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Kathleen Racher
Manager, Water Resources Division
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Your file - Votre référence
N7L3-1619

Our file - Notre référence

October 15, 2004

Mr. Gordon Wray
Chairman
NWT Water Board
P.O. Box 1326
Yellowknife, NT X1A 2N9



Dear Mr. Wray:

**RE: Hamlet of Paulatuk
Type "B" Municipal Water Licence Renewal
Level 1 Environmental Screening**

The Department of Indian Affairs and Northern Development (DIAND) has screened the above mentioned water licence renewal application submitted by the Hamlet of Paulatuk pursuant to Section 5 of the *Canadian Environmental Assessment Act* (CEAA).

DIAND has determined that this project, as proposed, is not likely to cause significant adverse environmental effects, providing that proposed mitigation measures are carried out and licence conditions met. A screening report has been prepared and DIAND recommends that the application proceed through the regulatory process. Incorporation of the recommended mitigative measures into the terms and conditions of the licence is required.

If the Board concurs with our findings, please sign the attached screening forms, advise the applicant of the CEAA recommendations in writing, and return the original forms to Water Resources Division for archiving and closure with CEAA.

If you require further information, please contact me at (867) 669-2749.

Sincerely,

Kathleen Racher
Manager
Water Resources Division

encl.

cc: D. Livingstone, Director, RR & E
North Mackenzie/Inuvik District
Environment and Conservation Division

Canada

ENVIRONMENTAL SCREENING REPORT

SCREENING SUMMARY

The Hamlet of Paulatuk (the Hamlet) applied to the Northwest Territories Water Board (NWTWB) pursuant to Section 14(6)(b) of the *Northwest Territories Water Act* (NWTWA) for a renewed municipal water licence. The proposed project involves municipal use of water in the Hamlet of Paulatuk, within the Northwest Territories, Inuvialuit Settlement Region. The current Water Licence expires October 30th, 2004 and water use and deposition of waste will be ongoing until the renewal of the current Water Licence. The environmental components with the potential to be adversely affected include surface water, air quality, soil and permafrost, terrain, vegetation, terrestrial fauna and habitat, aquatic fauna and habitat, heritage resources, and traditional use. The NWTWB examined the Hamlet's proposal in relation to these environmental components and determined the proposal to be adequate.

The NWTWB is the Responsible Authority under the *Canadian Environmental Assessment Act* (CEA Act) and has prepared this screening. The NWTWB, as the Lead Responsible Authority, has examined the Hamlet's proposed environmental protection and mitigation measures in relation to the CEA Act and determined the measures to be adequate.

The NWTWB is of the view that, taking into account the implementation of the Hamlet's proposed environmental procedures and mitigative measures the project is not likely to cause significant adverse environmental effects. This represents a determination pursuant to paragraph 20(1)(a) of the *Canadian Environmental Assessment Act*.

PROJECT IDENTIFICATION

Project Title:	Hamlet of Paulatuk – Type B Municipal Licence Renewal
Physical Work/Activity:	Water Use and Waste Disposal
Project Location:	Hamlet of Paulatuk, Inuvialuit Settlement Region, Northwest Territories, Approx. 69° 21'N 124° 04'W
Applicant Name:	Hamlet of Paulatuk (the Hamlet)
Application Date:	12/08/04
NWT Water Board File No.:	N7L3-1619
CEA Act Registration Date:	20/08/04
CEA Registry Reference¹ No.:	04-01-5666
CEA Act Law List Trigger:	Paragraph 14(6)(b) of the <i>Northwest Territories Waters Act</i>
CEA Act Determination Date:	26 October 2004

¹ CEAR (Canadian Environmental Assessment Registry)

1.0 SCOPE OF THE ENVIRONMENTAL ASSESSMENT

The Water Licence Renewal is provisionally scheduled to begin at the end of October 2004 and be in effect until October 2009. The Hamlet has proposed to withdraw water and deposit waste in accordance to the current licence. No changes are planned to current water use, its treatment and sewage disposal.

The NWTWB considers the principal project to be the use of water, its treatment and the deposit of waste. Unless otherwise identified this Environmental Screening Report (ESR) is based on the information provided in the Hamlet's Project Description¹ for the Type B Municipal Water Licence Renewal and associated documents (Appendix A).

Scope of the Project

Physical Work and/or Activity	Description
<i>Municipal Operations – October 2004 to October 2009</i>	
Water use	<ul style="list-style-type: none"> ▪ Approximately 8,000 m³ per year withdrawn from New Water Lake, 18 m deep and roughly 450 m x 350 m across (estimated volume 742,201 cubic metres). ▪ Water is treated with a chlorine solution as it is pumped into the water truck, prior to distribution. ▪ Water use is not expected to exceed 10,000 m³ per year for the next 5 years. ▪ Alternatively water can be withdrawn from Old Water Lake.
Sewage disposal	<ul style="list-style-type: none"> ▪ Approximately 8,000 m³ per year of sewage is deposited to the lagoon, locally known as Dead Lake, 4 to 5 m deep and roughly 250 m x 350 m across (estimated capacity 103,083 cubic metres). ▪ The sewage lagoon has a natural outflow through a large vegetated area approximately 500 m long. ▪ Sewage disposal is not expected to exceed 10,000 m³ per year for the next 5 years.
Solid waste disposal	<ul style="list-style-type: none"> ▪ Solid waste will be deposited at a disposal site consisting of three main cells, remaining capacity is approximately 1,200 m³. ▪ The site has a bulk meal waste area and an area designated for hazardous waste. ▪ The few honey bags are deposited at the honey bag disposal site and covered periodically as required.
<i>Abandonment and Restoration Plan</i>	
Waste disposal sites	<ul style="list-style-type: none"> ▪ The raw water source and sewage lagoon are expected to remain the same for the term of this licence. ▪ Solid waste disposal cells when full or abandoned will be covered with the stockpiled soils excavated and the area will be seeded to natural vegetation. ▪ Removal of any infrastructure associated with that cell.

¹ Hamlet of Paulatuk August 2004. *Water Licence Renewal Application*, submitted by Dillon Consulting Limited.

Scope of the Factors that Were Considered

The factors considered within the scope of this ESR, both spatial and temporal, are those set out in subsection 16(1) of the CEA Act and are examined in this report.

The project area is the area in which the project footprint occurs; the withdrawal lake, the sewage disposal lagoon and wetland area and the solid waste disposal area (see area details in scope table above).

2.0 DESCRIPTION OF THE ENVIRONMENT

2.1 Site Setting

The Hamlet is located in the Inuvialuit Settlement Region of the Northwest Territories. It is situated at the south end of Darnel Bay on the Arctic Coast, approximately 400 km east of Inuvik and 855 km northwest of Yellowknife. The mean annual temperature is 18.8 °C in July and -29 °C in January. The area is underlain by continuous permafrost with soils that are predominantly sandy, glacial till and marine sands and silts. Supplies are usually shipped by barge or by plane.

2.2 Population Projection

The population of Paulatuk in 1991 was 271 persons and in the year 2002 the last year available by the GNWT Bureau of Statistics the population was estimated at 319 persons. In 2009 the population is projected to be 342, an increase of only 23 persons. By the year 2019 the population is expected to be 411 persons.

2.3 Raw Water Source

The Hamlet currently obtains drinking water from New Water Lake, approximately 2 km from the Hamlet. The lake lies at the base of the hills southeast of the Hamlet. The lake is fed by a drainage basin approximately 140 hectares in size. The lake is recharged by precipitation, which averages 224 mm annually. The water supply facility and truck fill station is located on the north end of the lake and an intake pipe leads into the lake 5 m below the surface.

2.4 Sewage Disposal Site

The sewage lagoon is a natural lake (locally referred to as 'Dead lake' or 'Lake A') located approximately 2 km southwest of the Hamlet and does not contain any fish. Sewage is released into the lagoon using a chute. It is located in a drainage basin not associated with the water supply. The lake naturally drains through a vegetated corridor before reaching Darnel Bay.

2.5 Solid Waste Disposal Site

The solid waste disposal site is separated into three separate disposal areas. The refuse disposal area consists of three cells and only general wastes are placed here. The pits are excavated, covered and revegetated once full. The bulk metal waste area is located across the road and contains automobiles, appliances, etc. The hazardous materials area is located near the bulk metal waste area. The site contains paint, household hazardous wastes and old fuel drums. Waste oil generated by the Hamlet is stored in sealed drums until it can be transported out by barge.

3.0 CONSULTATION

3.1 Consultation carried out by the Hamlet

The Hamlet contracted Dillon Consultants Limited to review and prepare a water licence renewal application to the NWTWB. Dillon has reviewed the Hamlet's municipal infrastructure and has issued a report submitted with the application for a water licence renewal (dated August 2004).

3.2 Consultation with other Federal Authorities pursuant to the CEA Act

Based on the type and location of the project, and the nature of the environment that could be affected by the project, the NWTWB contacted Environment Canada (EC), Fisheries and Oceans Canada (DFO), NEB, INAC, Natural Resources Canada (NRCan), Health Canada (HC), and Parks Canada (PC) for their consideration. Summaries of the comments are provided in Appendix D.

3.3 Consultation carried out by the NWT Water Board

The NWT Water Board requested the NWT Water Board Technical Advisory Committee to provide comment on the Type B water licence renewal application. The details of the response to the consultation carried out by the NWT Water Board and the information considered in this ESR is provided in Appendix F.

4.0 ENVIRONMENTAL EFFECTS ANALYSIS

4.1 Baseline Information and Sources

The NWTWB's analysis is based on the information in the Application and the documents referenced in Appendices A, B and C.

4.2 Methodology of the Board's Environmental Assessment

In assessing the environmental effects of the project the NWTWB used an issue-based approach. In its analysis the NWTWB identified interactions expected to occur between the proposed project activities and the surrounding environmental components. If there were no expected project interactions with an environmental component then no further examination was deemed necessary (Table 4.3.1).

Further analysis was conducted for project-environment interactions that could result in negative effects or where the interactions or effects were uncertain (Table 4.4.1). As well, environmental effects of accidents or malfunctions that may occur in connection to the project were considered. The Applicant's proposed mitigative measures and environmental-protection procedures were examined to assess the potential for any residual adverse environmental effects.

Each predicted residual adverse environmental effect was evaluated and an overall cumulative effects assessment completed taking into consideration any additional mitigation, monitoring or regulatory requirements. Frequency, duration, geographic extent, reversibility and magnitude of the predicted effects were evaluated in determining significance and likelihood. The results of the environmental-effects analysis are summarized in the NWTWB's (Sections 5.0- 7.0) conclusions.

4.3 Project – Environment Interactions

Table 4.3.1 Interaction Matrix

	Environmental Component	Project Interaction (Y/N/U)	Probable Effect (Pos/Neg/0/U)	Description of Interaction (How, When, Where Likely to Occur)
Physical	Groundwater	Y	Neg	<ul style="list-style-type: none"> Potential interaction with waste at the landfill and sewage lagoon.
	Surface Water	Y	Neg	<ul style="list-style-type: none"> Potential surface water collection at landfill and sewage lagoon.
	Air Quality	N	0	<ul style="list-style-type: none"> No interaction.
	Soils-Permafrost	N	0	<ul style="list-style-type: none"> No interaction.
	Terrain	Y	Neg	<ul style="list-style-type: none"> Excavation of solid waste disposal cells.
	Effects of Environ. on Project	N	0	<ul style="list-style-type: none"> No interaction.
Biological	Vegetation	Y	Neg	<ul style="list-style-type: none"> Damage or removal of vegetation at solid waste disposal site.
	Terrestrial Fauna	Y	Neg	<ul style="list-style-type: none"> Direct human-wildlife interaction during vehicle travel to and from the project area and at landfill site. Wildlife attraction to the landfill site.
	Terrestrial Habitat	Y	Neg	<ul style="list-style-type: none"> Habitat removed or altered.
	Wetlands	Y	Neg	<ul style="list-style-type: none"> Some minor damage to aquatic vegetation communities and graminoid and sedge wetlands during withdrawals. Deposit of sewage at the lagoon site.
	Aquatic Fauna	Y	Neg	<ul style="list-style-type: none"> Potential impingement or entrainment in water intake hoses.
	Aquatic Habitat	Y	Neg	<ul style="list-style-type: none"> Changes in aquatic habitat due to water drawdown. Deposit of waste at the lagoon site.
	Species at Risk	Y	Neg	<ul style="list-style-type: none"> Possible interaction with polar and grizzly bears which are a COSEWIC species of "Special Concern" and listed as "sensitive" under the NWT Species 2000 classification.
Social	Land Use	Y	Neg	<ul style="list-style-type: none"> Use of the sewage and solid waste disposal sites.
	Heritage Resources	N	0	<ul style="list-style-type: none"> No interaction.
	Traditional Use	N	0	<ul style="list-style-type: none"> No interaction.
	Socio-economic	Y	Pos	<ul style="list-style-type: none"> Long-term employment opportunities and use of local suppliers/contractors.
	Human Health	N	0	<ul style="list-style-type: none"> No interaction
	Noise/Aesthetics	Y	Neg	<ul style="list-style-type: none"> Unightly deposition sites.

Legend: Y (yes); N (no); U (uncertain); Pos (positive); Neg (negative); 0 (neutral)

4.4 Project Interactions that May Result in Residual Adverse Environmental Effects

Table 4.4.1: Environmental-Effects Matrix

Environmental Component	Predicted Negative or Uncertain Effects	Applicant Mitigation (Y/N)	Residual Adverse Effect (Y/N/U)	Explanatory Notes
Ground Water	Introduction of wastes at landfill and sewage lagoon	Y	N	Continuous permafrost will mitigate any leaching or movement of contaminated ground water.
Surface Water	Surface water collection at the landfill and sewage lagoon	Y	N	Surface water will evaporate or be incorporated into the sewage lagoon. The lagoon outflow will be filtered and treated as it passes through the vegetation corridor before reaching Darnel Bay.
Terrain	Modification of the terrain for waste disposal cells	Y	Y	See Table 4.5.1
Vegetation	Damage and/or removal of vegetation	Y	Y	See Table 4.5.2
Terrestrial Fauna	Wildlife attraction, interaction and mortality	Y	Y	See Table 4.5.3
Terrestrial Habitat	Habitat removal or alteration	Y	N	The footprint of the solid waste disposal site is very small compared to surroundings and will not extend during the life of the project.
Wetlands	Changes during drawdown and sewage disposal	Y	N	Drawdown is recharged by precipitation and the vegetated wetland corridor that connects the lagoon to Darnel Bay receives diluted wastes and will return to natural condition.
Aquatic Fauna	Mortality due to impingement or entrainment in water intake hoses.	Y	N	The water intake hose is screened and steps will be taken to reduce screen size to 2.54 mm as per DFO guidance.
Aquatic Habitat	Changes during water drawdown	Y	N	Only small volumes of water will be withdrawn and it will be intermittent.
	Loss of aquatic habitat due to deposition of sewage	Y	Y	See Table 4.5.4
Species at Risk	Disturbance of polar and grizzly bears	Y	Y	See Table 4.5.5
Land Use	Sewage and solid waste disposal sites	Y	N	The sites have been selected based on location and acceptability and will eventually be returned to natural conditions.
Noise/Aesthetics	Unightly waste disposal sites	Y	N	Sites have been located out of site and will be reclaimed once abandoned.
Accidents and Malfunctions	Spills, leaks, well kicks and blowouts, and malfunction of wastewater treatment system	Y	N	Regular maintenance checks. Proper handling procedures and a spill contingency plan for oils and chemicals. Drinking water and sewage are monitored to ensure standards are met.

Legend: Y (yes); N (no); U (uncertain)

4.5 Predicted Residual Adverse Environmental Effects

Table 4.5: Criteria for Evaluation of Significance of Adverse Environmental Effects

Criteria	Definitions
ALL CRITERIA	
Uncertain	When no other criteria descriptor is applicable due to either lack of information or inability to predict.
FREQUENCY	
Single	A one-time event over assessment period (i.e., life of the project)
Multiple	Occurs intermittently but repeatedly over assessment period
Continuous	Occurs continually over assessment period
DURATION	
Short-term	Effect duration is limited to less than two days
Medium-term	Effect duration is longer than two days but less than one year
Long-term	Effect duration extends one year or longer
GEOGRAPHIC EXTENT	
Local	Project footprint, or the immediate area of the project operations that is estimated to affect less than 1 % of the regional area
Sub-regional	Extending beyond the limits of the project operations, but limited to an area of no more than 5 % of the regional area
Regional	Effect reaches beyond the 5 % of the regional area (Mackenzie Delta within the Inuvialuit Settlement Region)
REVERSIBILITY	
Reversible	Effect would return to baseline conditions within the life of the project
Irreversible	Effect would be permanent, or only reversible beyond the life of the project
MAGNITUDE	
Low	<ul style="list-style-type: none"> • Effects anticipated to be restricted to a few individuals, but would not affect the resource or parties involved • Factors that influence species at the population level would not be affected and in no way endangers their long-term survival • The component is not rare, nor unique
Medium	<ul style="list-style-type: none"> • Effects would affect many individuals or could noticeably affect the resource or parties involved • Factors that influence species at the population level would be affected to a degree that a change within natural limits of variability will occur without endangering their long-term survival • The component is not rare, nor unique
High	<ul style="list-style-type: none"> • Effects would affect numerous individuals or affect the resources or parties involved in a substantial manner • Factors that influence species at the population level would be altered to such a degree that a change beyond natural limits of variability will occur and endangers the long-term survival of a population or species • The component is unique; requires a particular protection status
EVALUATION OF SIGNIFICANCE	
Significant	Any adverse effect that would be of high frequency, long-term duration, regional extent, irreversible, and of high magnitude
Not significant	Any adverse effect that does not meet the above "significant" definition, in particular any adverse effect that would be of low to medium frequency, short to medium term duration, immediate to local extent, reversible, and of low to medium magnitude

Table 4.5.1: Summary of Analysis

Residual Effect: Modification of terrain for waste disposal cells					
<i>Physical Work/Activity:</i>		<ul style="list-style-type: none"> ▪ Excavation of solid waste disposal cells 			
<i>Mitigation:</i>		<ul style="list-style-type: none"> ▪ Excavated soil will be stockpiled and used to cover the cells once full or abandoned. 			
<i>Monitoring/Follow-up:</i>		<ul style="list-style-type: none"> ▪ None 			
Frequency	Duration	Geographic Extent	Reversibility	Magnitude	Significance
Single	Short-term	Local	Reversible	Low	Not significant

Table 4.5.2: Summary of Analysis

Residual Effect: Damage and/or removal of vegetation					
<i>Physical Work/Activity:</i>		<ul style="list-style-type: none"> ▪ Removal of vegetation for solid waste disposal cells 			
<i>Mitigation:</i>		<ul style="list-style-type: none"> ▪ Revegetation of the waste cells with natural vegetation types.. 			
<i>Monitoring/Follow-up:</i>		<ul style="list-style-type: none"> ▪ None 			
Frequency	Duration	Geographic Extent	Reversibility	Magnitude	Significance
Single	Short-term	Local	Reversible	Low	Not significant

Table 4.5.3: Summary of Analysis

Residual Effect: Wildlife attraction, interaction and mortality					
<i>Physical Work/Activity:</i>		<ul style="list-style-type: none"> ▪ Deposition of solid waste ▪ Human/animal interaction at the site and potential mortality from vehicle collision 			
<i>Mitigation:</i>		<ul style="list-style-type: none"> ▪ Erect a fence to enclose the solid waste disposal site (item proposed). ▪ Restrict community vehicles and human access to the site. ▪ Ensure staff is trained in bear safety. 			
<i>Monitoring/Follow-up:</i>		<ul style="list-style-type: none"> ▪ None 			
Frequency	Duration	Geographic Extent	Reversibility	Magnitude	Significance
Continuous	Long-term	Local	Reversible	Low	Not significant

Table 4.5.4: Summary of Analysis

Residual Effect: Loss of aquatic habitat due deposition of sewage					
<i>Physical Work/Activity:</i>		<ul style="list-style-type: none"> ▪ Deposition of municipal sewage 			
<i>Mitigation:</i>		<ul style="list-style-type: none"> ▪ Waste is diluted in the natural lake. ▪ Natural biological processes treat the waste. ▪ The lagoon outflow is delayed and filtered in the vegetated corridor between the lagoon and Darnel Bay. 			
<i>Monitoring/Follow-up:</i>		<ul style="list-style-type: none"> ▪ Monitoring of wastewater effluent at SNP station in Darnel Bay. 			
Frequency	Duration	Geographic Extent	Reversibility	Magnitude	Significance
Continuous	Long-term	Local	Reversible	Low	Not significant

4.6 Cumulative Effects Assessment

Table 4.6.1: Summary of Analysis

Potential Cumulative Effect (CE):	<ul style="list-style-type: none"> • Modification of terrain for waste disposal cells • Damage and/or removal of vegetation • Wildlife attraction, interaction and mortality • Loss of aquatic habitat due to deposition of sewage • Disturbance of polar and grizzly bears 				
<i>Project Residual Effect:</i>	<ul style="list-style-type: none"> ▪ Terrain at the solid waste cells will be covered and resemble natural conditions. ▪ Solid waste cells will be revegetated to natural conditions. ▪ The solid waste disposal site attracts all types of wildlife. ▪ Lessened water quality conditions at the sewage lagoon. ▪ Attraction of bears to the solid waste disposal site. 				
<i>Effects of Other Projects or Activities that Act in Combination with the Project Residual Effect:</i>	<ul style="list-style-type: none"> ▪ None, since there no other projects identified in the project area, there is no potential combination of effects, therefore no cumulative effects. 				
<i>CE Mitigation:</i>	<ul style="list-style-type: none"> ▪ None 				
<i>CE Monitor/Follow-up:</i>	<ul style="list-style-type: none"> ▪ None 				
Frequency	Duration	Geographic Extent	Reversibility	Magnitude	Significance
Single	Medium-term	Local	Reversible	Low	Not significant

5.0 NWTWB CONCLUSION

The NWTWB examined all of the environmental information as described or referenced in this ESR in making its conclusion. The NWTWB is of the view that the Hamlet should implement all of the policies, practices, mitigative measures, recommendations, and procedures for the protection of the environment referred to in its application and that a condition is required to that effect.

The NWTWB is of the view that if the Hamlet’s environmental protection procedures and mitigative measures are implemented, as well as any conditions imposed by the NWTWB Type B water licence that may be granted, the proposed Project is not likely to cause significant adverse environmental effects.

5.1 Proposed NWTWB Conditions

Proposed conditions are provided in Appendix F.

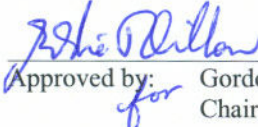
6.0 CEA ACT Determination

This ESR and the CEA Act determination were approved by the NWTWB on the date specified on page one of this report.

Table 6.0 CEA Act Determinations

NWT Water Board	CEA Act Decision on the Hamlet of Paulatuk, Type B Water Licence Renewal
X	Section 20 (1)(a) - Project may proceed as it is not likely to cause significant adverse environmental effects.
	Section 20 (1)(b) - Project may not proceed as it is likely to cause significant adverse environmental effects that cannot be justified.
	Section 20 (1)(c)(i) - Project must be referred to the Minister of Environment as it is uncertain whether the project is likely to cause significant adverse environmental effects.
	Section 20 (1)(c)(ii) - Project must be referred to the Minister of Environment as it is likely to cause significant adverse environmental effects.
	Section 20 (1)(c)(iii) - Project must be referred to the Minister of Environment as public concerns warrant the reference.

NWT Water Board Authorization (Lead RA):


Approved by: for Gordon Wray
Chair, NWT Water Board

Oct 26, 2004
Date

7.0 AGENCY CONTACT

Mr. Gordon Wray, Chairman
Northwest Territories Water Board
C/O Mr. Nathen Richea, Environmental Assessment Coordinator
4914 - 50th Street
P.O. Box 1500
Yellowknife, Northwest Territories X1A 2R3
Facsimile (867) 669-2716
E-mail: richean@inac-ainc.gc.ca

APPENDIX A: INFORMATION SOURCES

Reference No.	Title/Type of Document/Date
1	Hamlet of Paulatuk Water Licence Renewal Application, August 2004

APPENDIX B: APPLICANT'S REGULATORY COMMITMENTS

Reference No.	Legislation/Permits
1	NWT Water Board Type B Water Licence Renewal (N7L3-1619)

APPENDIX C: PROJECT-SPECIFIC MONITORING AND FOLLOW-UP

Environmental Component	Mitigation, Monitoring and/or Follow-up
Effluent Sampling	Surveillance Network Program

APPENDIX D: CONSULTATION WITH OTHER FEDERAL AUTHORITIES

Department / Agency	Involvement			Summary of Comments
	RA ¹	FA ² Specialist	None	
Department of Fisheries and Oceans (Email dated: August 25, 2004)		X		- Indicated that they have specialist advice available upon request. -Have had discussions with the Hamlet of Paulatuk about water withdrawal induction screen size.
Environment Canada / Canadian Wildlife Service (Sect 5 response dated: September 15, 2004)		X		- Indicated that they have specialist advice available upon request. - Provided comments (see below)
NEB (Sect 5 response dated: September 14, 2004)		X		- Indicated that they have specialist advice available upon request.
Indian and Northern Affairs Canada (Letter dated: September 20, 2004)		X		- Indicated that they have specialist advice available upon request.
Parks Canada (Sect 5 response dated: September 13, 2004)		X		-Indicated that they have specialist advice available upon request.
Natural Resources Canada (Sect 5 response dated: August 27, 2004)		X		-Indicated that they have specialist advice available upon request.

¹ RA refers to a Responsible Authority as defined by the CEA Act

² FA refers to a Federal Authority as defined by the CEA Act

Health Canada (Sect 5 response dated: August 27, 2004)		X	- Indicated that they have specialist advice available upon request.
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APPENDIX E: CONSULTATION CARRIED OUT BY NWTWB

Individual / Agency	Summary of Comments
INAC Water Resources (Memo dated: Aug. 25, 2004)	<p>Section A:</p> <ul style="list-style-type: none"> • Note: the telephone number of the 24-hour spill line is 867-920-8130. <p>Section E:</p> <ul style="list-style-type: none"> • The municipality states that the total capacity for each (of the solid waste cells) is approximately 1800m³, and that 1 cell is full and therefore the remaining capacity of the solid waste facility is 1200m³. For clarification purposes I would like it to be clarified that each cell has a capacity of 600m³ and the total capacity of the solid waste facility is 1800m³. • If the Hazardous Waste area is ever used the Municipality should ensure that it meets the GNWT RWED's general storage requirements for storage facilities as outlined in the Environmental Guideline for General Management of Hazardous Waste in the NWT. • #1: <ul style="list-style-type: none"> ○ a summary of modifications and/or major maintenance work carried out on the Water Supply and Waste Disposal Facilities, including all associated structures ○ tabular summaries of all data generated under the "Surveillance Network Program" ○ a list of unauthorized discharges ○ updates or revisions to the approved Waste Disposal Facilities Operation and Maintenance Plan • The Licensee shall maintain the necessary signs to inform the public of the location of the Water Supply Facilities and Waste Disposal Facilities. All postings shall be located and maintained to the satisfaction of an Inspector.
Inuvik Regional Health and Social Services (Email dated: September 16, 2004)	<ul style="list-style-type: none"> • Indicated that they have no concerns regarding the project however they identified the lists of regulations that are applicable to the Hamlet. • According to Mayor Keith Dodge and the CHR, the new solution mixer has arrived in the community of Paulatuk and therefore must be installed immediately. • It was noted that the sewage disposal site was without an enclosure. Section 10 of the Public Sewerage Systems Regulations states: "Adequate provision shall be made to protect the operator and visitors from hazards and the following shall be provided according to the particular needs of each plant: (a) enclosure of the plant site with a fence designed to discourage the entrance of unauthorized persons and animals." • It was noted in the application that a dead animal pit is not provided for the community. Community members need a place to dispose of animal offal, carcasses and other related wastes in a sanitary manner. The General Sanitation Regulations stipulate, under Section 27, that: "Every incorporated municipality shall provide adequate waste disposal grounds for the disposal of all garbage, refuse, excreta and other waste matter and shall cause such waste materials to be burned, buried or covered with a layer of earth or other innocuous material as necessary to deodorize the matter or thing deposited on the grounds and prevent the breeding of flies."

Environment Canada (Letter dated: July 12, 2004)	<ul style="list-style-type: none">• Compliance with the <i>Fisheries Act</i> is mandatory, a spill contingency plan is required, spill response equipment shall be maintained and available onsite, and steps should be taken to fence the area encompassing the solid waste disposal site.
DIAND Water Resources Officer (Letter dated: September 20, 2004)	<ul style="list-style-type: none">• Conditions regarding SNP signage, Operations and Maintenance and Construction should be reviewed, and if deemed necessary, added to the new Water Licence.

APPENDIX F: NWTWB PROPOSED WATER LICENCE

PART A: SCOPE AND DEFINITIONS

1. Scope

- a) This Licence allows for the use of water and disposal of waste for municipal purposes at the Incorporated Hamlet of Paulatuk, Northwest Territories, (Latitude 69°21'N and Longitude 124°04'W).
- b) This Licence is issued subject to the conditions contained herein with respect to the taking of water and the depositing of waste of any type in any waters or in any place under any conditions where such waste or any other waste that results from the deposits of such waste may enter any waters. Whenever new Regulations are made or existing Regulations are amended by the Governor in Council under the Northwest Territories Waters Act, or other statutes imposing more stringent conditions relating to the quantity or type of waste that may be so deposited or under which any such waste may be so deposited this Licence shall be deemed, upon promulgation of such Regulations, to be automatically amended to conform with such Regulations.
- c) Compliance with the terms and conditions of this Licence does not absolve the Licensee from responsibility for compliance with the requirements of all applicable Federal, Territorial and Municipal legislation.

2. Definitions

In this Licence: N7L3-1619

"Act" means the *Northwest Territories Waters Act*;

"Analyst" means an Analyst designated by the Minister under Section 35(1) of the *Northwest Territories Waters Act*;

"Board" means the Northwest Territories Water Board established under Section 10 of the *Northwest Territories Waters Act*;

"Inspector" means an Inspector designated by the Minister under Section 35(1) of the *Northwest Territories Waters Act*;

"Licensee" means the holder of this Licence;

"Minister" means the Minister of Indian Affairs and Northern Development;

"Regulations" means Regulations proclaimed pursuant to Section 33 of the *Northwest Territories Waters Act*;

"Waste" means waste as defined by Section 2 of the *Northwest Territories Waters Act*;

"Average Concentration" means the arithmetic mean of any four consecutive analytical results submitted to the Board in accordance with the sampling and analysis requirements specified in the "Surveillance Network Program";

"Average Concentration For Faecal Coliform" means the geometric mean of any four consecutive analytical results submitted to the Board in accordance with the sampling and analysis requirements specified in the "Surveillance Network Program";

"Bagged Toilet Waste Disposal Facilities" comprises the area and associated structures designed to contain bagged toilet wastes (honeybags);

"Commercial Waste Water" means water and associated waste generated by the operation of a commercial enterprise, but does not include toilet wastes or greywater;

"Freeboard" means the vertical distance between water line and crest on a dam or dyke's upstream slope;

"Greywater" means all liquid wastes from showers, baths, sinks, kitchens and domestic washing facilities, but does not include toilet wastes;

"Geotechnical Engineer" means a professional engineer registered with the Association of Professional Engineers, Geologists, and Geophysicists of the Northwest Territories and whose principal field of specialization is the design and construction of earthworks in a permafrost environment;

"Modification" means an alteration to a physical work that introduces a new structure or eliminates an existing structure and does not alter the purpose or function of the work, but does not include an expansion;

"Pumpout Sewage" means all toilet wastes and/or greywater collected by means of a vacuum truck for disposal at an approved facility;

"Sewage" means all toilet wastes and greywater;

"Sewage Disposal Facilities" comprises the area and engineered structures designed to contain sewage identified in Drawing Number PSW_P8, titled "Paulatuk Solid Waste Disposal Site and Sewage Lagoon", dated March 11, 1994;

"Solid Waste Disposal Facilities" comprises the area and associated structures designed to contain solid wastes identified in Drawing Number PSW_P8, titled

"Paulatuk Solid Waste Disposal Site and Sewage Lagoon", dated March 11, 1994;

"Toilet Wastes" means all human excreta and associated products, but does not include greywater;

"Waste Disposal Facilities" means all facilities designated for the disposal of waste, and includes the Sewage Disposal Facilities, Solid Waste Disposal Facilities, and Bagged Toilet Wastes Disposal Facilities; and

"Water Supply Facilities" comprises the area and associated intake infrastructure designed to collect, treat, and supply water for municipal purposes.

PART B: GENERAL CONDITIONS

1. The Licensee shall file an Annual Report with the Board not later than March 31st of the year following the calendar year reported which shall contain the following information:
 - a) the monthly and annual quantities in cubic metres of fresh water obtained from all sources;
 - b) the monthly and annual quantities in cubic metres of each and all waste discharged;
 - c) a summary of Modifications and/or major maintenance work carried out on the water supply and Waste Disposal Facilities, including all associated structures;
 - d) tabular summaries of all data generated under the "Surveillance Network Program";
 - e) a list of unauthorized discharges;
 - f) a summary of any abandonment and restoration work completed during the year and an outline of any work anticipated for the next year;
 - g) a summary of any studies requested by the Board that relate to waste disposal, water use or reclamation, and a brief description of any future studies planned;
 - h) any other details on water use or waste disposal requested by the Board by November 1st of the year being reported;
 - i) the monthly and annual quantities of solid waste removed from the sewage facilities for disposal; and

- j) updates or revisions to the approved sewage and solid waste Operation and Maintenance Plans.
2. The Licensee shall comply with the "Surveillance Network Program" annexed to this Licence, and any amendment to the said "Surveillance Network Program" as may be made from time to time, pursuant to the conditions of this Licence.
3. The "Surveillance Network Program" and compliance dates specified in the Licence may be modified at the discretion of the Board.
4. All monitoring data shall be submitted in printed form and electronically in spreadsheet format on a diskette or other electronic forms acceptable to the Board.
5. All reports shall be submitted to the Board in printed format accompanied by an electronic copy in a common word processing format on diskette or other electronic forms acceptable to the Board.
6. Meters, devices or other such methods used for measuring the volumes of water used and waste discharged shall be installed, operated and maintained by the Licensee to the satisfaction of an Inspector.
7. The Licensee shall, within sixty (60) days of the issuance of this Licence, post the necessary signs, where possible, to identify the stations of the "Surveillance Network Program". All postings shall be located and maintained to the satisfaction of an Inspector.
8. The Licensee shall, within sixty (60) days of issuance of this Licence, post signs in the appropriate areas to inform the public of water supply and Waste Disposal Facilities. All postings shall be located and maintained to the satisfaction of an Inspector.
9. The Licensee shall immediately report to the 24 Hour Spill Report Line (403-920-8130) any spills of waste, which are reported to or observed by the Licensee, within the municipal boundaries or in the areas of the Water Supply or Waste Disposal Facilities.
10. The Licensee shall ensure a copy of this Licence is maintained at the municipal office at all times.

PART C: CONDITIONS APPLYING TO WATER USE

1. The Licensee shall obtain all fresh water from New Water Lake using the Water Supply Facilities or as otherwise approved by the Board.
2. The Licensee may obtain water from an alternate water supply for use on an emergency basis upon approval of the Board, when it is not possible to obtain water from the source described in Part C, Item 1.
3. The annual quantity of water used for all purposes shall not exceed 10,000 cubic metres.
4. The water intake hose used on the water pumps shall be equipped with a screen with a mesh size sufficient to ensure no entrainment of fish (2.54mm).

PART D: CONDITIONS APPLYING TO WASTE DISPOSAL

1. The Licensee shall direct all piped and pumpout sewage to the Sewage Disposal Facilities or as otherwise approved by the Board.
2. All sewage effluent discharged from the Sewage Disposal Facilities at "Surveillance Network Program" Station Number 1619-2 shall meet the following effluent quality standards:

PARAMETER	MAXIMUM AVERAGE CONCENTRATION
Biological Oxygen Demand (BOD ₅)	360 mg/L
Total Suspended Solids (TSS)	300 mg/L

The waste discharged shall have a pH between 6 and 9, and no visible sheen of oil and grease.

3. A freeboard limit of 1.0 metre shall be maintained at all times or as recommended by a qualified geotechnical engineer and as approved by the Board.
4. All bagged toilet wastes (honey bags) shall be disposed of at the Bagged Toilet Waste Disposal Facilities to the satisfaction of an Inspector.

5. The sewage lagoon shall be maintained and operated in such a manner as to prevent structural failure.
6. The Licensee shall maintain the Sewage Disposal Facilities to the satisfaction of an Inspector.
7. The Licensee shall dispose of all solid wastes at the Solid Waste Disposal Facilities or as otherwise approved by the Board.

PART E: CONDITIONS APPLYING TO MODIFICATIONS

1. The Licensee may, without written consent from the Board, carry out Modifications to the Water Supply and Waste Disposal Facilities provided that such Modifications are consistent with the terms of this Licence and the following requirements are met:
 - a) the Licensee has notified the Board in writing of such proposed Modifications at least sixty (60) days prior to beginning the Modifications;
 - b) such Modifications do not place the Licensee in contravention of either the Licence or the *Act*;
 - c) the Board has not, during the sixty (60) days following notification of the proposed Modifications, informed the Licensee that review of the proposal will require more than sixty (60) days; and
 - d) the Board has not rejected the proposed Modifications.
2. Modifications for which all of the conditions referred to in Part E, Item 1, have not been met, can be carried out only with written approval from the Board.
3. The Licensee shall provide to the Board as-built plans and drawings of the Modifications referred to in Part E, Item 1 within ninety (90) days of completion of the Modifications.

PART F: CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION

1. The Licensee shall submit to the Board for approval an Abandonment and Restoration Plan at least six (6) months prior to abandoning any sewage or Solid Waste Disposal Facilities. The Plan shall include, but not be limited to:
 - a) contaminated site remediation;
 - b) leachate prevention;
 - c) an implementation schedule;
 - d) maps delineating all disturbed areas, borrow material locations, and site facilities;
 - e) consideration of altered drainage patterns;
 - f) type and source of cover materials;
 - g) future area use; and
 - h) hazardous wastes.

2. Licensee shall implement the plan specified in Part F, Item 1 as and when approved by the Board.

PART G: CONDITIONS APPLYING TO CONSTRUCTION

1. Prior to construction of any dams, dykes or structures intended to contain, withhold, divert or retain water or wastes, the Licensee shall submit to the Board for approval design drawings stamped by a qualified engineer registered in the Northwest Territories.

2. Construction of designed structures shall be carried out as approved by the Board.

PART H: CONDITIONS APPLYING TO OPERATION AND MAINTENANCE

1. The Licencee will maintain a copy of the approved Operation and Maintenance Plan onsite in a readily available location, to the satisfaction of an Inspector.

NORTHWEST TERRITORIES WATER BOARD

Witness

Chairman

NORTHWEST TERRITORIES WATER BOARD

LICENSEE: INCORPORATED HAMLET OF PAULATUK

LICENCE NUMBER: N7L3-1619

EFFECTIVE DATE OF LICENCE: OCTOBER 30, 2004

EFFECTIVE DATE OF SURVEILLANCE NETWORK PROGRAM: OCTOBER 30, 2004

SURVEILLANCE NETWORK PROGRAM

A. Location of Surveillance Stations

<u>Station Number</u>	<u>Description</u>
1619-1	Raw water supply from New Water Lake.
1619-2	Outlet of sewage lagoon before entering Darnley Bay.

B. Sampling and Analysis Requirements

1. Water at Station Number 1619-2 shall be sampled biweekly during periods of flow and analyzed for the following parameters:

BOD ₅	Suspended Solids
Oil and Grease	pH
Ammonia-Nitrogen	

2. All sampling, sample preservation and analyses shall be conducted in accordance with methods prescribed in the current edition of "Standard Methods for the Examination of Water and Wastewater", or by such other methods approved by the Analyst.
3. All analyses shall be performed in a laboratory approved by the Analyst.

C. Flow and Volume Measurement Requirements

1. The monthly and annual quantities of water pumped from Surveillance Network Program Station Number 1619-1 for municipal purposes shall be measured and recorded in cubic metres.
2. The monthly and annual quantities of sewage solids removed from the Sewage Disposal Facilities shall be measured and recorded.

D. Reports

1. The Licensee shall, unless otherwise requested by an Inspector, include all of the data and information required by the "Surveillance Network Program" in the Licensee's Annual Report, which report shall be submitted to the Board on or before March 31st of the year following the calendar year being reported.

NORTHWEST TERRITORIES WATER BOARD

Witness

Chairman