



Indian and Northern
Affairs Canada

Affaires indiennes
et du Nord Canada

Nunavut Regional Office
P.O. Box 2200
Iqaluit, Nunavut, X0A0H0

Date April 7, 2006

Phyllis Bealieu
Manger of Licensing
Nunavut Water Board
P.O. Box 119 Gjoa Haven,
Nunavut
X0B 1J0

RE; Justification of the proposed Wastewater Criteria for the CAM-F and FOX-C remediation projects

Dear Ms. Bealieu;

Indian and Northern Affairs Canada submitted supplemental information to the applications for both the CAM-F and FOX-C remediation project in the first quarter of 2006.

In a letter dated February 16, 2006, the Nunavut Water Board stated "The Applicant shall provide justification for the Wastewater Discharge Criteria in Section 01561 Section 5.1 in the project specifications compared to existing Northern standards and national standards, for example the Canadian Council of Ministers of the Environment (CCME), Canadian Environmental Quality Guidelines".

In response to the above request, the justification for use of the Wastewater Discharge Criteria is two fold. First, the criteria were derived from government guidelines, where available, and secondly the criteria have been approved for use on many of the DND DEW Line site remediation projects to date.

The Wastewater Discharge Criteria was first developed for the DND DEW Line Clean Up Project to address wastewater originating from the cleaning of barrels tanks and pipelines. Federal and territorial guidelines used to develop the criteria included:

1. "Guidelines for Municipal Type Wastewater Discharges in the Northwest Territories"(1982).
2. "An Approach for Assessing and Managing Wastewater Effluent Quality for Federal Facilities"(2000).
3. "Interim Canadian Environmental Quality Criteria for Contaminated Sites - Irrigation Criteria (CCME, 1991)".

Given that wastewater generated from cleaning activities will be applied to the land, "CCME Irrigation Criteria" was considered to be the most applicable. In instances where a parameter did not have any criteria associated with it in the CCME document, other

guidelines were used. As none of the guidelines contained criteria for land application of water contaminated with PCBs, specific criteria had to be developed (PCB vegetated area and PCB barren area). A table comparing the various references is attached.

The wastewater criteria defined in the CAM-F and FOX-C remediation specifications have been applied and used successfully at many DND DEW Line sites. Recent examples of DEW Line sites where this criteria has been, or is being used, includes FOX-5 (Qikiqtarjuaq), FOX-MAIN (Hall Beach), and DYE-MAIN (Cape Dyer).

If you have any questions or comments regarding this project, please do not hesitate to contact the Project Manager, Bob Martin at martinro@inac.gc.ca, or by telephone at (867) 979-7931.

Sincerely,

Natalie Plato
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Indian and Northern Affairs Canada, Nunavut Regional Office

CC Sarah Gagne

Attachment

Comparison of Project Wastewater Criteria to other Canadian and Northern Standards

Parameter	Specification Criteria (µg/L)	NWT Guideline, 1982¹ (µg/L)	Federal Effluent Guideline, June 2000 (µg/L)	CDWQG	CCME Interim Irrigation
pH	6 - 9 (unitless)	N.G.	6 - 9 (unitless)	6.5 - 8.5	N.G
Oils and Grease	5000	none visible	5000	N.G.	N.G
Arsenic (total)	100	50	50	25	100
Cadmium (dissolved)	10	5	5	5	10
Chromium (total)	100	100	50	50	100
Cobalt (dissolved)	50	100	100	N.G.	50
Copper (dissolved)	200	200	200	< 1 (AO)	200 to 1000
Lead (dissolved)	50	50	50	10	200
Mercury (total)	0.6	0.6	0.6	1	N.G
Nickel (dissolved)	200	300	300	N.G.	200
PCB (barren area)	50	N.G.	N.G.	N.G.	N.G
PCB (vegetated area)	5	N.G.	N.G.	N.G.	N.G
Phenols	20	N.G.	20	N.G.	N.G
Zinc (total)	1000	500	500	< 5 (AO)	N.G

¹ Guideline numbers derived from Table 2.2

N.G = No guideline

