

### 

January 16, 2014

Brady MacCarl Technical Advisor Nunavut Water Board P.O. Box 119, Gjoa Haven, NU, XOB 1J0

Phone: (867) 360-6338 Fax: (867) 360-6369

Email: <u>brady.maccarl@nwb-oen.ca</u>

Re: Hamlet of Coral Harbour Water Licence No. 3BM-COR0813 Amendment/Renewal Application

Dear Mr. MacCarl,

On behalf of the Hamlet of Coral Harbour, I am pleased to submit to the Nunavut Water Board (NWB) the enclosed new Water Licence Amendment Application with supplementary information for your reference. This application supersedes the Water Licence Amendment Application submitted to the NWB on February 20, 2014 by exp Services Inc. The attached authorization letter from the Hamlet of Coral Harbour naming Megan Lusty of CGS as licensee representative (January 16, 2016) also supersedes the authorization letter naming Stephen Douglas of exp Services Inc. as licensee representative (February 19, 2014).

Hamlet of Coral Harbour is requested an amendment to the water licence for a new pumphouse that will replace the existing buildings and has been designed with a single truck loading arm with a truck fill rate of 1,000 L/min. A series of 20 micron, 5 micron, and 1 micron cartridges will provide filtration and chlorine disinfection, with contact time being built-in with a 12,000 L contact pipe, will be utilized in the new pumphouse. The new pumphouse Design Brief and drawings were previously reviewed by the NWB and it was determined that the proposed upgrades are considered as modifications. Please refer to attached February 19, 2014 letter from Phyllis Beaulieu, NWB, to Stephen Douglas and Steven Burden, exp Services Inc. The amendment is also requesting that the amount of water licenced be increased to 45,000 cubic metres annually to meet the 10-year water demand of the community. The Hamlet of Coral Harbour is requesting a ten (10) year renewal of Water Licence No. 3BM-COR0813 which expired March 31, 2013.

Water Licence No. 3BM-COR0813 Hamlet of Coral Harbour, Nunavut



#### ᠗ᠳᢗ<sub>ᠤ</sub>ᠣ ቦሬ୮<sub>የ</sub>ዓዲን ୰ϧϲϞ*Ϩ*ℯϧႮ<sub>ჼ</sub>ϙϲ

Nunalingni Kavamatkunnilu Pivikhaqautikkut Department of Community and Government Services Ministère des Services communautaires et gouvernementaux

Previously submitted documents that should be considered with this application include:

- Facility Assessment and Design Brief (exp 2013)
- Cover Letter New Water Pump House Coral Harbour (exp 2013)
- M100 Mechanical Legend and Drawings List (exp 2013)
- M101 Mechanical Details (exp 2013)
- M200 Mechanical Plumbing Layout (exp 2013)
- M201 Mechanical Plumbing Schematic (exp 2013)
- M300 Mechanical Fuel System Layout (exp 2013)
- M301 Mechanical Fuel System Schematic (exp 2013)
- M500 Mechanical Ventilation Layout (exp 2013)
- M600 Mechanical Controls Schematics (exp 2013)
- C1 Site Plan (exp 2013)
- C2 Plan & Profiles (exp 2013)
- C3 Details (exp 2013)
- C4 Details (exp 2013)
- E1 Electrical New Power and Lighting Layout (exp 2013)
- E2 Electrical Schedules and Details (exp 2013)
- S1 Ground Floor Plan, Sections and General Notes (exp 2013)
- S2 Roof Framing Plan and Sections (exp 2013)
- S3 Building Elevations and Fill Pipe Details (exp 2013)
- S4 Sections (exp 2013)
- S5 Fuels Storage Tank Plan and Sections (exp 2013)
- Index of Included Drawings (exp 2013)
- Operations and Maintenance Manual for Water, Sewage and Solid Waste Facilities at Coral Harbour, NU (Nunami Stantec 2010), containing:
  - Water Distribution System Operations and Maintenance (Section 3)
  - Sewage Disposal Facility Operations and Maintenance (Section 4)
  - Sewage Sludge Management Plan (Section 4.7)
  - Solid Waste Disposal Facilities Operations and Maintenance (Section 5)
  - Spill Contingency Plan (Section 6.2), Spill Contingency Forms (Appendix G)
  - Monitoring Program Quality Assurance/Quality Control Plan

Please see below for a response on comments from your email dated November 12, 2014:

1. It is recommended that the applicant review the quantity amount requested. The community consumed roughly 35 million L/year according to the 2012 Annual Report, and the application lists the 2012 population as 887. This equates to roughly 110 L/day per capita, not 90.2 L/day per capita as listed in the application. The proponent has requested a 10 year licence, but based off of the proponent's own population projections, population will be about 1100 in 2022 (Not



## Department of Community and Government Services Ministère des Services communautaires et gouvernementaux

taking into account that per capita use usually increases as communities mature). As such, this would be 44,165,000 L/year in 2022, which is significantly higher than the 35,000,000 currently requested.

The new Amendment/Renewal Application is requesting that the annual quantity of water use be increased to 45,000 m<sup>3</sup> to meet the 10-year projected water demand. Please refer to the table below to the table below for water use estimates.

		Annual Water	Daily Water
Year	Population	Usage (m3)	Demand (lpcd)
2004	782	26,719.33	93.6
2005	778	28,844.65	101.6
2006	802	30,739.02	105.0
2007	812	31,539.51	106.4
2008	821	32,717.59	109.2
2009	838	33,268.68	108.8
2010	854	33,169.31	106.4
2011	870	33,865.66	106.6
2012	887	34,777.83	107.4
2013	903	34,093.40	103.4
2014	920	35,775.15	106.5
2015	939	36,513.98	106.5
2016	958	37,252.82	106.5
2017	977	37,991.65	106.5
2018	997	38,769.37	106.5
2019	1016	39,508.21	106.5
2020	1036	40,285.93	106.5
2021	1056	41,063.65	106.5
2022	1076	41,841.37	106.5
2023	1097	42,657.98	106.5
2024	1116	43,396.81	106.5
2025	1134	44,096.76	106.5

Note: Population information is taken from the Nunavut Bureau of Statistics (August 16, 2010). Annual water usage prior to 2014 is based on volumes submitted in the Annual Reports. The daily water demand from 2014 onward is an estimate based on the average daily water demand from the previous 5 years as per capita usage does not exhibit a positive growth trend.



## Department of Community and Government Services Ministère des Services communautaires et gouvernementaux

2. In the licence renewal application, section 15 has sections that are checked but not elaborated on below.

Section 15 has been revised on the newly submitted application. Sewage volume will increase as the water use increases within the community.

3. The 2011 ANNDC Inspection Report adamantly states that an updated compliance assessment should be submitted in 2012 indicating how the licencee plans to conform to licence conditions. NWB has no record of this assessment having been received, and the report is required to move forward with the application.

Please see attached Compliance Plan.

4. What is the status of the new pumphouse construction? The licence renewal application states that completion will occur December 2014, while the 2013 Annual Report states that completion will occur Fall 2015.

The Water Truck Fill Station Coral Harbour, Nunavut "Issued For Tender" drawings will follow in separate emails due to their file size. These drawings are signed and stamped by exp Services Inc. Construction is scheduled to begin the summer of 2015 and be completed by the end of the same year. The signed and stamped as-built drawings and Construction Report will be provided to the NWB upon completion of the new truck fill station.

5. Although the licence submitted an executive summary in English, applications require an executive summary in Inuktituk or Inuinnagtun as well.

An Inuktitut translation of the Executive Summary is included in the new application.

6. Is the new pumphouse a refurbish of the existing facility or an entirely new pumphouse structure? If it is a new structure, an abandonment and restoration plan will be required for the old pumphouse structure.



## LOCC<sup>©</sup> しぐしもので ン ハンマノマャ いっぱい Nunalingni Kavamatkunnilu Pivikhaqautikkut Department of Community and Government Services Ministère des Services communautaires et gouvernementaux

The new water truck fill station is a new structure. The existing building will be demolished prior to construction of the new water truck fill station on the same site. The site will not be abandoned or restored as the new water truck fill station will be constructed on the same site.

7. The 2012 Annual Report indicated a bathymetric study was to be completed in 2014. If so, the licencee should include this study in the 2014 Annual Report.

The project to Locate Alternative Sources of Drinking Water for Each Nunavut Hamlet done by Williams Engineering Canada Inc. was completed January 10, 2014. This report will follow in a separate email. The purpose of the project was to identify alternative water sources for emergency use in Nunavut, with the work being done in two phases. Phase 1 was a desktop study of all communities and phase 2 was a site visit to each community to sample and further characterize potential alternate water sources. The 2012 Annual Report incorrectly described the purpose of this study; no bathymetric surveys were done of existing or alternative water sources.

Coral Harbour was identified as a medium risk community with a water source that is vulnerable to interruption, but where an alternative source could be utilized. The reservoir is seasonally filled from Post River. The alternate source recommended by Williams Engineering is Post River, with an unnamed lake recommended if the river is frozen or otherwise affected. The unnamed lake is approximately 5 km northwest of the community. A map of the location of the community reservoir, Post River, and the alternative source at an unnamed lake can be found in Section 3 of the report.

Water sampling was done during the summer of 2013 at Post River (referred to as CH1 in the report) and an un-named lake (referred to as CH2 in the report). The results of the lab analysis were compared to the GCDWQ and parameters were within the guidelines, with the exception of E. coli and total coliforms which is to be expected when sampling untreated water. The sample for Post River exceeds aesthetic objectives for iron. The water quality lab results can be found in Appendix D of the report.

Annual Reports for 2007, 2008 and 2009 are enclosed with this application. Please see the attached Compliance Plan for more details regarding other outstanding information requirements and areas identified as non-compliant in past AANDC Inspection Reports.

Water Licence No. 3BM-COR0813 Hamlet of Coral Harbour, Nunavut



## ユロニータ しゃしゃ しゃしゅ ハンティストのもの Nunalingni Kavamatkunnilu Pivikhaqautikkut Department of Community and Government Services Ministère des Services communautaires et gouvernementaux

At the request of the NWB, a cheque for the amount of \$30.00 was re-issued by the Hamlet of Coral Harbour to the Receiver General for Canada for the Amendment Application fee. A copy of this cheque is attached. The NWB will receive this cheque shortly via mail.

While the Hamlet of Coral Harbour is working towards full compliance, they request than an Amended/Renewed Licence be issued so that the new water pumphouse can be constructed as scheduled in 2015. The new pumphouse is essential to ensure safe water is continued to be delivered to the residents of Coral Harbour.

Please feel free to contact the undersigned if there are any questions or concerns with the enclosed application or documents.

Sincerely,

Megan Lusty, EIT

Municipal Planning Engineer-In-Training Community and Government Services Kivalliq Region, Government of Nunavut P.O. Box 490, Rankin Inlet, NU, XOC 0G0

Phone: (867) 645-8176 Fax: (867) 645-8196 Email: mlusty@gov.nu.ca

Cc: Leonie Pameolik, SAO Hamlet of Coral Harbour

Phyllis Beaulieu, NWB David Hohnstein, NWB Robert Savard, AANDC Ralph Ruediger, GN-CGS



### ᠣᠳᡄ<sub>ᠤ</sub>ᢈ ᠬ᠘ᡏ<sub>₽</sub>ᠺᠲᢗᠽ᠂᠘ᢣᡕᡳᡶ<sub>ᡘ</sub>ᠳ᠐<sub>₽</sub>᠙ᡕ

Nunalingni Kavamatkunnilu Pivikhaqautikkut Department of Community and Government Services Ministère des Services communautaires et gouvernementaux

### **Table of Contents**

Letter to the Nunavut Water Board	
Letter of Authorization from the Hamlet of Coral Harbour	8
Copy of Application Fee Cheque	<u>9</u>
Executive Summary	10
Executive Summary Translation	11
Community Background	12
Water Licence	12
Water System	12
Sewage Waste	13
Solid Waste	14
Application for Water Licence Amendment	15
Annual Reports 2007, 2008 and 2009	31
Letter from NWB to exp Services Inc. dated February 19, 2014	42
Compliance Plan	1/

January 16, 2015

Phyllis Beaulieu Manager of Licensing Nunavut Water Board P.O. Box 119, Gjoa Haven, NU, XOB 1JO

Phone: (867) 360-6338 ext. 27

Fax: (867) 360-6369

Email: phyllis.beaulieu@nwb-oen.ca

Re: Hamlet of Coral Harbour Water Licence No. 3BM-COR0813 Authorization Letter

Dear Ms. Beaulieu,

This letter is to inform you that Megan Lusty from Community and Government Services is authorized to act as our Licensee Representative for the Water Licence Amendment/Renewal on behalf of the Hamlet of Coral Harbour. This authorization supersedes that given to Stephen Douglas of exp Services Inc. on February 19, 2014.

The contact information for Ms. Lusty is as follows:

Megan Lusty, EIT

Municipal Planning Engineer-In-Training
Community and Government Services
Kivalliq Region, Government of Nunavut
PO Bag 002, Rankin Inlet, NU, XOC 0G0

Phone: (867) 645-8176 Fax: (867) 645-8196

Email: mlusty@gov.nu.ca

Sincerely,

Leonie Pameolik

Senior Administrative Officer (SAO)

Hamlet of Coral Harbour

P.O. Box 30, Coral Harbour, NU, XOC OCO

Phone: (867) 925-8867 Fax: (867) 925-8233

Email: munch@ginig.com

TOTAL >

Hamlet of Coral Harbour P.O. Box 30 Coral Harbour, NU X0C 0C0 Ph: (867) 925-8867 Fax: (867) 925-8233

Royal Bank of Canada

Box 220 Rankin Inlet, NU X0C 0C0

15189

\*\*\*30.00

PAY Thirty and 00/100 Dollars

TO THE ORDER Receiver General for Canada

\*\*\* COPY \*\*\*

Hamlet of Coral Harbour

15189

NDOR NO:		NAME: Receiver Gener	al for Canada		CHECK DATE: Janua	
REFERENCE	INV DATE	INV DESCRIPTION		GROSS AMOUNT	DISCOUNT TAKEN	NET AMOUNT PAID
	1/20/2015	water license	-	30.00	0.00	30.00
	N		1	1		
	(		. ,		n <sup>100</sup>	
			~			
					1	
				1000000	,	
	1		п		J	
					,	
		)	TOTAL >	30.00	0.00	30.0

THIS CHEQUE CONTAINS A MICROLINE BORDER AND SECURITY FEATURES



**Hamlet of Coral Harbour** P.O. Box 30 Coral Harbour, NU X0C 0C0 Ph: (867) 925-8867 Fax: (867) 925-8233

Royal Bank of Canada

Box 220

Rankin Inlet, NU X0C 0C0

15189

1 2 0

\*\*\*30.00

PAY Thirty and 00/100 Dollars

TO THE **ORDER** 

OF

Receiver General for Canada



# Department of Community and Government Services Ministère des Services communautaires et gouvernementaux

#### Hamlet of Coral Harbour Water Licence No. 3BM-COR0813 Amendment/Renewal Application

#### **EXECUTIVE SUMMARY**

The Hamlet of Coral Harbour is submitting to the Nunavut Water Board (NWB) a Water Licence Amendment/Renewal Application for Water Licence No. 3BM-COR0813. This application supersedes that received February 20, 2014. The Hamlet is seeking a ten-year renewal of the licence which would be valid until 2025. The projected population of the Hamlet in the year 2025 is 1134 people.

The Hamlet of Coral Harbour utilizes Post River as a source of potable water with the authorized quantity of water not to exceed 35,000 cubic metres annually. Water is transferred from Post River via overland pipeline to refill the rock-blasted reservoir in the community near the end of summer each year. The truckfill station at the reservoir has been in service for more than 25 years and almost all internal systems and equipment housed within the existing buildings are in need of replacement. The water intake pipe from the reservoir delivers water to the truckfill station where chlorine is injected as water fills trucks for delivery. The existing buildings do not provide sufficient space to house a water treatment process which meets current drinking water quality guidelines.

The Hamlet of Coral Harbour is requested an amendment to the water licence for a new pumphouse that will replace the existing buildings and has been designed with a single truck loading arm with a truck fill rate of 1,000 L/min. A series of 20 micron, 5 micron, and 1 micron cartridges will provide filtration and chlorine disinfection, with contact time being built-in with a 12,000 L contact pipe, will be utilized in the new pumphouse. The treated water will meet the requirements of the Guidelines for Canadian Drinking Water Quality. The new pumphouse has been designed to meet the 20-year requirements of the Hamlet. Construction is anticipated to begin spring 2015 and is scheduled to be completed by the end of 2015. The Amendment/Renewal Application is also requesting that the amount of water licenced be increased to 45,000 cubic metres annually to meet the 10-year water demand of the community.

The Hamlet of Coral Harbour Solid Waste Disposal Site is located approximately 2.5 km northwest of the community. The site covers a fenced area of approximately 7,300 m<sup>2</sup>.

The Hamlet of Coral Harbour provides trucked sewage collection service for the community. The trucked sewage is discharged to the Sewage Disposal Facilities, which includes a sewage lagoon and wetlands area. Effluent is discharged from the lagoon naturally through the exfiltration berm and diversion berms within the wetlands area redirect flow away from the community.



# ○○ C<sup>o</sup> しぐしゃけの へんといれています。 ハンマンスペート Nunalingni Kavamatkunnilu Pivikhaqautikkut Department of Community and Government Services Ministère des Services communautaires et gouvernementaux

H4Lbd 5C  $\Delta$ Fili ALad  $\Delta$ LbC  $\Delta$ BM-coro8134  $\Delta$ PP4  $\Delta$ Cill  $\Delta$ C

### $\sigma \nabla_{\rho} \subset L \circ \Lambda_{\rho} \cap \Lambda_{\rho}$

ΗላԿ스৬৫ ኣ'ϲΓ ጋσተ³ኒር ውሲዎና ΔΓϲጢትঙ৫ ቴ/በኒትኄዮውና ΔΓናኛ ለተ³ሲኦበርናተበΓ $^{6}$  ላምቦላናንበΓ $^{6}$  ውርህጢላንበΓ $^{6}$  ውርህጢላንበΓ $^{6}$  ውርህጢላንበΓ $^{6}$  ውርህጤላንበΓ $^{6}$  ውርህጤላንበΓ $^{6}$  ውርህጤላንበΓ $^{6}$  ውርህጤላንበ $^{6}$  ውርህጤላንበ $^{6}$  ውርህጤላንበ $^{6}$  ውርህጤላና $^{6}$  ለተ $^{6}$  ለ

Ηላι-  $^{\circ}$  ላጋ  $^{\circ}$  የሩ  $^{\circ}$  ላይ  $^{\circ}$  የነጋ  $^{\circ}$  ላይ  $^{\circ}$  የነጋ የተመታው የተመታው



### **Community Background**

The Hamlet of Coral Harbour has an estimated 2014 population of 920 (Nunavut Bureau of Statistics 2010) and is located at the coordinates of 64°08′ north latitude and 83°10′ west longitude on the south shore of Southampton Island within the Keewatin planning region of Nunavut. The surrounding landscape is characterized generally by low relief and many shallow surface water bodies. The average annual precipitation consists of 163 mm rainfall and 141.6 mm snowfall. Average high and low temperatures in July are 14.7°C and 5.3°C, respectively. Average high and low temperatures in January are -25.5°C and -33.7°C, respectively. Existing water use and waste disposal facilities include a freshwater intake, reservoir, pump house, truck fill station, exfiltration sewage lagoon, wetland treatment area, solid waste and bulky items disposal areas, and hazardous waste storage.

### **Water Licence**

The Hamlet of Coral Harbour is applying for Amendment/Renewal of Water Licence No. 3BM-COR0813, which expired March 31, 2013, for providing water supply, sewage and solid waste disposal facilities.

The Hamlet provides trucked services for water delivery and sewage collection. Drinking water is obtained from Post River, stored in a reservoir, and distributed to water trucks via the pump house truck fill. Sewage and wastewater are treated in a bermed detention cell which discharges into a natural tundra wetland, draining east and southeast to eventually reach the marine environment of Hudson Bay. Domestic waste is collected five days a week (Monday through Friday) by the Hamlet and disposed of at the municipal solid waste facility.

### **Water System**

The Coral Harbour water distribution system consists of a water intake, overland pipeline, reservoir and pump house with truck fill. Potable water is obtained from Post River approximately 1.4 km west of the community. The water intake is situated approximately 20 m offshore. A pump shack is located near the shore of the Post River and houses the water pump and a diesel fuel tank.

Water is piped via an overland pipeline from Post River into a reservoir. The pipeline was constructed in the late 1970s, prior to the construction of the reservoir in 1982. Modifications were made to the original 1979 design of the pump house and it was not constructed until 1986. The pump house has been used since for truck fill and chlorination of potable water.

Water Licence No. 3BM-COR0813 Hamlet of Coral Harbour, Nunavut



## Department of Community and Government Services Ministère des Services communautaires et gouvernementaux

The reservoir is located approximately 350 m north of the community and was constructed by blasting bedrock to a depth of approximately 2.7 m. The reservoir is unlined and was expanded in the 1990s to consist of two dependent cells.

The Hamlet uses trucked services for daily water delivery to all houses and buildings. Water trucks obtain water from the reservoir via two submersible intake pumps, which pump through the pump house. The pump house accommodates the water intake system, truck fill system, chlorination system and associated heating, electrical and alarm systems.

The Operation and Maintenance Manual for the new pump house will be completed in 2015 and submitted to the NWB upon construction completion.

### **Sewage Waste**

The Hamlet of Coral Harbour provides trucked sewage service for the community's residents, businesses and institutions. The trucked sewage is discharged to the Sewage Disposal Facilities where primary treatment occurs.

The Coral Harbour sewage disposal facility consists of a fenced and bermed detention cell and a natural tundra wetland. Sewage is collected from the Hamlet's houses and buildings by vacuum truck and discharged into the detention cell located approximately 3 km north of the community. The detention cell was constructed in 2003 and has an estimated capacity of 41,200 cubic metres (170 m by 155 m by 1.7 m deep, allowing for reduced capacity due to inside sloping of berms). The detention cell is equipped with an outflow valve and was originally designed to act as a storage lagoon with an annual discharge however the berms were discovered to not be impervious and allowed effluent to seep through. Effluent leaving the detention cell flows through a natural tundra wetland, consisting of boggy areas and a series of wetland ponds which provide sewage treatment. The tundra wetland eventually flows into a large freshwater lake, approximately 580 m east from the detention cell.

In 2008, three flow diversion berms were constructed within the tundra wetland to divert flow to the east, away from the community, during periods of high flow (ie spring freshet). Construction of these berms was part of a program to enhance the tundra wetland and ensure it met conditions set in the Hamlet's waster licence. With these enhancements, the sewage disposal facility comprised of the detention cell and tundra wetland, will effectively treat the community's wastewater for a 20-year period in compliance with the applicable legislation. Signs advising the public of the treatment area were also erected.



## LOCCG しぐしものでコ ハンマイマャ いっぱい Nunalingni Kavamatkunnilu Pivikhaqautikkut Department of Community and Government Services Ministère des Services communautaires et gouvernementaux

As per Part D, Item 6, all effluent discharged from the Wetland Treatment Area Final Discharge Point (monitoring program station COR-5) shall be demonstrated to be Not Acutely Toxic using the following tests to be conducted once annually approximately mid-way through discharge:

- Acute lethality to Rainbow Trout, Oncorhynchus mykiss (as per Environment Canada's Environmental Protection Series Biological Test Method EPS/1/RM/13); and
- Acute lethality to the crustacean, Daphnia magna (as per Environmental Canada's Environmental Protection Series Biological Test Method EPS/1/RM/14).

The Licensee is requesting that this condition be removed from the Water Licence. The Hamlet of Coral Harbour has found it extremely difficult to have the required large volume of water shipped to the laboratory in Winnipeg within the timeframe mandatory for the test to take place. Unforeseen shipping delays due to inclement weather or mechanical problems result in samples becoming stale dated. The Licensee is alternatively requesting that the sample results are compared to the CCME Water Quality Guidelines for the Protection of Aquatic Life as a means of confirming the effluent discharged from the wetlands area does not have an adverse impact on the surrounding environment and fish habitat. Subsequently, the Licensee is also requesting that the condition for the annual toxicity test results to be included in the Annual Report, Part H, Item 4, be removed from the Water Licence.

### **Solid Waste**

Coral Harbour's primary solid waste disposal facility consists of a fenced and bermed disposal area for municipal solid waste and a separate bulk metal disposal area immediately south of the bermed area. The Hamlet collects waste from community buildings five times per week with a compactor truck and transports the waste to the solid waste site, located 2.5 km northeast of the community. The solid waste disposal facility covers an area of approximately 7300 m<sup>2</sup> and is situated to the south of the sewage disposal facility and tundra wetland.



### **Application for Water Licence Amendment**

Document Date: April 2013

Application Submission Date:

01/16/2015 Month/Day/Year

P.O. BOX 119 GJOA HAVEN, NUNAVUT XOB 1J0

Tel: (867) 360-6338 FAX: (867) 360-6369

### DOCUMENT MANAGEMENT

Original Document Date: April 2010

### **DOCUMENT AMENDMENTS**

	Description	Date
(1)	Updated for public distribution as separate document from NWB Guide 7	June 2010
(2)	Updated NWB logos and reformatted table to allow rows to break across page	May 2011
(3)	New NWB logo; request for background information; and change to Block 24	April 2013
(4)		
(5)		
(6)		
(7)		
(8)		
(9)		
(10)		



P.O. Box 119

Tel: (867) 360-6338

FAX: (867) 360-6369

ممهر ۲۲ حسهر ۱۳۹۹ م GJOA HAVEN, NU XOB 1JO NUNAVUT WATER BOARD NUNAVUT IMALIRIYIN KATIMAYIT OFFICE DES EAUX DU NUNAVUT

#### APPLICATION FOR WATER LICENCE AMENDMENT

The applicant is referred to the NWB's Guide 7: Licensee Requirements Following the Issuance of a Water Licence for more information about this application form.

Where possible, provide background information regarding the original licence application or attach previously submitted information.

EXISTING LICENCE NO: 3BM-COR0813
1. LICENSEE CONTACT INFORMATION
Is the licensee the same as that referred to on the existing licence?
X Yes  No
If No, a licence assignment must be completed and approved by the NWB. An amendment will only be issued in the name of the current licensee in the absence of assignment of the licence.
If the licensee is the same, but the <u>name</u> of the licensee has changed, attach a certificate of name change.
Name: Leonie Pameolik
Senior Administrative Officer (SAO)
Address: Hamlet of Coral Harbour
P.O. Box 30, Coral Harbour, Nunavut
X0C 0C0
Phone: 867-925-8867
Fax: 867-925-8233
e-mail: munch@qiniq.com
2. LICENSEE REPRESENTATIVE CONTACT INFORMATION – If different from Block 1.
Name: Megan Lusty, EIT

**Municipal Planning Engineer-In-Training** 

Address: Community and Government Services (CGS)

**Kivalliq Region, Government of Nunavut** P.O. Box 490, Rankin Inlet, Nunavut, X0C 0G0

Phone: 867-645-8176 Fax: 867-645-8196 e-mail: mlusty@gov.nu.ca

(Attach authorization letter.)

3.	NAME OF PROJECT
Has the	e name of the project changed?
	☐ Yes X No
If Yes,	indicate the name of the project including the name of the location:
4.	LOCATION OF UNDERTAKING
Does	the proposed amendment change the location of the amended undertaking?
	☐ Yes X No
Provid	de the project extents and camp locations. Identify proposed changes.
Projec	t Extents
NW: NE: SE: SW:	Latitude: ( ° ' "N) Longitude: ( ° ' "W) Latitude: ( ° ' "N) Longitude: ( ° ' "W) Latitude: ( ° ' "N) Longitude: ( ° ' "W) Latitude: ( ° ' "N) Longitude: ( ° ' "W)
Camp	Location(s)
Latitud	de: (64° 08' N) Longitude: (83° 10' W)
5.	MAP
Does th	ne proposed amendment change the locations of any of the main components of the undertaking?
	☐ Yes X No
Attach	a topographical map, indicating the main components of the undertaking. Identify proposed changes.
NTS M	ap Sheet No.: Map Name: Map Scale:

6.	NATURE OF INTEREST IN THE LAND	
Does	the proposed amendment change the nature of the i	nterest in the land?
	Yes	X No
If Yes	, indicate changes	
	k any of the following that are applicable to the proportice' header must be checked).	osed undertaking (at least one box under the
	Sub-surface	
	☐ Mineral Lease from Nunavut Tunngavik Incorpo Date (expected date) of issuance:	
	☐ Mineral Lease from Indian and Northern Affairs Date (expected date) of issuance:	` ,
	Surface	
	Crown Land Use Authorization from Indian and Date (expected date) of issuance:	
	☐ Inuit Owned Land (IOL) Authorization from Kitike Date (expected date) of issuance:	
	☐ IOL Authorization from Kivalliq Inuit Association Date (expected date) of issuance:	
	☐ IOL Authorization from Qikiqtani Inuit Association Date (expected date) of issuance:	
	Commissioner's Land Use Authorization  Date (expected date) of issuance:	Date of expiry:
	Other	
	Date (expected date) of issuance:	Date of expiry:
Is the licenc	name of the entity(s) holding authorizations the same?	e as that considered in the existing water
	X Yes	□No
If No,	a licence assignment must be completed and appro	ved by the NWB.
Namo	of entity(s) holding authorizations:	

7.	NUNAVUT PLANNING COMMISSION	(NPC) DETERMINATION
Indicat	e the land use planning area in which the	e existing project is located.
	☐ North Baffin ☐ South Baffin ☐ Akunniq	X Keewatin Sanikiluaq West Kitikmeot
Does t	he proposed amendment change the lan	nd use planning area?
		☐ Yes X No
If yes,	indicate the land use planning area in wh	hich the amended undertaking is located.
	☐ North Baffin ☐ South Baffin ☐ Akunniq	☐ Keewatin ☐ Sanikiluaq ☐ West Kitikmeot
Was a	•	required from NPC prior to the issuance of the existing water
		☐ Yes X No
If Yes,	indicate date issued and attach copy	
Does	the proposed amendment change the ori	iginal NPC conformity determination or the need to obtain one?
		☐ Yes X No
If Yes, If No,	indicate date issued (or expected) and a provide written confirmation from NPC co	attach a copyonfirming that a land use plan conformity review is not required.
8.	NUNAVUT IMPACT REVIEW BOARD	(NIRB) DETERMINATION
Was a	screening determination required from N	NIRB prior to the issuance of the existing water licence?
		☐ Yes X No
If Yes,	indicate date issued and attach copy	
Does one?	the proposed amendment change the ori	iginal NIRB screening determination or the need to obtain
		☐ Yes X No
If Yes, If No,	indicate date issued (or expected) and a provide written confirmation from NIRB c	attach a copyconfirming that a screening determination is not required.

DESCRIPTION OF UNDERTAKING
ne proposed amendment change the description of the undertaking?
☐ Yes X No
d attach plans and drawings or project proposal. Identify proposed changes.
OPTIONS
he proposed amendment change any of the alternative methods and locations that were considered yout the project?
☐ Yes X No
e a brief explanation of the alternative methods or locations that were considered to carry out the . Identify proposed changes.
CLASSIFICATION OF PRIMARY UNDERTAKING
te the primary classification of undertaking for the existing licence by checking one of the following ::
☐ Industrial ☐ Agricultural ☐ Mining and Milling (includes exploration/drilling/exploration camps) ☐ Conservation
<ul> <li>Municipal (includes camps/lodges)</li> <li>Power</li> <li>Recreational</li> <li>Miscellaneous (describe below):</li> </ul>
the proposed amendment change the classification of primary undertaking?
☐ Yes X No
indicate the primary undertaking of the amendment:
nation in accordance with applicable Supplemental Information Guidelines (SIG) must be updated and itted with an Application for Amendment. Indicate which SIG(s) are applicable to your application.
<ul> <li>Hydrostatic Testing</li> <li>Tannery</li> <li>Tourist / Remote Camp</li> <li>Landfarm &amp; On-Site Storage of Hydrocarbon Contaminated Soil</li> <li>Onshore Oil and Gas Exploration Drilling</li> <li>Mineral Exploration / Remote Camp</li> <li>Advanced Exploration</li> <li>Mine Development</li> <li>Municipal</li> <li>General Water Works</li> <li>Power</li> </ul>

12. WATER USE
Indicate, using the boxes below, the types of water use(s) approved in the existing licence.
X To obtain water for camp/ municipal purposes  To obtain water for industrial purposes To cross a watercourse To alter the flow of, or store water Other:  To obtain water for camp/ municipal purposes To divert a watercourse To modify the bed or bank of a watercourse Flood control
Does the proposed amendment change the type(s) of water use(s)?
☐ Yes X No
If Yes, indicate using the boxes below, the proposed change(s) to the type(s) of water use(s) noting any water use(s) that are to be added, continued, or removed.
□ To obtain water for camp/ municipal purposes         □ To obtain water for industrial purposes       □ To divert a watercourse         □ To cross a watercourse       □ To modify the bed or bank of a watercourse         □ To alter the flow of, or store water       □ Flood control         □ Other:       □ To divert a watercourse         □ Flood control
13. QUANTITY OF WATER INVOLVED
Does the proposed amendment change the source of water?
Indicate the water source(s). Identify proposed changes.:
Post River(show location(s) on map)
Does the proposed amendment change the quality of the water source and/or its available capacity?
☐ Yes X No
Describe the quality of the water source(s) and the available capacity(s). Identify any changes.:
Does the proposed amendment change the overall quantity of water to be used?
X Yes □ No
Provide the overall estimated quantity to be used. Identify proposed changes. : 40,000 m³/year
Does the proposed amendment change the quantity of water to be used from each source?
X Yes □ No
Provide the estimated quantity(s) of water to be used from each source. Identify proposed changes. :
40,000 m³/year from Post River. See forwarding letter for estimated water demand.

Does the proposed amendment change the quantity of water to be used for each purpose?
☐ Yes X No
Provide the estimated quantities to be used for each purpose (camp, drilling, etc.). Identify proposed changes.
Does the proposed amendment change the method(s) of extraction?
Describe the method(s) of extraction. Identify proposed changes. :
Does the proposed amendment change the quantity(s) of water returned to source(s)?
☐ Yes X No
Estimated quantity(s) of water returned to source(s). Identify proposed changes. : m³/day
Does the proposed amendment change the quality(s) of water returned to source(s)?
☐ Yes X No
Describe the quality(s) of water(s) returned to source(s). Identify any changes. :
14. WASTE
Check the appropriate box(s) to indicate the types of waste(s) approved in the existing licence.
X Sewage X Waste oil X Solid Waste Greywater X Hazardous Sludges X Bulky Items/Scrap Metal X Animal Waste Other (describe):
Does the proposed amendment change the type(s) of waste(s) to be generated or deposited?
☐ Yes X No
If Yes, indicate using the boxes below, the proposed change(s) to the type(s) of waste(s) to be generated and/or deposited noting the addition, removal or continued generation and/or disposal of waste(s).
Sewage

15. QUANTITY AND QUALITY OF WASTE INVOLVED
Does the proposed amendment change the quantity(s) of the types of wastes involved?
X Yes  No
Does the proposed amendment change the composition(s) of the types of wastes involved?
☐ Yes X No
Does the proposed amendment change the method(s) of treatment for the types of waste involved?
☐ Yes X No
Does the proposed amendment change the method(s) of disposal for the types of waste involved?
☐ Yes X No
If Yes to any of the above, describe the proposed changes: The sewage discharge is considered equal

to the water demand. The estimated sewage discharge is also 40,000 m<sup>3</sup>/year.

For each type of waste indicated in Block 14, describe its composition, quantity in cubic meters/day, method of treatment and method of disposal.

Type of Waste	Composition	Quantity Generated	Treatment Method	Disposal Method
Sewage	Greywater, wash room waste and toilet flush water (90-95% water)	110 m³/day (40,000 m³/year)	Exfiltration Sewage Lagoon, Natural Tundra Wetland Sewage Treatment Area	Truck fill from house tank, offload into sewage lagoon and decant into wetland
Solid Waste	Household waste, metal waste, auto parts, batteries, tires, electronics, paper, wood, etc.	12 m³/day (4,436 m³/year)	Compact and push down, cover with waste mix soil and granular	Household bin and collect by covered truck and dump on pile at location
Hazardous Waste	Batteries, paint, switch, antifreeze, bulb, etc.	0.38 m³/day (138 m³/year)	Store in wooden box with plastic around until shipped out	Ship to south with contractor
Bulk Metals	Auto body, snowmobile, metal door, window, electronics, etc.	1 m³/day (386 m³/year)	Pile on cell and smash into smaller pieces before cover with materials	Reusable items put in seacan and send out by barge
Animal Waste	Meat, bone, skin of caribou, muskox, fish, etc.	0.26 m³/day (96 m³/year)	Cover with granular cover materials	Put in place compost body and cover
Waste Oil	Engine oil, heating oil	0.2 m³/day (72 m³/year)	Store in Container with cover until ship out	Ship out in container

16. OTHER AUTHORIZATIONS
Does the proposed amendment change the need for other authorizations in addition to the sub-surface
and surface land use authorizations provided in Block 6?
☐ Yes X No
If Yes, indicate any additional authorizations required, which authorizations are no longer required, and which authorizations continue to be required.
For each provide the following:
Authorization:
Administering Agency:
Project Activity:
Date (expected date) of issuance: Date of expiry:
17. PREDICTED ENVIRONMENTAL IMPACTS OF UNDERTAKING AND PROPOSED MITIGATION MEASURES
Does the proposed amendment change the predicted environmental impacts of the undertaking or the mitigation measures?
☐ Yes X No
Describe direct, indirect, and cumulative impacts related to water and waste. Identify any changes.
18. WATER RIGHTS OF EXISTING AND OTHER WATER USERS
Was compensation paid and/or an agreement(s) for compensation been entered into with any existing or other users of water during consideration of the existing licence?
☐ Yes X No
If Yes, provide the names, addresses and the nature of water use by those persons or properties.
Does the proposed amendment adversely affect any known persons or property including those that hold licences for water use in precedence to the application, domestic users, in-stream users, authorized waste depositors, owners of property, occupiers of property, and/or holders of outfitting concessions, registered trapline holders, and holders of other rights of a similar nature?
☐ Yes X No
If Yes, provide the names, addresses and the nature of water use of those persons or properties.
Advise the Board if compensation has been paid and/or an agreement(s) for compensation has been reached with any existing or other water users with respect to the proposed amendment.

19. INUIT WATER RIGHTS			
Was compensation paid/ or an agreement(s) for compensation been entered into with any Designated Inuit Organization (DIO) during consideration of the existing licence?			
☐ Yes X No If Yes, which DIO(s)			
Does the proposed amendment substantially affect the quality, quantity or flow of waters flowing through Inuit Owned Land (IOL)?			
☐ Yes X No			
If Yes, advise the Board if negotiations have commenced or an agreement to pay compensation for any loss or damage has been reached with one or more DIO(s) with respect to the proposed amendment.			
<b>20. CONSULTATION</b> - Provide a summary of any consultation meetings including when the meetings were held, where and with whom. Include a list of concerns expressed and measures to address concerns.			
21. SECURITY INFORMATION			
Does the proposed amendment change the financial security assessment?			
☐ Yes X No			
Does the proposed amendment change the estimate of the total financial security for final reclamation?			
☐ Yes X No			
Provide an estimate of the total financial security for final reclamation equal to the total outstanding reclamation liability for land and water combined sufficient to cover the highest liability over the life of the undertaking. Estimates of reclamation costs must be based on the cost of having the necessary reclamation work done by a third party contractor if the operator defaults. The estimate must also include contingency factors appropriate to the particular work to be undertaken. Identify any changes in the financial security assessment resulting from the proposed amendment.			
Where applicable, the financial security assessment should be prepared in a manner consistent with the principals respecting mine site reclamation and implementation found in the <i>Mine Site Reclamation Policy for Nunavut</i> , Indian and Northern Affairs Canada, 2002.			

	ANCIAL INFORMATION				
Is the stateme	Is the statement of financial security the same as that considered in the existing water licence?				
	X Yes No				
Provide an upo	updated statement of financial security.				
If the applicant	ant is a business entity please answer the questions below:				
Is the list of the	Is the list of the officers of the company the same as those considered in the existing water licence?				
	X Yes No				
Provide a list of	st of the officers of the company.				
Is the Certifica	icate of Incorporation or evidence of registration of the company name the same?				
	X Yes No				
Attach a copy	by of the Certificate of Incorporation or evidence of registration of the company na	ıme.			
23. STUDI	DIES UNDERTAKEN TO DATE				
List and attach	ach updated studies, reports, research etc.				
<ul> <li>Population and Water Demand Estimate</li> <li>Annual Reports 2007- 2009</li> <li>Compliance Plan</li> </ul>					
- Cover - Facility - M100 - - M101 - - M200 - - M201 - - M300 -	er Letter – New Water Pump House – Coral Harbour (exp 2013) lity Assessment and Design Brief (exp 2013) 0 – Mechanical Legend and Drawings List (exp 2013) 1 – Mechanical Details (exp 2013) 0 – Mechanical Plumbing Layout (exp 2013) 1 – Mechanical Plumbing Schematic (exp 2013) 0 – Mechanical Fuel System Layout (exp 2013) 1 – Mechanical Fuel System Schematic (exp 2013) 0 – Mechanical Ventilation Layout (exp 2013) 0 – Mechanical Controls Schematics (exp 2013)				

- Operations and Maintenance Manual for Water, Sewage and Solid Waste Facilities at Coral Harbour, NU (Nunami Stantec 2010), *containing:* 
  - Water Distribution System Operations and Maintenance (Section 3)
  - Sewage Disposal Facility Operations and Maintenance (Section 4)
  - Sewage Sludge Management Plan (Section 4.7)
  - Solid Waste Disposal Facilities Operations and Maintenance (Section 5)
  - Spill Contingency Plan (Section 6.2), Spill Contingency Forms (Appendix G)
  - Monitoring Program Quality Assurance/Quality Control Plan

Provide a compliance assessment and status report including a response to any inspector's reports. The licensee must contact the NWB for licence specific direction in completing the assessment and report.

If in non-compliance, a licence may not be issued until compliance is achieved. If in non-compliance, attach plans/reports for consideration. Application will not be processed if significant issues of non-compliance exist.			
24. PROPOSED TIME SCHEDULE			
When are proposed amendments scheduled to be undertaken: June - December 2015			
Does the proposed amendment change the time schedule considered in the existing licence for any phase of development?			
☐ Yes X No			
Indicate the start and completion dates for each applicable phase of development (construction, operation, closure, and post closure). Identify proposed changes.			
Construction Proposed Start Date:June 2015 Proposed Completion Date:December 2015 (month/year)  Operation Proposed Start Date:February 2015 Proposed Completion Date:ongoing (month/year)			
(month/year) (month/year)  Closure Proposed Start Date: (month/year)  (month/year) Proposed Completion Date: (month/year)  Post - Closure			
Proposed Start Date: Proposed Completion Date:			
(month/year) (month/year)  For each applicable phase of development indicate which season(s) activities occur.			
Construction ☐ Winter ☐ Spring X Summer X Fall ☐ All season			
Operation  Winter Spring Summer Fall X All season			
Closure ☐ Winter ☐ Spring ☐ Summer ☐ Fall ☐ All season			
Post - Closure  ☐ Winter ☐ Spring ☐ Summer ☐ Fall ☐ All season			

25.	PROPOSED TERM OF LICENCE			
On w	On what date does the existing licence expire? March 31, 2013			
Is the	Is the Licensee applying for a combined renewal and amendment of the existing licence?			
	X Yes  No			
If Yes	s, indicate the proposed term of the renewal (maximum of 25 years): 10 years			
Requ	uested date of renewal issuance:February 2015 Requested Expiry Date:February 2025 (month/year) (month/year)			
(The requested date of renewal issuance must be <u>at least</u> three (3) months from the date of application for a type B water licence and <u>at least</u> one (1) year from the date of application for a type A water licence, to allow for processing of the water licence application. These timeframes are approximate and do not account for the time to complete any pre-licensing land use planning or development impact requirements, time for the applicant to prepare and submit a water licence application in accordance with any project specific guidelines issued by the NWB, or the time for the applicant to respond to requests for additional information. See the NWB's <i>Guide 5: Processing Water Licence Applications</i> for more information)				
26.	ANNUAL REPORTING			
Will th	e proposed amendment change the content of annual reports or the annual report template?			
	☐ Yes X No			
If Yes, report.	, provide details regarding the content of annual reports and a proposed outline or template of the annual .			

27.	CHECKLIST				
The foll	he following must be included with the application for Amendment for the water licensing process to begin.				
	Completed Application for Water Licence Amendment form.				
	X Yes	□No	If no, date expected		
	Information addressing	ressing Supplement Information Guideline (SIG), where applicable (see Block 11)			
	X Yes	□No	If no, date expected		
	Compliance Assessme	ent / Status Report	(see Block 23).		
	X Yes	□No	If no, date expected		
	Indication of Renewal	Requirement (see l	Block 26)		
	X Yes	□No	If no, date expected		
	English Summary of Amendment Application.				
	X Yes	□No	If no, date expected		
	Inuktitut and/or Inuinna	naqtun Summary of Amendment Application.			
	X Yes	☐ No	If no, date expected		
	Application fee of \$30.00 CDN (Payee Receiver General for Canada).				
	Yes	X No	If no, date expected _January 30, 2015		
	Water Use Fee Deposit of \$30.00 CDN (Payee Receiver General for Canada). The actual water use fee will be calculated by the NWB based upon the amount of water authorized for use in accordance with the Regulations at the time of issuance of the licence.				
	☐ Yes	X No	If no, date expectedN/A		
28.	SIGNATURE				
Leon	nie Pameolik Name (Print)	SHO Title (Pr	rint) Signature Date		

### YEAR BEING REPORTED: 2007

The following information is compiled pursuant to the requirements of Part B, Item 1 of Water Licence # 3BM-COR0813 issued to the Hamlet of Coral Harbour.

i-iii) tabular summaries of all data generated under the "Monitoring Program"; monthly and annual quantities in cubic metres of freshwater obtained from all sources; monthly and annual quantities in cubic metres of each and all wastes discharged;

Attached are quantities of water used as reported in our Fluid Manager Delivery System and the estimated discharge of sewage waste based on quantities used.

Month Reported	Quantity of Water Obtained from all sources (m³)	Quantity of Sewage Waste Discharged (m³)
January	2,698.725	2,698.725
February	2,238.782	2,238.782
March	2,594.875	2,594.875
April	2,605.673	2,605.673
May	2,647.557	2,647.557
June	2,458.675	2,458.675
July	2,846.962	2,846.962
August	2,680.399	2,680.399
September	2,575.918	2,575.918
October	2,743.940	2,743.940
November	2,684.907	2,684.907
December	2,763.097	2,763.097
ANNUAL TOTAL	31,539.508	31,539.508

Note: There is no meter existing at the discharge pipe. Therefore the monthly discharge is considered as equal to the monthly water consumption.

- iv. a summary of modifications and/or major maintenance work carried out on the Water Supply and Waste Disposal Facilities, including all associated structures and facilities;
  - Upgrades to the Coral Harbour sewage treatment facilities are taking place. These upgrades include construction diversion berms to redirect wetland treatment flow away from the community and the use of a Wetland Treatment Area as part of the overall sewage treatment system.
  - No major repairs or maintenance work taking place for the water supply facilities or solid waste site.
- v. a list of unauthorized discharges and summary of follow-up action taken;
  - 136 L of diesel at Airport, reported and cleaned up July 13, 2007.
  - 112 L of diesel fuel, Hamlet building storage tank, reported and cleaned up July 16, 2007.
  - 820 L of diesel fuel at Caribou Camp, outside Hamlet Boundaries, reported and cleaned up February 24, 2007.
  - Unknown volume of sewage from RCMP sewage holding tank, reported and cleaned up February 2007.
  - There are a number of barrels located inside the lagoon that must be removed. The content of the barrels is unknown and their effect on the lagoon and treatment process is unknown.
- vi. a summary of any abandonment and restoration work completed during the year and an outline of any work anticipated for the next year;
  - No abandonment and restoration work was planned/completed in 2007 and there is no planned work for next year.
- vii. 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;

- Operations and Maintenance Plan which includes a Water Storage and Distribution
   Facility O&M Plan, a Sewage Disposal Facility O&M Plan, Sewage Sludge
   Management Plan, Solid Waste Disposal Facility O&M Plan, Spill Contingency Plan,
   and Monitoring Program Quality Assurance/Quality Control Plan must be submitted.
- viii. any other details on water use or waste disposal requested by the Board by November 1st of the year being reported; and
  - NWB instructed the Licensee to maintain Monitoring Stations COR-2 and COR-3 during the months of May to August inclusive. Confirmation of locations and signage identity must be ensured with the Board and results of samples included in the Annual Report.
- ix. updates or revisions to the approved Operation and Maintenance Plans.
  - No O&M manual is currently available; one is being created for the existing water facility, solid waste site, and improved sewage disposal facility.

#### ADDITIONAL INFORMATION THAT THE LICENSEE DEEMS USEFUL:

- The municipal water licence expired on October 31, 2007.
- Nunami Jacques Whitford Limited (NJWL), on behalf of the Hamlet, submitted an application for water licence renewal on October 11, 2007. This contained:
  - o Application cover letter;
  - o Application summary;
  - o NWB Licence renewal application;
  - o NWB Municipal licence questionnaire;
  - Report of the Natural Tundra Wetland Sewage Treatment Facility (NJWL October 2007);
  - o Schematic Design Report: Natural Tundra Wetland Sewage Treatment Area Design (NJWL August 29, 2007);
  - o Appendix B: Wetland photos; and

o Figure 1: Hamlet of Coral Harbour Water and Waste Facility Locations (NJWL).

### FOLLOW-UP REGARDING INSPECTION/COMPLIANCE CONCERNS:

- There is a considerable amount of ponding at the toe of the landfill that much be addressed.
- There is garbage scattered outside the fenced area that must be moved within the solid waste site.

### YEAR BEING REPORTED: 2008

The following information is compiled pursuant to the requirements of Part B, Item 1 of Water Licence # 3BM-COR0813 issued to the Hamlet of Coral Harbour.

i-iii) tabular summaries of all data generated under the "Monitoring Program"; monthly and annual quantities in cubic metres of freshwater obtained from all sources; monthly and annual quantities in cubic metres of each and all wastes discharged;

Attached are quantities of water used as reported in our Fluid Manager Delivery System and the estimated discharge of sewage waste based on quantities used.

Month Reported	Quantity of Water Obtained from all sources (m³)	Quantity of Sewage Waste Discharged (m³)
January	2,793.645	2,793.645
February	2,408.862	2,408.862
March	2,707.471	2,707.471
April	2,716.627	2,716.627
May	2,637.910	2,637.910
June	2,495.238	2,495.238
July	3,075.741	3,075.741
August	2,758.638	2,758.638
September	2,604.506	2,604.506
October	2,758.638	2,758.638
November	2,809.752	2,809.752
December	2,950.565	2,950.565
ANNUAL TOTAL	32,717.593	32,717.593

Note: There is no meter existing at the discharge pipe. Therefore the monthly discharge is considered as equal to the monthly water consumption.

- iv. a summary of modifications and/or major maintenance work carried out on the Water Supply and Waste Disposal Facilities, including all associated structures and facilities;
  - Upgrades to the Coral Harbour sewage treatment facilities are being completed. These upgrades include construction diversion berms to redirect wetland treatment flow away from the community and the use of a Wetland Treatment Area as part of the overall sewage treatment system.
  - No major repairs or maintenance work taking place for the water supply facilities or solid waste site.
- v. a list of unauthorized discharges and summary of follow-up action taken;
  - No unauthorized discharge of sewage or solid waste during the reporting period.
- vi. a summary of any abandonment and restoration work completed during the year and an outline of any work anticipated for the next year;
  - No abandonment and restoration work was planned/completed in 2008 and there is no planned work for next year.
- vii. 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;
  - Operations and Maintenance Plan which includes a Water Storage and Distribution Facility O&M Plan, a Sewage Disposal Facility O&M Plan, Sewage Sludge Management Plan, Solid Waste Disposal Facility O&M Plan, Spill Contingency Plan, and Monitoring Program Quality Assurance/Quality Control Plan must be submitted.

- viii. any other details on water use or waste disposal requested by the Board by November 1st of the year being reported; and
  - The Licensee must provide the NWB with finalized as-built drawings for all construction of division berms associated with the Sewage Disposal Facilities and the Solid Waste Disposal Facility.
  - The Licensee must submit a Plan for Compliance that clearly demonstrates the ways and means the Licensee will undertake to achieve full compliance with the conditions of this Licence.
- ix. updates or revisions to the approved Operation and Maintenance Plans.
- No O&M manual is currently available; one is being created for the existing water facility, solid waste site, and improved sewage disposal facility.

#### ADDITIONAL INFORMATION THAT THE LICENSEE DEEMS USEFUL:

• The Board approved the application and issued No. 3BM-COR0813 on April 2, 2008. The licence expiry date is March 31, 2013.

### FOLLOW-UP REGARDING INSPECTION/COMPLIANCE CONCERNS:

• No INAC inspection took place this year.

### YEAR BEING REPORTED: 2009 (revised)

The following information is compiled pursuant to the requirements of Part B, Item 1 of Water Licence # 3BM-COR0813 issued to the Hamlet of Coral Harbour.

i-iii) tabular summaries of all data generated under the "Monitoring Program"; monthly and annual quantities in cubic metres of freshwater obtained from all sources; monthly and annual quantities in cubic metres of each and all wastes discharged;

Attached are quantities of water used as reported in our Fluid Manager Delivery System and the estimated discharge of sewage waste based on quantities used.

Month Reported	Quantity of Water Obtained from all sources (m³)	Quantity of Sewage Waste Discharged (m³)	
January	2,888.565	2,888.565	
February	2,578.941	2,578.941	
March	2,820.067	2,820.067	
April	2,896.762	2,896.762	
Мау	2,764.653	2,764.653	
June	2,550.017	2,550.017	
July	2,732.630	2,732.630	
August	2,731.779	2,731.779	
September	2,833.481	2,833.481	
October	3,098.980	3,098.980	
November	2,904.301	2,904.301	
December	2,468.501	2,468.501	
ANNUAL TOTAL	33,268.677	33,268.677	

Note: There is no meter existing at the discharge pipe. Therefore the monthly discharge is considered as equal to the monthly water consumption.

- iv. a summary of modifications and/or major maintenance work carried out on the Water Supply and Waste Disposal Facilities, including all associated structures and facilities:
  - No major repairs or maintenance work is taking place for the water supply facilities, sewage treatment facilities, or solid waste site.
- v. a list of unauthorized discharges and summary of follow-up action taken;
  - No unauthorized discharge of sewage or solid waste during the reporting period.
- vi. a summary of any abandonment and restoration work completed during the year and an outline of any work anticipated for the next year;
  - No abandonment and restoration work was planned/completed in 2009 and there is no planned work for next year.
- vii. 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;
  - The Licensee must provide the NWB with finalized as-built drawings for all construction of division berms associated with the Sewage Disposal Facilities and the Solid Waste Disposal Facility.
  - The Licensee must submit a Plan for Compliance that clearly demonstrates the
    ways and means the Licensee will undertake to achieve full compliance with the
    conditions of this Licence.
  - An annual inspection of the engineered facilities related to the management of
    water and waste shall be carried out by a Geotechnical Engineer in July or August.
    The engineer's report shall be submitted to the Board, including a cover letter from
    the Licensee outlining an implementation plan addressing the Engineer's
    recommendations.

- viii. any other details on water use or waste disposal requested by the Board by November 1st of the year being reported; and
- Samples at Monitoring Program Stations COR-3, COR-4a, COR-4b, COR-4c and COR-5 were not taken during the 2009 open water season.
- ix. updates or revisions to the approved Operation and Maintenance Plans.
- An Operations and Maintenance Manual for Water, Sewage and Solid Waste Facilities at Coral Harbour was submitted to the NWB on January 27, 2010 by Nunami Stantec on behalf of the Hamlet of Coral Harbour. This includes the Water Distribution System Operations and Maintenance, Sewage Disposal Facility Operations and Maintenance, Solid Waste Disposal Facilities Operations and Maintenance, and Emergency Response (including Spill Contingency Plan).

### ADDITIONAL INFORMATION THAT THE LICENSEE DEEMS USEFUL:

• There is no additional information to be included in this report.

#### FOLLOW-UP REGARDING INSPECTION/COMPLIANCE CONCERNS:

- INAC inspection took place on July 23, 2009. The Inspector identified the following compliance concerns:
  - Failure to collect and submit for analysis samples required on the Monitoring Program.
  - o Failure to segregate wastes;
  - o Failure to properly store hazardous wastes;
  - o Failure to submit required Annual Reports (Part B 1a through i);
  - o Failure to maintain appropriate signage (Part B 5);
  - o Failure to Submit the required Plan for Compliance (Part B 10);
  - o Failure to notify Inspector and implement the monitoring program as required (Part D 2);

- o Failure to submit an Operations and Maintenance manual as required (Part F 1);
- o Failure to submit an engineers report on the required Geotechnical Inspection of all engineered facilities (Part F 3);
- o Failure to submit as required the appropriate Abandonment and Restoration Plans (Part G 1); and
- o Failure to implement the requirements listed under the Monitoring Program (Part H).



File No.: 3BM-COR0813/TR

February 19, 2014

Stephen A. Douglas, Lead Designer Steven L. Burden, P. Eng., Senior Manager Infrastructure Services exp Services Inc. 100 – 2650 Queensview Drive Ottawa, Ontario K2B 8H6

Email: <u>stephen.douglas@exp.com</u> steven.burden@exp.com

Re: Licence No. 3BM-COR0813 – Application for Proposed Pump House and Truck Fill Station Updates; Hamlet of Coral Habour

Dear Mr. Douglas and Mr. Burden:

The Nunavut Water Board (NWB or Board) has completed its review of the documents submitted on December 12, 2013 by exp Services Inc., on behalf of the Hamlet of Coral Harbour (Hamlet or Proponent), for proposed upgrades to the pump house and truck fill station associated with the potable water treatment facility that is operated by the Hamlet. Your submission included the following documents:

- Facility Assessment and Design Brief
- Cover Letter New Water Pump House Coral Harbour
- M100 Mechanical Legend and Drawing List
- M101 Mechanical Details
- M200 Mechanical Plumbing Layout
- M201 Mechanical Plumbing Schematic
- M300 Mechanical Fuel System Layout
- M301 Mechanical Fuel System Schematic
- M500 Mechanical Ventilation Layout
- M600 Mechanical Controls Schematics
- C1 Site Plan
- C2 Plan & Profiles
- C3 Details
- C4 Details
- E1 Electrical New Power and Lighting Layout

- E2 Electrical Schedules and Details
- S1 Ground Floor Plan, Sections And General Notes
- S2 Roof Framing Plan And Sections
- S3 Building Elevations And Fill Pipe Details
- S4 Sections
- S5 Fuel Storage Tank Plan And Sections
- Index of Included Drawings

The submission has been placed in the NWB's public registry and public access to the documents is made available through the NWB's FTP at following link (Username: **public** and Password: **registry**):

<u>ftp://nunavutwaterboard.org/1%20PRUC/3%20MUNICIPAL/3B/3BM%20-</u> <u>%20Municipality/3BM-COR0813/3%20TECH/6%20CONSTRUCT%20(E)/131217%203BM-COR0813%20New%20Water%20Pump%20House-IMLE/</u>

The review has determined that the proposed upgrades are considered as modifications since they do not constitute substantive changes to the scope of the undertakings and activities associated with licence 3BM-COR0813. The Proponent should note, however, that Licence 3BM-COR0813 is currently expired; consequently, the Licence terms and conditions do not allow for any modifications to be undertaken before the Licence is renewed. The NWB therefore recommends that the Proponent consider renewing the licence and including the proposed upgrades under the scope of the renewed licence. Prior to or as part of the licence renewal process, the Proponent should ensure that any outstanding requirements under the expired licence are satisfied.

Should you have any question with respect to the administration requirements of your submission, please contact the NWB's Licensing Department at (867) 360-6338 or by email to <a href="mailto:Phyllis.Beaulieu@nwb-oen.ca">Phyllis.Beaulieu@nwb-oen.ca</a> or <a href="mailto:Sean.Joseph@nwb-oen.ca">Sean.Joseph@nwb-oen.ca</a> for any technical inquiries with respect to an application for amendment/renewal.

Regards,

*Original signed by:* 

Phyllis Beaulieu Manager of Licensing, NWB

Cc:

Brian Duguay, Project Manager – Kivalliq Region Ashwani Sharma, Project Officer – Kivalliq Region SAO, Hamlet of Coral Harbour

	Licence Condition	Status of Compliance	Short Term Plan for Compliance	Responsibility	Schedule of Implementation	Long Term Plan for Compliance
PART B	GENERAL CONDITIONS	- Courted or Compiler		Порология		
B-1	The Licensee shall file an Annual Report with the Board no later than March 31st of the year following the calendar year reported.	Non-compliance: Annual Reports for 2007 and 2008 have not been submitted; Annual Report for 2009 is incomplete.	Complete outstanding Annual Reports for 2007, 2008 and 2009.	Hamlet of Coral Harbour with assistance from CGS	Annual Reports 2007, 2008 and 2009 have been submitted with the revised Amendment/Renewal Application January 16, 2015. Annual Report 2014 will be submitted prior to March 31, 2015	Annual Reports will be submitted prior to the March 31st deadline each year.
B-2	The Licensee shall comply with the "Monitoring Program" described in this Licence, and any amendments to the "Monitoring Program" as may be made from time to time, pursuant to the conditions of this Licence.	Non-compliance	Weekly checks of the Monitoring Stations will begin in May and continue until the end of August. When flow is present, monthly samples will be taken. May-August checks and a summary of samples analysis will be submitted with the Annual Report.	Hamlet of Coral Harbour		Weekly checks of Monitoring Stations will begin in May and continue until August each year. Samples will be taken monthly when flow is present. Results of the sampling program will be included with the Annual Report.
B-5	The Licensee shall, within ninety (90) days after the first visit by the Inspector following issuance of this Licence, post the necessary signs to identify the stations of the "Monitoring Program". All signage postings shall be in the Official Languages of Nunavut.	Non-compliance	Signage for the Monitoring Program Stations will be ordered over the winter for installation summer 2015.		Signage for the Monitoring Program Stations will be ordered over the winter for installation summer 2015. Proof of installation will be included with the 2015 Annual Report.	Monitoring Program signage will be inspected on an annual basis and repaired if/when necessary. Proof of repair will be included in the Annual Report.
B-10	The Licensee shall submit to the Board for approval within the lesser of ninety (90) days or upon the filing of any application in relation to the Licence, a Plan for Compliance that clearly demonstrates the ways and means the Licensee will undertake to achieve full compliance with the conditions of this Licence.	Non-compliance	Complete Compliance Plan for Water Licence No. 3BM-COR0813.	Hamlet of Coral Harbour with assistance from CGS as needed	Compliance Plan is submitted with the revised Amendment/Renewal Application January 16, 2015.	Target dates set in Compliance Plan will be met to work towards bringing Water Licence No. 3BM-COR0813 towards full compliance. The Compliance Plan will be updated with the status of outstanding conditions and submitted with the Annual Report or as requested by the NWB.

DARTC	COMPLETIONS APPLYANCE TO MATER HIS					
PART C	CONDITIONS APPLYING TO WATER USE					
C-2	The annual quantity of water used for all purposed shall not exceed 35,000 cubic metres.		The Hamlet of Coral Harbour has not exceeded the authorized water quantity, however demand increase as the population of the community grows will require more water in the near future.	Hamlet of Coral Harbour	Amendment/Renewal Application January 16, 2015 requests increased water quantity authorization of 45,000 cubic metres annually.	If a greater volume of water authorized is needed to meet community demand prior to the renewed licence expiry, an Amendment Application with additional information on the water source and demand will be submitted to the NWB in a timely fashion.
C-3	The Licensee shall equip all water intake hoses with a screen of an appropriate mesh size to ensure that fish are not entrained and shall withdraw water at a rate such that fish do not become impinged on the screen.	Non-compliance	The intake screen will be inspected to ensure it meets DFO requirements.	Hamlet of Coral Harbour with assistance from CGS	on the condition of the intake screen within 60 days of this	The intake screen will be inspected a minimum of every 5 years. The NWB will be notified in the proceeding year's Annual Report if an intake screen inspection is scheduled for the following year. A report on the condition of the intake screen will be included with the Annual Report when completed.
	CONDITIONS APPLYING TO WASTE DISPOSAL					
D-2	The Licensee shall provide notice to an Inspector annually upon commencing the monitoring program when flow is observed from either the Sewage Disposal Facility, at monitoring station COR-3, or the Wetland Treatment Area at monitoring station COR-5.	Non-compliance	Weekly checks of the Monitoring Stations will begin in May and the Inspector will be notified via email when flow is observed. See B-2 for more information on week Monitoring Station checks.	Hamlet of Coral Harbour	at Monitoring Stations COR-3 or COR-5.	Weekly checks of the Monitoring Stations will take place each year from May to August. The Inspector will be notified via email as soon as flow is observed at Monitoring Stations COR-3 or COR-5.

D-6	All Effluent discharged from the Wetland Treatment Area Final Discharge Point, Monitoring Program Station COR-5, shall be demonstrated to the Not Acutely Toxic under the following tests to be conducted once annually approximately mid-way through discharge:	Non-compliance	The Licensee is requesting this condition be removed from the Water Licence.	Hamlet of Coral Harbour	and Acute lethality to Daphnia magna is requested to be removed from the Amended/Renewed Water Licence.	The Licensee will compare sample results from the Monitoring Stations to the CCME Water Quality Guidelines for the Protection of Aquatic Life as a means of confirming the effluent discharged from the wetlands area does not have an adverse impact on the surrounding environment and fish habitat.
D-6a	Acute lethality to Rainbow Trout, Oncorhynchus mykiss (as per Environment Canada's Environmental Protection Series Biological Test Method EPS/1/RM/13); and					Habitat.
D-6b	Acute lethality to the crustacean, Daphnia magna (as per Environment Canada's Environmental Protection Series Biological Test Method EPS/1/RM/14).					
PART E	CONDITIONS APPLYING TO MODIFICATION AND CONSTRUCTION					
E-3	Modifications for which all the conditions referred to in Part E, Item 2, have not been met may be carried out only with written approval from the Board. The Licensee shall provide asbuilt plans and drawings of the Modifications referred to in this Licence within ninety (90) days of completion of the Modification. These plans and drawings shall be stamped by an Engineer.	In compliance	As-built drawings of the new pump house will be submitted within 90 days of completion.	CGS	As-built drawings of the new pump house will be submitted within 90 days of completion, scheduled for the end of 2015.	As-built drawings of other modifications as approved by the NWB will be submitted when required.

F-1 T for is a w the a	for approval, within ninety (90) days of assuance of the Licence, an Operations and Maintenance Manual prepared where appropriate in accordance with the "Guidelines for the Preparation of		Operation and Maintenance Manual for Water, Sewage and Solid Waste Facilities at Coral	Hamlet of Coral Harbour with		O&M Manuals will be reviewed
F-1 T for its a which we have a for	The Licensee shall submit to the Board or approval, within ninety (90) days of ssuance of the Licence, an Operations and Maintenance Manual prepared where appropriate in accordance with the "Guidelines for the Preparation of	·	Manual for Water, Sewage and			O&M Manuals will be reviewed
for is a work the a	for approval, within ninety (90) days of assuance of the Licence, an Operations and Maintenance Manual prepared where appropriate in accordance with the "Guidelines for the Preparation of	·	Manual for Water, Sewage and			O&M Manuals will be reviewed
is a w th a	ssuance of the Licence, an Operations and Maintenance Manual prepared where appropriate in accordance with the "Guidelines for the Preparation of		-	Harbaur with		
a w th a	and Maintenance Manual prepared where appropriate in accordance with the "Guidelines for the Preparation of		Calid Masta Facilities at Caral		· ·	annually and the NWB will be notified
w th a	where appropriate in accordance with the "Guidelines for the Preparation of			assistance from CGS	water pumphouse will be	of any changes/updates in the Annual
th a	he "Guidelines for the Preparation of		Harbour, NU (Nunami Stantec		submitted to the NWB for	Report.
а			2010), was previously submitted		approval upon completion of	
			and contains: Water Distribution		construction.	
fo	an Operation and Maintenance Manual		System Operations and			
p -	for Sewage and Solid Waste Disposal		Maintenance (Section 3), Sewage			
F	Facilities in the Northwest Territories,		Disposal Facility Operations and			
1.	1996". The Manual shall take into		Maintenance (Section 4), Sewage			
C	consideration the comments received		Sludge Management Plan (Section			
d	during the application and review		4.7), Solid Waste Disposal Facilities			
р	process and shall contain the following		Operations and Maintenance			
p	plans:		(Section 5), Spill Contingency Plan			
ľ			(Section 6.2), Spill Contingency			
F 4 - 14	Mater Distribution Facility Once 11		Forms (Appendix G), and			
	Water Distribution Facility Operation		Monitoring Program Quality			
a	and Maintenance (O&M) Plan;		Assurance/Quality Control Plan.			
F-1b S	Sewage Disposal Facility Operation and		, - ,			
	Maintenance (O&M) Plan;					
	Sewage Sludge Management Plan;					
	Solid Waste Disposal Facility Operation					
	and Maintenance (O&M) Plan;					
u	ina Maintenance (O&M) Flan,					
F-1e S	Spill Contingency Plan; and					
	Monitoring Program Quality					
	Assurance/Quality Control Plan (QA/QC					
	Plan).					
		In compliance - ongoing	The updated Water Distribution	Hamlet of Coral	The revised O&M Manual for the	The O&M Manual will be reviewed
N	Manual referred to in Part F, Item 1 as	. 3 3	Facility O&M Manual for the new	Harbour with	new water pumphouse will be	annually and necessary revisions will
	required by changes in operation and/or		pumphouse and truck fill will be	assistance from CGS		be submitted as an Addendum to the
	echnology and modify accordingly.		submitted to the NWB for approval			annual report.
	Revisions are to be submitted in the		upon completion of construction.		construction.	<del>-  </del>
	form of an Addendum to be included					
	with the Annual Report.					
ľ	Mich die Aimai Neport.					

F-3	An inspection of all engineered facilities related to the management of water and waste shall be carried out annually in July or August by a Geotechnical Engineer. The engineer's report shall be submitted to the Board within sixty (60) days of the inspection, including a covering letter from the Licensee outlining an implementation plan addressing each of the Engineer's recommendations.	Non-compliance	No annual inspections were conducted by a Geotechnical Engineer from 2008-2014 therefore no reports can be provided to the NWB.	CGS Rankin Inlet Municipal Engineer	completed by the CGS Municipal Engineer upon commissioning the new sewage lagoon.	Annual inspection of the engineered facilities and sewage lagoon berms to be completed by the CGS Municipal Engineer. If any issues are found with the berms, appropriate measures will be taken for further study or repair of the berms. The annual berm inspection and any follow-up measure taken will be reported in the Annual Report.
PART H	CONDITIONS APPLYING TO THE MONITORING PROGRAM					
H-1		Non-compliance	Required sampling will occur at the Monitoring Program Stations described.	Hamlet of Coral Harbour with assistance from CGS	Sampling results will be included in the Annual Reports to be submit prior to the March 31st deadline each year.	Sampling will take place annually and results will be included in the Annual Reports to be submit prior to the March 31st deadline each year.

H-2	The Licensee shall sample at the Monitoring Program Stations COR-3, COR-4a, COR-4b, COR-4c and COR-5 once at the beginning, middle and near the end of the open water season when during periods of observed flow. Samples shall be analyzed for the following parameters: BOD <sub>5</sub> , Faecal Coliforms, Total Suspended Solids, pH, Conductivity, Nitrate-Nitrite, Oil and Grease (visual), Total Phenols, Magnesium, Calcium, Sodium, Potassium, Chloride, Sulphate, Total Hardness, Total Alkalinity, Ammonia Nitrogen, Total Zinc, Total Cadmium, Total Iron, Total Cobalt, Total Manganese, Total Chromium, Total Nickel, Total Copper, Total Lead, Total Aluminum, Total Arsenic, Total Mercury, Total Organic Carbon	·	Required sampling will occur at the Monitoring Program Stations described.	with assistance from CGS as needed	Sampling results will be included in the Annual Reports to be submit prior to the March 31st deadline each year.	Sampling will take place annually and results will be included in the Annual Reports to be submit prior to the March 31st deadline each year.
H-3	The Licensee shall sample at the Monitoring Program Station COR-6 annually during the periods of runoff or seepage. Samples shall be analyzed for the following parameters: Total Petroleum Hydrocarbons, Polycyclic Aromatic Hydrocarbons, BTEX, BOD <sub>5</sub> , Faecal Coliforms, pH, Conductivity, Total Suspended Solids, Oil and Grease, Nitrate-Nitrite, Ammonia Nitrogen, Total Phenols, Total Alkalinity, Total Hardness, Calcium, Magnesium, Potassium, Sodium, Sulphate, Total Arsenic, Total Cadmium, Total Copper, Total Chromium, Total Iron, Total Lead, Total Mercury, Total Nickel	·	Required sampling will occur at the Monitoring Program Stations described.	Harbour	Sampling results will be included in the Annual Reports to be submit prior to the March 31st deadline each year.	Sampling will take place annually and results will be included in the Annual Reports to be submit prior to the March 31st deadline each year.

H-4	The Licensee shall report all results of	Non-compliance	The Licensee is requesting this	Hamlet of Coral	The requirement to test for	The Licensee will compare sample
	acute toxicity testing as required under		condition be removed from the	Harbour	Acute lethality to Rainbow Trout	results from the Monitoring Stations to
	Part D, Item 6 within the Annual Report		Water Licence. Refer to Item D-6.		and Acute lethality to Daphnia	the CCME Water Quality Guidelines for
	as per Part B, Item 1.				magna be removed from the	the Protection of Aquatic Life as a
					Amended/Renewed Water	means of confirming the effluent
					Licence.	discharged from the wetlands area
						does not have an adverse impact on
						the surrounding environment and fish
						habitat.
1						