



North Warning System Office
Department of National Defence
National Defence Headquarters
101 Colonel By Drive
Ottawa, Ontario
K1A 0K2

28 January 2018

Karén Kharatyan
Senior Technical Advisor / Acting Licensing Manager
Nunavut Water Board
P.O. BOX 119
Gjoa Haven, Nunavut
XOB 1J0

RE: 3BC-DYE0919, DYE-M Cape Dyer Water Use Licence Renewal/Amendment

At the time of this renewal/amendment the Department of National Defence (DND) would like the Nunavut Water Board to consider updating a few of the historical Terms and Conditions associated with past Water Use Licences for DYE-M, Cape Dyer.

Item	Location in Licence (3BC-DYE0919)	Current Clause	Requested Change
1.	Part B: #9	The Licensee shall submit <u>one paper copy</u> and one electronic copy of all reports, studies, and plans to the Board. Reports or studies submitted to the Board by the Licensee shall include a detailed executive summary in English and Inuktitut.	DND would like to only submit electronic copies of reports, studies and plans.
2.	Part D: #1	The Licensee shall submit to the Board for approval, within thirty (30) days of Licence issuance, a Sewage Disposal Update include the following information: a. A plan to manage sludge from the Sewage Disposal Facility; b. Dimensions and capacity of the Sump to be located at the Sewage outfall; c. Location of the Sump on a map in relation to water bodies including ephemeral streams, topography and drainage paths; and d. Photos of the sump and outfall system.	This information has previously been provided to the NWB. DND requests that this clause be removed from the future licence.



**National
Defence** **Défense
nationale**

Item	Location in Licence (3BC-DYE0919)	Current Clause	Requested Change																																		
3.	Part D: #10	<p>All discharge of Effluent at Monitoring Station DYE-3 (Fuel storage area) shall not exceed the following Effluent quality limits:</p> <table border="1"><thead><tr><th>Parameter</th><th>Maximum Concentration of any Grab Sample (µg/L)</th></tr></thead><tbody><tr><td>pH</td><td>6 to 9 (units)</td></tr><tr><td>Oil and Grease</td><td>5000</td></tr><tr><td>Arsenic (total)</td><td>100</td></tr><tr><td>Cadmium (dissolved)</td><td>10</td></tr><tr><td>Chromium (dissolved)</td><td>100</td></tr><tr><td>Cobalt (dissolved)</td><td>50</td></tr><tr><td>Copper (dissolved)</td><td>200</td></tr><tr><td>Lead (dissolved)</td><td>50</td></tr><tr><td>Mercury (total)</td><td>0.6</td></tr><tr><td>Nickel (dissolved)</td><td>200</td></tr><tr><td>PCB (total)</td><td>1000</td></tr><tr><td>Phenols</td><td>20</td></tr><tr><td>Zinc (total)</td><td>500</td></tr><tr><td>Benzene</td><td>370</td></tr><tr><td>Toluene</td><td>2</td></tr><tr><td>Ethylbenzene</td><td>90</td></tr></tbody></table>	Parameter	Maximum Concentration of any Grab Sample (µg/L)	pH	6 to 9 (units)	Oil and Grease	5000	Arsenic (total)	100	Cadmium (dissolved)	10	Chromium (dissolved)	100	Cobalt (dissolved)	50	Copper (dissolved)	200	Lead (dissolved)	50	Mercury (total)	0.6	Nickel (dissolved)	200	PCB (total)	1000	Phenols	20	Zinc (total)	500	Benzene	370	Toluene	2	Ethylbenzene	90	<p>DYE-3 represents the discharge point of accumulated water from the fuel storage bermed area. DND requests that the parameters analyzed be directly correlated with the presence of hydrocarbons.</p> <p>Field screening could be used to determine if berm water meets with the discharge criteria; saving the requirement to transport samples to an analytical laboratory, awaiting results, chartering a plane to return to the site and subsequently discharging the berm water.</p> <p>Historical analytical data (2010-2018) for the berm water at DYE-3 does not indicate the presence of any of the analytes listed in the parameters of the licence.</p>
Parameter	Maximum Concentration of any Grab Sample (µg/L)																																				
pH	6 to 9 (units)																																				
Oil and Grease	5000																																				
Arsenic (total)	100																																				
Cadmium (dissolved)	10																																				
Chromium (dissolved)	100																																				
Cobalt (dissolved)	50																																				
Copper (dissolved)	200																																				
Lead (dissolved)	50																																				
Mercury (total)	0.6																																				
Nickel (dissolved)	200																																				
PCB (total)	1000																																				
Phenols	20																																				
Zinc (total)	500																																				
Benzene	370																																				
Toluene	2																																				
Ethylbenzene	90																																				
4.	Part E: #1	<p>The Licensee shall submit to the Board for approval, within sixty (60) days following Licence issuance, an Operation and Maintenance Plan for the Landfill and handling of solid wastes, developed in accordance with prepared in accordance with the "Guidelines for Preparing an Operation and Maintenance Manual for Sewage and Solid Waste Disposal Facilities", October 1996.</p>	<p>This information has previously been provided to the NWB in the letter from the licensee on 29-Jan-2010. The letter stated that "The landfill at DYE-M has been capped by the DEW Line Clean-up (DLCU) project and is closed.</p> <p>DND requests that this clause be removed from the future licence.</p>																																		



Item	Location in Licence (3BC-DYE0919)	Current Clause	Requested Change
5.	Part I: #3	<p>The Licensee shall sample at Monitoring Station DYE-2, <u>monthly</u> during periods of flow. Samples shall be analyzed for the following parameters:</p> <ul style="list-style-type: none">• Biological Oxygen Demand• Faecal Coliforms• Total Suspended Solids• pH• Oil and Grease (and visual)	<p>Sewage (blackwater) and greywater are combined in the sewage system. The sewage system comprises a sump, holding tank, and masticating pump within the building train. Sewage is not discharged daily. When the septic tank nears or reaches capacity, the sewage is discharged out the sewage outfall pipe to the receiving sump.</p> <p>Up to 10 m³ is discharged at one time from two to five times a year, depending on the number of people who have visited the site.</p> <p>The site has one incinerating toilet which reduces sewage to ash; the ash is disposed of off-site. The incinerating toilet's cycling time (interval between usages) does not make it practical to support anything but a short site visit by a few staff. It is primarily in place in case the site fails in the winter and freezes. Under these conditions, a small crew would be dispatched to the site to restore power and thaw the site. The incinerating toilet would be used until the sewage system was thawed and returned to a serviceable state. It cannot meet the demands of a ramped up site.</p> <p>DND requests that the sampling point DYE-2 be discontinued. This sampling will be replaced with sampling of effluent from the outfall sump if required to ensure proper operation of the sump or to perform maintenance on the outfall sump. This method was approved at the NWS FOX-3 (NWB water licence 8BC-FOD1828)</p>



National Défense
Defence nationale

Item	Location in Licence (3BC-DYE0919)	Current Clause	Requested Change
6.	Part I: #8	The Licensee shall within ninety (90) days following issuance of the Licence, submit to the Board a Quality Assurance / Quality Control (QA/QC) Plan. The Plan shall be include up to date field sampling methods to all applicable standards, acceptable to an accredited laboratory as required by Part I, Item 6 and Part I, Item 7. The Plan shall include a covering letter from the accredited laboratory confirming acceptance of the Plan for analyses to be performed under this Licence.	This information has previously been provided to the NWB. DND requests that this clause be removed from the future licence.
	N/A	N/A	DND requests the ability to conduct land farm operations on-site. A generic Landfarm Plan has been included in the relicensing package.

The following documents are being submitted as the Water Licence Renewal Package for DYE-M:

- Application for Water Licence Amendment 3BC-DYE0919
 - Annex A1 - NPC File 148956, 3BC-DYE0919 Renewal - NIRB Screening Required (25Oct2018)
 - Annex A2 - 181220-03DN124-NIRB Screening Decision Report for TC-OT8E
 - Annex A3 - DYE-M Landfarm Plan
 - Annex A4 - Berm Water Sampling QAQC Plan
 - Annex A5 - 170925 3BC-DYE0919 DYE-M_AUG_24_2017 Inspection Report-ILAE
 - Annex A6 - NWB Licence Compliance Assessment
- Remote Camp Supplementary Questionnaire 3BC-DYE0919
 - Annex Q1 - 3BC-DYE0919 Executive Summary
 - Annex Q2 – Spill Contingency Plan
 - Annex Q3 – DYE-M Site Description
 - Annex Q4 – DYE-M Site Plan
 - Annex Q5 – Jet A1 SDS
 - Annex Q6 - Sewage Disposal Update Addendum

Should you have any additional questions or require further clarification please contact, Will Wyman, Raytheon Canada Limited, by phone at 613-787-3655 or email William.wyman@raytheon.com.
Regards,

Chris Greaves

Major Chris Greaves

Officer Commanding, Det NWS, Real Property Operations (North)

Date: *28 Jan 19*

Canada