



July 16, 2012

Phyllis Beaulieu, Manager of Licensing
Nunavut Water Board
PO Box 119
Gjoa Haven NU
X0B 1J0

RE: Cape Hooper, FOX-4 Water Use Licence 1BR-FOX1118 – amendment to remove iron from wastewater discharge criteria

Dear Phyllis,

Defence Construction Canada (DCC) on behalf of the Department of National Defence (DND) is requesting an amendment to the newly issued Water Use Licence 1BR-FOX1118. Currently this Water Use Licence includes the requirement for wastewater to meet a maximum allowable concentration for iron; the DEWLine Clean-up (DLCU) Project would like the Nunavut Water Board to remove this element from the wastewater discharge criteria.

Iron is the fourth most abundant element in the earth's crust and the most abundant heavy metal. Iron is an essential element in human nutrition. During all of the site investigations followed by remediation work iron has never been identified as a contaminate of concern for any of the DEWLine sites.

According to the *Guidelines for Canadian Drinking Water Quality* for iron 'a maximum acceptable concentration has not been set' (Health Canada website, <http://www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/iron-fer/index-eng.php>); the aesthetic objective for iron in drinking water is ≤ 0.3 mg/L (≤ 300 µg/L). Toxic effects have resulted from the ingestion of large quantities of iron, but there is no evidence to indicate that concentrations of iron commonly present in food or drinking water constitute any hazard to human health.

The remediation work at Cape Hooper does not anticipate wastewater generation; there are several remediation activities that could potentially generate wastewater including dewatering activities, contact water from landfill and contaminated soil excavations, new landfill operation, and contaminated soil treatment areas. Contact water could potentially contain a number of constituents of concern and the parameters selected for the analysis in wastewater are a

reflection of the types of contaminants found at the sites during the environmental assessment. These include:

- pH
- Cadmium
- Copper
- Nickel
- Oil & Grease
- Chromium
- Lead
- PCB
- Arsenic
- Cobalt
- Mercury
- Zinc

These parameters were also consistent with all of the other Water Use Licenses received from the NWB for work at other abandoned military sites. The original Water Use Licence 1BR-FOX0713 issued to DLCU FOX-4, Cape Hooper included the above parameter with no mention of maximum allowable iron concentration.

Although naturally occurring iron is found at the FOX-4 site, it is not considered a contaminant of concern. Because iron is not a contaminant of concern, and the criteria associated with it are set for aesthetic purposes only, DCC would like to request the removal of this parameter from the suite of parameters to be monitored in any wastewater generated from the site.

An application for an amendment to the water use license is attached. We trust the information provided in this letter and the amendment application is sufficient. Please feel free to contact the undersigned if you have any questions or would like to discuss the matter further.

Sincerely,



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