concentration =	*Concentration of free chlorine residual that is required to achieve primary disinfection.*
CT =	*Chemical Disinfection CT (value taken from Table 7 of the "Procedure for Disinfection of Drinking Water in Ontario" Log Inactivation 2, Temperature 0.5 ℃, and pH 6 to 9)*
Time =	*Total T_{10} Contact Time (value taken from the Engineer's Report prepared by Kostuch Engineering Ltd, 2001 as based on assumed baffling conditions)*

The manufacture's instructions do not provide a recommended calibration schedule, therefore Schedule 6-5 Section 10 of O.Reg 170 applies, and the analyzer is required to be operated at an accuracy that is within the specified margins of error. The margins of error for a free chlorine analyzer is 0.05 mg/L if the concentrations measured are less than or equal to 1.0 mg/L, and proportionally higher if the concentrations usually measured are greater than 1.0 mg/L. The operating range for the Depolox 3 analyzer is +/- 5% (ie: +/- 0.05 mg/L at 1.0 mg/L). The operating authority's equipment work orders indicate that the analyzer is calibrated monthly.

The operating authority indicated that the analyzer is compared with the results from a Hach pocket colorimeter during each site visit. Documentation was provided that showed that pocket colorimeter was calibrated by the manufacturer in May 2003.

Turbidity Monitoring

A Hach model 1720D turbidimeter is installed on the treated water discharge line and provides a continuous measure of turbidity. The quality control band for this specific model of turbidimeter is ± 2% (ie: ± 0.02 at 1 NTU). The high alarm setting on the turbidimeter is 0.99 NTU.

Schedule 6-5 Section 8 of O.Reg 170 requires that continuous monitoring equipment is calibrated in accordance with the manufactures instructions. A review of the 1720D Operations Manual indicated that the manufacturer of this instrument recommends that it is recalibrated using a formazin primary standard after any significant maintenance or repair and at least once

every four months of normal operation. A review of the calibration work orders revealed that the turbidimeter was last serviced and calibrated with a formazin standard on July 17, 2003 by Jean Veilleux.

O. Reg. 170/03 does not require the monitoring of turbidity of treated water originating from a groundwater source, therefore the operation and reporting requirements for the subject turbidimeter do not apply.

3.1.3 Process Wastewater

The operating authority indicated that the floor drains located at the treatment facility discharge directly into a soak away pit located adjacent to the facility.

3.1.4 Distribution System

The Operating Authority stated that there were no active leak detection programs undertaken in the distribution system.

Maintenance Programs
The operating authority stated that there is no program to proactively rebuild/replace any portion of the distribution system. Components of the distribution system are repaired or replaced as required. The operating authority also indicated that there have been no watermain breaks since the last inspection. If a watermain break were to occur the operating authority indicated that operational duties would be performed by certified operators as required by O.Reg. 435/93 Section 19, and that the repairs would be documented in the logbook.

It was indicated by the operating authority that disinfection of repaired distribution system components would be undertaken in accordance with the AWWA (American Water Works Association) Standards for Disinfecting Watermains (AWWA C652-92) and Storage Facilities (AWWA C653-97). Written disinfection procedures are provided in the operations manual located at the water treatment plant.

Fire hydrants connected to the distribution system are inspected and exercised on a routine basis in accordance with AWWA standards. Hydrants are inspected during spring and fall flushing activities. The most recent fall and spring flushing events took place on October 8 to 10, 2002 and May 7 to 9, 2003. The operating authority indicated that the hydrants are pumped to ensure that there is no backflow of contaminants into the distribution system. Residents are advised prior to the commencing of flushing activities.

All service connections in the Village of Moose Creek are equipped with meters that are read by the Township on a quarterly basis.

Distribution system plans exist, and pressure problems have not been encountered in the distribution system.

Cross Connection and Backflow Prevention

By-law No. 41/1994 provides rules and regulations for the maintenance and operation of the Moose Creek Well Supply. Section 5(r) of the By-law states that "no person shall allow a foreign substance to enter the water system", and requires "backflow prevention devices to be installed in buildings that contain high health hazards". The By-law empowers the Municipality to shut off the supply of water if a backflow prevention device is not properly maintained.

Storage Structure Assessment

The elevated storage tank was commissioned in 1995 and has not yet been inspected.

The operating authority stated that they are not aware of any pesticides being applied or stored around, over or in the immediate vicinity of the water source, treatment or storage facilities.

The operating authority confirmed that pesticides are not applied or stored around, over or in the immediate vicinity of the elevated storage tank, nor are private applicators allowed to use hydrants for the mixing of pesticides.

3.2 WATER SYSTEM MANAGEMENT PRACTICES

3.2.1 Operational Manual

The operations manual produced by the operating authority, last revised January 30, 2003, is located in the treatment plant. The manual contains the following: process descriptions; sampling schedule and sampling procedures; identification, notification and corrective actions for adverse conditions, and procedures for disinfection and repair of watermains. The operations manual produced by the engineering design firm, included process diagrams and plans as required by O.Reg 435/93 Section 16. Engineering blueprints were also readily available at the treatment plant.

3.2.2 Logbooks

Taking the form of a bound notebook, the operations log is located at the water treatment plant. A review of the logbook indicated that it provided an excellent summary of operating conditions at the plant. The logbook review indicated that the operating authority began daily measurement of disinfection residuals in the distribution system on June 1, 2003.

The logbook review also revealed that the operating authority generally performs operational checks at the treatment works several times a week and performs site visits whenever system alarms are triggered. Entries in the logbook are made chronologically, and the operators are providing the dates and times of the site visits and recording information concerning the

operation of the facility and any departures from normal operating conditions. At least two years of logbook entries are available at the site.

3.2.3 Contingency and Emergency Planning

The Moose Creek Well Supply is equipped with security and alarm system capable of remote notification of the Operator in Charge in the event of an alarm condition. If an alarm is triggered then the Operator in Charge will receive notification via the on-call pager and/or the operator's cell phone. If the Operator in Charge does not respond to the on-call pager within a specified period of time then backup operators will be notified until one is contacted.

Alarms at the pumphouse include: well pump failure; well low level; well low flow; highlift pump failure; and low level in the clearwell. Additional alarms at the elevated tower include power failure and low tower level. Low building temperature alarms are also installed at both locations.

As required by Section 5 of Schedule 6-5, the chlorine analyzers are equipped with an alarm that is triggered if the equipment malfunctions, looses power, or detects a concentration of free chlorine that is above of below the minimum and maximum alarm settings. In addition, a low free chlorine alarm will trigger the high lift pumps to shut down.

An Environmental Contingency Plan has been developed for the facility. The Plan includes thirty-two separate contingencies such as: disinfection system failure, contaminated raw water, power failure, confined space rescue, water main break, pump failure, and spills. Also included in the Contingency Plan is a procedure for responding to an adverse water quality incident, which includes written procedures for the notification of the Medical Officer of health and the MOE as required by Condition 3.7 of the amended CofA. The Environmental Contingency Plan is kept at the water treatment plant.

Although the system is not equipped with a standby power source, the system is equipped with an elevated storage tank to ensure that positive pressure is maintained in the distribution system should a power outage occur. For extended power outages, the operating authority has a mobile generator unit that can be mobilized to the site as required.

The operating authority has developed a contingency plan for the position of Operator in Overall Responsibility to ensure that overall operation of the facility is placed with an operator who holds a license that is applicable to the facility.

3.2.4 Security

The inspection revealed that security alarms are installed at both the pump house and at the elevated tower that will trigger an operator response. Both the pumphouse and the elevated tower appeared to be secure, with a locked security fence installed around the elevated tower.

Operators access the water tower by unlocking a security door and by deactivation of the alarm system with a numeric touch pad.

3.2.5 Communication with Consumers

The operator manages and responds to customer complaints using the OPEX Incident Reporting System; a database that OCWA uses to record and report a wide range of incidents including community complaints. Over the course of the inspection period, OCWA recorded two complaints. One the complaints, regarding discoloured water, was attributed to the use of a hydrant by the fire department. The second complaint, regarding low pressure, was attributed to the routine flushing of the distribution system. The operating authority confirmed that the following documents are available to the public during normal business hours at OCWA's Chesterville Office:

- all of the lab reports for water samples taken under O. Reg. 170/03;
- all of the Approvals, Orders, and Directions related to system;
- Annual Compliance Report; and
- The Ontario Drinking Water Standards (O. Reg. 169/03).

3.2.6 Operator Certification and Training

The operator in overall responsibility for the Moose Creek Drinking Water System is Mr. Blair Henderson. Mr. Henderson possesses a Class 2 Water Treatment License and a Class 3 Water Distribution License. The Moose Creek Drinking Water System is classified as a Class 1 Water Treatment System and a Class 1 Distribution System. If Mr. Henderson is unable to act as the operator in overall responsiblity for the facility, his responsibilities are delegated to Dave Markell who is adequately licensed to undertake those responsibilities.

The following table provides a list of the operators at the Moose Creek Drinking Water System and their levels of certification for both water treatment and water distribution systems:

Operator Name	Treatment System Classification	Distribution System Classification
Dave Markell	Class 2	Class 3
William Michels	Class 2	Class 2
Jean Veilleux	Class 3	Class 3
Andrew Barrie	Class 2	Class 2
Tony Kelly	Class 3	Class 3
Mark Lauzon	Operator in Training	Operator in Training
Brian Huskinson	Class 2	Class 2
Lisa Bortolussi	Operator in Training	Operator in Training
James Roach	Operator in Training	Operator in Training

As required by O. Reg. 435/93 the operator licenses were conspicuously displayed at OCWA's office in Chesterville, and the plant classification certificate was conspicuously displayed at the Water Treatment Plant.

All the operations staff with the exception of Mark Lauzon, Lisa Bortolussi and James Roach possesses the adequate level of certification for this facility. Certification detail for each of the operator is also provided in **Appendix D**.

As of the end of 2002, all the operators had received a minimum of 40 hours of annual training as required by O. Reg. 435/93, Section 17, and the operating authority indicated that all of its operating staff are aware of the established emergency contingency procedures.

SECTION 4 WATER QUALITY MONITORING & ASSESSMENT

The water quality monitoring requirements for the Moose Creek Water Supply as required by O. Reg. 170/03 is as follows:

Raw Water

- one sample per week from each well for microbiological analyses; and
- one sample per month tested immediately for turbidity.

Treated Water

- one sample per week for microbiological analyses;
- one sample per quarter for nitrates/nitrites;
- one sample every three years for inorganics (Schedule 23);
- one sample every three years for organics (Schedule 24); and
- one sample every five years for fluoride.

Distribution System

- eight samples per month (at least one per week) for microbiological analyses, including 25% of each batch for a heterotrophic plate count;
- one sample for trihalomethanes per quarter, collected at a point reflecting the maximum residence time in the system; and
- one sample for lead per annum, collected at a point reflecting the maximum residence time in the system.

It is important to note that under Schedule 13-5 of Regulation 170/03, where a test result for lead or an organic parameter (Schedule 24) exceeds half of the standard prescribed in Schedule 2 of the Ontario Drinking Water Quality Standards (O. Reg. 169/03), then the frequency of sampling and testing for that parameter must be increased to once sample every three months.

From July 24, 2002 to June 17, 2003 the operator routinely collected weekly raw water samples from Well 2 and 3. Well 1 was taken offline in June 2002.

The raw water samples were collected from sample ports located on the raw water supply lines upstream of the raw water flow meters, the flow control check valves and the chlorine injection point. The raw water samples were submitted to Caduceon Environmental Laboratories of Ottawa, Ontario for microbiological analyses. All samples were analyzed for *E.Coli* and Total Coliforms.

From July 24, 2002 to June 17, 2003 the operator collected weekly treated water samples at the treatment plant/pumping station, and submitted the samples to Caduceon Environmental

Laboratories of Ottawa, Ontario for microbiological analysis. All samples were analyzed for *E.Coli*, Total Coliforms and a heterotrophic plate count.

Treated water samples were submitted for analysis of nitrates/nitrites, volatile organics, and pesticides and PCBs on August 8 and October 21, 2002 and January 20 and April 24, 2003. The samples were analyzed for all the parameters listed in O. Reg. 170/03 Schedule 24 with the exception of Benzo(a)pyrene. Benzo(a)pyrene was not included as an organic parameter in the legislation that was applicable (Regulation 459/00) at the time of the sampling. The operator must submit its first test of Benzo(a)pyrene prior to June 1, 2004 as required by Schedule 13-10(b) of Regulation 170/03.

The required sample for inorganics was submitted on January 21, 2003. The samples were analyzed for all the parameters listed in Regulation 170/03 Schedule 23 with the exception of Antimony. Antimony was not included as an inorganic parameter in the legislation that was applicable (Regulation 459/00) at the time of the sampling. The operator must submit its first test of Antimony prior to June 1, 2004 as required by Schedule 13-10 (b) of Regulation 170/03.

A treated water sample was submitted for analysis of fluoride and sodium on January 20, 2003.

The operator collected a minimum of eight samples per month from the distribution system and submitted them to Caduceon Environmental Laboratories of Ottawa, Ontario for microbiological analyses. All samples were analyzed for *E.Coli*, Total Coliforms. The required percentage of distribution samples were also analyzed for a Heterotrophic Plate Count.

The required quarterly distribution samples for Trihalomethanes, were collected on August 8 and October 21, 2002 and January 20 and April 24, 2003. The required annual distribution sample for lead was collected on January 20, 2003.

A review of the sampling schedule and laboratory analytical reports indicated that from July 24, 2002 (date of previous MOE inspection) until June 17, 2003, the Moose Creek Drinking Water System operated in compliance with the water quality sampling requirements of Condition 2.1of the amended CofA. All water samples submitted for analyses during the aforementioned period were analyzed by a laboratory accredited for the specific parameter that was analyzed.

A review of the water quality sampling locations indicates that the operating authority is conducting chlorine residual measurements at strategic points in the distribution system.

4.1 WATER QUALITY MONITORING

The operating authority collects weekly treated water samples at the treatment plant, and submits them to Caduceon Environmental Laboratories of Ottawa, Ontario for microbiological analysis. Samples are analyzed for *E.Coli*, Total Coliforms and heterotrophic plate count.

The Operating Authority is aware of the requirement to conduct monthly turbidity tests on the raw water, and the results of these tests are recorded in the logbook.

A review of the operations log indicated that the operating authority began daily monitoring of the distribution system chlorine residual on June 1, 2003. A review of the analytical results indicated that chlorine residual are being collected at the same time as microbiological samples.

4.2 WATER QUALITY ASSESSMENT

4.2.1 Bacteriological

The Engineer's Report (Kostuch Engineering Limited, 2001) included an evaluation of the source water quality. The Engineer concluded that raw water sampling has revealed a general absence of bacteria.

A review of the laboratory analytical reports indicates that the microbiological quality of the raw water from Well 2 and Well 3 was free of *E.Coli* over the course of the inspection period, and only occasionally were Total Coliforms detected. The Inspector collected raw water samples from both Well 2 and Well 3, laboratory analyses indicated that Total Coliforms and *E.Coli* were absent from both samples.

The microbiological results indicated that *E.Coli* was not detected in any of the treated water samples collected since the last MOE Compliance Inspection, and there was only one incident where Total Coliforms were detected in a treated water sample. The treated water sample collected on October 7, 2002 had a concentration of 2 Total Coliforms (cfu/100ML). The free chlorine residual at the time of sampling was 1.86 mg/L. Raw water samples were collected the same day from Well 2 and Well 3 and were also collected from two locations in the distribution system. The results from these samples indicated that Total Coliforms were not present in either the raw water or in the distribution system. The treated water sample collected by the Inspector during the site visit indicated that Total Coliforms and *E.Coli* were absent from both samples.

The Inspector also collected distribution system audit samples from the following locations: the water tower, the sewage pumping station, and an outdoor tap at a private residence located at 2049 North Valley Road. At all three locations the Inspector collected samples for the onsite analyses of total and free chlorine residual. The Inspector used Hach Pocket Colorimeter to perform the analyses. Water samples were collected in laboratory prepared sample bottles

containing the preservative sodium thiosulphate, and were subsequently submitted to the MOE Laboratory in Toronto for analyses of the following parameters: Total Coliforms, *E. Coli*, and a heterotrophic plate count.

The results of the onsite analyses of free chlorine residual in the Moose Creek distribution system indicated that the free chlorine residuals were well above the minimum required concentration of 0.05 mg/L required by O. Reg. 170/03 Schedule 1-2.

A review of the results from the free chlorine residual monitoring of the treated water discharged from the treatment plant indicated that, since the last MOE compliance inspection, the minimum recorded value was 0.20 due to a chlorine pump failure on October 23, 2002, which triggered the highlift pump lockout.

The results from the on-site analyses of chlorine residual are provided in the following table.

Free Chlorine Results – Moose Creek Distribution System – June 17, 2003			
	Water Tower	Sewage Pumping Station	2049 North Valley Road
Free Chlorine (mg/L)	**0.82**	**0.55**	**0.60**
Total Chlorine (mg/L)	**0.85**	**0.65**	**0.85**

4.2.2 Physical/Chemical

The Engineer's Report (Kostuch Engineering Limited, 2001) included an evaluation of the source water quality. The Engineer concluded that Volatile Organic Compounds (VOCs), Pesticides and PCBs, disinfection by-products, and radiological parameters were not of concern based on a review of the laboratory analytical results.

Inorganics were also found not to be of concern with the exception of iron and manganese. The average iron concentrations in Wells 1, 2 and 3 were 0.08 mg/L, 0.32 mg/L and 0.25 mg/L respectively (quarterly sampling for 2000). The aesthetic objective for iron is 0.3 mg/L as specified in the "Technical Support Document for the Ontario Drinking Water Standards, Objectives, Guideline" (MOE, 2003). The Engineer stated that treated water results from 1998 and 1999 indicated that iron concentrations were in the range of 0.2 mg/L and 0.3 mg/L with higher levels periodically recorded. The Engineer concluded that iron problems have been reported in the water supply and recommended that a study should be undertaken to develop possible solutions.

The Engineer noted that manganese levels in the individual wells have been at or just above the aesthetic objective of 0.05 mg/L as specified in the "Technical Support Document for the Ontario Drinking Water Standards, Objectives, Guideline" (MOE, 2003) but have met the required standard when blended with water from the other wells.

The treated water samples collected by the inspector confirmed that iron and manganese concentration are elevated. The lab results indicated that iron was detected at a concentration of 1.06 mg/L and manganese was detected at a concentration of 0.07mg/L.

In 2003 the operating authority examined possible methods of iron treatment. The treatment methods examined were iron oxidation via aeration, and iron sequestering with sodium silicate. The results of experiments with oxidation via aeration indicated that this method was not suitable because it resulted in treated water with high turbidity. Experiments with iron sequestering indicated that sodium silicate was successful in holding the iron for a short time, however it was concluded that the retention time of treated water in the distribution system is greater then the effective time of iron sequestering. Therefore, iron sequestering and iron oxidation are not likely to be suitable methods for iron treatment for the Moose Creek drinking water system.

Treated water samples were collected by the operating authority on August 8, 2002; October 21, 2002; January 20, 2003; and April 24, 2003 and submitted for the analysis of organic parameters. The results indicated that no volatile organic compounds (VOCs) were detected with the exception of THM compounds. Pesticides and PCBs were also not detected.

A sample of treated water was collected by the Inspector during the site inspection and submitted to the MOE laboratory in Toronto organic and inorganic analyses. A review of the analytical results indicated that the Schedule 23 inorganic parameters were well below the Ontario Drinking Water Quality Standards.

A review of the analytical results from the sample collected by the MOE, indicated that the Schedule 24 organic parameters were well below the Ontario Drinking Water Quality Standards. Please note that the organic analysis of the MOE sample did not include the analysis of the following Schedule 24 parameters: benzo(a)pyrene, and pesticides compounds.

The operating authority indicated that the treated water turbidity is gradually increasing.

As required by O.Reg. 170/03 Schedule 13-3 and 13-6, the operating authority collects its lead and THM samples at locations in the distribution system that are likely to have elevated levels. A review of the analytical results for the sample collected by the operating authority on January 20, 2003 indicated that all the Schedule 23 inorganic parameters were well below the Ontario Drinking Water Quality Standards, with the exception of Antimony which was not analyzed. A review of the analytical results indicated that Pesticides and PCBs were <u>not</u> detected.

4.2.3 Reporting, Notification & Corrective Action

One adverse water quality incident was identified at the Moose Creek Well Supply over the course of the inspection period. A treated water sample collected on October 7, 2002 indicated the presence of Total Coliforms (2 cfu/100mL) The operating authority collected resamples that indicated that the adverse water quality condition was no longer present. No further actions were

taken, and a records review shows that the operating authority provided the required notifications within the required time frames.

On March 3, 2003 Dave Markell signed and submitted the required "Notification of Laboratory Services Provided to Waterworks" form to the MOE's Laboratory Services Branch. A review of the Standards Council of Canada (SCC) scopes of accreditation for the laboratories indicated on the "Notification of Laboratory Services Provided to Waterworks" form indicated that the subject laboratories are accredited to conduct the test requested by the operating authority.

Laboratory analytical reports are kept for at least five years. The operating authority indicated that there have been no historical fluctuations in water quality.

Condition 4 of the amended CofA requires the owner to prepare an annual compliance report by March 31 of the following year. A 2002 Compliance Report was prepared by the operating authority on behalf of the owner, and was submitted to the owner on March 26, 2003. On April 8, 2003 the 2002 Annual Compliance Report was received and reviewed by the Township of North Stormont. As required by Condition 4 of the amended CofA the compliance report included the following:

- a summary of the Conditions of the amended CofA that were complied with;
- a detailed summary of those Conditions of the amended CofA that were not complied with;
- a discussion of the quantity of water supplied compared to the design values for the population serviced;
- analytical results of all such samples are included in reports required by the CofA;
- a summary listing treatment chemicals used; and
- a discussion regarding flow rate exceedances.

The laboratory analytical reports for the regulated samples collected from the Drinking Water System are kept on file at OCWA's Chesterville offices from a minimum of five years. The Annual Compliance Reports and Engineers Report are also kept at OCWA's Chesterville Office along with a copy of the Drinking Water Systems Regulation. These reports are available to the public without charge during normal business hours.

The required Engineer's Report was prepared by Kostuch Engineering Limited of Ottawa, ON. on March 27, 2001. Condition 6.1 of the amended CofA requires that the Second Engineer's Report is submitted not later than September 30, 2004. Regarding the Second Engineer's Reports, an open memorandum to waterworks owners from the MOE's Assistant Deputy Minister Doug Barns was issued on February 19, 2003. The memorandum stated that the due dates for the Second Engineer's Reports as specified in CofA's are no longer applicable and that these reports are now due within five years of the original Engineer's Report.

SECTION 5 ASSESSMENT OF PREVIOUS INSPECTION ISSUES

5.1 NON COMPLIANCE WITH REGULATORY REQUIREMENTS

The previous MOE inspection did not reveal violations that would likely cause an adverse impact on human health or environmental impairment. The inspection did reveal the following regulatory issues:

1. Weekly raw water samples were not being collected from each well as required by O. Reg. 459/00.

   A review of the laboratory analytical reports indicated that the operating authority now collects weekly raw water samples from both Well 2 and Well 3; Well 1 is currently offline.

2. The analytical results for the samples collected during the previous MOE Compliance Inspection indicated that the treated water had a concentration of 0.776 mg/L of iron and 0.06 mg/L of manganese. The aesthetic objectives for iron and manganese are 0.30 mg/L and 0.05 mg/L respectively.

   To address the iron issue the Municipality approved additional flushing of the water mains in Moose Creek to 3 times per year (from 2 times per year) to prevent the growth of iron bacteria in the distribution system. The operating authority investigated aeration and iron sequestering as methods for treating the water for iron. Both methods were found not to be suitable for iron treatment for the Moose Creek drinking water system.

3. The previous inspection report required the owner to conduct well capacity testing by February 17, 2003 and if warranted by the findings apply for an amendment to the CofA and PTTW.

   On July 11, 2003 Water and Earth Science Associates (WESA) of Ottawa, ON conducted a 72-hour pump test of Moose Creek Well 2 and Well 3. Well 2 was pumped at an average rate of 3.25 L/sec and Well 3 at a rate of 3.3 L/sec. WESA also provided the Township with an estimate to drill a replacement for Well 1. The options provided to the Township by their consultant include: i) applying to the Ministry to have the PTTW and the CofA amended to reflect a long term well yield of 457 m3/day; ii) drilling a replacement for Well 1. The Township confirmed that they are in the process of discussing which of the two option they will adopt.

4. The previous inspection revealed that the Operator in Charge was not clearly identified in the Operations Logbook as required by O. Reg. 435/93 Section 20 (4).

   A review of the Operations Logbook revealed that the operators are now clearly identified in the Logbook.

5. The previous inspection report indicated that Operations and Maintenance Manuals were required to be updated to be in compliance with O. Reg. 435/93 Section 16 (2).

   The operating authority stated that the Operations Manual and Standard Operating Procedures were updated in August 2002 and again in January 2003.

5.2 BEST MANAGEMENT PRACTICES RECOMMENDATIONS

None were provided.

SECTION 6 SUMMARY OF NON COMPLIANCE ISSUES & ACTIONS REQUIRED

1. Condition 5.1 of the CofA required the owner to implement a Well Head Protection Plan by July 1, 2003. The purpose of the Well Head Protection Plan is to monitor aquifer conditions and to identify and protect the area of recharge of the wells. Since a Well Head Protection Plan has not yet been prepared for the Moose Creek Well Supply the owner is not in compliance with Condition 5.1 of the CofA, and therefore in contravention of Section 52 (7) of the Ontario Water Resources Act. The owner must submit a workplan that describes in detail what steps will be taken and the date those steps will taken to ensure that the required Well Head Protection Plan is completed.	
Order Number: 4758-5V9R4X	Compliance Date: February 13, 2004
2. Condition 5.1 of the CofA required the owner to install a stand-by hypochlorite solution storage tank with automatic switch-over when the connected tank is empty (or alternative approved by the Ministry) by July 1, 2003. The required stand-by solution tank was not installed by the required deadline, but was subsequently installed in August 2003.	
Order Number: none	Compliance Date: not applicable

A copy of the Provincial Officer's Order, along with a Provincial Officer's Report, can be found in **Appendix H**.

SECTION 7 SUMMARY OF BEST PRACTICE RECOMMENDATIONS

Legislated requirements have been identified in the previous section. In the interest of continuous improvement, we provide the following suggestions:

1. The owner should conduct an inspection of the interior of the elevated storage tank. The interior of the tank has not been inspected since it was brought into service. Routine tank inspections are crucial in order to determine the condition of the interior coating and the extent of corrosion and debris buildup within the tank.

2. The inspection revealed that attempts to rehabilitate Well 1 were unsuccessful. If the owner cannot rehabilitate Well 1, then the existing well then the owner must properly abandoned Well 1 in accordance with O .Reg. 903 Section 21.

3. It is recommended that the owner should investigate the benefits of installing isokinetic monitoring stations for routine distribution system sampling.

4. The inspection revealed that iron and manganese concentrations continue to exceed the aesthetic objectives. The owner should investigate additional treatment technologies for iron and manganese removal.

Please provide a response by February 29, 2004 detailing how the owner plans to address these Best Practice Recommendations.

SIGNATURES

Inspected By: Jan Franssen	*Signature: (Inspector):*
Reviewed & Approved By: James Mahoney	*Signature (Supervisor):*
Review & Approval Date: (yyyy/mm/dd) *2004/01/26*	

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.

cc: Mr. Rhéal Charbonneau, Clerk-Treasurer – Township of North Stormont
Mr. Blair Henderson, Water System Manager – OCWA Chesterville Hub
Dr. Robert Bourdeau, Medical Officer of Health – Eastern Ontario Health Unit
Mr. Mirek Tybinkowski, Specialist, Water and Wastewater – MOE EAAB
Mr. Richard Pilon,Director of Planning & Engineering- South Nation Conservation Authority
District Office File – SI ST RX C6 241

APPENDIX A

CERTIFICATE OF APPROVAL

(AS ATTACHED)

Ontario

Ministry of the Environment | Ministère de l'Environnement

AMENDED CERTIFICATE OF APPROVAL
MUNICIPAL AND PRIVATE WATER WORKS
NUMBER [redacted]

The Corporation of the Township of North Stormont
PO Box 99
Berwick, Ontario
K0C 1G0

Site Location: Moose Creek Water System
16950 McNeil Road
North Stormont Township, United Counties of Stormont, Dundas & Glengarry

You have applied in accordance with Section 52 of the Ontario Water Resources Act for approval of:

a groundwater supply system serving the community of Moose Creek, located on Parts 1, 2, 3 and 4 of RP52R-4724 in the Township of North Stormont, United Counties of Stormont, Dundas and Glengarry consisting of three (3) wells, rated at a maximum daily flow of 896 m^3/d, consisting of the following:

PROPOSED WATER WORKS - Upgrades
(as per Application for Approval, dated August 07, 2002)

Well No. 1, 2 & 3

- Implementing a wellhead protection program;
- Upgrading of well vents to comply with O. Reg. 903;
- Conducting well capacity testing;

Pumphouse

- Addition of one (1) 100 L capacity hypochlorite solution storage tank with automatic change-over switch, and a solenoid valve on pipe joining duty and standby solution tanks ;
- Provision of secondary containment basin for solution tanks;
- Installation of continuous monitoring turbidity analyzer for treated water;
- Installation of flow data recorder and associated software upgrades;

EXISTING WATER WORKS
(as per consolidated CofA No. 1254-542QKE, dated February 01, 2002)

Well No. 1

- a 150 mm diameter 30.5 m deep drilled groundwater production well with sealed well head (NAD 27: UTM Zone 18, 502730.00 m E. and 5010535.00 m N.), equipped with a submersible well pump rated at 3.4 L/s at 35 m total dynamic head (TDH), discharging to a pump header in the adjacent pumphouse;

Well No. 2

- a 150 mm diameter 30.8 m deep drilled groundwater production well with sealed well head (NAD 27: UTM Zone 18, 502823.00 m E. and 5010430.00 m N., equipped with a submersible well pump rated at 3.5 L/s at 40 m TDH, discharging to a pump header in the adjacent pumphouse;

Well No. 3

- a 150 mm diameter 32.0 m deep drilled groundwater production well with sealed well head (NAD 27: UTM Zone 18, 502891.00 m E. and 5010465.00 m N.), equipped with a submersible well pump rated at 3.5 L/s at 42 m TDH, discharging to a pump header in the adjacent pumphouse;

Pumphouse

- a 9.4 m by 9.7 m masonry pumphouse (NAD 27: UTM Zone 18, 502843.00m E. and 5010612.00m N.), that houses treatment, pumps and control facilities including:

    - a sodium hypochlorite disinfection system, consisting of one (1) 100 L capacity sodium hypochlorite solution storage tank, three (3) chemical metering pumps (two duty, one standby) capable of delivering a minimum of 2.8 L/hr into the well pump header, inside the pumphouse upstream of the mixing chamber, and, to provide and maintain a free chlorine residual of at least 0.2 mg/L throughout the distribution system at the approved rate of 622.2 L/min., and

    - two (2) centrifugal high lift pumps (one duty, one standby), each rated at 10.4 L/s at 58 m TDH;

Mixing Chamber and Clearwells

- an "L" shaped baffled chlorine contact chamber 5.6 m by 2.0 m and 5.35 m by 1.0 m and a minimum depth (low water level) of 0.5 m;

- two (2) rectangular clearwells, one 6.6 m by 3 m (Clearwell 1) and the other 5.2 m x 3 m (Clearwell 2) and a minimum depth (low water level) of 0.5 m;

- a 200 mm diameter feeder watermain with no service connections over its entire length of approximately 800 m;

- together with all associated piping, electrical and mechanical equipment, ventilation, monitoring, control, metering, alarm system and instrumentation;

all in accordance with the Engineer's Report entitled, "Village of Moose Creek Water System Engineers' Report for Water Works", prepared by Kostuch Engineering Limited and dated March, 2001 (1st revision May 30, 2001 and 2nd revision October 5, 2001), and any additional information and documentation that may have been provided in support of the Report.

For the purpose of this Certificate of Approval and the terms and conditions specified below, the following definitions apply:

(1) "certificate" means this entire certificate of approval document, issued in accordance with Section 52 of the *Ontario Water Resources Act*, and includes the schedules to it, if any, and any applications for approval for which certificates of approval have previously been issued, and supporting information to the applications;

(2) "Director" means any Ministry employee appointed as Director pursuant to Section 5 of the *Ontario Water Resources Act*;

(3) "Ministry" means the Ontario Ministry of the Environment;

(4) "Owner" means the Corporation of the Township of North Stormont, and includes its successors and assignees;

(5) "works" means the water works described in this certificate and in the supporting documentation included in the Engineer's Report for Water Works, to the extent approved by this certificate;

(6) "water treatment plant" means the entire water treatment system, including the groundwater wells, and any water storage facilities associated with the water treatment plant;

(7) "water treatment or distribution system" means a system for collecting, producing, treating, storing, supplying or distributing water that includes one or more water works;

(8) "quarter" means the three-month period beginning on January 1, April 1, July 1 and October 1 in each year;

(9) "maximum flow rate" means the maximum rate of water flow for which the plant or process unit was designed;

(10) "contact time" means the detention time T_{10} which is the time for 10% of the water (tracer) to pass through the process unit, storage reservoir or pipe;

(11) "operating authority" means the Ontario Clean Water Agency, hired by the Owner to operate the works, and includes any subsequent operating authority hired by the Owner in the future to operate the works.

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

TERMS AND CONDITIONS

1. PERFORMANCE

1.1 The Owner shall ensure that, subject to Conditions 3.1 through 3.14, the water treatment or distribution system is operated and maintained in such a manner, and with such facilities that water supplied to the consumers serviced by the system satisfies the requirements of the "Ontario Drinking Water Standards", dated January 2001, as amended from time to time.

1.2 The groundwater wells have been approved to supply water at the following maximum flow rates:

Well No. 1	207.4 L/min
Well No. 2	207.4 L/min
Well No. 3	207.4 L/min

(a) The Owner shall have a valid Permit To Take Water;

(b) The Owner shall submit an application for an amendment to this certificate when the maximum flow rates of the approved wells are exceeding the flow rates specified in the valid Permit To Take Water.

1.3 The Owner shall ensure that, subject to Conditions 3.1 through 3.14, the water treatment plant is operated to treat water at a rate not exceeding the maximum flow rate of 896 m^3/d.

1.4 The Owner shall ensure that the flows into the water treatment plant do not exceed the maximum flow rates set out in Condition 1.3, except:

(a) where necessary to meet an unusual water demand for fighting a large fire, **or**

(b) where necessary for the purpose of maintenance of the works and essential to its efficient operation,

and provided that the treated water quality satisfies the requirements set out in the Ministry Procedure B13-3 entitled "Chlorination of Potable Water Supplies in Ontario", dated January 2001, as amended from time to time.

1.5 The Owner shall ensure that the disinfection facilities in the water treatment plant are operated and maintained in such a manner and with such facilities as is necessary to be in accordance with the Ministry Procedure B13-3 entitled "Chlorination of Potable Water Supplies in Ontario", dated January 2001, as amended from time to time.

2. MONITORING AND RECORDING

2.1 The Owner shall ensure that the following monitoring program is established and carried out:

(a) Install, maintain and operate a sufficient number of flow measuring devices to measure:

(i) the flow rate and daily quantity of water being taken from each well and conveyed to and through the water treatment plant, and

(ii) the flow rate of treated water supplied to the distribution system.

(b) Calibrate the flow measuring devices required by clause (a) above at regular intervals not exceeding one year to ensure their accuracy to within plus or minus 5% of actual rate of flow within the range of 10% to 100% of the full scale reading of the measuring devices, or as specified by the instrument manufacturer's instructions.

(c) Record the results of the flow measurements made in accordance with clause (a) above as total daily flow and as daily peak flows.

(d) Record the date, time, duration and cause of each occasion that the flow rate exceeds that specified in Condition 1.3.

(e) Samples of raw water and treated water shall be collected and analyzed for parameters at the locations and frequencies in accordance with Regulation 459/00, Drinking Water Protection, Schedule 2, Sampling and Analysis Requirements, as amended from time to time.

NOTE: Works which do continuous monitoring of chlorine residual or turbidity may do so instead of taking and analyzing grab samples as may be required by O. Reg. 459/00.

NOTE: Samples of raw water do not need to be analyzed for heterotrophic plate count or background colonies.

(f) The sampling required by clause (e) above shall be performed in a manner that ensures samples have a composition which is representative of the water stream from which they are taken, and also in accordance with the instructions provided by the accredited laboratory engaged to perform the analyses.

2.2 The Owner shall retain for a minimum of five (5) years from the date of their creation, all records and information related to or resulting from the monitoring, sampling and analyzing activities required by this certificate.

3. OPERATIONS AND MAINTENANCE

3.1 The Owner, when making decisions within its authority, shall consider the impact of these decisions on the drinking water supply source for water works approved by this Certificate.

3.2 The Owner shall ensure that, subsequent to repairs to the water supply or distribution system, or interruptions in the operation of the water supply resulting in negative pressure conditions in the distribution system, and prior to utilization of the affected parts of the works for the supply of potable water, the affected parts of the water supply or distribution system have been adequately disinfected in accordance with the Ministry Procedure B13-3 entitled "Chlorination of Potable Water Supplies in Ontario", dated January 2001, as amended from time to time.

3.3 The Owner shall ensure that there is an operator who holds a valid licence that is applicable to this type of water treatment plant and that is of the same class as or higher class than the class determined for the water treatment plant in accordance with O. Reg. 435/93, as amended from time to time, and who is responsible for the operation of the water treatment plant.

3.4 The Owner shall exercise due diligence in ensuring that, at all times, the works and the related equipment and appurtenances used to achieve compliance with this certificate are properly operated and maintained. Proper operation and maintenance shall include effective performance, adequate funding, adequate operator staffing and training, including training in all procedures and other requirements of this certificate and the Act and regulations, adequate laboratory facilities, process controls and alarms, and the use of process chemicals and other substances that come in contact with water being treated, that are suitable for the process, compatible with each other and appropriate for drinking water.

3.5 In addition to the requirements of Condition 3.4, the Owner shall ensure that all chemicals used in the treatment process and all materials contacting the water meet both the American Water Works Association (AWWA) quality criteria as set out in AWWA standards and the American National Standards Institute (ANSI) safety criteria as set out in ANSI standard NSF/60 or NSF/61. For all chemicals used in the water treatment process and all materials contacting the water being treated, the Owner shall have evidence of current chemical and material product registration by a testing institution accredited under the Standards Council of Canada Act or by the ANSI or documents showing the Ministry is satisfied that the information provided by the product manufacturer indicates the chemical or material product will meet the criteria of the ANSI standards.

3.6 The Owner shall immediately discontinue use of any chemical upon written notice by the Director.

3.7 The Owner shall establish written procedures for the notification of the Medical Officer of Health and the Ministry required by O. Reg. 459/00, and shall ensure that these procedures are followed.

3.8 The Owner shall ensure that contingency plans and procedures are established and adequate equipment and material are available for dealing with emergencies, upset conditions and equipment breakdowns in the works, and that such plans and procedures are implemented.

3.9 The Owner shall ensure that an operations manual that incorporates, at a minimum, the requirements of this certificate, and any adopted operation and maintenance recommendations of the Engineer's Report based on which this certificate has been issued, is prepared within twelve (12) months of issuance of this certificate of approval, and ensure that the operations manual is kept up to date. Upon request, the Owner shall make the manual available for inspection by the Ministry personnel.

3.10 The Owner shall ensure that based on the raw water source characterization and the treatment process, the operations manual includes monitoring and reporting of the necessary raw water and in-process parameters that are essential for control of the treatment process and for the assessment of the performance of the works. The manual shall also contain procedures that are required for adequate operation and maintenance of the monitoring equipment.

3.11 Within one (1) year of substantial completion of the construction of the new water works required by this Certificate, the Owner shall ensure that drawings accurately showing the new works as constructed (record drawings) are prepared and kept up-to-date, including timely incorporation of all modifications made to the works throughout its operational life.

3.12 The Owner shall ensure that a Process and Instrumentation Diagram (PID) for the entire water treatment plant is prepared and kept up-to-date, including timely incorporations of all modifications made to the works throughout its operational life.

3.13 The Owner shall keep a complete set of up-to-date record drawings and diagrams required to be prepared by Conditions 3.11 and 3.12, and all existing record drawings which are currently in retention throughout the operational life of the water works, and upon request, shall make them readily available for inspection by Ministry staff.

3.14 The Owner shall ensure that procedures are established and followed for receiving, responding to, and recording complaints about any aspects of the works, including recording the steps that were taken, if any, to determine the cause of complaint and the corrective measures taken to alleviate the cause and prevent its reoccurrence.

4. COMPLIANCE REPORT

4.1 (a) The Owner shall ensure that a written report detailing compliance with all terms and conditions of this approval is completed annually ("Compliance Report").

(b) The first Compliance Report shall cover a period commencing not later than the date of issue of this certificate to the end of the calendar year in which the certificate is issued and shall be completed and made available not later than March 31 of the following year. Each subsequent Compliance Report shall be completed and made available not later than March 31 following the end of the calendar year to which the Compliance Report applies.

(c) A Compliance Report shall include, at a minimum, the following information:

(i) Under a heading of 'Compliance with Terms and Conditions of the Certificate of Approval', a statement as to compliance with all of the terms and conditions of the certificate and a detailed description of the measures taken to ensure compliance with the certificate, including any supporting data or other information;

(ii) In the event of any non-compliance during the reporting period, and under a heading of 'Non-Compliance with Terms and Conditions of the Certificate of Approval', details of the non-compliance as well as details of how and when any non-compliance was corrected;

(iii) A summary and discussion of the quantity of water supplied during the reporting period compared to the rated capacity specified in this certificate of approval, including monthly average and maximum daily flows;

(iv) A summary of records made under Condition 2.1 related to flow rate exceedances, and a summary of analytical results of sampling required by the certificate, including raw water and in-process parameters as specified in the operations manual in accordance with Condition 3.10; and

(v) A summary listing treatment chemicals used, including average dosage rates with special reference to any abnormal usages.

(d) The Compliance Report shall be signed by a person designated by the Council of the municipality that owns the works.

(e) Within three months of completion of the Compliance Report, the Owner shall confirm by a resolution of council that the Compliance Report has been presented to council.

(f) The Owner shall ensure that copies of the Compliance Report are available for inspection by any member of the public during normal business hours without charge and at the same location as that required by s.11 of O.Reg. 459/00 for reports under that regulation. Each 4th quarter report required under section 12 of that regulation shall include information about when the Compliance Report is required to be completed, an outline of the requirements for its contents, and the location where the completed report can be inspected.

5. UPGRADING REQUIREMENTS

5.1 Subject to Condition 5.2 below, by **July 01, 2003**, the Owner shall implement the following physical improvements to the works, in keeping with recommendations of the Engineers' Report and related correspondence:

(a) All works necessary to ensure that a free chlorine residual of 0.2 mg/L after 15 minutes contact time determined as T_{10} at maximum flow and before the first consumer is maintained in all disinfected water entering the distribution system in accordance with requirements of the "Procedure B13-3 Chlorination of Potable Water Supplies in Ontario", including but not limited to:

(i) stand-by hypochlorite solution storage tank with automatic switch-over when connected tank is empty or alternative approved by the Ministry.

(b) All works and measures necessary to ensure the effective treatment and integrity of the works, including but not limited to:

(i) implementing a Wellhead Protection Program to monitor aquifer conditions and to identify and protect the area of recharge of the wells from the risk of man-made activities,

(ii) upgrading of all well vents to comply with Ontario Regulation 903 and

(iii) conducting well capacity testing for all three production wells and, if warranted by the findings, applying for an amendment to the Certificate of Approval and the Permit To Take Water to revise the rated well capacities.

5.2 The Owner shall not construct or allow the construction of any portion of the works necessary to comply with the requirements of Condition 5.1 above for which an approval under the *Ontario Water Resources Act* or the *Environmental Protection Act* is required unless a complete application for approval of such portion of the works, including detailed design drawings, specifications and a design brief containing detailed design calculations, has been submitted to and approved by the Director.

5.3 The Owner shall ensure that a complete application for approval under Section 52 of the *Ontario Water Resources Act*, and if necessary, under Section 9 of the *Environmental Protection Act*, is submitted to the Director for each item listed in Condition 5.1 above for which an approval is required at a date which will allow the Owner to obtain approval for the required physical upgrades to the works, and implement the upgrades on or before the compliance date stipulated in Condition 5.1 above.

6. SUBSEQUENT ENGINEERS' REPORTS

6.1 The Owner shall ensure that not later than **September 30, 2004** a Second Engineer's Report, prepared in accordance with the Ministry publication "Terms of Reference for Second and Subsequent Engineers' Reports for Water Works" current at the time of the preparation of the Report, is submitted to the Director.

6.2 The Owner shall ensure that each subsequent Engineer's Report, required by O. Reg. 459/00 to be submitted to the Director not later than the third anniversary of the submission of the previous report, is prepared in accordance with the Ministry publication "Terms of Reference for Second and Subsequent Engineers' Reports for Water Works" current at the time of the preparation of the Report.

7. REVOCATION OF EXISTING APPROVALS

7.1 The descriptions of the approved works and conditions of approval in this certificate apply in place of all existing descriptions and conditions in the certificates of approval under the *Ontario Water Resources Act* for water works which are part of the works approved by this certificate.

7.2 Notwithstanding Condition 7.1 above, the original applications for approval, including design calculations, engineering drawings and reports prepared in support of the existing certificate(s) of approval whose descriptions of the approved works and conditions are now replaced pursuant to Condition 7.1 above, shall form part of this certificate.

7.3 Where an existing certificate of approval referred to in Condition 7.1 above applies to works in addition to the works approved by this certificate, it shall continue to apply to those additional works.

8. INFORMATION

8.1 The requirements in this certificate shall not be construed as limiting in any way the ability of the Ministry to request or require the Owner to furnish any information related to compliance with this certificate, as limiting in any way the authority of the Ministry to require certain steps be taken, or as evidence of the fulfillment of the obligation to report or notify of non-compliance where reporting or notification is required by a statute, regulation, order or other approval.

8.2 In the event the Owner provides the Ministry with information, records, documentation or notification in accordance with this certificate ("Information"),

(a) the receipt of the Information by the Ministry;

(b) the acceptance by the Ministry of the Information's completeness or accuracy; or

(c) the failure of the Ministry to prosecute the Owner or to require the Owner to take any action, under this certificate or any statute or regulation in relation to the Information;

shall not be construed as an approval, excuse or justification by the Ministry of any act or omission of the Owner relating to the Information, amounting to non-compliance with the certificate.

9. CHANGE OF OWNERSHIP

9.1 The Owner shall notify the Manager of the local District office of the Ministry in writing of any of the following changes within 30 days of the change occurring:

(a) change of owner or operating authority, or both;

(b) change of address of owner or operating authority or address of new owner or operating authority;

(c) change of partners where the owner or operating authority is or at any time becomes a partnership, and a copy of the most recent declaration filed under the *Partnerships Registration Act* shall be included in the notification to the Manager of the local District office of the Ministry;

(d) change of name of the corporation where the owner or operating authority is or at any time becomes a corporation, other than a municipal corporation, and a copy of the most current "Initial Notice or Notice of Change" (Form 1, 2 or 3 of O.Reg. 189, R.R.O. 1980, as amended from time to time), filed under the *Corporations Information Act* shall be included in the notification to the Manager of the local District office of the Ministry;

9.2 In the event of any change in ownership of the works, other than change to a successor municipality, the Owner shall notify in writing the succeeding owner of the existence of this certificate, and a copy of such notice shall be forwarded to the Manager of the local District office of the Ministry.

9.3 The Owner shall ensure that all communications made pursuant to Conditions 9.1 and 9.2 will refer to this certificate's number.

10. INTERPRETATION (Severability and Conflicts)

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

10.2 In all matters requiring the interpretation and implementation of this certificate, the conditions of the certificate shall take precedence, followed by the documentation submitted in support of the applications associated with any previously issued certificates of approval for works which are part of the works approved by this certificate.

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

1. Conditions 1.1, and 1.5 are included so that the water quality delivered by the water treatment plant satisfies the current Ontario Drinking Water Standards in order to protect public health and so that the water is aesthetically acceptable.

2. Conditions 1.2, 1.3 and 1.4 are included so that the flow rate of water through the works is within the approved treatment capacity of the works.

3. Conditions 2.1 and 2.2 related to the flow metering, sampling and monitoring program are imposed so

that all pertinent data are available for the works performance evaluation and so that the works is operated and maintained at the level consistent with the design objectives, and is effective in producing water of an acceptable quality at all times.

4. Conditions 3.1 through 3.9 and 3.11 through 3.14 are included so that the works will be operated, maintained, funded, staffed and equipped in a manner enabling compliance with the terms and conditions of this certificate and that the Owner can deal with contingency and/or emergency situations.

5. Condition 3.10 is included so that adequate information is available to allow proper control of the treatment process in order to achieve the desired water quality and efficiency of the treatment process.

6. Condition 4.1 is included so that the Owner will regularly review compliance with the terms and conditions of this certificate, be alerted to its obligations with respect to any non-compliance, and allow the public enhanced participation in monitoring compliance.

7. Condition 5.1 is included to require the Owner to implement improvements to the works necessary for the works to be capable of providing safe drinking water in accordance with Ontario Regulation 459/00 and Ontario Drinking Water Standards in a consistent and reliable manner.

8. Conditions 5.2 and 5.3 are included so that the Owner is aware that Condition 5.1, which identifies the requirements for improvements to the works, does not constitute an approval for the implementation of the improvements, and before undertaking any of the improvements, the Owner must apply for and obtain Director's approval under Section 52 of the *Ontario Water Resources Act.*

9. Conditions 6.1 and 6.2 are included to set specific dates for the submission of a second and subsequent engineers' reports, which are required by Ontario Regulation 459/00.

10. Conditions 7.1 through 7.3 are included to stipulate that this certificate replaces all previous approvals for the works being the subject of this certificate, and that the existing approvals remain in force for the purpose of any works which are not subject to this certificate (e.g., a distribution system or its portions, including any in-distribution storage facilities not associated with a water treatment process).

11. Conditions 8.1 and 8.2 are included to emphasize the distinction between the requirements of this certificate and other legal requirements with which the Owner is required to comply.

12. Conditions 9.1 through 9.3 are included so that the Ministry records are kept accurate and current with respect to approved works, and so that subsequent owners of the works are made aware of the certificate and continue to operate the works in compliance with it.

13. Conditions 10.1 and 10.2 are included to clarify how the certificate is to be judicially interpreted, and specifically, to clarify that the requirements of the certificate are severable and that they prevail over supporting documentation.

This Certificate of Approval revokes and replaces Certificate(s) of Approval No. 1254-542QKE issued on February 1, 2002

In accordance with Section 100 of the Ontario Water Resources Act, R.S.O. 1990, Chapter 0.40, as amended, 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, Chapter 0.40, provides that the Notice requiring the hearing shall state:

1. The portions of the approval or each term or condition in the approval 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.

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The Certificate of Approval number;
6. The date of the Certificate of Approval;
7. The name of the Director;
8. The municipality within which the works are located;

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary*
Environmental Review Tribunal
2300 Yonge St., 12th Floor
P.O. Box 2382
Toronto, Ontario
M4P 1E4

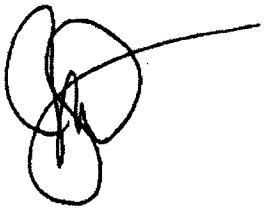
AND

The Director
Section 52, *Ontario Water Resources Act*
Ministry of Environment and Energy
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
M4V 1L5

*** Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 314-4600, Fax: (416) 314-4506 or www.ert.gov.on.ca**

The above noted water works are approved under Section 52 of the Ontario Water Resources Act.

DATED AT TORONTO this 10th day of September, 2002



Mohamed Dhalla, P.Eng.
Director
Section 52, *Ontario Water Resources Act*

AW/

c: District Manager, MOE Kingston
J. C. Johnston, Genivar Consulting Group Ltd.
Manager, Drinking Water, Wastewater and Watershed Standards Section, Standards Development Branch

APPENDIX B

PERMIT TO TAKE WATER

(AS ATTACHED)

RC 02 03 00

Ministry of the Environment and Energy / Ministère de l'Environnement et de l'Énergie

Ontario

PERMIT TO TAKE WATER
Number 93-P-4064

MINISTRY OF ENVIRONMENT

SEP 8 1993

CORNWALL

TO: Roxborough Township
P.O. Box 189
MOOSE CREEK, Ontario
K0C 1W0

has applied in accordance with Section 34 of the Ontario Water Resources Act for approval of:

the taking of water for Municipal purposes **from** 3 Wells **on** Lot 19, Concession VI, Roxborough Township. **This will be effective until** August 30, 2003, **with the rate of taking not to exceed** 207.4 litres **per minute, or** 298,656 litres **per minute, or** 298,656 litres **per day from each of the three** wells.

all in accordance with the application dated July 22, 1993, **and signed by** D.W. Lishman, McNeely Engineering Consultants Limited.

You are hereby notified that this Permit is issued to you subject to the General Terms and Conditions in Schedule A, and subject to the Special Conditions listed here.

SPECIAL TERMS AND CONDITIONS

1) Measurement and Reporting under General Terms and Conditions 2 clauses (b) and (c). Records to be submitted to the Director annually.

2) If the taking authorized by this Permit interferes with a neighbouring well supply then the contingency plan entitled Township of Roxborough, Village of Moose Creek Water Supply System Contingency Plan prepared by McNeely Engineering Consultants Ltd. must be implemented.

The reason for the imposition of this condition is as follows:

1) The reason for Condition 1 is to establish a record of water taking.

2) The reason for Condition 2 is to ensure that neighbouring residents have an adequate water supply at all times.

You may, by written notice served upon me and the Environmental Appeal Board within 15 days after receipt of this Notice, require a hearing by the Board. Section 101 of the Ontario Water Resources Act, R.S.O. 1990, Chapter 0.40, 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 <u>each</u> portion appealed.**

The Notice should also include:

3. **The name of the appellant;**
4. **The address of the appellant;**
5. **The Permit number;**
6. **The date of the Permit;**
7. **The name of the Director;**
8. **The municipality within which the taking is located;**

And the Notice should be signed and dated by the appellant.

This notice must be served upon:

The Secretary
Environmental Appeal Board
112 St. Clair Avenue West
Suite 502
TORONTO, Ontario
M4V 1N3

AND

The Director
Section 34, Ontario Water Resources Act
Ministry of Environment and Energy
133 Dalton Avenue, Box 820
KINGSTON, Ontario
K7L 4X6

Dated at Kingston this 23rd day of August, 1993.

Director
Section 34, Ontario Water Resources Act
Ministry of Environment and Energy.

THIS IS A TRUE COPY OF THE
ORIGINAL PERMIT MAILED ON
SEP 07 1993

(Signed)

Schedule A - General Terms and Conditions

These Terms and Conditions have been designed to allow for the development of water resources for beneficial purposes while providing reasonable protection to existing water uses and to public interests in water.

1. **Permit**

This permit shall be kept available at all times for inspection.

2. **Measurement and Reporting of Water Taking**

The Director may, from time to time, where a situation of interference or anticipated interference with water supplies exists, or in a situation requiring information on water takings for purposes of water resource inventory and planning, give written notice to the Permit holder to undertake any of the following actions. The Permit holder shall comply with any such notice:

a) To establish and maintain a system for the measurement of the quantities of water taken;
b) To operate such a system and to record measurements of the quantities of water taken on forms provided by the Director, with such frequency or for such time periods as the Director may specify;
c) To return to the Director records made pursuant to clause 2(b) at such times or with such frequency as the Director may specify;
d) To keep records made pursuant to clause 2(b) available for inspection until such time as they are returned to the Director pursuant to clause 2(c).

3. **Interference with Other Water Supplies**

The Permit holder shall immediately notify the Director of any complaint arising from the taking of water authorized by this Permit and shall report upon any action which has been taken or is proposed with regard to such complaint.

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 the 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.

For Ground-Water Takings, if the taking of water is forecast to interfere seriously, or is observed to interfere seriously with other water supplies obtained from any adequate sources that were in use prior to initial issuance of a Permit for this water taking, the Permit holder shall take such action as will make available to those affected a supply of water equivalent in quantity and quality to their normal takings, or shall compensate such persons for their reasonable costs of so doing, or shall reduce the rate and amount of taking so as to prevent the forecast interference or alleviate the observed interference. Pending permanent restoration of the affected supplies, the Permit holder shall provide to those affected temporary water supplies adequate to meet their normal requirements, or shall compensate such persons for their reasonable costs of so doing.

4. **Reporting of Changes**

The Permit holder shall report to the Director any changes of address or telephone number, or change of ownership of the property for which this Permit is issued and shall report to the Director any changes in the general conditions of water taking from those described in the Permit application within thirty days of any such change. The Permit holder shall not assign his/her rights under this Permit to another person without the written consent of the Director.

5. **Expiry**

No water may be taken under authority of this Permit after the expiry date shown on the face of this Permit, unless the Permit is renewed, or after the expiry date shown on any renewal of this Permit.

6. **Liability**

This Permit does not release the permittee from any legal liability or obligation and remains in force subject to all limitations, requirements, and liabilities imposed by law. This Permit shall not be construed as estopping 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 permittee, its officers, employees, agents, and contractors.

7. **Inspection**

It is a condition of this Permit that the permittee must forthwith on request permit provincial officers to carry out inspections authorized by Section 15, 15a or 15b of the Ontario Water Resources Act, Section 156, 156a or 157 of the Environmental Protection Act or Section 19 or 20 of the Pesticides Act of any place, other than any room actually used as a dwelling, to which the permit relates.

APPENDIX C

GPS COORDINATES

GPS REFERENCING	
ITEM	GLOBAL POSITIONING SYSTEM (GPS) COORDINATES
MAP DATUM:	NAD83
UTM ZONE:	18T
WELL 1	0502764 / 5010767 (±8.8m)
WELL 2	0502855 / 5010651 (±5.7m)
WELL 3	0502916 / 5010688 (±6.3m)
DISTRIBUTION SYSTEM: Elevated Storage Tank	0501844 / 5010639 (±9.1m)
DISTRIBUTION SYSTEM: Sewage Pump Station	0501897 / 5011361 (±6.7m)
DISTRIBUTION SYSTEM: 2029 North Valley Road	0502069 / 5012717 (±5.4m)

APPENDIX D

PLANT CLASSIFICATION
Plant Name: Village of Moose Creek Drinking Water System
Facility Level: Class 1 Water Treatment and Class 1 Water Distribution
Certificate Number: 2381 and 2382
Date of Issue: March 20, 1995

PLANT OPERATOR	
Operator Name: Blair Henderson	**Title:** Operations Manager
Water Treatment Classification: Class 2	**Water Distribution Classification:** Class 3
Certificate Number: 3695	**Certificate Number:** 3643
Expiry Date: October 31, 2005	**Expiry Date:** October 31, 2005

Operator Name: Dave Markell	**Title:** Process/Compliance Technician
Water Treatment Classification: Class 2	**Water Distribution Classification:** Class 3
Certificate Number: 9396	**Certificate Number:** 7807
Expiry Date: November 30, 2004	**Expiry Date:** September 30, 2005

Ontario

Ministry of the Environment
Drinking Water Inspection Report

Operator Name: William Michels	**Title:** Operator
Water Treatment Classification: Class 2	**Water Distribution Classification:** Class 2
Certificate Number: 13519	**Certificate Number:** 14646
Expiry Date: September 30, 2006	**Expiry Date:** September 30, 2006

Operator Name: Jean Veilleux	**Title:** Operator
Water Treatment Classification: Class 3	**Water Distribution Classification:** Class 3
Certificate Number: 7171	**Certificate Number:** 7172
Expiry Date: May 31, 2006	**Expiry Date:** May 31, 2006

Operator Name: Andrew Barrie	**Title:** Operator
Water Treatment Classification: Class 2	**Water Distribution Classification:** Class 2
Certificate Number: 11395	**Certificate Number:** 11396
Expiry Date: October 31, 2005	**Expiry Date:** January 31, 2005

Operator Name: Tony Kelly	**Title:** Operator
Water Treatment Classification: Class 3	**Water Distribution Classification:** Class 3
Certificate Number: 9394	**Certificate Number:** 7805
Expiry Date: November 30, 2004	**Expiry Date:** November 30, 2003

Ontario

Ministry of the Environment
Drinking Water Inspection Report

Operator Name: Mark Lauzon	**Title:** Operator
Water Treatment Classification: OIT	**Water Distribution Classification:** OIT
Certificate Number: OT18272	**Certificate Number:** OT18273
Expiry Date: September 30, 2005	**Expiry Date:** September 30, 2005

Operator Name: Brian Huskinson	**Title:** Operator
Water Treatment Classification: Class 2	**Water Distribution Classification:** Class 2
Certificate Number: 13539	**Certificate Number:** 2225
Expiry Date: October 31, 2005	**Expiry Date:** August 31, 2005

Operator Name: Lisa Bortolussi	**Title:** Operator in Training
Water Treatment Classification: OIT	**Water Distribution Classification:** OIT
Certificate Number:	**Certificate Number:**
Expiry Date: June 30, 2006	**Expiry Date:** June 23, 2006

Operator Name: James Roach	**Title:** Operator in Training
Water Treatment Classification: OIT	**Water Distribution Classification:** OIT
Certificate Number:	**Certificate Number:**
Expiry Date: March 31, 2005	**Expiry Date:** November 30, 2005

APPENDIX E

CONTACT INFORMATION

Local Health Unit

Eastern Ontario Health Unit
1000 Pitt Street
Cornwall, ON

Attention: Dr. Bourdeau

Medical Officer of Health:

Dr. Robert Bourdeau

Phone: 613-933-1375
Fax: 613-933-9707

Conservation Authority or Ministry of Natural Resources

South Nation Conservation Authority
15 Union Street
Berwick, Ontario
K0C 1G0

Attention: Richard E. Pilon

Phone: 613-984-2948
Fax: 613-984-2872

MOE Environmental Assessment and Approvals Branch

Ministry of the Environment
2 St. Clair Avenue West
Floor 12A
Toronto ON M4V 1L5

Attention: Mirek Tybinkowski
Water and Wastewater
Specialist

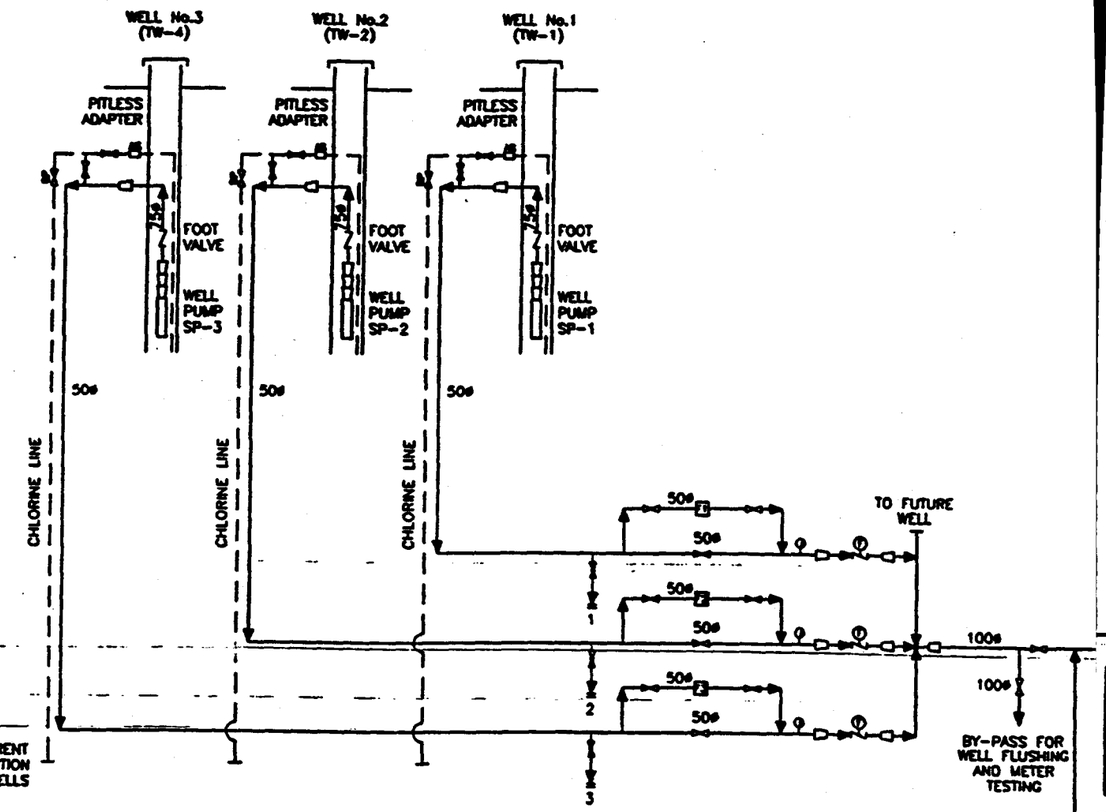
Phone: 416-314-8202
Fax: 416-314-6935

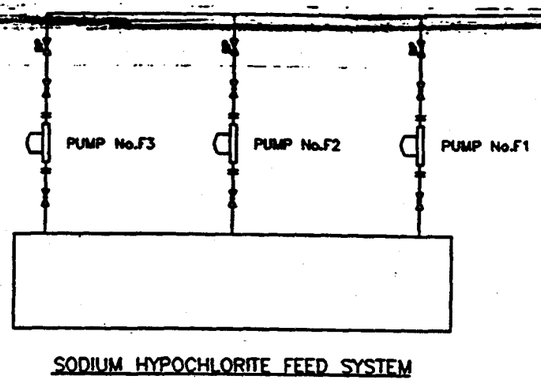
APPENDIX F

PLANT SCHEMATIC

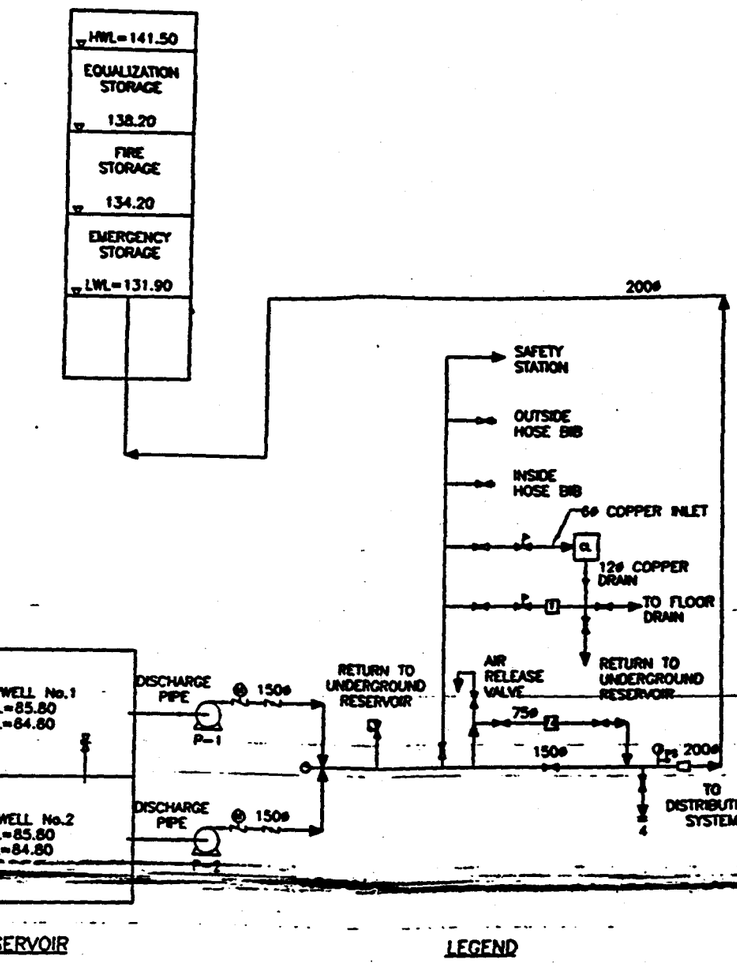
(SEE ATTACHED)

ADAPTED FROM FEB./94 DIAGRAM
BY McNEELY ENGINEERING CONSULTANTS LTD.





SODIUM HYPOCHLORITE FEED SYSTEM



LEGEND

- GATE VALVE
- KNIFE GATE VALVE
- BUTTERFLY VALVE
- MOTORIZED CHECK VALVE
- FLOW CONTROL CHECK VALVE
- BALL VALVE
- PRESSURE REDUCING VALVE
- HOSE VALVE
- BACK PRESSURE VALVE
- PRESSURE RELIEF VALVE
- CL CHLORINE ANALYZER
- F FLOWMETER
- P PRESSURE ELEMENT
- ANTI-SIPHON VALVE
- UNION
- DRAIN
- 2 SAMPLING OUTLET
- REDUCER
- HIGH LIFT PUMP (P)
- CHLORINE FEED PUMP
- T TURBIDITY ANALYZER
- PRESSURE GAUGE
- PS PRESSURE SWITCH

MOOSE CREEK WATER SUPPLY SYSTEM PROCESS AND FLOW CONTROL DIAGRAM

APPENDIX G

MINISTRY AUDIT SAMPLE RESULTS

(SEE ATTACHED)

APPENDIX
Table 1
MOOSE CREEK WELL SUPPLY
AUDIT SAMPLE RESULTS - 17-JUN-2003
CHEMICAL / PHYSICAL PARAMETERS - HEALTH RELATED

Sample # 1 - (REG) TREATED WATER

Parameter	Units	MAC [1]	IMAC [2]	AO [3]	SAMPLE # 1
ANTIMONY, UNFILTERED TOTAL	UG/L		6		.38 +/-0.13
ARSENIC, UNFILTERED TOTAL	UG/L		25		.1 +/-0.10
BARIUM, UNFILTERED TOTAL	UG/L	1000			218 +/-16.00
BENZENE C6H6	UG/L	5			.05 <=W
BORON, UNFILTERED TOTAL	UG/L		5000		59 +/-7.00
BROMODICHLOROMETHANE	UG/L				6.4
BROMOFORM	UG/L				.5 <=W
CADMIUM, UNFILTERED TOTAL	UG/L	5			-.04 +/-0.05
CARBON TETRACHLORIDE	UG/L	5			.2 <=W
CHLOROBENZENE	UG/L	80			.05 <=W
CHLORODIBROMOMETHANE	UG/L				2
CHLOROFORM CHCL3	UG/L				18.9
CHROMIUM, UNFILTERED TOTAL	UG/L	50			1.6 +/-0.50
DICHLOROBENZENE 1,2	UG/L	200			.05 <=W
DICHLOROBENZENE 1,4	UG/L	5			.05 <=W
DICHLOROETHANE 1,2	UG/L		5		.05 <=W
DICHLOROETHYLENE 1,1	UG/L	14			.05 <=W
FLUORIDE, UNFILTERED REACTIVE	MG/L	1.5 b			.17
LEAD, UNFILTERED TOTAL	UG/L	10 c			.12 +/-0.12
MERCURY, UNFILTERED TOTAL	UG/L	1			.02 <=W
METHYLENE CHLORIDE	UG/L	50			.2 <=W
NITRATES TOTAL, UNFIL.REAC	MG/L	10 d			.022 <T
NITRITE, UNFILTERED REACTIVE	MG/L	1 d			.001 <=W
SELENIUM, UNFILTERED TOTAL	UG/L	10			0 +/-1.00
TETRACHLOROETHYLENE	UG/L	30			.05 <=W
TRICHLOROETHYLENE C2HCL3	UG/L	50			.05 <=W
TRIHALOMETHANES, TOTAL	UG/L	100 e			27.5
URANIUM, UNFILTERED TOTAL	UG/L	20			.05 +/-0.05
VINYL CHLORIDE C2H3CL	UG/L	2			.05 <=W

Shortforms:

<T - A measurable trace amount; interpret with caution

<W - No measurable response (zero)

<=W - No measurable response (zero)

< - Actual result is less than reported value

ND - Not detected

!NP - No appropriate procedure available

NA - Result not available

NS - Not sampled

FTU = NTU - Nephelometric Turbidity Unit

NG/L - Nanograms per litre

UG/L - Micrograms per litre

MG/L - Milligrams per litre

Footnotes:

1 Maximum Acceptable Concentration

2 Interim Maximum Acceptable Concentration

3 Aesthetic Objective

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. 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. Levels above the MAC must be reported to the local Medical Officer of Health.

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) A MAC for turbidity of 1.0 NTU in drinking water leaving the treatment plant was established to ensure the efficiency of the disinfection process. Distribution system protection processes can result in increased turbidity in the distribution system. To ensure that the aesthetic quality is not degraded, an aesthetic objective for turbidity at the free flowing outlet of the ultimate consumer has been set at 5 NTU.

APPENDIX
Table 2
MOOSE CREEK WELL SUPPLY
AUDIT SAMPLE RESULTS - 17-JUN-2003
MICROBIOLOGICAL PARAMETERS - HEALTH RELATED

Sample # 1 - WELL 2 RAW
Sample # 2 - WELL 3 RAW
Sample # 3 - (REG) TREATED WATER
Sample # 4 - (REG) WATER TOWER
Sample # 5 - (REG) STP 35 SIMEON LANE
Sample # 6 - (REG) DISTRIBUTION

Parameter	Units	MAC [1]	AO [2]	SAMPLE # 1	SAMPLE # 2
COLIFORM, TOTAL M/F BCKGRD	C/100ML	200		0	0
COLIFORM, TOTAL MF	C/100ML	0		0	0
ESCHERICHIA COLI MF	C/100ML	0		0	0
HETEROTROPH MF 35 C	C/ML	500			
NT: DETERIORATION INDICATORS	C/100ML		0		
NT: ESCHERICHIA COLI	C/100ML	0			
NT: TOTAL COLIFORMS	C/100ML	0			

APPENDIX
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Sample # 2 - WELL 3 RAW
Sample # 3 - (REG) TREATED WATER
Sample # 4 - (REG) WATER TOWER
Sample # 5 - (REG) STP 35 SIMEON LANE
Sample # 6 - (REG) DISTRIBUTION

Parameter	Units	MAC [1]	AO [2]	SAMPLE # 3	SAMPLE # 4
COLIFORM, TOTAL M/F BCKGRD	C/100ML	200			
COLIFORM, TOTAL MF	C/100ML	0			
ESCHERICHIA COLI MF	C/100ML	0			
HETEROTROPH MF 35 C	C/ML	500		10 <	10 <
NT: DETERIORATION INDICATORS	C/100ML		0	NOT DETECTED	NOT DETECTED
NT: ESCHERICHIA COLI	C/100ML	0		ABSENT	ABSENT
NT: TOTAL COLIFORMS	C/100ML	0		ABSENT	ABSENT

APPENDIX
Table 2
MOOSE CREEK WELL SUPPLY
AUDIT SAMPLE RESULTS - 17-JUN-2003
MICROBIOLOGICAL PARAMETERS - HEALTH RELATED

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Sample # 2 - WELL 3 RAW
Sample # 3 - (REG) TREATED WATER
Sample # 4 - (REG) WATER TOWER
Sample # 5 - (REG) STP 35 SIMEON LANE
Sample # 6 - (REG) DISTRIBUTION

Parameter	Units	MAC [1]	AO [2]	SAMPLE # 5	SAMPLE # 6
COLIFORM, TOTAL M/F BCKGRD	C/100ML	200			
COLIFORM, TOTAL MF	C/100ML	0			
ESCHERICHIA COLI MF	C/100ML	0			
HETEROTROPH MF 35 C	C/ML	500		10 <	10 <
NT: DETERIORATION INDICATORS	C/100ML		0	NOT DETECTED	NOT DETECTED
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 Acceptable Concentration
2. Aesthetic objective

Indicators of adverse water quality, notification procedure and corrective actions (from ODWS section 4.2.2)

Each of the following is an indicator of adverse water quality:

a) *Escherichia coli (E.coli)* or fecal coliform is detected in any required sample other than a raw water sample. (Corrective action: Increase the chlorine dose and flush the mains to ensure that a total chlorine residual of at least 1.0 mg/L or a free chlorine residual of 0.2 mg/L is achieved at all points in the affected part(s) of the distribution system. Resample and analyze. Corrective action should begin immediately and continue until *E. coli* and fecal coliforms are no longer detected in two consecutive sets of samples or as instructed by the local Medical Officer of Health.)

b) Total coliforms detected (but not *Escherichia coli* or other fecal coliforms) in any required sample other than a raw water sample. (Corrective action: Resample at the same site and analyze. If confirmed to be positive, increase the chlorine dose and flush the mains to ensure that a total chlorine residual of at least 1.0 mg/L or a free chlorine residual of 0.2 mg/L to all points in the affected part(s) of the distribution system. Corrective action outlined should begin immediately and continue until total coliforms are no longer detected in two consecutive sets of samples or as instructed by the local Medical Officer of Health.)

c) Unchlorinated water is directed to the distribution system, where chlorination is used or required. This includes water in the distribution system which has less than 0.05 mg/L of free chlorine residual when tested. (Corrective action: Restore chlorination immediately and follow instructions as directed by the local Medical Officer of Health.)

d) Samples, other than raw water samples, containing more than 500 colonies per mL on a heterotrophic plate count analysis. (Corrective action: Resample and analyze. On confirmation, call the local Medical Officer of Health again and consult.)

e) Samples, other than raw water samples, containing more than 200 background colonies on a total coliform membrane filter analysis. (Corrective action: Resample and analyze. On confirmation, call the local Medical Officer of Health again and consult.)

f) Aeromonas spp., *Pseudomonas aeruginosa,,Staphylococcus aureus, Clostridium* spp. or fecal streptococci (Group D streptococci) are detected in samples, other than raw water samples. (Corrective action: Resample and analyze. On confirmation, call the local Medical Officer of Health again and consult.)

Pursuant to the Drinking Water Protection Regulation, when a, b, c, d, e, and/or f occurs, the laboratory and the owner of the water works shall immediately notify the MOE Spills Action Centre (SAC) and the local Medical Officer of Health. In the case of c the owner of the water works shall immediately notify the MOE SAC and the local Medical Officer of Health.

APPENDIX
Table 3
MOOSE CREEK WELL SUPPLY
AUDIT SAMPLE RESULTS - 17-JUN-2003
CHEMICAL / PHYSICAL PARAMETERS - NOT HEALTH RELATED

Sample # 1 - (REG) TREATED WATER

Parameter	Units	OBJECTIVE	TYPE OF OBJECTIVE	SAMPLE # 1	
ALUMINIUM, UNFILTERED TOTAL	UG/L	100	OG	1.7	+/-0.60
AMMONIUM, TOTAL UNFIL.REAC	MG/L	a	a	.002	<=W
COPPER, UNFILTERED TOTAL	UG/L	1000	AO	5.4	+/-0.60
ETHYLBENZENE C8H10	UG/L	2.4	AO	.05	<=W
IRON, UNFILTERED TOTAL	UG/L	300	AO	1060	+/-170.00
MANGANESE,UNFILTERED TOTAL	UG/L	50	AO	74.3	+/-5.80
TOLUENE C7H8	UG/L	24	AO	.05	<=W
TURBIDITY	FTU	5	AO	.79	
XYLENE-M C8H10	UG/L	300	AO	.05	<=W
XYLENE-O C8H10	UG/L	300	AO	.05	<=W
XYLENE-P C8H10	UG/L	300	AO	.05	<=W
ZINC, UNFILTERED TOTAL	UG/L	5000	AO	3.1	+/-0.90

Shortforms:

<T	-	A measurable trace amount; interpret with caution	DEG	-	Degree celsius
<W	-	No measurable response (zero)	AO	-	Aesthetic Objective
<=W	-	No measurable response (zero)	OG	-	Operational Guideline
<	-	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

Footnotes:

a No limit has been established for this parameter.

b Organic Nitrogen = (Total Kjeldahl Nitrogen - Ammonia)

c 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.

d When sulphate levels exceed 500 mg/L, water may have a laxative effect on some people.

APPENDIX H

PROVINCIAL OFFICER'S ORDER & REPORT

Ministry of the Environment

Ministère de l'Environnement

Ontario

Provincial Officer's Order

Environmental Protection Act, R.S.O. 1990, c.E 19 (EPA)
Ontario Water Resources Act, R.S.O. 1990, c. O. 40 (OWRA)
Pesticides Act, R.S.O. 1990, c. P11 (PA)
Safe Drinking Water Act, S.O. 2002, c.32 (SDWA)

Order Number
4758-5V9R4X

To: The Corporation of the Township of North Stormont
PO Box 99
Berwick, Ontario, K0C 1G0
Canada

Site: 16950 McNeil Road
North Stormont, United Counties of Stormont, Dundas & Glengarry

Work Ordered

On or before February 13, 2004 submit to the issuing Provincial Officer, a workplan that describes in detail what steps will be taken, and the date those steps will be taken, to ensure that the required Well Head Protection Plan for the Moose Creek Well Supply is completed as per Condition 5.1 of the facility's Certificate of Approval (Number 9727-5DMJAA).

A. While this Order is in effect, a copy or copies of this order shall be posted in a conspicuous place.

B. While this Order is in effect, report in writing , to the District or Area office, any significant changes of operation, emission, ownership, tenancy or other legal status of the facility or operation.

Issued at Cornwall this 23 rd day of January, 2004.

Jan Franssen
Badge No: 939
Cornwall Area Office
Tel: (613) 933-7402 Ext. 234

APPEAL/REVIEW INFORMATION

REQUEST FOR REVIEW

You may request that this order be reviewed by the Director. Your request must be made in writing (or orally with written confirmation) within seven days of service of this order and sent by mail or fax to the Director at the address below. In the written request or written confirmation you must,

- specify the portions of this order that you wish to be reviewed;
- include any submissions to be considered by the Director with respect to issuance of the order to you or any other person and with respect to the contents of the order;
- apply for a stay of this order, if necessary; and provide an address for service by one of the following means:
  1. mail 2. fax

The Director may confirm, alter or revoke this order. If this order is revoked by the Director, you will be notified in writing. If this order is confirmed or amended by order of the Director, the Director's order will be served upon you. The Director's order will include instructions for requiring a hearing before the Environmental Review Tribunal.

DEEMED CONFIRMATION OF THIS ORDER

If you do not receive oral or written notice of the Director's decision within seven days of receipt of your request, this order is deemed to be confirmed by order of the Director and deemed to be served upon you.

You may require a hearing before the Environmental Review Tribunal if, within 15 days of service of the confirming order deemed to have been made by the Director, you serve written notice of your appeal on the Environmental Review Tribunal and the Director. Your notice must state the portions of the order for which a hearing is required and the grounds on which you intend to rely at the hearing. Except by leave of the Environmental Review Tribunal , you are not entitled to appeal a portion of the order or to rely on grounds of appeal that are not stated in the notice requiring the hearing. Unless stayed by the Environmental Review Tribunal , the order is effective from the date of service.

Written notice requiring a hearing must be served personally or by mail upon:

The Secretary
Environmental Review Tribunal
P.O. Box 2382
2300 Yonge Street, Suite 1201
Toronto, ON M4P 1E4

and

Director (Provincial Officer Orders)
Ministry of the Environment
Kingston District Office
133 Dalton Ave
Kingston ON K7L 4X6
Fax: (613)548-6908
Tel: (613)549-4000

Where service is made by mail, it is deemed to be made on the fifth day after the date of mailing and the time for requiring a hearing is not extended by choosing service by mail.

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

Tel: (416) 314-4600 Fax: (416) 314-4506 www.ert.gov.on.ca

FOR YOUR INFORMATION

- Unless stayed by the Director or the Environmental Review Tribunal , this order is effective from the date of service. Non-compliance with the requirements of this order constitutes an offence.
- The requirements of this order are minimum requirements only and do not relieve you from complying with the following:
  - any applicable federal legislation;
  - any applicable provincial requirements that are not addressed in the order; and
  - any applicable municipal law.
- The requirements of this order are severable. If any requirement of this order or the application of any requirement to any circumstance is held invalid, the application of such requirement to other circumstances and the remainder of the order are not affected.
- Further orders may be issued in accordance with the legislation as circumstances require.
- The procedures to request a review by the Director and other information provided above are intended as a guide. The legislation should be consulted for additional details and accurate reference.

Ministry of the Environment
Ministère de l'Environnement
Ontario

Provincial Officer's Report

Order Number
4758-5V9R4X

The Corporation of the Township of North Stormont
PO Box 99
Berwick, Ontario, K0C 1G0
Canada

Site
16950 McNeil Road
North Stormont, United Counties of Stormont, Dundas & Glengarry

Observations

Condition 5.1 of the Certificate of Approval (Number 9727-5DMJAA) for the Moose Creek Well Supply, required the owner to implement a Well Head Protection Plan by July 1, 2003. Since the Well Head Protection Plan has not been prepared the owner is not in compliance with the Certificate of Approval, and therefore in contravention of Section 52(7) of the Ontario Water Resources Act (OWRA). Section 52(7) of the OWRA states:

"No person shall use or operate water works for which an approval is required under subsection (1) unless the required approval has been granted and complied with."

The purpose of the accompanying Provincial Officer's Order is to bring this non-compliance situation to the attention of the owner, and to require the owner to develop a workplan that describes how and when the owner will implement the required Well Head Protection Plan.

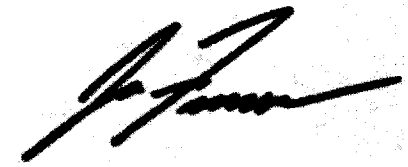
The owner is reminded that subsection 117(3) of the Safe Drinking Water Act applies and states:

"For greater certainty, a person remains subject to prosecution or a penalty in respect of a contravention of a requirement under this Act that occured or was continuing to occur immediately before the order was issued."

Offence(s)

Suspected Violation(s)/Offence(s):	
Act - Regulation - Section, Description (General Offence) 1) Ontario Water Resources Act - OWRA - 52 (7), No person shall use or operate water works for which an approval is required under subsection (1) unless the required approval has been	

granted and complied with.
{107 (1)}



Jan Franssen
Provincial Officer
Badge Number: 939
Date: 2004/01/23
District Office: Cornwall Area Office