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Our file: 4709 012 001  
Your file: EA 0809-004

October 13, 2009

Mackenzie Valley Environmental Impact Review Board  
P.O. Box 938  
Yellowknife, NT X1A 2N7

*Via email: aehrlich@mveirb.ca*

Attention: Alan Ehrlich

**Re: Comments on the Draft Terms of Reference for the Environmental Assessment of Fortune Minerals Ltd.'s NICO Project**

Thank you for the opportunity to provide input to the Mackenzie Valley Environmental Impact Review Board (MVEIRB) regarding the NICO Project Environmental Assessment. Environment Canada's specialist advice is provided pursuant to its mandated responsibilities under the *Canadian Environmental Protection Act 1999*, Section 36(3) of the *Fisheries Act 1985*, the *Metal Mining Effluent Regulations 2002*, *Migratory Birds Convention Act 1994*, and the *Species at Risk Act (SARA)*.

EC has reviewed the sections pertaining to air quality, cumulative effects, water quality, emergencies, mine waste management and ARD, closure planning, migratory birds, and species at risk.

**Comments and Recommendations:**

Section 2. Scope of development - Construction

The 8<sup>th</sup> bullet should specify which plant; i.e. the *potable* water treatment plant.

The 9<sup>th</sup> bullet should specify "Construction of *water* management facilities..."

The 11<sup>th</sup> bullet should be followed by a bullet "Construction of the sewage treatment plant;"

Throughout the document there is inconsistent use of punctuation with the bullets (semi-colons, periods, no punctuation marks) which could be revised.

Section 3.2.4

Under the requirement to describe the biophysical environment, there should be a bullet for "geology".

Section 3.2.5

The last bullet in the left-hand column should specify "*water* management and treatment"

Section 3.3

The last bullet on page 12 states that the Developer's Assessment Report (DAR) will:

- “Identify any monitoring, evaluation and adaptive management plans required to ensure that predictions are accurate and if not, to proactively manage against adverse impacts when they are encountered.”

Further direction on monitoring is given briefly in Appendix C, Item 9.c. in which a draft framework is to be described. EC recommends that the wording be more explicit to direct the proponent in demonstrating the monitoring has sufficient baseline characterization, that the range of natural variability has been adequately described, and that the monitoring program will be capable of detecting changes before they become impacts. EC notes that the proponent has already initiated development of the AEMP/EEM work in consultation with the working group, so this is not an item of high concern, and a general wording will suffice.

### Section 3.3.2

Key Line of Enquiry: Water Quality

The wording should be clarified in the sentence in the first paragraph of this section:

“The developer will consider all potential impacts of water quality in the watershed to the point where no changes can be measured...”

As worded, the requirement is open ended, and should be narrowed to specify mine-related impacts on water quality; as it is in Appendix C.4. In both cases, it may be useful to use some objective measure of change, such as being significantly different from baseline or reference values, as “no measurable change” is difficult to identify.

### Section 3.5 Accidents and Malfunctions, Page 16

It is suggested that an example environmental risk management standard for mining be cited here, e.g. *Risk and Accident Prevention, Best Practice Environmental Management in Mining Series, Australia Environment, 1999*. In general, it would be useful to incorporate into the TOR a list of environmental laws, regulations, guidelines, standards, codes and best practices (at international, Federal, Territorial, community & industry association levels) that will apply, be used or adhered to by the proponent throughout the project.

### Appendix C, Water Quality, Part 13 a., Page 24

EC suggests rewording this part to read: “Contingency plans to address metals leaching and acid rock drainage;” The term ‘conceptual contingency plan’ is unnecessarily abstract.

### Appendix C Part 10,

The proponent is required to evaluate the water treatment facilities against their ability to meet site specific objectives for the MMER metals. EC recommends that the proponent evaluate treatment system in terms of all the parameters, including TSS and pH, as well as using metals. Water quality objectives for the protection of aquatic life, such as the CCME Water Quality Guidelines (CCME WQG), provide accepted benchmarks for impacts of effluents in receiving waters. Given that the MMER regulated values are not based on protection of the environment *per se*, but on concentrations achievable on an industry-wide basis, ideally, the proponent should be comparing the water-treatment facilities to achieve the lowest achievable values or CCME WQG or ambient levels. For the other parameters, also add the MMER non-metal parameters cyanide (as it is proposed to be used in the mill, it will be required to be monitored under the MMER), and radium-226.

### Appendix D. Closure and Reclamation

Item 5 deals with the concept of establishing a self-sustaining vegetation community at the mine site. Given that closure options will not be determined for some time, this could be worded on a more conceptual level, or could ask for plans to establish the viability of a self-sustaining vegetation community as a closure option. As worded, this clause presumes a closure option that may not be approved.

EC was pleased to see that it was stipulated that clear closure objectives need to be developed for the Conceptual C&R plan and linked to measureable closure criteria and indicators, and that this be done in consultation with communities and interested parties.

#### Appendix F. Wildlife

No concerns have been identified.

#### Appendix H. Air Quality

The TOR for the air assessment was very well done. The only recommended changes are regarding the statements in H.2a and 2b:

a. Estimate emissions from all project sources including fugitive dust;  
Change to: "a. Estimate criteria air contaminants emissions from all project sources including fugitive dust";

And, b. Predict total carbon emissions on an annual basis and over the life of the NICO Project

Change to: "b. Predict total ~~carbon~~ Greenhouse Gas emissions on an annual basis and over the life of the NICO Project".

#### Appendix K: Cumulative Effects

The cumulative effects section appears to be comprehensive; no comments or concerns identified.

Please do not hesitate to contact me with any questions or comments with regards to the foregoing at (867) 669-4735 or by email at [anne.wilson@ec.gc.ca](mailto:anne.wilson@ec.gc.ca).

Yours truly,

#### ***Original signed by***

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