

Rhonda Miller - MVLWB

From: Kathleen Graham [kgraham@mvlwb.com]
Sent: May-30-11 2:38 PM
To: jsoucy@fortsmith.ca
Cc: permits@mvlwb.com
Subject: Reviewer Comment Tables (please respond by June 3, 2011)
Attachments: Comment Table1.xlsx; Proposed Workplan_ToFS_Apr28.docx; 2011-05-05 DFO Comments on WL Renewal.pdf

Importance: High

Good Afternoon Jean,

Attached is the reviewer comment table for the renewal of the Town of Fort Smith Water Licence. I was unable to insert the DFO comments into the comment table, so their comment table is attached separately (but please respond quickly to the comments made in both tables). I will need your response by this Friday (June 3, 2011) in order to stay on schedule which is outlined in the attached workplan. If you have any problems meeting this deadline, please notify me as soon as possible.

Thank you,
Kathleen

Kathleen Graham

Regulatory Officer

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**Proposed Workplan
Town of Fort Smith Type A Water Licence Renewal Application
(MV2011L3-0001)**

	Task	Responsible Party	Time Frame	Dates
1.	Application deemed complete			April 28, 2011
2.	Draft workplan & WLA sent for review	RO		April 28, 2011
3.	Comment Deadline - Draft Workplan	Reviewers	2 week review of workplan	May 12, 2011
4.	Workplan presented to the Board		1 meeting	May 26, 2011
5.	Comment Deadline - Additional Information Requests	Reviewers	About one month from send out	May 27, 2011
6.	Proponent Response to Reviewer Comments Due	ToFS	~ 7 Days for response	June 3, 2011
7.	External Technical Session (details to follow)	All Parties	1 Day	June 10, 2011
8.	Proponent Response to IR's from Technical Session	ToFS	After technical session ~7 days	June 17, 2011
9.	Written Interventions Due	Interveners	2 wks after tech. sess., ~7 days after Proponent IRs	June 24, 2011
10.	Proponent's Response to Interventions	ToFS	6 Days after interventions due	July 4, 2011
11.	Pre-hearing Conference (PHC)	All Parties	10 Days prior to Hearing (pm)	July 11, 2011
12.	Public Hearing Presentations Due	Interveners	10 Days prior to Hearing	July 11, 2011
13.	Public Hearing	All Parties	Allow 2 days	July 20-21, 2011
14.	Public Hearing Undertakings Due	Interveners & ToFS	7 days after hearing	July 27, 2011
15.	DRAFT WL Out for Review	RO		Early August
16.	Comment Deadline for DRAFT WL	Interveners & ToFS	~14 Days for review	Mid-August
17.	DRAFT WL/LUP and RFD presented to Board		1 day	Early-Mid September
18.	Water licence sent to INAC Minister for review			Early-Mid September
19.	Final WL Decision from Minister of INAC	Minister	up to 60 days	October 2011

Comment Summary Table - MV2011L3-0001
 Type A Water Licence Renewal - Town of Fort Smith

#	REVIEWER	TOPIC	COMMENT	Reviewer Recommendation	Company Response
1	INAC-WR	Annual Reporting	Part B, Section 1 of the water licence refers to the elements to be included in the annual report.	INAC recommends that the following be also included in the annual report: Results of any inspections of all dams, berms, dykes and control structures; Updates or revisions of the upcoming snow disposal plan; Sludge management details if any; Comparison of the Surveillance Network Program data to the water licence regulated limits and sampling and analysis requirements; Correspondence between the Inspector and the Town and Groundwater monitoring results.	
2	INAC-WR	Snow Disposal Plan	The current water licence does not have a condition relating to snow disposal.	The Town of Fort Smith should provide to the Board a map outlining areas (with UTM positioning) currently used or to be used for snow disposal. The drainage pathways of the meltwater should also be indicated. This snow disposal plan should be reviewed yearly and any additions or deletions to areas used should be identified in the Annual Report.	
3	INAC-WR	Operation and Maintenance Plan	An Operation and Maintenance (O&M) Plan relating to Solid Waste Landfill Site and Sanitary Sewage System was first prepared by the Town in August 1999. An updated version focusing mainly on Solid Waste Management Facilities was prepared in August 18, 2004.	INAC-WRD recommends that the O&M plan be revised to also include the following: <ul style="list-style-type: none"> • Wastewater collection system; • Hazardous Waste Management Plan that should be completed in general accordance with Government of the Northwest Territories; Department of Environment and Natural Resources 2009 Developing a Community Hazardous Waste Management Plan • A map of all existing and planned Surveillance Network Program stations (as the one provided in the application – Figure 9) including the latitude and longitude of each stations. • A Quality Assurance/Quality Control Plan for “Surveillance Network Program” sampling. The Quality Assurance/Quality Control Plan for sampling and transport of water samples shall be completed in accordance with Indian and Northern Affairs Canada’s “Quality Assurance (QA) and Quality Control (QC) Guidelines” for Use by Class “A” Licensee in meeting Surveillance Network Program Requirements and for Submission of a QA/QC Plan • A copy of the Water Licence 	
4	INAC-WR	Spill Contingency Plan	INAC understands that the Town is currently developing a Spill Contingency Plan.	The Town may refer to the Guidelines for Spill Contingency Planning produced by INAC Water Resources Division in 2007 to provide further guidance on the recommended level of detail to be included in Spill Contingency Plans. These guidelines can be found at http://nwt-tno.inac-ainc.gc.ca/wrd-gl_e.htm and hard copies can be obtained from the Water Resources Division by contacting Jeanette Hernberg at Jeanette.Hernberg@inac.gc.ca .	

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5	INAC-WR	SNP - Sampling and Analysis Requirements	The Town currently tests for BOD at SNP 567-2. Currently, the CCME Municipal Wastewater Strategy for the Treatment of Municipal Wastewater Effluent uses CBOD as an indicator for the quality of municipal wastewater. INAC recommends that both parameters be sampled for a specified period of time within the renewed water licence. This would maintain the existing long-term BOD dataset collected by the Town, but also have a period of overlap with CBOD analysis, which would provide information relevant to the upcoming CCME requirements, as well as provide a relationship to the long-term BOD dataset.	INAC recommended that CBOD be added to the list of parameters to be sampled for 567-2 in Part B. Section 1.	
6	INAC-WR	SNP - Groundwater wells monitoring	The Town of Fort Smith has been collecting groundwater water quality data intermittently since 2001. The "Fort Smith SWDF 2008 Groundwater Monitoring" prepared by IEG Consultants suggests that in absence of any data indicating a geological variability across the SWDF, elevated concentrations of salts and metals suggests impact from landfill to groundwater. It also indicates that as surface water is likely a receptor to groundwater discharge north of the SWDF, monitoring impacts to the surface water quality is key in assessing potential offsite environmental impacts of the SWDF. Following a study by AECOM (then Earth Tech) in 2006, the MVLWB accepted a revised sampling protocol for the groundwater monitoring wells. Groundwater sampling was therefore reduced from twice to once a year; the numbers of wells to be sampled were reduced from 16 to 11, and the parameters to be sampled reduced to groundwater elevation, pH, sulphate, sodium, chloride, major ions and ICP-MS Metal Scan (Dissolved).	<ul style="list-style-type: none"> • INAC-WRD recommends a revision of the protocol and the parameters sampled to ensure that the integrity of the groundwater source is adequately protected, without incurring unnecessary costs to the Town. • As also suggested in the 2008 report by IEG Consultants, it is recommended that the BH-04 be retrofitted and redeveloped to reduce the presence of sand and silt in the water of the monitoring well. 	

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7	INAC-WR	Water Licence Conditions	INAC recommends that the conditions in the existing licence stay the same with the exception of a the following revisions:	<p><u>Part A - Scope & Definitions</u></p> <ul style="list-style-type: none"> • Average Concentration For Faecal Coliform should be changed to “means the running geometric mean of any four consecutive analytical results submitted to the Board in accordance with the sampling and analysis requirements specified in the Surveillance Network Program”; • Freeboard should be changed to “means the vertical distance between the water line and the lowest elevation of the effective water containment crest on a dam or dyke’s upstream slope. <p><u>Part B - General Conditions</u></p> <ul style="list-style-type: none"> • Section 1, item 5, should be re-worded to read “The licensee shall maintain, to the satisfaction of an inspector, the necessary signs to identify the stations of the Surveillance Network Program. <p><u>Part I - Spill Contingency Planning</u></p> <ul style="list-style-type: none"> • Part I, Condition 1, of the water licence should refer to INAC’s new “Guidelines for Spill Contingency Planning” April 2007. 	
8	EC	Reduction of scope and frequency of groundwater well sampling program (cover letter dated January 25 2011 - Town of Fort Smith Water License Renewal Application)	In their cover letter for the water license renewal, the Town of Fort Smith has requested the Board consider reducing the frequency and scope of the sampling wells at the municipal landfill. As per the letter dated Sept. 27/06 from the Board to Roy Scott, EC understands the Board has already granted reduction in sampling frequency (i.e., twice to once annually), the number of wells monitored (i.e., 16 to 11) and the number of parameters (i.e., removal of hydrocarbon sampling) for the landfill groundwater wells.	Given that a reduction in the frequency and scope of the groundwater sampling wells was already granted in 2006, EC seeks clarification on what additional reductions are requested. Further, before EC can comment on any additional reduction in groundwater monitoring, EC would like the opportunity to review all the raw data for SNP station 567-5. The filed information is lacking sampling data for 2002, 2003 and 2006-2010 inclusive.	

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9	EC	Groundwater Quality (SNP 567-5)	EC reviewed the Groundwater Monitoring Program Evaluation report prepared by Earth Tech Canada Inc. (May 2006). The report revealed that dissolved metal concentrations for aluminum, arsenic, chromium, copper, iron, lead, nickel, selenium and zinc frequently exceeded their respective CCME guidelines for the protection of aquatic life. It should be duly noted that the reported concentrations are in dissolved form. Therefore, the total metal concentrations for each reported metal would be ever greater and thus the groundwater samples would surpass CCME guidelines by a greater margin and with greater frequency than that suggested by the current report. Of particular concern are aluminum, arsenic, chromium, copper, iron and lead whose concentrations are 1-2 orders of magnitude higher than their respective CCME guideline.	While CCME Guidelines for the protection of aquatic life are not the appropriate benchmark for which to compare groundwater concentrations, they nonetheless flag that metal concentrations are elevated in groundwater and suggest metals may be leaching from the landfill. EC requests Fort Smith describe the measures already in place or planned to be introduced to reduce water contact with landfill waste for the purpose of reducing the production of leachate and increasing the retention of metals at the landfill site.	
10	EC	Landfill Runoff Sampling Program (SNP 567-4)	EC reviewed all available data for SNP 567-4. EC noted that iron concentrations were relatively high on all sampling dates with iron levels 2-9 times greater than its respective CCME guideline. There was also one occurrence (Jul/06) where lead was found to be 15 times greater than its respective CCME guideline. Other than these observations, there were no other CCME guideline exceedances for the remaining monitored metals. However, EC's review was limited by the fact that some raw data for 567-4 were missing from the submitted package.	To complete our review of SNP 567-4, EC would appreciate the opportunity to review all the raw data for this station. In the current submission, the spring raw data for 2010 and 2004 were not provided, mercury and arsenic analysis are missing for the fall 2010, spring 2009 and fall 2006 samples, the 2008 samples were not provided (i.e., 2006 samples were provided in Appendix B of Volume 2), and the raw data for 2007 fall sample is incomplete. Further, in order to better understand the high levels of iron in the landfill runoff, EC recommends Fort Smith characterize iron concentrations in the intake water (SNP 567-1).	
11	EC	Sewage Effluent Quality (SNP 567-2)	Effluent quality standards outlined in Part D of WL2003L3-006 for SNP 567-2 exceed the Guidelines for the Discharge of Treated Municipal Wastewater in the Northwest Territories.	EC recommends reducing the Effluent Quality Standards to promote pollution prevention.	
12	EC	Sewage Bioassay Samples (SNP 567-2)	EC reviewed the bioassay data associated with SNP 567-2. Discussion with the Director of Municipal Services, Jean Soucy, confirmed that bioassay samples for Acute Toxicity Testing are not 100% effluent strength, as they are collected in the receiving environment.	EC recommends that all sampling, including the annual bioassay testing, of the sewage effluent be done at the end of pipe. For the purpose of collecting sewage effluent, EC recommends using either the diffuser as a sampling point by creating a collection pool at the bottom of the rocks where the effluent discharges or sample from the manhole in the discharge pipe.	

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13	EC	Sewage Effluent Quality (SNP 567-2)	EC understands the purpose of this surveillance site is to monitor final effluent quality before it is discharged into receiving environment (As stated in the Surveillance Network Program in the Water License MV2003L3-0006). At this time EC is unclear where the samples for 567-2 test parameters are being taken – whether from the receiving environment, or directly from the effluent.	EC recommends that all sampling of the sewage effluent be done at the end of pipe and that Fort Smith clarify the precise location of the sample collection.	
14	EC	Sewage Effluent Water Quality	Winter effluent water quality for BOD and coliforms indicates little microbial treatment during cold, ice-covered months based on typical raw sewage values for piped sewage systems. However, the summer effluent quality values indicate effective biological treatment. Hydraulic retention time is limited to 90 days. Summer TSS and unionized ammonia (considering pH and Temperature) values are high. The winter BOD and microbial counts as well as the summer TSS and ammonia concentrations can be controlled to improve effluent water quality, yet no substantial improvements to the lagoon treatment system have taken place over the last 30 years.	EC recommends that Fort Smith conduct a study to identify the means of improving effluent water quality that may include, but are not limited to water saving methods (i.e., reduction in wastewater produced), increase hydraulic retention time, expansion of the lagoon cells, additional lagoon cells, retention of wastewater through the winter months, retention of water through summer months with controlled discharge after the algae die-off period.	
15	EC	Sewage Disposal Facilities	Sludge removal from the 2 primary cells is said to occur every 5 years. From a design and operation perspective, these 2 cells are functioning as short-retention (10 day) anaerobic cells, described as grey or brown in colour. This information indicates that sludge build up is an ongoing issue for the system. If left unmanaged the sludge build-up can significantly reduce its treatment efficiency.	EC recommends that Fort Smith 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 interim sludge disposal, sludge treatment and final disposal location or usage. The sludge management information can be contained within the Sewage System Operation and Maintenance Plan.	
16	EC	Water Treatment	Backwash from Drinking Water Treatment is discharged to Sewage lagoons. This backwash may contain active coagulant that may increase settling in the lagoon, causing additional sludge-build up. Furthermore, the chemical composition of the coagulant may slow the sludge breakdown.	EC recommends that Fort Smith provide the following information: the specific name of the polymer and/or chemical composition, methods of dosage determination and application, frequency, seasonality and volume of backwash and sludge discharged to the sewage lagoon.	
17	EC	Operation and Maintenance Plan of the Sewage Facilities	A revised plan for the Operation and Maintenance of the Sewage Facilities was required by February 2004 in accordance with condition H.1 of the expiring license. No Operation and Maintenance manual has been provided.	EC recommends that Fort Smith provide an up to date Operation and Maintenance Plan for the Wastewater Facility to the Board for approval.	

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18	EC	Operation & Maintenance Plan - Document titled: "Town of Fort Smith Solid Waste Management Facilities O & M Plan" Revised 08/18/04	The Operations and Maintenance Plan needs revision to provide a useful working reference for operators.	Environment Canada recommends that a revised Operation and Maintenance Plan be submitted to the Board for approval as a part of the Water License conditions. For the solid waste site, the plan should include practical guidance on the operation of the engineered treatment pad, the leachate control pond, recycling, handling and disposal of hazardous materials, and treatment of contaminated drainage from the landfill. All aspects of the wastewater collection and treatment should be covered as well.	
19	EC	Approval of the Annual Report	Under the current Water License, MV2003L3-0006, the annual report is not required to be approved by the Board.	Environment Canada recommends for the new water license, MV2011L3-0001, that the Annual Report be submitted for approval by the Board, with provision for re-submission if it is deemed to be not satisfactory.	

GENERAL INSTRUCTIONS FOR EXCEL TEMPLATE:

1. Do not leave blank rows above or between comments.
2. Do not modify the instructions or the column headings (i.e. the top three rows).
3. **Each comment must have an associated recommendation.**
4. All formatting will be lost when this file is uploaded to the Online Comment Table.
5. If necessary, adjust the cell width and height in order to view all text.
6. Cutting and pasting comments from WORD documents cannot include hard returns (spaces between paragraphs).
7. If you would like to create paragraphs within a single cell, please use a proper carriage return (ALT & ENTER).

TOPIC

COMMENT

RECOMMENDATION

Be as specific as you think is appropriate; for example a section or page of the document, a recommendation #, general comment, etc.

Comments should contain all the information needed for the proponent and the Board to understand the rationale for the accompanying recommendation.

Recommendations can be for the proponent or for the Board. Recommendations should be as specific as possible, relating the issues raised in the "comment" column to an action that you believe is necessary.

Flow of Slave River	Section 2.12 states that information is not available regarding the rate of flow. The Water Survey of Canada reports an average discharge of the Slave River at approximately 3,400 cubic metres per second.	This is for information purposes to illustrate that the Slave River has a sufficient discharge to support the withdrawal request from the Town of Fort Smith.
River bank stabilization (intake line)	There is reference to rehabilitation of the slope near the water intake structure to stabilize the riverbank in the area including regrading of the slope, realigning of the water supply line, construction of a new access road and replacement of the power line.	Given the history of the river bank in the area, DFO recommends additional erosion control measures be implemented including but not limited to re-vegetation and erosion matting.
River bank stabilization (sewage discharge)	There is reference to rehabilitation of the slope near the sewage lagoon discharge pipeline to stabilize the riverbank in the area including regrading of the slope, installation of anchoring manholes, installation of riprap at the end of the pipe, etc.	Given the history of the river bank in the area, DFO recommends additional erosion control measures be implemented including but not limited to re-vegetation and erosion matting.
Water Intake Screens	Section 2.5 of the Questionnaire requests information on the intake screen size. While there is additional information in Section 3.1 of Volume 1 of the background report and the <i>Water Intake Integrity Report</i> , this specific information appears to be lacking.	DFO recommends that the Licensee adhere to the <i>Freshwater Intake End-of-Pipe Fish Screen Guidelines</i> . Additional information on the intake structure should be provided in this regard.
Previous environmental reviews	Section 8.1 of the questionnaire states that the project has not undergone an initial environmental review. DFO is under the assumption that the undertaking went through a preliminary screening during a previous review which resulted in its current exemption status.	This should be clarified to reflect that a preliminary screening/"initial environmental review" has occurred.
Abandonment and Restoration Plan	Section 6.4 states that no abandonment and restoration plan exists.	DFO recommends a water licence condition be included that is similar to other Type A Municipal Water Licences requiring the submission of a plan six (6) months prior to closure of any municipal infrastructure.
Landfill Run-Off	In 2005, Inuvialuit Environmental and Geotechnical Inc. reported increased levels of metals downstream of landfill site as well as some confusion regarding flow direction in relation to the landfill as identified in the <i>Fort Smith Landfill Wetlands Characterization</i> report. It is unclear how this relates to the 2006 proposal for a reduction in sampling stations, parameters and frequency at the landfill site.	DFO recommends that this issue be investigated more thoroughly and the results used to direct the locations and frequencies of SNP sampling, especially in relation to Site 567-4.