

Melanie Daneluk

From: wallace king [wallace.king@shaw.ca]
Sent: Sunday, April 05, 2009 12:10 PM
To: AENV Environmental Assessment
Subject: Proposed Terms of Reference for EnCana FCCL Oil Sands Ltd. Christina Lake In Situ Thermal Project
Attachments: Proposed Terms of Reference for EnCana FCCL Oil Sands Ltd.doc; Note to the northern environmental director.doc

Director
Thank you for the opportunity to submit my concerns.
I have sent them in written format via Cdn Post as well.

Yours truly,
Wallace King Jr P.Geol

Proposed Terms of Reference for EnCana FCCL Oil Sands Ltd. Christina Lake In-Situ Thermal Project

Director Environmental Assessment
Northern Region Alberta

I have done Pro Bono work in this area for the former Métis Zone One leadership. They are very concerned about the environmental and social impact the concentration of SAGD projects are having on the community of Conklin and the Christina Lake watershed area.

I found there were a host of geological features that made this area intriguing and a cause for concern. I will list them below with others, and some short comments.

This is followed by written comments on the Proposed Terms of Reference.

- The Devonian salt solution edge runs through this area, this created a rollover or flexure zone, and is one of the reasons that the pools are trapped there.
- This is an active and presently ongoing geological phenomena
- To what extent this collapse has fractured the vertical section is undetermined
- The potential impact of this fracturing on the SAGD projects has yet to be documented or seriously considered
- The risk of down cutting preglacial channels on the SAGD projects. In some areas channels have cut within a 100 m of the steamed zones
- Christina Lake is a discharge area for the groundwater channels; i.e. the hydraulic head for the Empress Channel is +560m asl and the base of the lake is deeper than +524m asl
- Numerous exploration and delineation wells have set only surface casing and the casing depths are not deep enough to protect the Wiau and Christina Lake channels
- Estimates are as high as 25% of all conventional oil and gas wells drilled have cement/casing integrity problems. This issue is only magnified by the thermal nature of these projects
- Every well drilled within these projects is a weak point
- A protective “fence” of monitoring wells deep and shallow need to buffer Christina Lake from these SAGD projects
- Employment opportunities for local Conklin businesses and residents need to be enhanced; unemployment and the associated problems it bring are rife in the community.

Thank you, for the opportunity to submit our concerns.

Wallace King Jr P. Geol

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Director Environmental Assessment
Northern Region Alberta

HYDROGEOLOGY

Baseline Information

1. Present regional and project area geology that defines the Devonian salt solution edges.
2. Present project area geology that defines and quantifies the areal distribution of fracture trends associated with the Devonian salt solution edges.
3. Highlight areas both regional and locally of surface seeps of saline waters and their salinities.
4. Present regional and local salinity maps for the post Devonian formations highlighting the areas of inter formational changes
5. Isopach map of the; Base of the Empress Channel aquifer to Top of Bitumen producing formation in the greater Christina Lake area encompassing the Meg, Devon Jackfish & EnCana In-Situ projects
6. Present mapping as to the thickness and distribution of the groundwater aquifers outcropping within Christina Lake, which is over 30 m deep.

Impact Assessment

1. Describe the nature and significance of the fracture swarms emanating upwards from the Devonian salt collapse.
2. Describe any formation integrity tests done on or proximal to these fracture trends
3. Describe the potential impact on the project of these fractures, specifically on the integrity of the steam chamber and potential for cross-formational flow into the overlying aquifers.
4. Discuss how potential impacts of these fractures can be minimized by well pad location and orientation.

5. Describe programs to protect and mitigate groundwater resources that may be contaminated by deep incisions by glacial aquifers as depicted in the AGS, ESR 2002-03, Fig 52.
6. Identify measures to reduce the environmental risks from casing cement failures in producing, delineation, observation and exploration wells in the project area.
7. Discuss the reasons for rapid salinity changes in the area and the impact this may have on the project.

HYDROLOGY

Baseline information

1. Provide a hydraulic balance for Christina Lake, including in this; stream inflow and outflow, precipitation and evaporation.
2. Provide data that defines the amount of yearly discharge of groundwater into Christina Lake
3. Provide data on the vertical hydraulic communication of groundwater aquifers in the Labyrinth hydrostratigraphic model as defined by the AGS in the report ESR 2002-03, Fig 51.

Impact Assessment

1. Discuss the impact on the project of cross-formational flow from steam chambers into groundwater aquifers
2. Describe potential downstream impact if surface water is contaminated and mitigation plans for such an incident
3. Discuss the need for an emergency environmental waterborne response unit on Christina Lake

Monitoring

1. Describe any groundwater monitoring program for the Empress and other groundwater aquifers with respect to Christina Lake being a groundwater discharge area.
2. Discuss locations of deep and shallow groundwater monitoring wells with respect to detecting contaminants before they reach Christina Lake

SOCIO-ECONOMIC ASSESSMENT

Baseline information and impact assessment should include a section that is specific to the community of Conklin for housing, education, recreation, policing, training, and employment and business opportunities. This should also indicate the percentage of expenditures expected to occur in the community of Conklin.



Métis Local 1935 Chard Local 214 Fort Chipewyan Local 125 Fort McKay Local 63 Willow Lake Local 780

Wood Buffalo Metis Corporation

Tony Punko

441A Sakitawaw Trail

Fort McMurray, AB T9H 4P3

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Fax

Date:	April 17, 2009
Send To Company:	Northern Region, Alberta Environment
Attention:	Director Environmental Assessment
Fax Number:	780-427-9102
From:	T. Punko
Office Location:	Ft. McMurray, Alberta
Phone Number:	780-748-7601
RE:	EnCana Proposed ToR's

Total Pages Including Cover: **3**

Urgent Reply ASAP Please Comment Please Review For Your Information

Please refer to the enclosed letter.

Original copy of letter will be mailed to your address.

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Metis Local
#1935



Chard
Local #214



Fort Chipewyan
Local #125



Fort McKay
Local #63



Willow Lake
Local #780

Wood Buffalo Métis Corporation

April 16, 2009

Fax: (780) 427-9102

Director Environmental Assessment
Northern Region – Alberta Environment
111 – Twin Atria Bldg.
4999 – 98 Avenue
Edmonton, Alberta, T6B 2X3

Dear Sir:

**RE: ENCAN A FCCL OIL SANDS LTD. CHRISTINA LAKE IN-SITU THERMAL PROJECT
PROPOSED TERMS OF REFERENCE, ENVIRONMENTAL IMPACT ASSESSMENT**

The Wood Buffalo Metis Corporation is a representative organization of the five Metis Locals located with the Regional Municipality of Wood Buffalo. It is governed by a board of directors comprised of the presidents' of these locals and has members across the entire Athabasca Oil Sands region -- from Fort Chipewyan in the north to Chard in the south.

The Wood Buffalo Metis Corporation (WBMC) is writing to you on behalf of the Willow Lake and Chard Metis Locals to file our concerns pertaining to the above-mentioned proposed project. At this point in time, our concern is with the associated process for a potentially impacted stakeholder to be able to have a reasonable opportunity and ability to review the Proposed Terms of Reference.

WBMC was able to arrange for an initial meeting with EnCana for March 10, 2009 for the purpose of them providing WBMC with some of their information regarding their proposed project. Also, it was to discuss how it might be best for EnCana to approach and deal with the Chard and Willow Lake Metis locals' in order to develop and establish a consultation process with each community. Due to everyone's time scheduling being so busy, EnCana was not able to meet with the Chard Metis Local until April 9, 2009, but we were not able to schedule a meeting date with Willow Lake Metis Local.

Although we believe that some progress was made during the April 9th meeting, during which time some agreement was reached about future meetings, EnCana did not make a firm commitment to the CML for providing the necessary funding in order to have the necessary assistance provided to them for reviewing the ToR's. CML has much concern

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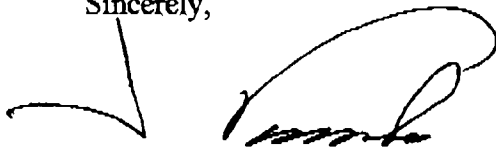
T: (780) 748-7601 • F: (780) 748-4620 • E-m: wbmchome@shawbiz.ca

in regard to the way in which the ToR's are written since they find them to be inadequate and unclear on whether or not their concerns and issues will be adequately addressed within the EIA. It is important that clarity is provided to CML, but without adequate funding and the time deadline for submitting comments to your Department becoming an issue, CML is very concerned about the apparent lack of response and co-operation demonstrated by EnCana to date.

In that regard, we respectfully ask that you allow us an extended period of time in order that we may be able to get more co-operation from EnCana which would permit us to conduct our review on the Proposed ToR's and submit our comments to you for your review and consideration. Also, we are asking for your assistance in helping us to get more needed co-operation from EnCana. There can be no question as to whether or not CML will be impacted by EnCana's proposed project, due to their proximity to that community. Therefore, it is very crucial that CML have a reasonable and adequate opportunity to closely review the Proposed ToR's prior to your Department's approval.

I would appreciate your response to this matter at your earliest convenience.

Sincerely,

A handwritten signature in black ink, appearing to read 'T. Punko', with a large, sweeping flourish extending to the left.

T. Punko
Chief Executive Officer

cc: Darlene Herman, President
Chard Metis Local No. 214

Margaret Scott, President
Willow Lake Metis Local No. 780

Trent Zacharias
EnCana FCCL Oil Sands Ltd.

Rob Barber, ERCB
Ft. McMurray