

Action Alert – Sisson Tungsten and Molybdenum Mine

The Conservation Council of New Brunswick (CCNB) is asking its members and the public to submit comments on the federal Comprehensive Study Report for the proposed Sisson tungsten and molybdenum mine. The mine would be located 60 km northwest of Fredericton (near Napadogan) in the headwaters of the Nashwaak River.

Comments are due: May 15, 2016
Send comments to: Sisson Project
Canadian Environmental Assessment Agency
200-1801 Hollis Street
Halifax, Nova Scotia B3J 3N4
Email: sissonproject@ceaa-acee.gc.ca

The Comprehensive Study Report can be found at:
<http://www.ceaa.gc.ca/050/documents/p63169/113759E.pdf>

Background

The Comprehensive Study Report (CSR) is a summary of the Canadian Environmental Assessment Agency's (CEA Agency) analysis of whether the mine is likely to cause "significant adverse environmental effects". The federal Minister of the Environment and Climate Change will consider the CSR and comments received from the public and First Nations before deciding whether to approve the mine. Other than impacts on Maliseet First Nation's land use, the CEA Agency has concluded the mine will not cause significant adverse environmental effects. In other words, the CEA Agency is recommending the federal Minister approve the mine.

Prior to the CSR, in 2013 Sisson Mines Ltd. submitted an Environmental Impact Assessment (EIA) study for the mine to the CEA Agency. The CEA Agency's findings in the CSR are based mostly on the EIA study.

There was a public comment period on the EIA study in the fall of 2013. CCNB commissioned an expert review of the EIA study which we submitted to the CEA Agency. Based on this review, CCNB identified five significant shortcomings of the EIA study and project in 2013:

- ☐ The EIA study was fundamentally incomplete. Missing information included details regarding potential acid mine drainage, specifics about the design of the tailings pond and dam, mine site hydrogeology, impacts on downstream water quality, etc.
- ☐ No economic cost - benefit analysis for the mine.
- ☐ No proper assessment of the potential failure of the tailings dam.
- ☐ The closure plan for the mine was missing significant details, such as how toxic mine wastewater would be treated in perpetuity.
- ☐ Costs of closure of the mine were not explained. As the EIA report was written, it seemed the people of New Brunswick could be left responsible for the costs of cleaning up the mine.

CCNB's report on the EIA study can be read at: <http://www.conservationcouncil.ca/sisson-mine-project/>.

As a reminder, there has also been a provincial environmental assessment of the Sisson mine. Based on pretty much the same EIA study used in the federal environmental assessment, on December 3, 2015,

the NB Department of Environment approved the mine subject to 40 conditions (see: http://www2.gnb.ca/content/gnb/en/departments/elg/environment/content/environmental_impactassessment/comprehensive_reviews/sisson.html).

CCNB's concerns with the Comprehensive Study Report and the mine

CCNB had funding to hire a few of our original experts to review portions of the CSR. Based on their comments and our own review, CCNB has the following broad concerns regarding the CSR and reasons why the mine should not be approved:

1. Fundamental questions regarding the impacts of the mine on the environment still remain unanswered.

Throughout the CSR, the CEA Agency relies on the NB government's 40 conditions of approval as the Agency's basis for concluding the mine will not have significant adverse environmental effects. Several of these conditions require Sisson Mines Ltd. to conduct further studies of and gather information on the current state of the environment around the mine. Other conditions require further details regarding technical aspects of the mine.

For example:

- ☐ Baseline air quality sampling is still required (NB Condition #20).
- ☐ Impacts on water resources are still unknown.
 - Hydrogeologic and groundwater data still needs to be collected (NB Conditions #24, 25, 26).
 - Seepage rates from the tailings pond to the environment need to be clarified (Condition #4).
- ☐ Impacts of a catastrophic failure of the tailings dam still need to be modeled (NB Condition #26).
- ☐ Comprehensive plans for waste rock and wastewater management are still not completed.
- ☐ Confirm amount of loss of fish habitat caused by the mine (NB Condition #22).
- ☐ Further baseline studies of traditional country foods that might be impacted by the project, e.g., contaminated by dust from the mine site, are still required (NB Condition #18).

It is unclear how the CEA Agency reached the conclusion the mine will not have significant adverse environmental effects when key details regarding the mine and surrounding environment remain unknown.

2. The mine should not be approved until impacts on Aboriginal and treaty rights are fully addressed.

At page 121, the CSR states, "The Agency concludes that the Sisson Project is likely to result in significant adverse environmental effects on the current use of lands and resources for traditional purposes by Maliseet First Nations." The CSR notes that Maliseet First Nations and the provincial government are negotiating ways to accommodate or compensate for these effects. CCNB cannot support the approval (federal or provincial) of a project that is given prior to the full accommodation of Aboriginal and treaty rights.

3. There is no longer a need for the project (or the economics just don't make sense).

The stated purposes of the mine are to, “to mine tungsten and molybdenum containing ore from the Sisson deposit, process ore to meet market demand for the mineral products, and create return on investment for the shareholders of Sisson Mines Ltd” (CSR at 11). However, as one of our experts notes, there is no longer a shortage of tungsten and molybdenum on world markets (other mines are closing) and the prices for tungsten and molybdenum have plummeted since the mine was first proposed (with an upswing in prices unforeseeable in the near future). Combining these facts with the very low quality grade of the Sisson mine ore makes the profitability of this project very uncertain. Given this, the stated “Need for” the project is not being met and as such, the project should not be permitted to proceed.

Other concerns raised about the mine being unprofitable include whether it will generate meaningful royalties/taxes, be able to implement best available safety technologies, and fully cover closure costs such as those needed for long-term water treatment.

4. The CSR does not require the use of best available practices.

Throughout the CSR, the CEA Agency regularly accepts Sisson Mine Ltd.’s “economically feasible” proposals rather than requiring the mine to be operated using the best available practices. Nowhere is this more evident than with the design of the tailings pond and dam. As one of our experts wrote:

“With regard to the tailings dam design the Comprehensive Study Report notes that:
The centreline method was selected as the preferred alternative by the proponent ... (CSR, p. 14).
In the Environmental Impact Assessment, the tailings dam design is more correctly called a “modified centerline” (EIA, p. 3-24), which is really a code for modified upstream-type construction ...

This is the same type of construction design that failed at Mt Polley. All of [the] guarantees given for the Sisson dam were also given for the dam at Mt Polley. There have been no modifications to the dam design proposed since the EIA, so the dam design and operating parameters have not been modified in accordance with the Mt Polley Expert Panel recommendations.

Specifically, the Mt Polley Expert Panel “actively encourages” dry closure for new tailings facilities (Expert Panel, p. 121, 125). This strong recommendation has obviously been lost to both the proponent’s engineering advisors, and to the technical reviewers of the CSR. A simple way to achieve this would be to place drains underneath the impoundment, but this option is not considered.”

Our expert further added:

“In addition to dry closure, the Mt Polley Expert Panel recommends that excess water (stormwater, excess process water, etc.) NOT be stored in the tailings facility (Expert Panel, pp. 121, 122), yet the CSR notes:

If regular monitoring were to indicate that the water treatment plant effluent exceeds specifications, then the discharge would be immediately stopped and redirected to the tailings storage facility. The tailings storage facility would have adequate capacity to manage water during temporary shut-down of the water treatment plant.

This operating plan is in direct contradiction to a Mt Polley Expert Panel recommendation, which again suggests that the Panel's recommendations were either not understood or ignored for dam design and operation.

5. Too much reliance on undefined adaptive management strategies.

As discussed in concern #1 above, not enough baseline work has been done to truly understand the impacts of the mine and determine whether it should proceed. The proposed remedy for this is the CSR's reliance upon monitoring and adaptive management; "when we find a problem we'll fix it." While adaptive management should be encouraged, there are several problems with how its use is currently envisioned for the proposed Sisson mine. First, there may be impacts that can't be fixed and if we knew about them today we wouldn't permit the mine. Second, as proposed, the adaptive management proposals do not contain clear "triggers" or thresholds to initiate corrective actions. ("A trigger specifies what actions will be taken by an agency if monitoring information shows x or y.")¹ Finally, the proposed reliance on adaptive management is contrary to CEA Agency policy:

"If, taking into account the implementation of mitigation measures, there is uncertainty about whether the project is likely to cause significant adverse environmental effects, a commitment to monitor project effects and to manage adaptively is not sufficient.

A commitment to implementing adaptive management measures does not eliminate the need for sufficient information regarding the environmental effects of the project, the significance of those effects and the appropriate mitigation measures required to eliminate, reduce or control those effects.

Where additional information collection or studies are needed over the life-cycle of the project, such studies in themselves should not be considered "mitigation measures"." (CEA Agency at: <https://www.ceaa-acee.gc.ca/default.asp?lang=En&n=50139251-1>.)

¹ Decision-making Triggers, Adaptive Management, and Natural Resources Law and Planning, Courtney Schultz & Martin Nie, Natural Resources Journal, Vol. 52, Fall 2012 at p. 444.)