

Pays Plat First Nation (Band No. 191)

Date of Visit: February 19, 2001

by Peter Doig (OCWA)

Site Address: P.O. Box 819

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

Operators: Gerald Bouchard, Rene Wanakamie

Location: The Pays Plat First Nation community is located on approximately 65 km east of Nipigon and 25 km west of Schreiber

Population: 89 people in the community (December 2000 - INAC)

No. of Units: 25 housing units (CAIS)

1.0 Description of the Community Water Supply

Based on the CAIS report, water to the houses in the Pays Plat community is treated as follows:

- 82 people use piped water
- 7 people have no services

- 23 houses are serviced by a communal water system; and
- 2 houses have no services.

2.0 Description of the Community Sewage Facilities

Based on information supplied to OCWA, sewage from the Pays Plat community is treated as follows:

- 82 people use septic tanks
- 7 people have no services

- 23 houses are serviced by septic tanks; and
- 2 houses have no services.

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.

SECTION Water	SECTION RANKING Water	RISK Water
A. Water Source		
Biological	0	
Chemical	0	
Physical	0	
Overall Ranking for Water Source	0	No lab data available
B. Design		
Biological	0	No lab data available
Chemical	1	No exceedances
Physical	6	Dissolved organic carbon exceedance
Risk to Public Health	1	No risk
Condition of Laboratory Equipment	0	Not inspected
Overall Ranking for Design	3	
C. Operations		
Reservoir Cleanliness	0	Not inspected
Emergency Plan	5	No plan
Overall Ranking for Operations	10	No chlorine residual analyzer, service disruption due to check valves malfunctioning, PLC and chart recorder out of service due to lightning strikes, level indicator for chlorine injection in the filling/reservoir tank is broken
D. Reporting		
Ranking for Laboratories and Testing	1	Monthly by Dilico

Ranking for Boil Water Advisories	1	No boil water advisory
Overall Ranking for Reporting	1	
E. Operators		
Overall Ranking for Operators	2	Trained and confident
F. Statistical Data		
Overall Ranking for Individual Wells	0	
Overall Ranking for the System	10	High Risk

4.0 Communal Water Treatment Supply (23 houses)

4.1 Water Source

The water supply is from Lake Superior.

4.2 Design

The community is serviced with a water treatment plant constructed in 1997. The rated design capacity and usage requirement are not known.

The treatment plant consists of a slow sand filtration system, and an on-site water reservoir with a capacity of 2000 m³. There is no on-line chlorine residual analyzer or colilert unit but the chlorine residual is checked once per day. The chemicals are stored in accordance with MOE guidelines.

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

Date	Location	Exceedances	Result	GCDWQ limit
Apr. 18, 2000	Water Treatment Plant	Dissolved Organic Carbon	7 mg/L	5.0 mg/L (AO)

AO = aesthetic objective

There is adequate ventilation for the plant and chemical storage area. There is also an adequate designated area for laboratory/office/filing/maintenance. There is no backup power generator for the water treatment plant but there is a diesel operated pump for fire protection, which is being tested on a regular basis. There is adequate safety equipment at the plant with no other safety hazards or concerns.

There is an annual hydrant flushing but no maintenance program for hydrants and main valve.

4.3 Operations

Sodium hypochlorite is used for disinfection. The disinfection equipment is functional with sufficient chlorine available. The current disinfectant has been on site for two months.

There are operating and maintenance manuals for plant equipment but no as-built drawings on site. There are no emergency spare parts readily available on site but there is a contact listing of technicians/trades people available. The response for such personnel is fair.

In the last two years, service disruptions have been experienced due to check valves malfunctioning. Re-occurring operational problems include PLC & chart recorder failures related to lightning strikes.

4.4 Reporting

Dilico conducts bacteriological testing every month on the communal water system. The results are recorded and kept at the Band Office.

Last year, Health Canada issued no boil water advisory on the communal water system. In the last two years, there have been no disease or health related outbreaks.

The turbidity of the treated water is not recorded. A chemical analysis of the treated water is conducted once per year.

4.5 Operators

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Rene Wanakamie and Gerald Bouchard operate the treatment plant. [REDACTED]

[REDACTED] Additional training on calibration of equipment, laboratory work, and maintenance of equipment is recommended.

5.0 Deficiencies in the Community Water Supply

1. The water treatment plant does have a backup pump for fire protection but no backup power supply for the plant.
2. There are operating and maintenance manuals for plant equipment but no as- built drawings on site.
3. The operator does perform a hydrant flushing program but no maintenance program in place for hydrants and main valve.
4. Service disruptions due to check valves malfunctioning.
5. There is no written contingency plan available.
6. Record keeping needs improvement.
7. The chlorine equipment was working and a free chlorine test is done once a day. There is no chlorine analyzer.
8. Turbidity of treated water is not recorded.
9. The operators are not certified but have received training on operating and maintenance of the facility.
14. If the filter tank is full, the chlorine fails to turn on while filling the reservoir because the level indicator is broken.
15. The PCL unit and chart recorder are out of service due to lightning strikes/or power surges for over six months. There is no indication that this unit will be repaired in the near future.

6.0 Recommendations

- Repair/replace check valves.
- Repair level indicator for chlorine system.
- Repair/replace PLC unit and chart recorder.
- Implement a training program that can lead to certification of the operators.
- Establish and implement a protocol for taking water samples at the water treatment plants, including raw water samples.
- Consider backup power for the water treatment plant.

- Consider installation of an on-line chlorine analyzer with alarms.
- Develop a comprehensive operating and maintenance program on the water distribution system to address valve and hydrant maintenance.
- Develop a comprehensive contingency plan to address operational problems, breakdowns, vacations and sickness, main breaks and boil water advisories.
- Turbidity readings should be recorded on a daily basis.
- Obtain as-built drawings and operating and maintenance manuals.
- Implement a sewage septic tank inspection program to inspect all septic tanks in the community for proper operations and meeting the required standards.

7.0 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 this plant as follows:

Water Treatment Facility - Class I

8.0 Overall Community Risk Assessment

Water Category - High Risk

High Risk because of the following:

- Repair level indication for chlorine system; and
- Repair PLC unit and chart recorder.

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