



North Warning System Office  
Department of National Defence  
National Defence Headquarters  
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28 January 2018

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Nunavut Water Board  
P.O. BOX 119  
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**RE: 3BC-BAF0919, BAF-3 Brevoort Island 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 BAF-3, Brevoort Island.

Item	Location in Licence (3BC-BAF0919)	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.



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3.	Part D: #10	<p>All discharge of Effluent at Monitoring Station BAF-4 (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>BAF-4 represents the discharge point of accumulated water from the fuel storage bermed area. The bulk fuel tanks were removed from the summit berm in 2011 and the berm was breached. The bulk fuel tanks were removed from the beach berm in 2013 and the berm was breached in 2016.</p> <p>DND requests that monitoring station BAF-4 be discontinued.</p>
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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.</p> <p>DND requests that this clause be removed from the future licence.</p>																																		



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Item	Location in Licence (3BC-BAF0919)	Current Clause	Requested Change
5.	Part I: #3	<p>The Licensee shall sample at Monitoring Station BAF-2, <u>monthly</u> during periods of flow. Samples shall be analyzed for the following parameters:</p> <ul style="list-style-type: none"><li>• Biological Oxygen Demand</li><li>• Faecal Coliforms</li><li>• Total Suspended Solids</li><li>• pH</li><li>• Oil and Grease (and visual)</li></ul>	<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 m<sup>3</sup> 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 BAF-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>



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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

The following documents are being submitted as the Water Licence Renewal Package for BAF-3:

- Application for Water Licence Amendment 3BC-BAF0919
  - Annex A1 - 148957 - No LUP - Renewal - No Conformity or Screening required (17Oct2018)
  - Annex A2 - 090731 3BC-BAF0409 Exempt from NIRB-IMLE
  - Annex A4 - Berm Water Sampling QAQC Plan
  - Annex A5 - 170925 3BC-BAF0919 2017\_inspection\_report-ILAE
  - Annex A6 - NWB Licence Compliance Assessment
- Remote Camp Supplementary Questionnaire 3BC-BAF0919
  - Annex Q1 - 3BC-BAF0919 Executive Summary
  - Annex Q2 – Spill Contingency Plan
  - Annex Q3 – BAF-3 Site Description
  - Annex Q4 – BAF-3 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](mailto:William.wyman@raytheon.com).  
Regards,

*Chris Greaves*  
Major Chris Greaves  
Officer Commanding, Det NWS, Real Property Operations (North)

Date: 28 Jan 19