

For the purpose of this application, the water supply is defined as the water supply for the purpose of the Water Licence Act, 1992, and the Water Licence Act, 1992, and the Water Licence Act, 1992.

**Water Licence Application  
Supplementary Questionnaire  
for Municipalities**

APPENDIX 1 - MODIFICATION  
TO WATER SUPPLY (MAY)

## I. GENERAL

1. Date: OCTOBER 20 1997
2. Applicant: PELLY BAY  
Municipality
3. Contacts: MARLA LIMOUSIN  
Name of Contact  
SENIOR ADMINISTRATIVE OFFICER  
Position  
403-769-6281  
Telephone #  
403-769-6069  
Fax #
4. Municipal Status: ☐ Village ☐ Town  
☒ Hamlet ☐ Settlement Corporation
5. Is this a ?  
☒ New Application  
☐ Renewal -> Water Licence # \_\_\_\_\_

## II. ATTACHMENTS

1. Attach<sup>?</sup>(up- to- date) detailed map(s) showing the locations of the: ONLY DWG OF FILE W/  
LAW 4 T
  - ✓a. water intake; FIG 3, FIG 7 (OVERALL SITE PLAN), FIG 8 (CONTOURS)
  - ✓b. water storage and treatment facilities; FIG 4, 5, 6,
  - c. fuel and chemical storage; FIG 9
  - d. sewage treatment facilities (lagoon, honey bag pit, wetland); FIG 10
  - e. wastewater treatment area and discharge outlets; FIG 10
  - f. solid waste disposal areas and drainage patterns; FIG 12 -> BULK WASTE ON 12a
  - g. hazardous waste disposal area; NONE
  - h. access roads; WATER SUPPLY ROAD PROFILE FIG 13 REFER TO FIG 10 + 12 ALSO.
  - i. existing water bodies/courses and any changes to these water bodies/courses that have or may occur as a result of water use or waste disposal facilities, locations of environmental monitoring sites. (Outline drainage basin); FIG 15, 15a (DRAINAGE BASIN)
  - j. Areas around the community used for recreation, camping, fishing, etc. FIG 12a
  - k. abandoned and/or restored water treatment, sewage, and solid waste disposal facilities.

Are maps attached? ☒ Yes ☐ No  
If no, please indicate when they will be available.

Who has provided or prepared these maps?

PELTY BAY WATER SUPPLY INTAKE PROFILE (1987) G.C.G. DILLON FIG 3  
WATER SUPPLY BUILDING LAYOUT (1987) G.C.G. DILLON FIG 4-7

PELTY BAY, UPSTREAM KUGADJUK RIVER WATER SUPPLY SOURCE (1986) DILLON,  
CONSULTING ENGINEERS & PLANNERS FIG 8.

### III. WATER SUPPLY

#### Water Source

1. Type of source: ☐ Lake ☒ River ☐ Well ☐ Other \_\_\_\_\_

2. Name of water source and alternative, if any.

KUGURDIUK RIVER

Primary Source

UNTREATED FRESH WATER SOURCE  
DURING SPRING FLOODING INTERMITTENT

Secondary Source

STREAM WEST OF  
GRAVEL SOURCE

SEE FIG 12a

3. Usual break-up & freeze-up period: FIRE SOURCE: NONE

JUNE  
Break-up

EARLY OCTOBER  
Freeze-up

#### Water Storage

1. Type of water storage facility. (check where applicable)

☐ Reservoir/Pond

☐ Storage tank

☒ None

☐ Other \_\_\_\_\_

Description

2. If "reservoir" checked: N/A

Is the reservoir lined? ☐ Yes ☐ No

What type of liner? N/A When was it installed? N/A

#### Water Treatment

1. What is the quality of the water, and provide water quality results.

Summer: ☐ good ☐ fair ☒ poor

Fall: ☐ good ☐ fair ☒ poor

Winter: ☐ good ☐ fair ☒ poor

Spring: ☐ good ☐ fair ☒ poor

- AESTHETICALLY, COLOR, TRADITIONALLY WATER QUALITY  
HAS BEEN POOR FORCING RESIDENTS  
TO OBTAIN FRESHWATER DRINKING  
WATER FROM INTERMITTENT STREAM

3 PROBLEMS W/ SALT WATER INTRUSION  
OCTOBER TO JUNE

Describe.

CONSIDER THE PROPOSED SYSTEM WITHOUT ASSUMING FRESH WATER IN ATTEMPT TO SOLVE INTRUSION PROBLEMS REFER TO DATA PRODUCTION IN APPENDIX 1

3. Type of water treatment.

- ☐ Filtration and chlorination  
☒ Chlorination only PRIMARY SOURCE  
☒ None SECONDARY SOURCE  
☐ Other \_\_\_\_\_

Description

**Water Use And Distribution**

1. Volume of water use:

Distribution	Estimated number of people on the system A	Estimated average water consumption (Litres/capita/day) B	Total water consumption (Litres/day) A x B
PIPED	N/A	N/A	N/A
TRUCKED	~ 510	~ 90 L/c/d	16 753 000 <sup>400</sup>
TOTAL			

from Study dated 31 MARCH 1986

**General Condition of the water supply facilities**

1. General condition of the:

a. Water supply facility

- ☐ Satisfactory ☒ Unsatisfactory

If unsatisfactory, explain.

SALT WATER INTRUSION PROBLEMS SEE EVERETT FROM STUDY DATED 1986 PG 7 AND APPENDIX 1

REQUEST INSTALLATION OF SALT WATER INTRUSION ALARM (Appendix 3)

b. Storage facility

- ☐ Satisfactory ☒ Unsatisfactory

If unsatisfactory, explain.

NONE IN PLACE. CONCERNS W/ LACK OF WATER READILY AVAILABLE AS FIRE PROTECTION REQUIREMENTS

- c. Distribution system  
☒ Satisfactory ☐ Unsatisfactory  
If unsatisfactory, explain.

SHOULD INTRUSION PROBLEMS RE-OCCUR COMMUNITY FORCED TO INSTALL  
FLOATING INTAKE ON ICE OF KUGUSAK RIVER TIMELY AND EXPENSIVE PROCESS  
FOR FILLING TRUCKS. LACK OF TREATMENT AS TRUCKS CHLORINATED INDIVIDUALLY  
SOMETIMES UNDER SEVERE WEATHER CONDITIONS TREATMENT NOT DONE.

(LETTER BOB PHILLIPS  
dated Aug 27  
Appendix 1)

### Modifications

1. Are there any changes *planned* for the water supply system?

☐ No ☒ Yes

If yes, please attach a copy of the plan, or describe changes. Provide information on the implementation schedule.

RECENT CHANGED TO INTAKE LINE: LINE RAISED 5 ft

WITHIN THE FRESHWATER ZONE REFER TO APPENDIX 1- 1997 MODIFICATIONS

NOTE: COSTS FOR MODIFICATION \$12000 BORT SOLELY BY HAMLET

2. Are changes needed to the water supply, storage or treatment facilities? Describe.

- POSSIBLY TO INTAKE SHOULD RECENT MODIFICATION FAIL TO SOLVE
- INTRUSION PROBLEMS
- STORAGE FOR FIRE PROTECTION
- INTRUSION ALARM REQUIRED

### Identification

Are there signs identifying drinking water sources presently used by the municipality?

☒ No ☐ Yes

## IV. SEWAGE DISPOSAL

1. What type(s) of sewage treatment is used?

- ☒ Lagoon  
☐ Mechanical system  
☐ Wetland  
☐ Honey bag  
☐ Combination/Other: describe

**Lagoon (if applicable)**

1. Has there been any operating problems with the lagoon?

☒ Yes ☐ No

If yes, describe

DIKE FAILURE IN JUNE 1997 REPAIRS MADE, NO FURTHER  
PREVENTATIVE IMPROVEMENTS MADE. (REFER TO APPENDIX 3)

**Mechanical System (if applicable)**

1. Describe (type, specifications, operation and maintenance program for the mechanical wastewater treatment system).

N/A

2. Are sludges produced ?

☐ Yes ☐ No

If yes, describe how the sludges are disposed of:

N/A

**Wetland (if applicable)**

1. Describe the Wetland wastewater treatment system.

N/A

**Honey Bag Pit**

1. Does the municipality use a honey bag pit?

☐ Yes ☒ No

If yes, describe the location, drainage, and operation/maintenance of the site:

N/A

**Commercial, Industrial and/or Hazardous Wastes**

1. Are there any sources of commercial or industrial *liquid* waste being discharged or deposited to the wastewater treatment system that may affect the quality of the effluent or leachate produced? *(The municipality should be aware that any commercial or industrial discharge has to be approved by the municipality)*

☒ Yes ☐ No

If yes, indicate sources, types and quantities.

HOUSEHOLD CLEANERS, PERSONAL CARE PRODUCTS, MINIMAL AMOUNTS

**Sewage Discharge**

1. Are fish, shell fish and other wildlife harvested in or near the discharge area ?

☐ Yes ☐ No

If yes, indicate species harvested, and level of harvest.

\*

REFER TO FIGURE 16

**General Condition of the sewage treatment facilities**

1. General condition of the:

- a. Sewage collection system

☒ Satisfactory ☐ Unsatisfactory

If unsatisfactory, explain.

- b. Discharge control system

☒ Satisfactory ☐ Unsatisfactory

If unsatisfactory, explain. COMMENT

TREATMENT APPEARS GOOD FROM APPEARANCE OF EFFLUENT, CLEAR WITHIN  
200 M OF DISCHARGE POINT (APPENDIX 2)

- c. Dams, diversion dykes, berms

☐ Satisfactory ☒ Unsatisfactory

If unsatisfactory, explain.

DATE FORW. JUNE 1987 REFER TO APPENDIX E (1987 PLAN)

REPORT

### **Modifications**

1. Are there any changes *planned* in the sewage treatment facilities?

☒ No ☐ Yes

If yes, please attach a copy of the plan, or describe changes. Provide information on the implementation schedule.

\_\_\_\_\_

\_\_\_\_\_

- \* 2. Does the municipality or residents believe changes are needed to the sewage treatment facilities? Describe.

\_\_\_\_\_

\_\_\_\_\_

### **Abandonment and Restoration**

1. List and describe abandoned or restored sewage treatment facilities. Indicate their location on a map.

N/A

\_\_\_\_\_

### **Identification**

Are there signs identifying past and present sewage disposal sites?

☒ No ☐ Yes

### **V. SOLID WASTE DISPOSAL**

RECUVING WASTE WESTERLY

NORTHWEST DIRECTION, DUMPING

1. Briefly describe how solid wastes are collected and delivered to the disposal area.

GARBAGE COLLECTED REGULARLY ( /WEEK ) BY HAMLET FOR FEE. PRIVATE HOME OWNERS DISPOSE OF WASTE INDIVIDUALLY CHANGE TO BY-LAW PROPOSED TO ENSURE CONTROLLED DISPOSAL AND ORGANIZATION AT DUMP SITE. TRUCKS TRANSPORT GARBAGE TO DISPOSAL AREA

2. Is the solid waste site fenced? ☐ Yes ☒ No

3. Is the fence adequate? ☐ Yes ☐ No

If no, describe

N/A



### **Waste Reduction**

1. Does the municipality burn garbage?

☒ Yes ☐ No

If yes, describe how and when this is done.

COMMUNITY BURNED WASTES UNTIL ADVISED BY ENVIRONMENTAL HEALTH OFFICER  
TO DISCONTINUE BURNING IN 1996,  
COMMUNITY REQUIRES DIRECTION FROM NWB. GIVEN LIMITED GRANULAR MAT'L TO COVER,  
LACK OF FUNDING FROM MACA TO OBTAIN ADDITIONAL SOURCE COVER MAT'L. EXTREME

2. Has the municipality considered measures for waste reduction such as recycling or reuse? RESTRICTIONS

☒ Yes ☐ No

If yes, describe

IMPOSED ON COMMUNITY,  
CONCERNS WITH LIFE EXPECTANCY  
OF SITE, REFER TO APPENDIX 2.

WASTE OIL FURNACE BEING INSTALLED AT LAKEVIEW GARAGE

### **Animal Carcasses Pit**

1. Does the municipality have an area for the disposal of animal carcasses?

☐ Yes ☒ No

If yes, describe the location, drainage and operation/maintenance of the site

### **Bulky Scrap Metal Waste Disposal Area**

1. Does the municipality have a scrap metal or bulky waste disposal area?

☒ Yes ☐ No

If yes, briefly describe its location and operation plan.

REFER TO FIG ② PLANS TO BECOME A PORTION OF THE SITE. BY DIVIDING  
SITE INTO CELLS AND DIGGING PIT AND COVERING WASTE. CONSIDERATIONS  
FOR REDUCTION OF WASTE, DEPENDING UPON COST IS TO OBTAIN SHEDDER TO  
REDUCE AMOUNT OF WASTE PRIOR TO RECLAMATION OF CELL 1. REFER TO FIG 12a

### **Commercial, Industrial and/or Hazardous Wastes Disposal Area**

1. Are there any commercial or industrial waste being discharged or deposited in the solid waste disposal area? *(The municipality should be aware that any discharge of commercial or industrial waste has to be approved by the municipality)*

☒ Yes ☐ No

If yes, please indicate sources, types and quantity.

WASTE OIL - STORED AT SOLID WASTE SITE SEGREGATED AND PALLETIZED. HAZARDOUS OIL IN WASTE OIL FURNACE AT HAMLET GARAGE

BATTERIES - COLLECTED AND STORED BY HAMLET UNTIL ACCEPTANCE OF DISPOSAL CAN BE DETERMINED

2. Will the municipality use a hazardous waste disposal area?

☐ Yes ☒ No

If yes, describe its:

UNKNOWN AMOUNTS OF  
AUTOMOTIVE / FLUID PRODUCTS /  
PAINT / SOLVENTS

a. Location

b. Structure

c. Operation and maintenance (describe special handling/disposal methods for these wastes)

### General Condition of the Solid Waste Disposal Area

1. General condition of the:

a. Solid waste disposal area

☒ Satisfactory ☐ Unsatisfactory

If unsatisfactory, explain.

### Modifications

1. Are there any changes planned for the solid waste disposal area?

☐ No ☒ Yes

If yes, attach a copy of the plan, or describe changes. Provide information on the implementation schedule.

PLAN TO INSTALL FENCING AT SOLID WASTE FACILITY TO PREVENT WINDBLOWN GARBAGE IN PREVAILING WIND DIRECTION REFER TO FIGURE 12

2. Are changes needed to the solid waste disposal area? Describe.

### ***Abandonment and Restoration***

1. List and describe abandoned or restored solid waste facilities.  
Indicate their location on a map.

REFER TO FIG 12a OR COMMENTS FOR BURIED METAL WASTES

### **Identification**

Are there signs identifying past and present solid waste disposal sites?

☒ No ☐ Yes

## **VI. INSPECTION AND MONITORING**

1. When were municipal facilities inspected by:

☒ Indian and Northern Affairs Inspector

Date: AUGUST 16/1997, Paul Smith Appendix 3

☒ Municipal and Community Affairs

Date: SEPT 30/1997, Kojó Kumi

☒ Other: NWP SITE VISIT

Date: OCTOBER 17 1997

FRANK IPAKONAK, DIONNE FILIATRAULT  
DAVID PORTER

2. Is there a system in place for reporting spills?

☐ Yes ☐ No

If yes, describe.

SPILL HOTLINE 403-920-8130  
'2 WED' ?

3. Is there a contingency plan for clean up of spills?

☐ Yes ☐ No

If yes, describe.

4. Have any spills occurred in the past five years? GENERAL FUEL

☒ Yes ☐ No

If yes, describe and show on a map the locations of the spills. What action has been taken to clean the affected areas?

### Monitoring Program

1. Is water sampling and analysis done ?

☐ No ☒ If Yes, answer the questions a to e

a. Briefly describe how samples are taken and sent to the laboratory.

SAMPLE COLLECTED BY INSPECTOR ON AUG 16, 1997; ANALYSIS DONE BY DIAND LAB. SAMPLES COLLECTED RAW WATER, SEWAGE EFFLUENT CREEK WATER COLLECTED FOR ENVIRONMENTAL HEALTH OFFICE

b. Briefly describe any monitoring done for wastewater effluent and leachate.

SAMPLE COLLECTED AUG 17 1997 BY PAUL SMITH DATA WILL BE SUPPLIED TO NWB DIRECTLY BY INSPECTOR

c. Who is <sup>performed</sup> responsible for water sampling ?

Paul Smith

Name

WATER RESOURCES OFFICER

Position

819-979-4405

Telephone #

819-979-0445

Fax #

UNKNOWN

Level of training

d. Laboratory performing analysis of samples.

TIAGA LAB (DIAND LAB) Contact:

Name

Yellowknife NT

Address

403 -

Telephone #

403 -

Fax #

e. Are any changes planned in the water quality monitoring program?

☐ Yes ☐ No

If yes, describe.

## VII. PUBLIC CONCERNS

1. What concerns does the municipality or residents have regarding the municipal water supply or waste disposal facilities? List the concerns and describe what steps have been taken to address those concerns.

① SALT WATER INTRUSION - INTAKE RAISED

② CONTAMINATION DUE TO WELINE SITE

③ WATER QUALITY - RECOMMENDATION OF EHO TO BOIL WATER DUE TO CRYPTOSPORIDIUM

④ REQUIREMENT TO BURN WASTE / LACK COVER MATIL

⑤ REDUCE WIND BLOWN DEBRIS - FENCING PURCHASED

⑥ LACK OF STORAGE FOR FIRE PREVENTION

⑦

## VIII. PUBLIC HEALTH *(To be filled by the Regional Environmental Health Officer)*

1. Date: \_\_\_\_\_

2. Municipality: \_\_\_\_\_

3. Contact: \_\_\_\_\_

Environmental Health Officer Contact

Telephone # \_\_\_\_\_

Fax # \_\_\_\_\_

4. Have there been any problems or health/environmental concerns with drinking water ?

☒ Yes ☐ No

If yes, describe

Recommendation of ENVIRONMENTAL HEALTH OFFICER TO BOIL WATER DUE  
TO CRYPTOSPORIDIUM

5. Have there been any problems or health/environmental concerns with sewage disposal/treatment?

☐ Yes ☒ No  
If yes, describe

6. Have there been any problems or health/environmental concerns with solid waste disposal?

☐ Yes ☐ No  
If yes, describe

**Monitoring Program**

1. Does the Regional Health Board <sup>for Community Health Centre</sup> perform water quality sampling?  
☐ No ☐ If Yes, answer questions (a) to (e)

a. Briefly describe the sampling methodology.

b. Briefly describe any monitoring of wastewater effluent and leachate.

c. Who is responsible for sampling ?

\_\_\_\_\_  
Name

\_\_\_\_\_  
Position

\_\_\_\_\_  
Telephone #

\_\_\_\_\_  
Fax #

\_\_\_\_\_  
Level of training

- d. Laboratory performing analysis of samples.

\_\_\_\_\_  
Name

\_\_\_\_\_  
Address

\_\_\_\_\_  
Telephone #

\_\_\_\_\_  
Fax #

- e. Are any changes planned in the water quality monitoring program?

☐ Yes ☐ No

If yes, describe.

\_\_\_\_\_  
\_\_\_\_\_

**IX. TECHNICAL INFORMATION** (*Assistance from the Regional Municipal and Community Affairs Office*)

1. Date: \_\_\_\_\_

2. Municipality: PELLY BAY

3. Contact: \_\_\_\_\_

MACA Representative/Position

\_\_\_\_\_  
Telephone #

\_\_\_\_\_  
Fax #

4. Population (according to most recent census results): \_\_\_\_\_

5. Estimated growth rate over next 5 years: \_\_\_\_\_

6. Has any baseline data collection and evaluation been undertaken with respect to the physical, biological, and chemical characteristics of the main water bodies in the area?

☐ No ☐ Yes

If yes, provide details below:

Prepared by

Title

Completion Date

If no, are such studies being planned?

☐ No ☐ Yes (If yes, when and by whom):

7. Have Elders been consulted in the collection of baseline data on main water bodies in the area?

☐ No ☐ Yes.

If yes, specify.

8. Has any baseline data collection and evaluation been undertaken with respect to the various biophysical components of the environment potentially affected by the project?

☐ No ☐ Yes

If yes, provide details below.

Prepared by

Title

Completion Date

If no, are such studies being planned?

☐ No ☐ Yes. If yes, specify:

### **Attachments**

1. Attach detailed plan or drawing(s) of the present *solid waste disposal area*. Include the following information:

- a. details of pond size and elevation;
- b. details of all retaining structures (dimensions, materials of construction, etc.);
- c. details of the drainage basin, and existing and proposed drainage modifications;
- d. details of all decant, siphon mechanisms etc., including sewage treatment facilities;



- e. details regarding direction and path of wastewater flow from the area;
- f. distance from watercourses and fish bearing waters;
- g. location and construction of liners;
- h. leachate and groundwater collection systems; and
- i. control structures.

2. Attach detailed plan or drawing(s) of the present *sewage treatment system*. The drawing(s) should include the following:

- a. details of all retaining structures (dimensions, materials of construction, etc.);
- b. details of the drainage basin, and existing and proposed drainage modifications;
- c. details regarding direction and path of wastewater flow from the area;
- d. indications of the distance from watercourses and fish bearing waters;
- e. all sources of seepage presently encountered near these areas, including volumes (m<sup>3</sup>/day) and directions.

Are drawings for the solid waste disposal area and sewage treatment system attached?

☐ Yes ☐ No

If Yes, who has provided them ?

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If no, indicate when they will be available

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### **Hydrology**

1. Effects on surface water flow:

Are any stream channels altered?

☐ Yes ☒ No

Is the natural storage or water level of any lake or pond changed?

☐ Yes ☒ No

Are there changes in water flow downstream of the project?

☐ Yes ☒ No

Is a storage reservoir created in a natural channel?

☐ Yes ☒ No

If yes to any of the above, briefly describe the expected change in flow or storage:

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2. Drainage Area:

What is the drainage area? \_\_\_\_\_ km<sup>2</sup>

What is the average elevation of the drainage basin? \_\_\_\_\_ metres

Is the drainage basin outlined on an attached map? ☐ Yes ☐ No

Describe the drainage basin characteristics, (vegetation, general soil type, lakes, swamps and permafrost areas, etc.)