National Defence / Défense nationale

North Warning System Office
Department of National Defence
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Nunavut Water Board
P.O. BOX 119
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RE: 3BC-FOD0919, FOX-3 Dewar Lakes 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 FOX-3, Dewar Lakes.

Item	Location in Licence (3BC-FOD0919)	Current Clause	Requested Change
1.	Part B: #9	The Licensee shall submit one paper copy 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; can this clause be removed from future licence?

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<tr><th>Item</th><th>Location in Licence (3BC-FOD0919)</th><th>Current Clause</th><th>Requested Change</th></tr>
<tr><td>3.</td><td>Part D: #10</td><td>All discharge of Effluent at Monitoring Station FOD-3 (Fuel storage area) shall not exceed the following Effluent quality limits:
<table>
<tr><th>Parameter</th><th>Maximum Concentration of any Grab Sample (µg/L)</th></tr>
<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>
</table></td><td>FOD-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; Benzene, Toluene and Ethylbenzene.

Portable field analytical equipment 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.

Historical analytical data (2010-2017) for the berm water at FOX-3 does not indicate the presence of any of the analytes listed in the parameters of the licence.</td></tr>
<tr><td>4.</td><td>Part E: #1</td><td>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.</td><td>This information has previously been provided to the NWB. This landfill is no longer being used at this site. Can this clause be removed from future licence?</td></tr>
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Item	Location in Licence (3BC-FOD0919)	Current Clause	Requested Change
5.	Part I: #3	The Licensee shall sample at Monitoring Station FOD-2, monthly during periods of flow. Samples shall be analyzed for the following parameters: • Biological Oxygen Demand • Faecal Coliforms • Total Suspended Solids • pH • Oil and Grease (and visual)	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. Up to 10 m^3 is discharged at one time from two to five times a year, depending on the number of people who have visited the site. 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. DND requests the sewage effluent sampling be required monthly only when the site is ramped up. The sampling point is FOD-2, the end of the sewage outfall pipe. DND recognizes that the Sewage effluent samples be analyzed for: Biochemical Oxygen Demand (BOD), fecal coliforms, pH, phenols, and oil & grease. However, DND requests that the analytical testing for these parameters be performed using Portable field analytical equipment.

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Item	Location in Licence (3BC-FOD0919)	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. Can this clause be removed from future licence?

Should you have any additional questions or require further clarification please contact, Tamara Van Dyck, Defence Construction Canada, by phone at 613-993-2234 or by email Tamara.VanDyck@dcc-cdc.gc.ca.

Regards,

I. Creighton

Major Ian Creighton
North Warning System Facilities Manager
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