

## **SUMMARY OF COMMENTS/RECOMMENDATIONS**

**PROPONENT:** CaNickel Mining Ltd.  
**NAME OF DEVELOPMENT:** Bucko Lake Mine Tailing Management Area  
**CLASS OF DEVELOPMENT:** Two  
**TYPE OF DEVELOPMENT:** Mining – Milling Facilities  
**CLIENT FILE NO.:** 5212.10

### **OVERVIEW:**

The Proposal was received on July 11, 2011. It was dated July 8, 2011. The advertisement of the proposal was as follows:

“A Proposal has been filed by CaNickel Mining Limited (formerly Crowflight Minerals Inc.) for the construction and operation of a new above ground tailings management area for its Bucko Lake Mine near Wabowden. The proposed facility would be constructed in two main stages immediately adjacent to the west and north of the existing Interim Tailings Storage Facility, and would provide storage for tailings for the remainder of the mine’s expected life. The facility would incorporate provisions for the reuse of settled water for mine operations. The Proposal includes plans for the capping of the existing Interim Tailings Storage Facility once it is full, and plans for the capping of the new tailings management area. Construction of the new tailings management area is proposed for the late fall of 2011, with operation beginning when the existing facility is full. Operation of the mine and mill would not be changed by the construction of the new tailings management area. A new paste backfill plant would replace the present hydraulic backfill plant for the mine to increase the amount of tailings used as backfill in the mine.”

The Proposal was advertised in the Thompson Nickel Belt News on Wednesday, July 20, 2011 and in the Thompson Citizen on Friday, July 22, 2011. It was placed in the Main, Millennium Public Library (Winnipeg), Eco-Network and Thompson Public Library (Thompson) public registries, as well as in the Wabowden Community Office as a public registry location. The Proposal was distributed to TAC members on July 14, 2011. The closing date for comments from members of the public and TAC members was August 22, 2011.

### **COMMENTS FROM THE PUBLIC:**

#### **Brian Shlachetka**

I am a resident of Wabowden and I am strongly opposed of this new location. I don’t want to see our lakes and our wildlife end up like what happen in Sheridan, Manitoba. If you locate the tailings pond north of the existing tailings pond and it leaks and could possibly get into Bowden Lake as there is a rapier that drains into Bowden Lake through town on 353 Fleming Drive and Bowden Lake is our community’s source of drinking water.

The mine life is short. They will be here for only 5-10 years and we may or may not affect by it us but it will be our future generations to inherit this problem.

Pollution will also definitely get into Bucko Lake, Goose Lake, Halfway Lake and other surrounding lakes.

On Goose Lake, hundreds of ducks are born there and the First Nations of Wabowden depend on the ducks and geese on this lake as they depend on the white fish on Halfway Lake.

If they build the tailings pond in the proposed area the ducks and geese start showing up dead on Halfway Lake, I will be taking pictures and sending them to the press for everyone to see what the mine has done to our clean lakes and ducks and geese.

I am a First Nation's trapper and I own a trap line on Halfway Lake which starts 6 miles directly north and downstream of Bucko Lake.

The south end of Halfway Lake is plugged with weeds where thousands of ducks and geese go to fatten up in the fall before they go south for the winter. Poison from the tailings pond will filter into these weeds where the ducks feed. If they continue, it will be worse than the tar sands in Alberta.

Halfway Lake also has all the major species of fish except Walleye/Pickrel. That is why there is no human traffic along the shores. This lake is like a refuge for birds and mammals.

Capping the old tailings pond will not stop the leaks, this tailing pond should be fixed so it will stop leaking. My suggestion would be to locate the new tailings pond toward Resting Lake over the hill so if it does leak, it would leak into the swamp and eventually into Resting Lake and Sipiwisk Lake as it is already polluted and damaged from Manitoba Hydro.

Thank you for giving us the opportunity to express our opinions and concerns in this matter.

Disposition:

These comments involve the location of the tailings facility on the CaNickel site. The proposed facility has been designed to fit the proponent's available area and to take advantage of existing infrastructure. The proposed facility has been designed to prevent leakage, and controlled releases of water from the facility will continue to be monitored for compliance with federal mining effluent regulations. Water quality monitoring is already done downstream of Bucko Lake; this would be continued with the proposed facility. Discontinuing use of the existing tailing storage facility and capping it will lead to a substantial decline in leakage as no new water sources will be available to contribute to leakage. (Leakage from this facility is currently pumped back into the facility.) The concerns identified can be addressed through licence conditions concerning construction and monitoring.

**COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE (TAC):**

**Manitoba Conservation – Sustainable Resource and Policy Management Branch and Land Programs Branch**

The Sustainable Resource and Policy Branch and the Land Programs Branch have reviewed the Environment Act Proposal to expand the Bucko Lake Mine Interim Tailings Storage Facility and create a permanent land-based storage facility and has the following comments:

- With the footprint of the tailings facility being expanded by nearly 30 ha., the Sustainable Resource and Policy Branch and the Land Programs Branch is assuming that Section 35 First Nation consultation will be conducted by the Mines Branch.
- The attached map shows the Surface Lease M154-SL (Plan 5742). The surface lease does not encompass the area of the proposed tailings pond that is within the Mineral Lease ML31 but IEM has advised in the past that a Mineral Lease was not sufficient and that a surface lease or a General Permit or Crown land Lease would be required for the portion of the tailings pond site that lies outside of their current surface lease.
- It is advised that CaNickel submit a Crown land application for legal control of the land.

Disposition:

Later comments from the Northeast Region (below) provided additional clarification concerning land control requirements. Section 35 consultation is also discussed below.

**Manitoba Conservation – Parks and Natural Areas Branch**

No comments.

**Manitoba Conservation – Air Quality Management**

No air quality-related comments or concerns.

**Manitoba Conservation – Northeast Region**

The NE Region has reviewed the Environment Act Proposal to expand the Bucko Lake Mine Interim Tailings Storage Facility and create a permanent land-based storage facility and has the following comments:

- With the footprint of the tailings facility being expanded by nearly 30 ha. the region is assuming that Section 35 consultation will be conducted.
- Other than sorting out the land use authority (as described below and in the attachments), the region has no other concerns with the proposal.

The Region also forwarded the following comments from the Mines Branch:

Further review of our records shows the surface lease doesn't cover the entire mineral lease as you point out. In my opinion the mineral lease is sufficient to proceed with the tailings pond providing it is within the lease area. However, the company should make application for surface rights for the areas not covered under our surface lease M154. I would suggest the company make application for a general permit with Conservation as the circulation process will be the same. At some point IEM and CL will need to agree on a process and communication strategy for tracking GP/SL when they are associated with a mineral disposition.

As for a work permit, discussions between Conservation and IEM have not yet taken place regarding when a work permit is required on a mineral lease.

Disposition:

The requirements for both a Work Permit and a general permit can be addressed as licence requirements.

### **Manitoba Water Stewardship**

Manitoba Water Stewardship has reviewed the referenced file, forwarded for comment on July 18, 2011.

- Manitoba Water Stewardship requires an *Environment Act* Licence to include the following:
  - The Licencee shall construct the tailings management area to maintain a maximum hydraulic conductivity of  $1 \times 10^{-7} \text{ cm} \cdot \text{s}^{-1}$ . The tailings management area shall be lined with compacted clay or a synthetic liner.
  - The Licencee shall develop and implement a Contingency Plan that includes the following:
    - Specific measures to manage the possible oxidation of tailings and minimize acid generating potential, including after mine closure and during periods of prolonged inactivity;
    - Measures to address the possibility of the water quality of the settling ponds being not in compliance with water quality objectives; and,
    - Measures to prevent tailings water from entering surface waters in the event of a pipeline rupture.
  - The Licencee shall comply with the Manitoba Water Quality Objectives at the point of discharge.

- The Licencee shall comply with *Metal Mining Effluent Regulations* under the *Fisheries Act* (Canada).
- The Licencee shall develop and implement the following water quality monitoring program:
  - Monitoring should be consistent with the current *Environment Act* Licence, including the following:
    - Monthly monitoring of water quality of the perimeter ditches of the tailings facility (when not frozen). Ground water wells shall be installed outside the tailings facility to monitor the quality, on a monthly basis, of any seepage leaving the tailings facility.
    - Annual ambient monitoring is required in Rock Island Lake downstream of Bucko Lake, during open water season, for the following parameters and minimum detection limits. Monitoring of the perimeter ditches parameters marked as (d) and ground water (g):

Dissolved Oxygen	0.1 mg/L	
pH	0.1 mg/L	d,g
Conductivity	1 us/cm	d,g
Total suspended solids	5 mg/L	d,g
Total dissolved solids	5 mg/L	d,g
Temperature	0.1 Celsius	d
Alkalinity	1 mg/L	d,g
Turbidity	0.01 NTU	D,g
Chloride	0.2 mg/L	d,g
Sulphate	0.5 mg/L	d,g
Nitrate/nitrite	0.01 mg/L	d,g
Ammonia	0.01 mg/L	d,g
Total phosphorus	0.001 mg/L	D
Total dissolved phosphorus	0.001 mg/L	D
Total Kjeldahl Nitrogen	0.2 mg/L	D
Chlorophyll a	0.1 ug/L	
Total metal scan by ICPMS (see below)	various	D,g
Total Hg (cold vapour)	< 0.02 ug/L	D,g
Hardness calculation	0.07 mg/L	D,g

## List of total metals

Parameter	detection limit	
Aluminum_Al	0.001	mg/L
Antimony_Sb	0.0002	mg/L
Arsenic_As	0.0002	mg/L
Barium_Ba	0.0002	mg/L
Beryllium_Be	0.0002	mg/L
Bismuth_Bi	0.0002	mg/L
Boron_B	0.01	mg/L
Cadmium_Cd	<i>0.00055</i>	mg/L
Calcium_Ca	0.01	mg/L
Cesium_Cs	0.0001	mg/L
Chromium_Cr	<i>0.0157</i>	mg/L
Cobalt_Co	0.0002	mg/L
Copper_Cu	<i>0.0018</i>	mg/L
Iron_Fe	0.01	mg/L
Lead_Pb	<i>0.0003</i>	mg/L
Lithium_Li	0.0002	mg/L
Magnesium_Mg	0.01	mg/L
Manganese_Mn	0.0002	mg/L
Molybdenum_Mo	<i>0.073</i>	mg/L
Nickel_Ni	<i>0.0104</i>	mg/L
Phosphorus_PO4	0.03	mg/L
Potassium_K	0.02	mg/L
Rubidium_Rb	0.0002	mg/L
Selenium_Se	<i>0.001</i>	mg/L
Silicon_Si	0.05	mg/L
Silver_Ag	<i>0.0001</i>	mg/L
Sodium_Na	0.01	mg/L
Strontium_Sr	0.0002	mg/L
Tellurium_Te	0.0002	mg/L
Thallium_Tl	<i>0.008</i>	mg/L
Thorium_Th	0.0001	mg/L
Tin_Sn	0.0002	mg/L
Titanium_Ti	0.0002	mg/L
Uranium_U	0.0001	mg/L
Vanadium_V	0.0002	mg/L
Zinc_Zn	<i>0.020</i>	mg/L
Zirconium_Zr	0.002	mg/L

- Manitoba Water Stewardship requests clarification on the following:
  - The proponent needs to provide the location of the discharge effluent path and the quantity of discharge effluent.

- The Proposal notes that Nickel and <sup>226</sup>Radium are not in compliance with the *Metal Mining Effluent Regulations* under the *Fisheries Act* (Canada). The Proposal also notes that pH has been measured at 3.7. Has water been discharged to the environment with a pH of 3.7 or exceeding the limits of the *Metal Mining Effluent Regulations*?
  - The most recent federal Environmental Effects Monitoring report showed that that water column concentrations of Barium, Boron, and Strontium have increased in Bucko Lake between 2000 and 2009, and are elevated relative to Access Lake. What chemicals are used in the mine ore processing or water treatment that could account for this increase? What is the long term projection for Barium, Boron, and Strontium concentrations in Bucko Lake?
  - The Proposal outlines several parameters of potential concern such as nickel and total dissolved solids. Manitoba Water Stewardship requests to receive the results of a full chemical analysis of recent discharge water, including nutrients, metals, and metalloids.
- Manitoba Water Stewardship submits the following comments:
    - Manitoba Water Stewardship does not object to this proposal, at this time.
    - Bucko Lake is directly hydrologically connected to Rock Island Lake and Halfway Lake, which drains into the Grass River. These lakes and the Grass River have significant recreational and commercial fishery value, maintaining their water quality is important.
    - The proponent needs to be informed of the following for information purposes:
      - Erosion and sediment control measures should be implemented until all of the sites have stabilized.
      - *The Water Rights Act* requires a person to obtain a valid licence to control water or construct, establish or maintain any “water control works.” “Water control works” are defined as any dyke, dam, surface or subsurface drain, drainage, improved natural waterway, canal, tunnel, bridge, culvert borehole or contrivance for carrying or conducting water, that temporarily or permanently alters or may alter the flow or level of water, including but not limited to water in a water body, by any means, including drainage, OR changes or may change the location or direction of flow of water, including but not limited to water in a water body, by any means, including drainage. If a proposal advocates any of the aforementioned activities, a person is required to submit an application for a Water Rights Licence to Construct Water Control Works. A person may

contact the following Water Resource Officer to obtain an application and/or obtain information.

- A contact person is Mr. Ed MacKay, C.E.T., Senior Water Resource Officer, Water Control Works and Drainage Licensing, Manitoba Water Stewardship, 1129 Queens Avenue, Brandon, Manitoba R7A 1L9, telephone: (204) 726-6226, email: ed.mackay@gov.mb.ca.

**Disposition:**

With respect to the required hydraulic conductivity of the tailings storage area, the facility is designed as an operation that will require active management for the life of the mine, and then will be capped. Since seepage can be collected and managed, hydraulic conductivity requirements are not the same as for municipal wastewater treatment and waste disposal ground facilities. Accordingly, hydraulic conductivity limitations will not be specified in an Environment Act Licence for the proposed facility. This is in keeping with the existing licence for the present tailings storage area for the operation. Several other comments can be addressed through licence conditions, including the monitoring program. Additional information was requested to address other comments. Current monitoring results were forwarded to Manitoba Water Stewardship as requested.

**Manitoba Infrastructure and Transportation – Highway Planning and Design Branch** No concerns.

**Canadian Environmental Assessment Agency**

I have completed a survey of federal departments with respect to determining interest in the project noted above. I can confirm that the project information provided was reviewed by all federal departments with a potential interest. I am enclosing copies of the responses for your file. Based on the responses to the survey the application of the *Canadian Environmental Assessment Act* (the Act) by a federal authority will not be required for this project.

Natural Resources Canada provided a letter stating their relevant areas of expertise and indicating that they could provide specialist advice if requested (see attached). Environment Canada's comments will be forwarded following receipt.

Please note that the project information was also reviewed by Fisheries and Oceans Canada (DFO) and Transport Canada as part of the federal coordination process. DFO's determination that a Fisheries Act authorization would not be required assumes that:

- a) no more water is extracted from Bucko Lake than was originally proposed under DFO file # 06-HCAA-CA1 -02383;
- b) any water intake is properly screened to prevent entrainment/impingement of fish; and
- c) there would be monitoring and contingency for fish winterkill in Bucko Lake in the event that this should occur as a result of water extraction.

Disposition:

This information was provided directly to the proponent by the Agency. Water intake screening requirements can be addressed as a licence condition.

**ADDITIONAL INFORMATION:**

Additional information was requested for clarification to address some TAC comments. This information is not needed for licensing purposes, but was forwarded to the reviewers.

**PUBLIC HEARING:**

As no requests for a public hearing were made, a public hearing is not recommended.

**CROWN-ABORIGINAL CONSULTATION:**

The Government of Manitoba recognizes it has a duty to consult in a meaningful way with First Nations, Métis communities and other Aboriginal communities when any proposed provincial law, regulation, decision or action may infringe upon or adversely affect the exercise of a treaty or Aboriginal right of that First Nation, Métis community or other Aboriginal community.

With respect to the project, advice was obtained from the Mines Branch of Manitoba Industry, Energy and Mines (IEM) concerning the need for and activities undertaken relative to consultation. IEM is the lead department for consultation purposes, since the mineral lease that the mine operated under is issued by the Mines Branch. The Mines Branch advised that since no decisions or new permits were required for the project, no consultation activities had been undertaken. Consultation had been undertaken in 2007-2008 in connection with the original proposal.

IEM, Manitoba Conservation and Manitoba Justice have prepared an Initial Assessment and Record of Conclusion respecting consultation for the current project. The document concludes that consultation is not required for the first phase of the TMA construction, since the proponent already controls the land through a Mineral Lease for which consultation previously occurred. It is anticipated that further consultation led by the Mines Branch would be required for an additional Mineral Lease area prior to the construction of the later stage of the project, if this stage proceeds.

**RECOMMENDATION:**

All comments received on the Proposal have been addressed through licence conditions, additional information, or the provision of information to the proponent.

Crown-Aboriginal Consultation has been considered by all involved departments, and a conclusion has been reached and documented that consultation is not required for the components of the project that are currently planned for construction.

It is further recommended that enforcement of the Licence be assigned to the Northeast Region of the Environmental Operations Branch.

Prepared by:

---

Bruce Webb, P. Eng.  
Environmental Assessment and Licensing - Land Use Section  
(for Municipal, Industrial and Hazardous Waste Section)  
September 14, 2011 Updated: September 29, 2011  
Telephone: (204) 945-7021  
Fax: (204) 945-5229  
E-mail: [bruce.webb@gov.mb.ca](mailto:bruce.webb@gov.mb.ca)