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NUNAVUT WATER BOARD

NUNAVUT IMALIRIYIN KATIMAYINGI

**Water Licence Application
Supplementary Questionnaire
for Municipalities**

I. GENERAL

1. Date: March 27, 2000
2. Applicant: Municipality of Qikiqtarjuaq, Baffin Region
3. Contacts Don Pickle
Name of Contact

Sr. Admin Officer
Position

867 927 8832 867 927 8120
Telephone # Fax #
4. Community Status: Village Town City
X Hamlet Settlement Corporation
5. Indicate the status of the municipality's licence on the date of the application.
 New Application
X Renewal - Water Licence # N4L3-0640 & N4L4-0640

II. ATTACHMENTS

1. Attach current or up-to-date detailed map(s) showing the locations of the:
 - a. raw water intake;
 - b. water storage and treatment facilities;
 - c. fuel and chemical storage;
 - d. sewage treatment facilities (lagoon, honey bag pit, wetland);
 - 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 or waste disposal facilities, locations of environmental monitoring sites. (Outline drainage basin);
 - j. Traditional use areas outlined on site map and areas around the community used for recreation, camping, fishing, etc.
 - k. abandoned and/or restored water treatment, sewage, and solid waste disposal facilities.

Are maps attached? Yes X No

If no, please indicate when they will be available.

Maps and locations have not changed since previous application

Indicate which organization has provided the various maps or diagrams.

GNWT - MACA

III. WATER SUPPLY

Water Source

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

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

Tulugak River
Primary Source

Bubble Lake
Secondary Source

3. Usual break-up & freeze-up period: July Nov/Dec
Break-up Freeze-up

Water Intake

1. Please provide short descriptions for the following:

a. Freshwater intake facility
Gravity fed

b. Operating capacity of pumps used
N/A – Gravity Fed

c. Intake screen size
No screens used

Water Storage

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

☒ Reservoir/Pond ☐ Storage tank ☐ None

☐ Other _____ Description:

2. If “reservoir” checked:

Is the reservoir lined? ☒ Yes ☐ No

What type of liner? Potable Water Rubber Liner When was it installed? 1984

Water Treatment

1. Indicate the quality of the water.

Summer:	<input checked="" type="checkbox"/> good	<input type="checkbox"/> fair	<input type="checkbox"/> poor
Fall:	<input checked="" type="checkbox"/> good	<input type="checkbox"/> fair	<input type="checkbox"/> poor
Winter:	<input checked="" type="checkbox"/> good	<input type="checkbox"/> fair	<input type="checkbox"/> poor

Spring: ☒ good ☐ fair ☐ poor

2. Describe.

We have excellent quality water from snow melt off

3. Type of water treatment.

☐ Filtration and chlorination

☒ Chlorination only

☐ None

☐ 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	0	0	0
TRUCKED	520	70 L/capita/day	36,400 L /day
TOTAL			

General Condition of the water supply facilities

1. General condition of the:

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.

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.

2. Does the community believe changes needed to the water supply, storage or treatment facilities? Describe.

No changes currently required

Identification

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

☒ Yes ☐ No

IV. SEWAGE DISPOSAL

1. What type(s) of sewage treatment does the community have?

☒ 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

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:

Located in Solid Waste (Garbage) Dump. Bags are burned and buried.

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.

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.

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.

- c. Dams, diversion dykes, berms

☒ Satisfactory ___ Unsatisfactory

If unsatisfactory, explain.

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.

No changes required at this time

Abandonment and Restoration

1. List and describe abandoned or restored sewage treatment facilities.
Refer to original attachment maps.

N/A

Identification

Are there signs identifying past and present sewage disposal sites ?

☒ Yes ___ No

V. SOLID WASTE DISPOSAL

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

Daily pick up by compaction (garbage) truck, delivered to dump, burned daily, covered with fill weekly.

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

3. Is the fence adequate? ☒ Yes ☐ No

If no, describe

Waste Reduction

1. Does the municipality burn garbage ?

☒ Yes ☐ No

If yes, describe how and when this is done.

Burned daily at end of work day approximately 4 pm

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

☐ Yes ☒ No

If yes, describe

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

Waste Oil Pit

1. Describe the waste oil storage area.

Waste Oil is contained in drums beside the firehall in a portable secondary containment berm. When there is excess waste oil unable to be burned in waste oil furnace (located in Fire Hall) it is transported to the Waste Oil pit located next to dump and burnt off. The waste oil pit is an old dump truck box. It has no leaks.

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.

Located next to solid waste dump, bulky metals are deposited here and covered over by fill.

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.

Batteries, paint, solvents, washers, dryers, fridges, freezers, snowmobiles, glycol, boats, motors, old equipment

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

☒ Yes ☐ No

If yes, describe its:

- a. Location
Solid Waste Dump
- b. Structure
Semi Trailer
- c. Operation and maintenance (describe special handling/disposal methods for these wastes)
When Trailer is full, we will sealift out for disposal in a proper hazardous waste facility.

General Condition of the Solid Waste Disposal Area

1. Comment on the general conditions 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.

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

No Changes needed

Abandonment and Restoration

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

Old Dump Site has been restored.

Identification

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

☒ Yes ☐ No

VI. INSPECTION AND MONITORING

1. When were municipal facilities inspected by:

☒ Indian and Northern Affairs Inspector

Date: August 11, 1998

☒ Municipal and Community Affairs

Date: 1995 & 1996

☐ Other:

Date: _____

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

☒ Yes ☐ No

If yes, describe.

Call 1 867 920 8130 spill line and report on case by case basis

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?

☒ 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?

Outside Municipal Garage, Airport Runway, Next to FireHall, behind Northern Store. All areas cleaned up to satisfaction of Renewable Resource Officer

Monitoring Program

1. Is water sampling and analysis done ?

☒ Yes ☐ No

If Yes, answer the questions a to e

- a. Briefly describe how samples are taken and sent to the laboratory.
Random Monthly Samples taken from water plant, water truck, housing unit & commercial unit.
Samples delivered to Health Centre and then sent to Iqaluit for testing.
Annual samples taken and sent to Ottawa for testing as per DIAND's requirements
- b. Briefly describe any monitoring done for wastewater effluent and leachate.
Annual sample taken and sent out for analysis to Ottawa
- c. Who is responsible for water sampling ?

Name: Les Kunilusi _____

Position: ☐ Foreman

Telephone #: ☐ 867 927 8200 _____

Fax # : ☐ 867 927 8818

Level of training: ☐ NWTWWA Training Courses ☐

- d. Recognized laboratory performing analysis of samples.

Name: ☐ Taiga Environmental Laboratory ☐

Address: ☐ 4601-52nd Ave, Yellowknife, NT X1A 2R3

Telephone #: ☐ 867 669 2788

Fax #: ☐ 867 669 2718 ☐

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

☐ Yes ☒ No

If yes, describe.

I. 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.

No noted concerns

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

1. Date: March 29, 2000
2. Municipality: Qikiqtarjuaq
3. Contact: (Environmental Health Officer Contact) Bonnie Segal

Telephone #: 867 979 7656

Fax #: 867 979 7659
4. Have there been any problems or health/environmental concerns with drinking water ?
____ Yes __X__ No

If yes, describe

5. Have there been any problems or health/environmental concerns with sewage disposal/treatment?
____ Yes __X__ No

If yes, describe

6. Have there been any problems or health/environmental concerns with solid waste disposal?
____ Yes __X__ No

If yes, describe

Monitoring Program

1. Does the Regional Health Board perform water quality sampling?
____ No __X__ 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: Les Kunilusi

Position: Hamlet Foreman

Telephone #: 867 927 8200

Fax # : 867 927 8818

Level of training: NWTWWA Training Courses

d. Recognized 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: March 29, 2000

2. Municipality: Qikiqtarjuaq

3. Contact: Doug Sitland
(Community Government and Transportation Representative)

Telephone # 867 975 5341

Fax # 867 975 5330

4. Population (according to most recent census results):
525

5. Estimated growth rate over next 5 years: 15 people/year estimated pop in 2005 - 599

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?

☐ Yes ☒ No

If yes, provide a summary of program details or site title, authors, cities, and dates:

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^3/day) and directions.
- f. The volume of seepage flow (m^3 / day); and
- g. The direction of each flow.

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

___ Yes ___X___ No

If Yes, who has provided them ?

If no, indicate when they will be available. 2001/02

Hydrology

1. Effects on surface water flow:

Are any stream channels altered?

___ Yes ___X___

No

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

___ Yes ___X___

No

Are there changes in water flow downstream of the project?

___ Yes ___X___

No

Is a storage reservoir created in a natural channel?

___ Yes ___X___

No

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

2. Drainage Area:

What is the drainage area? ___2___ km^2

What is the average elevation of the drainage basin? ___10___ metres

Is the drainage basin outlined on an attached map? ___Yes ___X___ No

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

3. Channel characteristics:

Is the course of any channel changed?

___ Yes ___X___ No

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

4. Will the cross-section of any watercourse be changed? ____ Yes X No

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

Water Supply

1. What is the rate of withdrawal from the source? 380 m³/day.
2. Is water drawn from the source X intermittently continuously
3. If it is drawn intermittently, during what month(s) is it drawn?
September/October
4. For what period is it drawn (days/weeks/months)? 7/week 3.5
weeks/month two months
5. What is the rate of flow of source (if river) or size (if lake)? unknown
6. At the intended rate of water usage, describe the effects on the river or lake from which water will be drawn.

No Impact

Water Intake

1. Please provide short descriptions of the following:
 - a. freshwater intake facility

6 " PVC Pipe, Gravity Feed

- b. operating capacity of the pumps

N/A – Gravity Feed

- c. intake screen size

No Screen

Water Storage

1. Is a dam or dyke being used to store or alter the flow of water? ____ Yes X No
2. What are the dimensions of the dam or dyke? N/A
Length: Width: Height:
U/S slope: D/S slope:
3. Does the proposed dam create a reservoir in a natural watercourse? N/A

☐ Yes ☐ No

If yes, what is the storage capacity and surface area of the reservoir?

21,000 m³ 16 ha.

4. Will the dam or dyke affect fish migration or movement ? N/A

☐ Yes ☐ No

If yes, describe all measures for compensation of fish habitat lost due to the dam or dyke, and mitigation for fish migration or movement.

Water Treatment

1. Indicate the capacity of the treatment facility. 10 L/min
2. What is the capacity of the water storage facility. 21000 m³
3. 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.

Chlorination is the only water treatment

4. Are there any changes planned in the water treatment facilities?

☒ No ☐ Yes

If yes, attach a copy of the plan or indicate changes and include an implementation schedule.

Include excerpt from MACA Capital Plan if available.

Plan study projected for 2001/02

Sewage Disposal

1. Indicate the level of sewage treatment:
☒ primary ☐ secondary ☐ tertiary
Pre-treatment (if applicable): ☐ screening ☐ maceration
Lagoons (if applicable): ☐ anaerobic ☒ aerobic ☐ facultative
2. Indicate the capacity of the sewage treatment facility 16,300 m³
3. Based on current population projections, the facility will meet the needs of the community until the year 2003.
4. Average depth of the wastewater lagoon 20 m.
5. What is the design freeboard? 1 m.
6. Indicate the retention time of the sewage while in the treatment facility 365 days.
7. Indicate the estimated rate of discharge of wastewater 1 month to deccant

8. Indicate the location of the discharge point SW Corner.

9. Is the discharge: ☒ seasonal ☐ continuous

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

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

October for 31 days

10. Are there any changes planned in the sewage disposal facilities?

☒ No ☐ Yes

If yes, attach a copy of the plan or indicate changes and include an implementation schedule.

Include excerpt from MACA Capital Plan if available.

Planing Study in 2001/02

Solid Waste Disposal

1. Indicate the capacity of the disposal area 8,000 m³.

2. The *average* depth of the solid waste disposal site 10 m.

3. The current facility will meet community needs until the year 2003.

4. Do any natural watercourse enter the solid waste disposal area? What methods are used to decrease the amount of runoff water entering these areas?

No water courses enter disposal area. Ditching is used to decrease runoff

5. Indicate the volume of water that may enter these areas from any source(s) and attach all pertinent details of the diversions.

Source

Volume

None

6. Please describe any diversions of watercourses:

None

7. Are there any changes planned in the solid waste disposal facilities?

☒ No ☐ Yes

If yes, attach a copy of the plan or indicate changes and include an implementation schedule.

Include excerpt from MACA Capital Plan if available.

Planing Projected for 2001/02

Other

1. Describe any additional details on the existing municipal facilities which should be considered by the Nunavut Water Board during it review.

Old Community Dump has been cleaned up, however errossion is beginning to expose dump site again.