



SCHEDULE III  
(Subsection 6 (1))

APPLICATION FOR LICENCE, AMENDMENT OF LICENCE OR RENEWAL OF LICENCE

APPLICATION/LICENCE NO. N 3 L 3 - 0 5 7 0  
(amendment or renewal only)

1. NAME AND MAILING ADDRESS OF APPLICANT

Hamlet of Aklavik  
P.O. Box 88  
Aklavik, NT X0E 0A0

Telephone: 867-978-2361 Fax: 867-978-2434

2. ADDRESS OF HEAD OFFICE IN CANADA IF INCORPORATED

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_

3. LOCATION OF UNDERTAKING (describe and attach a map, indicating watercourses and location of any proposed waste deposits)

See Figure 1 of "Hamlet of Aklavik Background Report for Water Licence Renewal"

Latitude: 68° 13' N Longitude: 124° 59' W

4. DESCRIPTION OF UNDERTAKING (describe attach plans)

Municipal Waste Disposal. See "Background Report" for descriptions.

5. TYPE OF UNDERTAKING

1. Industrial	_____	4. Power	_____	6. Conservation	_____
2. Mining and milling	_____	5. Agriculture	_____	7. Recreation	_____
3. Municipal	<u>X</u>				

8. Miscellaneous (describe) \_\_\_\_\_

6. WATER USE

To obtain water	_____	Flood control	_____
to cross water course	_____	To divert water	_____
to modify the bed or bank of watercourse	_____	to alter the flow of, or store, water	_____

Other (describe) \_\_\_\_\_

7. QUANTITY OF WATER INVOLVED (litres per second, litres per day or cubic metres per year, including both quantity to be used and quantity to be returned to source)

See "Background Report" section 3.2 Sanitary Sewage Facility

SCHEDULE III – Concluded

APPLICATION FOR LICENCE, AMENDMENT OF LICENCE, OR RENEWAL OF LICENCE – Concluded

8. WASTE DEPOSITED (quantity, quality, treatment and disposal)

See "Background Report" section 3.3 Solid Waste Disposal

9. OTHER PERSONS OR PROPERTIES AFFECTED BY THIS UNDERTAKING (giving name, mailing address and location; attach list if necessary)

N/A

10. PREDICTED ENVIRONMENTAL IMPACTS OF UNDERTAKING AND PROPOSED MITIGATION

No predicted impacts, no mitigation proposed

11. CONTRACTOR AND SUB-CONTRACTORS (names, addresses and functions)

Water and Sewer Trucking : AC Contracting  
Solid Waste Trucking : Flyke Contracting

12. STUDIES UNDERTAKEN TO DATE (attach list if necessary)

See "Background Report" sections 4 and 5

13. PROPOSED TIME SCHEDULE

Start date: July 2009 Completion date: July 2019

Evelyn Stone  
NAME (Print)

SAD  
TITLE (Print)

[Signature]  
SIGNATURE

May 05-09  
DATE

FOR WB OFFICE USE ONLY

APPLICATION FEE	Amount: \$ _____	Receipt No.: _____
WATER USE DEPOSIT	Amount: \$ _____	Receipt No.: _____

# Municipal Questionnaire to Accompany Water License Applications to the Mackenzie Valley Land and Water Board



**Mackenzie Valley Land and Water Board**  
7th Floor - 4910 50th Avenue  
P.O. Box 2130  
YELLOWKNIFE NT X1A 2P6  
Phone (867) 669-0506  
FAX (867) 873-6610

*Regulating the use of land and waters and the deposit of waste, and enabling residents to participate in the management of resources to provide optimum benefit to the residents of the settlement areas and of the Mackenzie Valley and to all Canadians.*

**October 2003**



The purpose of this questionnaire is to solicit supplemental information from an applicant to support his/her application for a water licence (or renewal). It is anticipated that the completion of this questionnaire will reduce delays arising from the Board having to solicit additional information after an application has already been submitted. This information will also be useful during the pre-screening of your application, which must be undertaken prior to development and approval of a water licence to determine if the project needs to be referred to the Environmental Impact Review Board.

The applicant should complete the questionnaire to the best of his/her ability, recognizing that

some questions may not be relevant to the project under consideration. For questions that do not relate to his/her operation, the applicant is requested to indicate "N/A" (Not Applicable).

If any questions arise while completing the questionnaire, the applicant may wish to contact the Mackenzie Valley Land and Water Board at (867) 669-0506.

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**PLEASE PRINT OR TYPE YOUR RESPONSES**

**NOTE** If space is insufficient for any of the responses on this questionnaire, use the back of the sheet or an attachment.

**SECTION 1 – GENERAL**

**Date:**

**1.1 Applicant**

Hamlet of Aklavik T:(867)978-2361 F:(867)978-2434  
(company, corporation, owner) (telephone no.) (fax no.)

XOE OAO  
(postal address)

Evelyn Storr, SAO  
\_\_\_\_\_  
(alternate contact) (position)

(postal address)

(telephone no.) (fax no.)

**1.2 Community Status** City Village Town

(Hamlet) Settlement Corporation

1.3 Population (according to most recent census results) 629  
0%  
estimated growth rate over next 5 years

1.4 Indicate the status of the municipality's license on the date of application.

New Application

Renewal @ Water License # N3L3-0570

1.5 Has any baseline data been collected for the main water bodies in the area?

Yes  No

1.6 If "Yes", please attach all data gathered on the physical, biological and chemical characteristics at each sampling location. Attach a summary of program details indicating sampling locations, description of waste at each location, sampling frequency, and parameters analyzed. Include an outline of Quality Assurance/Quality Control methods being applied to sampling, preservation and analysis within the program.

1.7 Has any baseline data collection and evaluation been undertaken with respect to the various biophysical components of the environment potentially affected by the project (e.g., wildlife, soils, air quality) in addition to water related information requested in this questionnaire?

Yes  No  Unknown

1.8 If "Yes", please attach copies of reports or cite titles, authors and dates.

Prepared by:

Title:

Completion Date:

1.9 If no, are such studies being planned?

Yes  No

1.10 If "Yes", briefly describe the proposals.

1.11 Attach detailed maps which show the relative locations of the:

- raw water intake,
- water treatment facilities,
- fuel & chemical storage,
- sewage treatment facilities,
- wastewater treatment area and discharge outlets,
- solid waste disposal areas and drainage patterns,
- hazardous waste disposal area,
- transportation access routes,
- existing waterbodies/courses and any changes to these water bodies/courses which have or may occur as a result of water use of waste disposal facilities, locations of environmental monitoring sites.

See attached report titled "Hamlet of Akavik Background Report for Water

1.12 Attach detailed scale plan drawing(s) of the proposed (or present) sewage treatment system. The drawing(s) must be stamped by an engineer registered in NWT and include the following: Lic  
Rena

- (a) details of pond size and elevation;
- (b) precise 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 route followed by wastewater flow from the area;
- (f) indications of the distance to nearby major watercourses, and fish bearing waters;
- (g) location and construction of liners;
- (h) leachate and groundwater collection systems; and
- (i) control structures.

See attached "Background Report"

**1.13 Attach detailed scale plan drawings of the proposed (or present) solid waste disposal area. The drawings must include the following:**

- (a) precise 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 route followed by wastewater flow from the area;
- (d) indications of the distance to nearby major watercourses, and fish bearing waters;
- (e) all sources of seepage presently encountered in the vicinity of these areas;
- (f) the volume of each seepage flow (m<sup>3</sup>/day); and
- (g) the direction of each flow.

See attached "Background Report"

**1.14 Attach the present or proposed contingency plan which will be used for each portion of the waste control system in the event it fails to operate properly.**

**1.15 Attach the present or proposed spill contingency plan which will be employed in case a spill of hazardous materials occurs. Describe courses of action, mitigative methods and equipment available for use.**

NOTE: Individual detailed large scale drawings of all facilities (dam, decant system, ditch, dike, water treatment plant, etc) constructed or proposed must be attached. Specific details with regard to the methods of construction, materials used, etc. are required.

## SECTION 2 -- WATER SUPPLY

### 1. 2.1 Volume of water use

**System of Estimated Number Estimated Average Total Water Distribution Of People on water use use (L/d) Each System (L/c/d)**

Piped

Trucked 629 people, 124 L/c/d, 78,000 L/d

Other

Other

WaterUsage(L/d)

$$\frac{\quad}{1000} = \text{Water Usage } \underline{78} \text{ (m}^3\text{/d)}$$

$$\text{WaterUsage(m}^3\text{/d)} \times 365 = \text{WaterUsage } \underline{28,470} \text{ (m}^3\text{/year)}$$

### 2.2 Type of source

Lake  River  Well  Other

**2.3 Name of raw water source and alternative, if any.**

Peel Channel

Primary Source Alternative Source

**2.4 Usual break-up & freeze-up months.**

May/June October

break-up freeze-up

**2.5 Please provide short descriptions for the following**

Operating capacity of the pumps used

1000 L/minute

Freshwater intake facility.

Operating capacity of the pumps used

Intake screen size

coarse mesh

**2.6 Type of water storage facility. (check where applicable)**

Reservoir  Storage tank  None  Other description

**2.7 What is the capacity of the water storage facility?** m<sup>3</sup> 289

**2.8 What is the rate of withdrawal from the source?** (m<sup>3</sup>/d) 78

**2.9 Is water drawn from the source?**

intermittently  continuously

**2.10 If it is drawn intermittently, during what month(s) is it drawn?**

**2.11 For what time period is it drawn (days/weeks/months)?**

**2.12 What is the rate of flow of source (if river) or size (if lake)?** Not known

2.13 At the intended rate of water usage, describe the effects on the river or lake from which water will be drawn.

2.14 General condition of:

(a) Water supply facility  Satisfactory  Unsatisfactory

If unsatisfactory, explain.

(b) Storage facility  Satisfactory  Unsatisfactory

If unsatisfactory, explain.

(c) Distribution system  Satisfactory  Unsatisfactory

If unsatisfactory, explain.

2.15 Are there any changes planned in the water supply system?

Yes  No

2.16 If "Yes", please attach a copy of the plan, or describe changes.

New screens - see "Background Report" section 6.1

### SECTION 3 -- WATER TREATMENT

3.1 Indicate the quality of the raw water prior to treatment & distribution.

2.

Good Fair  Poor

Describe

See "Background Report" section 3.1.1

3.2 Indicate the capacity of the treatment facility. L/min 100 L/min

3.3 Type of water treatment facility.

Filtration & Chlorination  Chlorination only  None

Other description

Conventional - see "Background Report" sections 3.1.2 + 6.1

3.4 Describe in detail the method of water treatment (i.e. backwash, flocculation, sedimentation, chemicals used), and provide the results of the most recent bacteriological and chemical analysis. Attach a diagram if possible.

See "Background Report" 3.1.2 and 6.1



3.5 Have there been any problems or health and environmental concerns with the water treatment facilities?

Yes No

3.6 If "Yes", please describe

O+M difficulties with existing WTP due to age of facility

3.7 Are there any changes planned in the water treatment facilities?

Yes No

3.8 If "Yes", please attach a copy of the plan or indicate changes

See "Background Report" section 6.1

#### SECTION 4 -- SEWAGE DISPOSAL

4.1 Indicate the level of treatment the sewage will be receiving:

primary secondary tertiary

4.2 Pre-treatment (if applicable): screening maceration

4.3 Lagoons (if applicable): anaerobic aerobic  facultative

4.4 Indicate the capacity of the sewage treatment facility. m<sup>3</sup> 435,000 m<sup>3</sup>  
See "Background Report" section 3.2.3

4.5 Indicate the retention time of the sewage while in the treatment facility.

days : -- expected to be in excess of 10 years  
See "Background Report" section 3.2.3

4.6 Indicate the estimated rate of discharge of wastewater. L/sec

Unknown

4.7 Indicate the location of the discharge point.

See "Background Report" figure 3

4.8 Will the discharge be: seasonal  continuous

4.9 If the discharge is seasonal, during what month(s) is it done?

4.10 What is the duration of the discharge (days/weeks/months)?

**4.11 Comment on the general condition of the:**

(a) Sewage collection system

Satisfactory

(b) Discharge control system

none

(c) Dams, diversion dykes, berms

none

**4.12 Have there been any problems or health and environmental concerns with the sewage disposal facilities?**

Yes  No

**4.13 If "Yes", please describe**

**4.14 The average depth of the wastewater lagoon is** m 1.5m

**4.15 What is the design freeboard?** m. natural lagoon, no design freeboard

**4.16 Is there any harvesting of fish or shellfish in the waters where waste is discharged?**

Yes  No

**4.17 If yes, please indicate species harvested, and estimate amounts.**

**4.18 Will the municipality be using a honey bag pit?**

Yes  No

**4.19 If yes, describe its:**

Location

Drainage

Operation & Maintenance

**4.20 Are there any sources of commercial or industrial liquid waste being discharged or deposited to the municipal system which may affect the quality of the effluent or leachate produced?**

Yes  No

4.21 If "Yes", please describe.

4.22 Have any spills occurred in the past five years?

Yes  No

4.23 If "Yes", please describe.

4.24 Have there been any operating problems with the lagoon?

Yes  No

4.25 If "Yes", describe.

4.26 Are any changes planned in the sewage disposal facilities?

Yes  No

4.27 If "Yes", please describe and if possible, attach a copy of the plan.  
SECTION 5 --SOLID WASTE DISPOSAL

5.1 Indicate the capacity of the disposal area. m<sup>3</sup> 40,000 m<sup>3</sup> - see "Background Report"  
Section 3.3.2

5.2 The average depth of the solid waste disposal site is m.  
0m

5.3 Are there any sources of commercial or industrial solid waste being deposited in the municipal system which may affect the quality of the effluent or leachate produced?

Yes  No

5.4 If "Yes", please describe.

5.5 Briefly describe how the solid waste will be picked up & delivered to the disposal area.

trucked by Flyke Contracting

5.6 Is the solid waste site fenced?

Yes  No

5.7 Will the municipality be using a dead animal pit?

Yes  No

**5.8 If "Yes", describe its:**

Location

Drainage

Operation & Maintenance

**5.9 Will the municipality be using a bulky metal waste disposal area?**

Yes  No

**5.10 If "Yes", briefly describe its location and operation plan:**

See "Background Report" section 3.3.2 and Figure 4

**5.11 Will the municipality be using a hazardous waste disposal area?**

Yes  No

**5.12 If "Yes", describe its:**

Location: See "Background Report" Figure 4

Structure:

Operation & Maintenance:

**5.13 Are there any hazardous commercial wastes entering the solid waste disposal system?**

Yes  No

**5.14 If "Yes", describe and note amounts and special handling/disposal methods for these wastes.**

Source:

Volume (m<sup>3</sup>/day):

**5.15 If any natural watercourse may gain access to the proposed solid waste disposal area, what methods will be used to decrease the amount of runoff water entering these areas? Indicate the volume of water which may enter these areas from the source(s) in question and attach all pertinent details of proposed diversions.**

Source:

**5.16 Please describe the nature of any diversions of watercourses:**

5.17 Have there been any problems or health and environmental concerns with the solid waste disposal facilities?

Yes  No

5.18 If "Yes", please describe.

5.19 Are any changes planned in the solid waste disposal system?

Yes No

5.20 If "Yes", please describe and, if possible, attach a copy of the plan.

Planning to berm + cover part of the domestic landfill  
See "Background Report" section 6.2

## SECTION 6 -- ABANDONMENT AND RESTORATION PROGRAM

6.1 List and describe the locations of abandoned or restored water treatment facilities.

6.2 List and describe the locations of abandoned or restored sewage treatment facilities.

6.3 List and describe the locations of abandoned or restored solid waste disposal facilities.

6.4 Do you have an abandonment and restoration plan?

Yes  No

6.5 If "Yes", please attach a copy of the plan.

## SECTION 7 -- WATER QUALITY MONITORING PROGRAM

7.1 Briefly describe the methodology that is presently used to sample the raw water supply.

Currently handled by PWS, not the Hamlet

**7.2 Briefly describe any monitoring that is done on wastewater effluent and leachate.**

Samples are collected periodically by DIAND Water Resources.

**7.3 Recognized laboratory performing analysis of samples.**

Name:

Contact name:

Postal address:

Telephone number

Facsimile number

**7.4 Are any changes planned in the water quality monitoring program?**

Yes  No

**7.5 If "Yes", describe**

Hamlet will be taking regular lagoon effluent samples according to Water Licence (SNP)

## **SECTION 8 -- PRESCREENING**

**8.1 Has this project ever undergone an initial environmental review, including previous owners?**

Yes  No

**8.2 If "Yes", by whom/when** Unknown

**8.3 Has approval been obtained or sought from the Department of Fisheries and Oceans for using any fish bearing waterbodies for containment or disposal of waste?**

Yes  No

**8.4 Are there any environmental studies ongoing or planned ?**

Yes  No

**8.5 If "Yes", list:**

**SECTION 9 -- LIST OF ATTACHMENTS**

**Reference to Question # Title Number of pages**

1. Hamlet of Aklavik Background Report for Water Licence Renewal
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.

Prepared by: Ken Johnson (AECOM)

Title: P.Eng.

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