



Environmental Protection Operations
Prairie and Northern
5019 52nd Street, 4th Floor
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Yellowknife, NT, X1A 2P7

July 15th 2011

EC file: 4782 014
MVLWB file: MV2011L3-0001

Zabey Nevitt
Executive Director
Mackenzie Valley Land and Water Board
P.O. Box 2130
Yellowknife, NT, X1A 2P6

Via Email at permits@mvlwb.com

Dear Mr. Nevitt:

RE: MV2011L3-0001 - Type A Water License Renewal Application: Town of Fort Smith - Public Hearing Presentation

Please find attached Environment Canada's presentation outlining our intervention regarding the renewal of the Town of Fort Smith's Water Licence (MV2011L3-0001).

Ms. Mary Kelly, Project Officer – Wastewater Specialist and Ms. Sarah-Lacey McMillan, Environmental Assessment Coordinator, will be giving this presentation at the public hearing and will be available to respond to any questions from the Mackenzie Valley Land and Water Board, proponent or the public.

If you wish clarification on any aspect of this submission, please contact Ms. Sarah-Lacey McMillan at (867) 669-4724 or by email at sarah-lacey.mcmillan@ec.gc.ca.

Yours truly,

A handwritten signature in black ink, appearing to read "C Ogilvie".

Carey Ogilvie
Head, Environmental Assessment-North (NT & NU)
Environmental Protection Operations
Prairie and Northern Region

cc:

Lisa Lowman, Senior Environmental Assessment Coordinator, EPO, EC, Yellowknife, NT
Sarah-Lacey McMillan, Environmental Assessment Coordinator, EPO, EC, Yellowknife, NT
Mary Kelly, Project Officer, EPO, EC, Yellowknife, NT

Rhonda Miller - MVLWB

From: McMillan, Sarah-Lacey [Yel] [Sarah-Lacey.McMillan@EC.GC.CA]
Sent: July-15-11 11:22 AM
To: permits@mvlwb.com
Cc: Ogilvie, Carey [Yel]; Lowman, Lisa [Yel]; Kelly, Mary [Yel]; EANorthNWT [Yel]
Subject: MV2011L3-001 Fort Smith Public Hearings - EC's presentation
Attachments: MV2011L3-0001 Fort Smith WL renewal - EC hearing cover letter.pdf; MV2011L3-0001 Ft Smith WL Public Hearing - EC.ppt

Hi Lynn,

Please find attached a copy of EC's cover letter and presentation for the Town of Fort Smith's Water Licence Renewal Public Hearings scheduled for July 20th in Fort Smith. If you have any questions or concerns please feel free to contact me.

Thanks,

Sarah-Lacey McMillan

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Environment Canada's Intervention for the Town of Fort Smith's Type A Water Licence Renewal Application

Fort Smith, NT

Mary Kelly / Sarah-Lacey McMillan

Environmental Protection Operations

July 20th, 2011



Overview

- Environment Canada's Mandate
- Sewage Disposal Facility
- Solid Waste Disposal Facility
- Closing Remarks



Environment Canada's Mandate

- The primary relevant legislation and standards administered or adhered to by EC which influenced the content of this submission are:
 - *Canadian Environmental Protection Act (CEPA 1999); and*
 - Sections 36 to 42 of the *Fisheries Act*
 - *Pollution Prevention Provisions*

Environment Canada's Mandate - *Fisheries Act*

- Environment Canada, on behalf of the Minister of DFO, administers Section 36 of the *Fisheries Act*.
- Subsection 36 (3) of the *Fisheries Act* prohibits the deposit of deleterious substance into fish bearing waters unless authorized by a regulation under the Act or by another law of Parliament.



Sewage Disposal Facility

- **Proposed Wastewater System Effluent Regulations**
 - Under the authority of the Fisheries Act
 - Government of Canada's principal tool to implement the CCME Canada-wide Strategy for the Management of Municipal Wastewater Effluent
 - The NWT is currently exempt from the proposed Regulation
- Currently, effluent quality requirements captured under existing authorizations including Subsection 36(3) of the Fisheries Act which prohibits any person from depositing or permitting the deposit of a deleterious substance of any type in water frequented by fish, will continue to apply.

Sewage Disposal Facility

- **Effluent Quality Criteria**

- The Fisheries Act, S. 36(3) prohibits the deposit, into fish-bearing waters, of substances that are deleterious to fish.
- Sample Results from 2004-2009 have passed annual Acute Lethality tests on Rainbow Trout
- Effluent quality varies between seasons

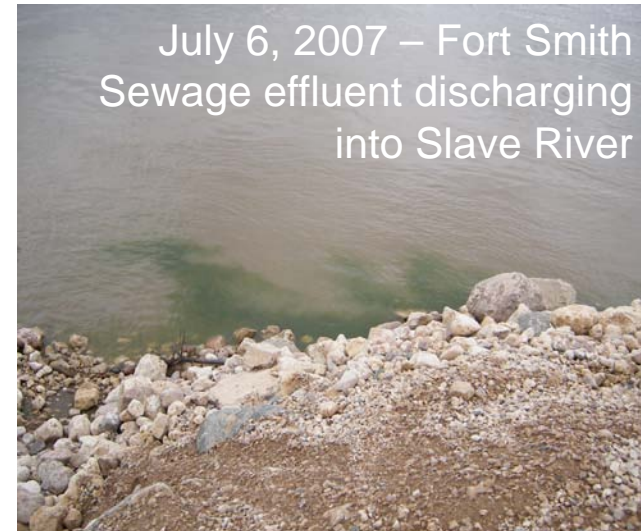


Photo by Mary Kelly

Recommendation:

- EC recommends that the Town of Fort Smith conduct an *Acute Lethality Pass/Fail Bioassay Test for Rainbow Trout* quarterly in accordance with the test method in EPS 1/RM/13 with 50% success rate.
- EC recommends including a condition in the water licence that the waste discharged shall not be acutely lethal, as determined through quarterly testing.

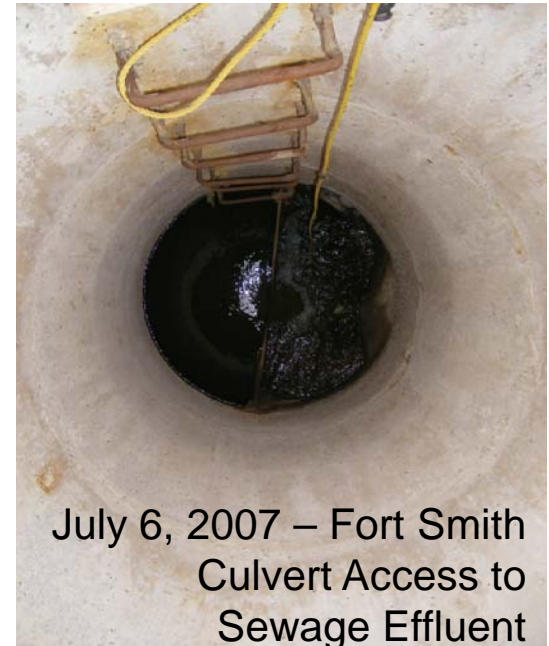
Sewage Disposal Facility

- **Bioassay test sampling location**

- Acute Toxicity Testing is to assess whole effluent water quality
- The Town has confirmed that sample water has been collected from the receiving environment's initial mixing zone and do not represent 100% Effluent.

Recommendation:

- EC recommends that all sampling for the sewage effluent at SNP 567-2, including bioassay samples, be collected from full-strength effluent before mixing with the receiving environment.



July 6, 2007 – Fort Smith
Culvert Access to
Sewage Effluent

Photo by Mary Kelly

Sewage Disposal Facility

- **Sludge Management Plan**

- The Town has been removing sludge from the lagoon approximately every 5 years.
- No Sludge Management Plan is in place.



Photo by Mary Kelly

Recommendation:

- EC recommends that the Town develop a Sludge Management Plan that includes, but is not limited to operational practices of sludge level measurement and monitoring methods, sludge removal, location of sludge storage and sludge treatment.
- The sludge management information can be contained within the Sewage Facility Operation and Maintenance Plan.

Sewage Disposal Facility

- **Operations and Maintenance Plan for the Sewage Disposal Facility**
 - Required under Part H of current licence.
 - Facility has been in operation since 1970s.

Recommendation:

- An O&M Plan should be developed for the wastewater system and distributed for review, within the first 12 months following issuance of the new licence.
- Following the initial submission, the O&M Plan should be reviewed and updated annually, with changes filed with the Board in the Annual Report. If annual updates are not submitted for approval by the Board, there should be a requirement for re-submission of the plan for approval in the event there are significant changes.

Solid Waste Disposal Facility

- **Groundwater Quality Monitoring & Guidelines**

Recommendation:

- EC recommends that the *Federal Interim Groundwater Quality Guidelines (May, 2010)* be applied when assessing SNP groundwater monitoring samples at this site.
- In addition, two other sets of guidelines may be relevant for groundwater at this site:
 - **Guidelines for Canadian Drinking Water Quality (Health Canada, 2008)** It is recommended that these guidelines be used when investigating groundwater that could be used as a potable water source.
 - **Canadian Water Quality Guidelines for the Protection of Aquatic Life** It is recommended that these guidelines be applied to the receiving water body, groundwater within 10m of a surface water body, and to the groundwater-surface water transition zone (i.e. porewater in sediment in the transition zone).

Solid Waste Disposal Facility

- **Groundwater Contingency Plan**

Recommendation:

- EC recommends that a Groundwater Contingency Plan be included as a requirement under the terms and conditions of the Water Licence. The Plan should outline in detail the corrective action required whenever contaminants in the groundwater exceed applicable guideline criteria.



Solid Waste Disposal Facility

- **Upgradient Surface Water Location**

Recommendation:

- EC recommends that the up-gradient surface water sampling station be located further upstream (as a reference/control point) to avoid any possible influence from potential contamination migrating from the landfill.



Solid Waste Disposal Facility

- **Identification of natural background levels of metals in the environment around the Solid Waste Facility.**

Recommendation:

- EC recommends that the Proponent characterize background site conditions with respect to metals in the vicinity of the Solid Waste Facility, and propose appropriate criteria. In addition, corrective measures should be considered should the source of elevated metals be the landfill.

Solid Waste Disposal Facility

- **Interim Closure & Reclamation Plan**

Recommendation:

- EC recommends that the title of the “Abandonment and Restoration Plan” in the Water Licence under Part F be updated to “Closure and Reclamation Plan” to be consistent with current terminology.
- In addition, EC supports ENR’s recommendation in requiring the Proponent to submit an Interim Closure and Reclamation Plan for the Solid Waste Disposal Facility that is approved by the Board.

Closing Remarks

- EC would like to thank the Board for the opportunity to participate in the renewal process for the Town of Fort Smith's water licence.



Questions?

