

## **Ochiichagwe'babigo'ining (Dalles) First Nation (Band No. 147)**

**Date of Visit:** March 23, 2001

By Keith Lusignan (OCWA) and Richard Chukra (Technical Service Unit Advisor)

**Site Address:** P.O. Box 1770

Kenora, ON P9N 3X5

**Phone No.:** 807-548-1929

**Fax No.:** 807-548-2337

**Tribal Council Affiliation:** Thunder Bay Services Centre - Unaffiliated First Nations (North)

**Operator:** Clifford Beauchamp

**Location:** The Ochiichagwe'babigo'ining (Dalles) First Nation community is located approximately 8 km northwest of Kenora

**Population:** 136 people in the community (November 2000 - INAC)

**No. of Units:** 47 housing units (CAIS).

### **1.0 Description of the Community Water Supply**

Based on the CAIS report, water to the houses in the Ochiichagwe'babigo'ining (Dalles) community is treated as follows:

- 127 people use piped water
- 9 people have no services
  
- 45 houses are serviced by a communal water system; and
- 2 houses have no services.

### **2.0 Description of the Community Sewage Facilities**

Based on the CAIS report, sewage from the houses in the Ochiichagwe'babigo'ining (Dalles) community is treated as follows:

- 107 people use piped sewage
- 29 people use septic tanks
  
- 37 houses are serviced by a communal sewage system; and,
- 10 houses are serviced by individual septic tanks.

### 3.0 Overall Assessment for Communal Water Treatment Supply

The questionnaire developed by PWGSC required OCWA to undertake a risk assessment of the Water Source, Design, Operation, Reporting, and Operators. To properly assess these areas, a revisit to the water treatment facilities would be required.

OCWA was requested to undertake the evaluation without a visit to the site. With the available information, OCWA has undertaken the requested assessment of the facilities.

The ranking system used is as follows:

- 0 = Not enough information to assess
- 1-4 = Low Risk
- 5-7 = Medium Risk
- 8-10 = High Risk

For more detailed information on the Risk Assessment used see the Terms of Reference, Appendix B.

<b>SECTION Water</b>	<b>SECTION RANKING Water</b>	<b>RISK Water</b>
<b>A. Water Source</b>		
Biological	0	
Chemical	0	
Physical	0	
Overall Ranking for Water Source	0	No lab data available
<b>B. Design</b>		
Biological	7	11 exceedances out of 88 samples (12.5%)
Chemical	10	Turbidity, lead exceedances
Physical	6	Colour, hardness, dissolved organic carbon exceedances
Risk to Public Health	10	Turbidity, lead, boil water advisory in effect
Condition of Laboratory Equipment	0	Not inspected
Overall Ranking for Design	10	
<b>C. Operations</b>		
Reservoir Cleanliness	0	Not inspected
Emergency Plan	0	Unknown
Overall Ranking for Operations	7	No chlorine residual analyzer, no operation and maintenance manuals, frequent chlorination break down of metering pumps
<b>D. Reporting</b>		
Ranking for Laboratories and Testing	3	Monthly by Health Canada

<b>SECTION Water</b>	<b>SECTION RANKING Water</b>	<b>RISK Water</b>
Ranking for Boil Water Advisories	10	Boil water advisory in effect during visit
Overall Ranking for Reporting	7	
<b>E. Operators</b>		
Overall Ranking for Operators	4	Some training and confidence
<b>F. Statistical Data</b>		
Overall Ranking for Individual Wells	0	
Overall Ranking for the System	10	High Risk

#### 4.0 Overall Assessment for Communal Sewage Treatment Facilities

The questionnaire developed by PWGSC required OCWA to undertake a risk assessment of the Effluent Receiver, Design, Operation, Reporting, and Operators. To properly assess these areas, a revisit to the sewage treatment facility would be required.

OCWA was requested to undertake the evaluation without a visit to the site. With the available information, OCWA has undertaken the requested assessment of the facilities.

The ranking system used is as follows:

- 0 = Not enough information to assess
- 1-4 = Low Risk
- 5-7 = Medium Risk
- 8-10 = High Risk

For more detailed information on the Risk Assessment used see the Terms of Reference, Appendix B.

SECTION Sewage	SECTION RANKING Sewage	RISK Sewage
<b>A. Effluent Receiver</b>		
Overall Ranking for Effluent Receiver	0	
<b>B. Design</b>		
Quality of Treated Effluent	0	No data available
Ranking of Design of Sewage Plant	1	No data available
Ranking of Concerns and Hazards within the Plant	4	Some emergency parts available
Condition of Laboratory Equipment	0	
Overall Ranking for Design	2	
<b>C. Operations</b>		
Ranking for Emergency Plan	0	
Overall Ranking for Operations	0	Insufficient info
<b>D. Reporting</b>		
Overall Ranking for Reporting	4	Reed in lagoons, repair berm
<b>E. Operators</b>		
Overall Ranking for Operators	4	Some training and confidence
<b>F. Statistical Data</b>		
Overall Ranking for Individual Septic Tanks	0	
Overall Ranking for the Systems	4	Low Risk

## **5.0 Communal Water Treatment Supply (45 houses)**

### **5.1 Water Source**

The raw surface water is drawn from the Winnipeg River.

### **5.2 Design**

A water treatment plant constructed in 1993 services the community. The rated design capacity of the plant is not known.

The treatment plant consists of Culligan filter units with addition of sodium hypochlorite for disinfection. There is an on-site water reservoir with unknown capacity.

The following table summarizes the treated water data available from Health Canada, which does not meet GCDWQ:

<b>Date</b>	<b>Location</b>	<b>Exceedances</b>	<b>Result</b>	<b>GCDWQ Limit</b>
May 19, 1998	Band Office	Hardness	48.9 mg/L	80 to 100 mg/L (OG)
		Turbidity	1.5 NTU	1 NTU (HL)
		Dissolved Organic Carbon	13 mg/L	5 mg/L (AO)
		Lead	0.013 mg/L	0.01 mg/L (HL)

AO - aesthetic objective; OG - operational guideline; HL - health limit

There is no diesel operated backup power generator for fire protection and water treatment plant operation. The water treatment plant is very basic, and there is insufficient safety equipment on site.

There is adequate ventilation for the plant and chemical storage area. However, laboratory, office space and workshop area for maintenance are not available.

There is no annual main valve operating and maintenance program. There are no hydrants on the water distribution system. In the last two years, service disruptions have been experienced due to power outages. Re-occurring operational problems include the chlorine metering pumps breaking down.

### **5.3 Operations**

The disinfection equipment is functional with sufficient sodium hypochlorite on site. There is no on-line chlorine residual analyzer, but residuals are checked every two days. The chemicals are stored in accordance with the MOE guidelines. There is also no colilert unit available.

There are no operating and maintenance manuals for plant equipment or as-built drawings on site. Emergency spare parts are also not available; however there is a contact listing of technicians/ trades people available. The response for such personnel is about one day.

### **5.4 Reporting**

Health Canada, (Kenora office) conducts bacteriological testing every month on the communal water system. The results and analyses are kept at the Band Office and at Health Canada.

There have been no disease or health related outbreaks in the last two years, but the community is currently under boil water advisory issued by Health Canada.

The following table summarizes the bacteriological data available from Health Canada:

Period	Frequency	Regularity	Exceedances
99/10/18 to 2001/10/02	1 to 16 times per month from different locations	<ul style="list-style-type: none"> <li>▪ 1 month missing in 1999</li> <li>▪ 3 months missing in 2000</li> <li>▪ 1 month missing in 2001</li> </ul>	<ul style="list-style-type: none"> <li>▪ Total coliform exceedances in distribution system were recorded on 99/11/29, 2000/06/20, 2000/07/06, 2000/08/10, 2000/11/29, and 2001/04/04.</li> <li>▪ Total coliform exceedances at pump house were recorded on 2000/06/20.</li> </ul>

Turbidity readings are not recorded. It is unknown how often chemical analysis of the treated water is done, or whether there have been exceedances according to GCDWQ.

### 5.5 Operators

s.19(1)

Clifford Beauchamp is the operator for both the water treatment plant and the sewage treatment plant. He has had on the job training a

The operator is familiar with calibrating and maintaining the equipment and appears to have confidence in. However, there is no backup operator for vacation or illness.

Clifford needs training in basic water, maintenance (pumps, chemicals, feed pumps, electrical safety), basic sewage, collection and distribution, and lagoon operation.

The housekeeping seems adequate, however, more effort could result in a tidier facility.

### 6.0 Deficiencies in the Community Water Supply

1. There are no hydrants on the distribution system.
2. The community is currently under boil water advisory issued by Health Canada.
3. There is insufficient safety equipment available on site.
4. The water treatment plant doesn't have a backup power supply, and service disruptions have occurred because of power outages.
5. There are no operating and maintenance manuals for plant equipment, no as-built drawings and no operating manuals for the plant.
6. Record keeping needs improvement.
7. It is unknown how often chemical analysis and turbidity tests of treated water are performed.
8. The operator is not certified.
9. The chlorine metering pumps keep breaking down.
10. Maintenance needs more attention.

11. There are lead and turbidity exceedances in the treated water.

## **7.0 Communal Sewage Facilities (37 houses)**

### **7.1 Effluent Receiver**

The Winnipeg River is the effluent receiver.

### **7.2 Design**

The community uses a lagoon for sewage disposal. Two sewage-pumping stations are part of the collection system, one was built in 1993 and the other in 2000. The rated design capacity meets the present usage of the system.

The sewage pumping station pumps are routinely maintained. Some emergency spare parts are readily available. But there is a contact listing of technicians/trades people available who respond to calls within one day. No raw sewage bypasses from any of the sewage pumping stations have occurred.

### **7.3 Operations**

The lagoon is a very large two-cell unit. There is a washout on one berm, which has occurred from runoff into the lagoon. The operator will be repairing shortly. Reed growth in both cells is very severe. The current facilities should handle future growth well into the future providing they are repaired and maintained.

This is generally a good, clean operation.

### **7.4 Reporting**

No disease or health related outbreaks have occurred in the last two years.

There have been no sewage collection backups or improper discharges.

### **7.5 Operators**

Clifford Beauchamp is the operator for both the water treatment plant and the sewage plant.

**s.19(1)** [REDACTED] has had on the job training [REDACTED]

The operator is familiar with calibrating and maintaining the equipment [REDACTED].  
[REDACTED] However, there is no backup operator for vacation or illness.

Clifford needs training in basic water, maintenance (pumps, chemicals, feed pumps, electrical safety), basic sewage, collection and distribution, and lagoon operation.

## **8.0 Deficiencies in the Community Sewage Facilities**

1. There is a washout on one berm of the lagoon.
2. Excessive reed growth in both cells is very severe.
3. There are no records available for lagoon sampling.

s.19(1) [REDACTED] has received training to operate and maintain the facility.

5. Maintenance and repair of lagoon berms should be a priority issue.

## 9.0 Recommendations

- Resolve the issue of the boil water advisory as quickly as possible.
- Address lead and turbidity exceedances issue in the treated water.
- Purchase required safety equipment.
- Implement a regular sampling program at the treatment facilities.
- Record turbidity of the treated water regularly.
- Purchase a diesel backup system for the water treatment plant.
- Review the consultant's report on the operating and maintenance of the lagoon to ascertain whether the lagoon is being operated properly.
- Repair the berm at the washout.
- Remove the reeds from the lagoon.
- Implement a training program for the operators that can lead to certification.
- Develop a contingency plan for emergency situations.
- Implement a sewage septic tank inspection program for proper operations and meeting of the required standards.

## 10.0 Plant Classification

Based upon the Terms of Reference – Appendix I – Plant Classification Guideline developed by Public Works and Government Services Canada and with discussions with the Ontario Ministry of the Environment Classification Group, OCWA classified these plants as follows:

Water Treatment Facility - Class I  
Sewage Treatment Facility – Class I

## 11.0 Overall Community Risk Assessment

### **Water Category – High Risk**

#### **High Risk because of the following:**

- Boil water advisory is in effect;
- No chlorine residual analyzer;
- Chlorination metering pumps break down often; and
- Potential lead and turbidity exceedances.

### **Sewage Category – Low Risk**

**Note: Information within this report is based on discussions with the plant operators and a quick visual walkthrough of the facilities. No detailed review was undertaken by OCWA.**