



MiningWatch Canada

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Mr. Cahill:

Please accept these comments regarding the Marine Environment Component Study of Long Harbour, Placentia Bay and Vicinity (April 24, 2007 – SA 889), completed by LGL Limited based on data collected between October 2005 and October 2006.

These comments and requests for clarification refer to the baseline data provided in the Marine Environment Component Study (MECS) and reference potential impacts highlighted in the Environmental Impact Statement and Federal Environmental Assessment Guidelines for the Long Harbour commercial Nickel Processing Plant (Placentia Bay, Newfoundland and Labrador).

Sampling stations:

- There were 6 “sampling stations” selected in Long Harbour and one “reference station” at Little Seal Cove. It is unclear from the MECS on what basis the 6 sampling stations in Long Harbour were chosen.
- Why were no sampling stations chosen north of Long Harbour, in the direction of currents out of Long Harbour as it may be expected that effluent would travel with these currents?
- Other than the reported “Candidate Effluent Outfall Station” are any of these sampling stations being considered as Candidate Effluent Outfall areas?
- Why were no sampling stations located in the vicinity of the 3 blue mussel-farming sites in Long Harbour to gather baseline data in these sensitive areas?

- Are any of the sampling sites in the location of proposed aquaculture projects?
- All 6 sampling stations appear to be close to shore. Why were no sea water samples taken in the vicinity of the Candidate Effluent Outfall area that is in the middle of Long Harbour?
- The MECS does not clarify the reason, related to potential marine impacts, for the location of the Candidate Effluent Outfall area other than to note that based on preliminary oceanographic mixing studies this is a “good area for mixing.” (p. 2-2). Is it anticipated that there will be a need for a “mixing zone” in the sea in order to be in compliance with TSS, pH, and metal levels at the edges of this zone?

Test results:

- How do the metals that were scanned in the sea water, sediments and biota (Blue Mussels and Winter Flounder) relate to the metals that are predicted to be associated with the effluent from the facility ?
- It appears that while beryllium and aluminum may be present in the effluent from a potential hydromet plant, they have not been tested for in “surface water” or in “bottom water.” We would expect that any metals that may be expected to be in the effluent would also be tested for in the sea water, sediments, and biota, to provide a solid baseline for these particular metals.
- It is of particular concern to us that there were exceedances for copper, iron, lead, and zinc in the metals in sea water tested at some sample stations in Long Harbour. And that “surface water” at Long Harbour sample stations showed concentrations that were consistently higher than the reference station in TSS, arsenic, chromium, copper, iron, manganese and zinc. Bottom water at Long Harbour sample stations was higher in TSS, iron, and lead than the reference station. This raises concern for cumulative effects if any of these metals are also in the effluent, or if effluent TSS values near compliance limits. There is also a concern for potential effects from interactions of these baseline metals that are already elevated in Long Harbour and metals in the effluent. We would like to see these concerns for cumulative effects and for chemical interactions addressed in the EIA.
- Similarly, exceedances were noted in surficial sediment for arsenic at all 6 stations in Long Harbour, for barium at all test stations, and cadmium, cobalt, copper, iron, lead, manganese, selenium, and thallium also exceeded ISQG values at various stations. Again, we would like to see the cumulative effects and potential interactions with metals in the effluent receive special attention in the EIA.
- The same concern applies to exceedances found in other locations that were tested, such as the ERCO wharf.
- It is of concern that arsenic levels in muscle samples of Winter Flounder exceeded Canadian guidelines for arsenic in fish and fish products and that Flounder from the Candidate Effluent Outfall area had higher metal concentrations for a range of metals than flounder from the Little Seal Cove reference station. Again, concern for adding to the toxic load of this species with metals from the effluent outfall must be addressed.

Section 36(3) of the Fisheries Act:

- We would like to have clarity with respect to the regulations that will apply to the discharge of effluent from the proposed facility into the marine environment (waters frequented by fish). As the effluent derives from the processing of ore from a mine, do the MMERs apply? If not, how will we be assured that no deleterious substances will be deposited in waters frequented by fish?

Hydromet:

- Hydromet is still, globally, an experimental technology, necessitating the use of pilot plants. Furthermore, the precise chemical composition used in the process is frequently proprietary, making it difficult for the public and regulators to know which chemicals of concern may be involved. Finally, the process itself (particularly the heat, pressure and subsequent chemical reactions in the autoclaves) is known to generate chemical forms that are not present in the ore body or in the process chemicals. All of this has an impact on residues, air emissions, and effluent from the process. We are particularly concerned that Canadian regulations that may apply to effluent derived from hydromet that is entering the marine environment (waters frequented by fish) may not be adequate to regulate all chemical components of this effluent that may be environmentally toxic. We would like to see this concern addressed.

Best Practice:

- Increasingly in mining, best practice dictates that there should be no “off-site” impacts from mining and mine processing. It is therefore imperative that alternatives be found for the contemplated marine outfall pipe. This waste should not be dumped into a marine environment that is already stressed, where it will contribute to contamination of human food sources that are already high in metals.

We look forward to your response.

Sincerely,



Catherine Coumans
Research Coordinator
MiningWatch Canada

c. Minister Clyde Jackman
Minister John Baird