Water Licence Application
Supplementary Questionnaire
for Municipalities

Section 1:

GENERAL

1. Date: Nov. 29/96

2. Applicant: HAMLET OF POND INLET
Municipality and Region

BOX 180.
Postal Address

POND INLET. NT

X0A 0S0

899-8934/35 899-8940
Telephone # Fax #

E-Mail Address

3. Contacts:

JAKE ANAVIAPIK	RHODA KATSAK
Municipality Contact	Alternate Contact
SAO	ASAO
Position	Position
899-8935	899-8934
Telephone #	Telephone #
899-8940	899-8940
Fax #	Fax #

4. Community Status: ☐ City ☐ Village ☐ Town
☒ Hamlet ☐ Settlement Corporation

5. a) Population (according to most recent census results): 1150

b) Estimated growth rate over next 5 years: 2-6 % per annum (based on 1995 projection)

6. Indicate the status of the municipality's licence on the date of application

☒ New Application

☐ Renewal → Water Licence # _____

7. Public Concerns:

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

NONE WITH WATER SUPPLY. OLD WASTE DISPOSAL SITE REQUIRES TO BE CLEANED UP

8. Traditional Water Use Areas:

Will the project impact on traditional use areas? ☐ Yes ☒ No

How has this been determined? Explain how such concerns have been addressed.

NO NEW CONSTRUCTION PROJECT PLANNED

9. Have the Elders in the community been consulted in the use of Traditional Knowledge in determining this project?

If so, how?

NO NEW CONSTRUCTION PROJECT PLANNED.

If **not**, why not?

10. Has any baseline data collection and evaluation been ...

chemical characteristics of the main water bodies in the area?

☒ Yes ☐ No ☐ Unknown

If yes, please provide a summary of program details or site titles, authors, cities, and dates.

Prepared by	Title	Completion Date
DIAND	WATER SAMPLE ANALYSIS REPORT	AUG 7, 1995
REID CROWTHER + PARTNERS	WATER SOURCE EVALUATION	JAN. 1984

If no, are such studies being planned? ☐ Yes ☒ No

If yes, briefly describe the proposals.

11. Have Elders been consulted in the gathering of baseline data collection with respect to the main water bodies in the area?

If so, how?

UNKNOWN

If **not**, why not?

components (eg wildlife, soils, air quality) of the environment potentially affected by the project, ie; in addition to water related information requested in this questionnaire?

☑ Yes ☐ No ☐ Unknown

If yes, please attach copies of reports or cite titles, authors and dates.

Prepared by	Title	Completion Date
Thurber Consultants Ltd	Water Supply Lake Upgrading - Pond Inlet Geotechnical Evaluation	Nov. 1986

If no, are such studies being planned? ☐ Yes ☐ No

If yes, briefly describe the proposals.

13. Have Elders been consulted on how the project will potentially affect the environment, (eg. wildlife, soils, air quality, water quality, etc.)?

If so, how?

N/A NEW CONSTRUCTION PROJECT PLANNED

If **not**, why not?

If no, when will the Elders be consulted on this proposal?

SECTION 2:

ATTACHMENTS

Attach current or up to date detailed map(s) showing the relative locations of the:

(a) raw water intake;

(b) water treatment facilities;

(c) fuel & chemical storage;

(d) sewage treatment facilities;

(e) wastewater treatment area and discharge outlets;

(f) solid waste disposal areas and drainage patterns;

(g) hazardous waste disposal area;

(h) transportation access routes;

(i) existing water bodies/courses and any changes to these water bodies/courses that have or may occur as a result of water use of waste disposal facilities, locations of environmental monitoring sites. (Outline drainage basin)

(j) traditional use areas outlined on site map;

Are maps attached? ☒ Yes ☐ No

If no, please indicate when they may be available.

_____

Indicate which organization has provided the various maps or diagrams.

MACA – IQALUIT.

_____

_____

2. 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:

(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.

Are maps attached? ☐ Yes ☐ No

If Yes, indicate which organization has provided the various maps or diagrams.

FERGUSON, SIMEK, CLARK

If no, please indicate when they may be available.

3. Attach detailed scale plan drawing(s) of the ~~proposed~~ (or present) solid waste disposal area. Please include the following details:

(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 near these areas;

(f) the volume of each seepage flow (m^3/day); and

(g) the direction of each flow.

Are drawings attached? ☒ Yes ☐ No

If yes, indicate which organization has provided the various maps or diagrams.

FERGUSON, SIMEK, CLARK

If no, please indicate when they may be available.

4. Attach the present or proposed spill contingency plan that will be employed in case a spill of hazardous materials occurs. Describe the course of action, mitigative methods and equipment available for use. Consult Spill Contingency Guideline enclosed?

Is a copy of the plan attached? ☒ Yes ☒ No

If no, please indicate when it will be available.

Section 3:

HYDROLOGY

1. Effects on surface water flow:

Will a stream channel be altered? ☐ Yes ☑ No

Will the natural storage or water level of a lake or pond be changed? ☐ Yes ☑ No

Will there be changes in the volume of water flow downstream of the project? ☐ Yes ☑ No

Will a storage reservoir be created in a natural channel? ☐ Yes ☑ No

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

NO NEW CONSTRUCTION PLANNED.

2. Drainage Area (Catchment or Basin):

What is the drainage area? $\overset{+}{277,800}$ Km^2

What is the average elevation of the drainage basin? <500 metres

Check: is the drainage basin outlined on an attached map? ☑ *Yes* ☐ *No*

* TITLED "WATER SUPPLY LAKE RECHARGE AREA"

Describe the drainage basin characteristics, vegetation types, general soil type, lakes, swamps and permafrost areas:

- sandy gravels some silty sands soils, vegetation consists of tundra grasses.
- permafrost depth 1.0m to 1.5m

Information source: Water Supply Lake Geotechnical Evaluation - Thurlow 1986.

3. Channel Characteristics:

Will the course of any channel be changed? ☐ Yes ☑ No

If yes describe measures to maintain stream bed and bank stability.

4. Will the cross-section of any watercourse be changed? ☐ YES ☐ NO

If yes, describe the change and its effect on the flow capacity of the channel.

Section 4:

WATER SUPPLY

1. Volume of water use:

System of distribution	Estimated number of people on each system	Estimated average water use (L/c/d)	Total water use (L/d)
_____	_____	_____	_____ (L/d)
piped ✓	1,146 [1]	62 [2]	71,052 (L/d)
trucked			

[1] BUREAU OF STATISTICS (NWT) 1996 [2] 1994-95 consumption figures MACA

71,052 (Water usage (L/d)) x 1 m³ / 1000 L = Water Usage: 71.052 (m³/d)

71.052 (Water usage (m³/d)) x 365 days / year = Water Usage: 25,933.98 (m³/y)

2. Type of source: ☐ Lake ☑ River ☐ Well ☐ Other _____

3. Name of raw water source and alternative, if any.

SALMON RIVER (Primary Source) _____ (Secondary Source)

4. Usual break-up & freeze-up months. JUNE (Break-up) OCTOBER (Freeze-up)

5. Please provide short descriptions for the following

- freshwater intake facility TRUCKFILL STATION
- operating capacity of the pumps used 1,100 l/min.
- intake screen size. STAINLESS STEEL, DIA. 300mm., SCREEN SIZE 3.0 mm

6. Type of water storage facility: (check one)

☑ Reservoir ☐ Storage tank ☐ None

☐ Other _____
description

Is the Reservoir lined? ☐ Yes ☑ No

What type of liner? _____ When was it installed? _____

7. What is the capacity of the water storage facility. 153,140 m^3

8. What is the rate of withdrawal from the source? 71 (m^3/day)

9. Is water drawn from the source ☑ intermittently ☐ continuously

If it is drawn intermittently, during what month(s) is it drawn? 12 months a year

For what period is it drawn (days/weeks/months) ? 365 days per year.

10. What is the rate of flow of source (if river) or size (if lake)? UNKNOWN

11. At the intended rate of water usage, describe the effects on the river or lake from which water will be drawn.
NONE

12. Is a dam or dyke being used to store or alter the flow of water? ☑ Yes ☐ No

13. What are the dimensions of the dam or dyke?

APPROX. Length: 500 m. Width: 6.0 m. Height: 73.0 m.

U/S slope: ____ m.* D/S slope: ____ m.*

* NOTE SECTION DRAWINGS IN CONTRACT 'A' DRAWINGS BY REID CROWTHER

14. Does the ~~proposed~~ dam create a reservoir in a natural watercourse? ☐ Yes ☑ No
If yes, what is the storage capacity and surface area of the reservoir?

____ m^3 ____ ha.

15. Will the dam or dyke affect fish passage? ☐ Yes ☑ No
If yes, describe all measures for compensation of fish habitat lost due to the dam or dyke and provisions for fish passage.

_____

_____

_____

Maintenance of the Water Supply equipment and structures is as per Public Works + Services Maintenance Mgmt. System and MACA - Community Works Management System. Truckfill is radio monitored.

17. General conditions of:

(a) Water supply facility ☑ Satisfactory ☐ Unsatisfactory

If unsatisfactory, explain. _____

(b) Storage facility ☐ Satisfactory ☐ Unsatisfactory

If unsatisfactory, explain. N/A

(c) Distribution system ☑ Satisfactory ☐ Unsatisfactory

If unsatisfactory, explain. _____

18. When was the last site inspection of the facilities done? By whom?

JULY 22, 1996 / PETER KUSUGAK / DIAND / IQALUIT

COPY OF INSPECTION REPORT IS INCLUDED.

19. Are there any changes planned in the water supply system? ☑ No ☐ Yes

If yes, please attach a copy of the plan, or describe changes. Provide the NWB with the contact person and implementation schedule.

Section 5:

WATER TREATMENT

Indicate the quality of the raw water before treatment & distribution.

Summer:	☑ good	☐ fair	☐ poor
Fall:	☑ good	☐ fair	☐ poor
Winter:	☑ good	☐ fair	☐ poor
Spring:	☐ good	☒ fair	☐ poor

Describe.

WATER SAMPLING OF SOURCE WATER IS CARRIED OUT BY DIAND USUALLY EACH SUMMER.

2. Indicate the capacity of the treatment facility. 1,100 L/min

3. Type of water treatment facility.

☐ Filtration & Chlorination ☑ Chlorination only ☐ None

☐ Other _____
Description

Describe 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.

Calcium hydroxide is mixed transferred to a feed tank and injected into the truckfill line through a metering pump. Note Section drawing in 'Contract B' - Truckfill Station Drawings.

5. Have there been any problems or health and environmental concerns with the water treatment facilities?
☑ No ☐ Yes, describe.

If yes, please attach a copy of the plan or indicate changes and include an implementation schedule. Please include excerpt from MACA Capital Plan if available.

SEWAGE DISPOSAL

1. Indicate the level of treatment the sewage will be receiving:
☒ primary ☐ secondary ☐ tertiary

Pre-treatment (if applicable): ☐ screening ☐ maceration N/A

Lagoons (if applicable): ☐ anaerobic ☑ aerobic ☐ facultative

2. Indicate the capacity of the sewage treatment facility. >66,253 m^3

3. The average depth of the wastewater lagoon is <3 m.

4. What is the design freeboard? 1.5 m.

5. Indicate the retention time of the sewage while in the treatment facility. DISCHARGED ANNUALLY. IN FALL days

6. Indicate the estimated rate of discharge of wastewater. 10 L/sec

7. Indicate the location of the discharge point. NOTE LOCATION ON SITE PLAN.

8. Will the discharge be: ☑ seasonal ☐ continuous

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

What is the duration of the discharge (days/weeks/months) ? 30 days.

9. Comment on the general condition of the:

(a) Sewage collection system ☑ Satisfactory ☐ Unsatisfactory

If unsatisfactory, explain. LAGOON IN 2nd FIRST YEAR OF OPERATION.

(b) Discharge control system ☑ Satisfactory ☐ Unsatisfactory

If unsatisfactory, explain. _____

(c) Dams, diversion dykes, berms ☑ Satisfactory ☐ Unsatisfactory

If unsatisfactory, explain. _____

10. When was the last inspection of the facilities? Provide the name and contact number of the inspector.

PETER KUSUGAK/DIAND/IQALUIT (867) (1-819-979-4405)

INSPECTION DATE JULY 22, 1996

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

☑ No

☐ Yes, describe. NEW FACILITY - NO PROBLEMS REPORTED.

12. Is there any harvesting of fish or shell fish in the waters where waste is discharged?

☐ Yes ☒ No

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

13. Will the municipality be using a honey bag pit? ☐ Yes ☑ No

If yes, describe its:

Location -

Drainage -

Operation & Maintenance -

Please provide a map outlining the above information.

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

☐ Yes ☑ No

If yes, please describe. _____

_____

15. Have any spills occurred in the past five years? ☐ 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.

_____

_____

16. Does the community have a system in place for reporting spills? ☒ Yes ☐ No

If yes, describe. STOP SPILL, SCRAPE IT, AND BURN IT.

17. Does the community have a contingency plan for clean up of spills? ☒ Yes ☐ No

If yes, describe. _____

_____

18. Has there been any operating problems with the lagoon? ☐ Yes ☑ No

If yes, describe. NEW LAGOON IN ~~FIRST~~ SECOND YEAR OF OPERATION.

_____

_____

19. Are any changes planned in the sewage disposal facilities? ☑ No ☐ Yes

If yes, please describe and if possible, attach a copy of the plan and proposed implementation schedule.

_____

_____

_____

Section 7:

SOLID WASTE DISPOSAL

1. Indicate the capacity of the disposal area. >65,143 m^3 [1]

The average depth of the solid waste disposal site is 2.2 m. [2]

3. Are there any sources of commercial or industrial solid waste being deposited in the municipal system that may affect the quality of the effluent or leachate produced?
☐ Yes ☒ No

If yes, please describe. _____

_____

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

Solid Waste is picked up by work crew using a 1989 Ford F-350 truck mounted with a 12 cu.yd side loading garbage compactor.

5. Is the solid waste site fenced? ☑ Yes ☐ No

6. Will the municipality be using a dead animal pit? ☐ Yes ☒ No

If yes, describe its:

Location - _____

Drainage - _____

Operation & Maintenance - _____

7. Will the municipality be using a bulky metal waste disposal area? ☑ Yes ☐ No

If yes, briefly describe its location and operation plan.

Note location on Sewage Lagoon site plan.
Method of operation attached.

[1] 20 year solid waste generation noted in Design Concept Brief. (attached)
[2] finished depth recommended in 'Recommended Method of Operation' in Design Concept Brief. (attached).

8. Will the municipality be using a hazardous waste disposal area? ☒ Yes ☐ No
If yes, describe its:

Location - SEE GENERAL POND INLET MAP

Structure - SEALIFT CONTAINER

Operation & Maintenance - STORED UNTIL REMOVAL

9. Are there any hazardous commercial wastes entering the solid waste disposal system?
☒ Yes ☐ No

If yes, describe and note amounts and special handling/disposal methods for these wastes.

ONLY MINIMAL QUANTITY OF PAINT WE THEN STORED AT THE SEALIFT CONTAINER

10. How past, present, future has the community assessed the SNP dumpsite runoff?

DIAND SAMPLES TESTED AND RESULTS WERE FORWARDED TO THE HAMLET IN THE PAST.

11. If any natural watercourse may enter the proposed solid waste disposal area, what methods will be used to decrease the amount of runoff water entering these areas?

NO NATURAL WATERCOURSES PRESENT.

12. Indicate the volume of water that may enter these areas from the source(s) in question and attach all pertinent details of proposed diversions.

Source	Volume (m^3/day)
N/A	N/A

N/A

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

☒ No
☒ Yes, describe.

NO - WITH NEW SITE
YES - WITH OLD SITE - BUT IT BEING CLEAN-UP IN FALL 1998

15. Are any changes planned in the solid waste disposal system?

☐ Yes ☑ No

If yes, please describe and, if possible, attach a copy of the plan and proposed implementation schedule.

16. Is seepage (leachate) anticipated from the site? ☑ Yes ☐ No

IN ALL SITES THERE IS THE POSSIBILITY OF SOME LEACHATE. THROUGH DESIGN OF THE VARIOUS SITES THE EFFECTS OF LEACHATE SHOULD BE MINIMIZED. SNP SITES YET TO BE ESTABLISHED.

ABANDONMENT AND RESTORATION PROGRAM

1. List and describe the locations of abandoned or restored water treatment facilities. Outline on an current map. Refer to original attachment maps.

ABANDONED WATER TRUCKFILL STATION ADJACENT TO MUNICIPAL GARAGES. NOTE MAP LOCATION

2. List and describe the locations of abandoned or restored sewage treatment facilities. Outline on a current map. Refer to original attachment maps.

NOTE LOCATION OF SEWAGE POND ABANDONED IN 1996. RESTORATION PLANNED IN 1998.

3. List and describe the locations of abandoned or restored solid waste disposal facilities. Outline on a current map. Refer to original attachment maps.

NOTE LOCATION ON MAPS OF ABANDONED SOLID WASTE DISPOSAL FACILITY DUE FOR RESTORATION IN 1997.

4. Do you have an abandonment and restoration plan?
☑ Yes ☐ No
If yes, please attach a copy of the plan.

ATTACHMENT - "REMEDIATION OF EXISTING FACILITIES." FERGUSON SIMEK CLARK.

WATER QUALITY MONITORING PROGRAM

1. Briefly describe the methodology that is presently used to sample.

WATER QUALITY TESTING DONE BY DIAND, USUALLY ANNUALLY ON WATER SOURCES

WATER QUALITY TESTING FOR BACTERIA COMPLETED BY THE COMMUNITY HEALTH REPRESENTATIVES ON DELIVERY TRUCKS, HOUSEHOLD TANKS, ETC. MONTHLY

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

NEW FACILITY - SNP SITES TO BE ESTABLISHED.

3. Name the individual who performs sampling within the community?

~~Taqqu Aqoodoo~~ CHR Rep (Mona Katsak)
contact name

Box 180
postal address

POND INLET, NT X0A 0S0
postal address

(819) 899-8935
telephone number

(819) 899-8940
facsimile number

What level of training does this person have?

4. Recognized laboratory performing analysis of samples.

DIAND WATER LAB.
name

BILL CODEY
contact name

4601 - 52ND AVENUE
postal address

YELLOWKNIFE, N.W.T.
postal address

(403) 669-2780
telephone number

(403) 669-2718
facsimile number

☐ Yes ☑ No

If yes, describe. _____

_____

_____

ENVIRONMENTAL ASSESSMENT AND SCREENING

1. Has approval been obtained or sought from the Department of Fisheries and Oceans for using any fish bearing water bodies for containment or disposal of waste?
☐ Yes ☐ No N/A.

2. Are there any environmental studies ongoing or planned ?
☒ Yes ☒ No
If yes, list:

Prepared by	Title	Completion Date
MACA - REQUIRES ENVIRONMENTAL HEALTH RISK ASSESSMENT, CONTRACT HAS NOT YET AWARDED		