



Mackenzie Valley Land and Water Board
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From: Amanda for Kathy Racher, Technical Director

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Remarks:

Information regarding: Consultant Response to Information Request and Extension to Intervention Deadline.

Thanks,

- Enclosures
- As requested
- For your information
- For your comment
- For your approval

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From: [Johnson, Ken](#)
To: racherk@wllwb.ca
Cc: [Jean Soucy](#); [Lanteigne, Michel](#)
Subject: Town of Fort Smith Water License - Response to MVLWB questions
Date: Thursday, June 30, 2011 11:30:19 AM
Attachments: [E-Response to Kathy Racher Email - MVLWB 110630.docx](#)

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From: Kathy Racher - WLWB [mailto:racherk@wlwb.ca]
Sent: Monday, June 20, 2011 10:04 AM
To: 'Kathleen Graham'
Subject: have I missed anything?

Hi Jean,

I took some time on Friday to re-evaluate some of the discussions at the technical session and make sure we had all the right information requests of your consultant from AECOM, Ken Johnson. You indicated that he would be back this week and I am hoping he will have the time to answer the following questions. I believe the answers to these questions will help the Board quite a bit:

1. At the technical session, it was stated that the solid waste facility has an estimated 20 year lifespan. How was this determined?
2. With respect to the Groundwater Monitoring Program Review (AECOM, June 2011), please answer the following questions:
 - a. On page 7, the document concludes that the Licence should require analysis for dissolved metals instead of total metals and that this is typical of groundwater monitoring programs. It is noted, however, that it is difficult to compare dissolved metal information to guideline values (e.g., CCME guidelines for aquatic life) since guideline values are typically reported in total metal concentrations. If dissolved metals are typically measured in groundwater monitoring programs elsewhere, what are these values compared against for the purposes of assessing environmental impacts? AECOM has further recommended (on page 8) that criteria should be established “to evaluate the results so that the laboratory may coordinate the analytical methods to reflect detection limits below the criteria values” – does AECOM have any recommendations as to suitable criteria?

AECOM Response:

- AECOM stated in the report that the License requests analysis for total metals, but the review indicated that the samples were analyzed for dissolved metals during the annual groundwater monitoring events from 2006 to 2010. Dissolved metals are typically analyzed for groundwater monitoring, but this does not mean that total metals could not be analyzed for. We recommended that the Town find out from the Water Board which method they would like to have results for.
- When a groundwater monitoring program at a landfill in Alberta includes testing for metals, it is typically dissolved metals that are tested for and then the results are

compared with the CCME criteria or Alberta Tier 1 Soil and Groundwater Remediation Guidelines (which are essentially the same as CCME). These criteria for total metals are used even though the results are for dissolved metals. There shouldn't be a lot of solids in the groundwater, so a dissolved metals test reflects the actual groundwater quality. There is a potential for a total metals test to be biased high for samples with high turbidity.

- AECOM also state that the consultant doing the sampling should establish (find out) what the criteria that is going to be used, not establish a criteria. Finding out what criteria is being used to compare the results to before submitting the samples to the lab will fix the problem of having detection limits above the criteria.

b. On page 8, one of the recommendations is : “that a full suite of parameters be added to the surveillance program periodically (once in five years) for liability purposes, in the event that parameters not previously of concerns at the Site become elevated”. Please specify what is meant by a “full suite of parameters”.

AECOM Response:

- Full suite of parameters refers to testing for all the parameters specified in the License (including major ions, metals, total volatile hydrocarbons, total extractable hydrocarbons, BTEX and Mineral Oil & Grease).

c. With respect to the recommended suspension of sampling at BH-04 and BH-05, there was a question at the technical session as to whether these stations might be useful in distinguishing impacts to groundwater from different areas of the landfill. Please give further rationale for suspension of these two sampling locations.

AECOM Response:

- These wells are considered down-gradient of the landfill as stated in sub section 4.1.1. However, these wells are not directly down-gradient of the municipal waste disposal location because they are south (up-gradient) of the municipal waste location. The analytical results from 2006 to 2009 did not indicate elevated parameters of concern in these wells meaning that there is little to no impact on the groundwater up-gradient of these two wells.
- It should be noted that the suspension of sampling these wells does not mean decommissioning of the wells. These wells may still be used for the surveillance program periodically (once in five years) and if there is further development at the landfill up-gradient of BH-04 and BH-05.

d. Why has AECOM recommended BH-02 as the single up-gradient monitoring location over BH-01A or BH-01B (which are also up-gradient)? Please provide further rational for removal of those two sites.

AECOM Response:

- These three wells are considering as up-gradient of the landfill. However, it is not necessary to have more than one up-gradient well if one well can be used as a reference or background of groundwater quality. Either one of these wells could be used as a background well, but BH-02 was selected because the groundwater flow direction from BH-02 appears to be moving more directly towards the municipal waste than BH-01A and BH-01B.
 - BH-01A and BH-01 B may be used for the surveillance program periodically (once in five years).
- e. On page 6, it is noted that there is year to year variation in results possibly due to the fact that samples are taken at different times of the year. Does AECOM recommend choosing a single annual sampling date to reduce the effects of seasonal variation?

AECOM Response:

- It is recommended that a single annual sampling will be carried out during the first two weeks of October. This will reduce seasonal variability of the data collected.

If you have any questions about these information requests, please contact Kathy Racher at 867-765-4591

Kathleen Racher, Ph. D.,

Technical Director

Wek'eezhii Land and Water Board

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Amanda Gauthier - MVLWB

From: Amanda Gauthier - MVLWB [agauthier@mvlwb.com]
Sent: Thursday, June 30, 2011 3:33 PM
To: 'screeningofficer@eastarm.com'; 'scellis@eastarm.com'; 'jbrennan@yellowknife.ca'; 'rlong@yellowknife.ca'; 'lmandeville@denation.com'; 'Carolc.lands@gmail.com'; 'imadenegurl@hotmail.com'; 'Rick.Walbourne@dfo-mpo.gc.ca'; 'Sao_enterprise@northwestel.net'; 'ec.ea.nwt@ec.gc.ca'; 'Frmc53@yahoo.ca'; 'fortsmithmetiscouncil@northwestel.net'; 'Gnwt_ea@gov.nt.ca'; 'Rhonda_Batchelor@gov.nt.ca'; 'Patrick_Clancy@gov.nt.ca'; 'Duane_Fleming@gov.nt.ca'; 'K_Johnson@gov.nt.ca'; 'Mark_Davy@gov.nt.ca'; 'Glen_Mackay@gov.nt.ca'; 'hrmc@northwestel.net'; 'intergov@inac-ainc.gc.ca'; 'norrisa@inac.gc.ca'; 'consultationsupportunit@inac.gc.ca'; 'james.lawrance@inac.gc.ca'; 'Lorraine.Seale@inac-ainc.gc.ca'; 'Scott.Stewart@inac.gc.ca'; 'darnelle.mccurdy@inac.gc.ca'; 'Charlene.Coe@inac-ainc.gc.ca'; 'Robert.Jenkins@inac.gc.ca'; 'landsnresources@katlodeeche.com'; 'doraenzoe@yahoo.com'; 'permits@mvlwb.com'; 'lands@nsma.net'; 'Matthew.Spence@cannor.gc.ca'; 'Kate.Witherly@cannor.gc.ca'; 'ima.nwtmn@northwestel.net'; 'Katherine.Cumming@pc.gc.ca'; 'Gordon.Hamre@pc.gc.ca'; 'jsoucy@fortsmith.ca'; 'ceo@srfn195.com'; 'bblack@fortsmith.ca'; 'mrichardson@hayriver.com'; 'SusanA@wcb.nt.ca'; 'wpfn@northwestel.net'; 'environment@ykdene.com'; 'tslack@ykdene.com'; 'esangris@ykdene.com'; 'ttsetta@ykdene.com'; 'GERALD_ENNS@gov.nt.ca'; 'DIEP_DUONG@gov.nt.ca'; 'Jeanne.Arsenault@inac-ainc.gc.ca'; 'Wayne.Starling@inac-ainc.gc.ca'; 'sarahlacey.mcmillan@ec.gc.ca'; 'mary.kelly@ec.gc.ca'; 'jane.fitzgerald@ec.gc.ca'; 'racherk@wlwb.ca'; 'lboettger@mvlwb.com'; 'Kathleen Graham'; 'Zabey Nevitt - MVLWB'
Cc:
Subject: MV2011L3-0001 - Town of Fort Smith Water Licence Renewal Information
Attachments: Fort Smith Consultant Response to Information Request for water licence renewal - June30, 2011.pdf; ToFS - Dist list jun8_11.docx

Good day,

Please find attached responses to an information request give to the Town of Fort Smith after the technical session. As this information has been received late, we will **extend the deadline for intervention submission until Wednesday, July 6 at 5 pm**. If you have any questions or concerns, please contact Kathleen Racher at 867-765-4591 or racherk@wlwb.ca

Thanks,

Amanda Gauthier

Regulatory Clerk

Mackenzie Valley Land and Water Board

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Abbreviations:

HS:Host Send	PL:Polled Local	CP:Completed	TS:Terminated by System
HR:Host Receive	PR:Polled Remote	FA:Fail	TU:Terminated by User
MS:Mailbox Save	WS:Waiting To Send	RP:Report	G3:Group3
MP:Mailbox Print	EC:Error Correct		