

September 26, 2001

Mr. Patrick Finlay, Chief  
Minerals and Metals Division  
Environment Canada  
Place Vincent Massey, 13<sup>th</sup> Floor  
Hull QC K1A 0H3

SENT BY FAX 819 953 5053

Dear Mr. Finlay:

**RE. Proposed Metal Mining Effluent Regulations under the Federal Fisheries Act**

As a preamble to our comments on the proposed amendments to the Metal Mining Liquid Effluent Regulation under the Fisheries Act, I would like to convey our appreciation for the many years of work that you and your colleagues in Environment Canada and the Department of Fisheries and Oceans have invested in the review and modernization of this regulation. It has been a demanding exercise for the many parties involved, but I expect for none more than for you and your department. You are to be commended for having kept the process in forward motion, and for having now reached this important milestone.

It will be no surprise to learn that we are not yet satisfied with the draft regulation. You may have anticipated some of those areas in which we would react with disappointment, given the views and priorities we shared with the federal departments and other stakeholders at the table through several generations of the review process. At the same time, we are predictably pleased with some of the areas of improvement in the draft regulation. Given the familiarity your department has with our views, we intend to provide only brief comments at this point, primarily for the purpose of placing them on the public record and emphasizing some key points, as well as commenting on some new areas of the regulation.

Regulatory Impact Statement

In our view, the RIAS reasonably conveys the views of the environmental non-governmental organizations, i.e. that the requirements of the new regulation is not protective enough, nor is it technology-forcing; the new regulation fails to require that the effluent be non-lethal to Daphnia; the limits for metals should be lower, and the list should be more inclusive; the regulation will not come into force soon enough; and there is no legal linkage between the Environmental Effects Monitoring program and the development of a more protective site-specific regulation or the revision of the national regulation. However, the RIAS does poorly at responding to those ENGO concerns, and is weak in several other key areas. For example, the RIAS claims that the "proposed new MMER limits are based on a comprehensive review and assessment of national and international standards, pollution prevention practices and control technologies of relevance to the mining sector, and the current performance of the Canadian mining sector in terms of effluent quality." While it is true that some review of national and international standards was undertaken and reported to the Amendments Working Group, it is not fair or appropriate to claim

that the resulting regulation in general, and the limits for various deleterious substances in particular, is based on that review. There is, on the other hand, a fair statement included in the latter part of that sentence, in that the proposed regulation is based on the current operating standard or performance of Canadian mines. The question, of course, is whether current practice is good enough. In our view, it is neither sufficiently protective of the aquatic environments affected by mine effluent, nor in keeping with current international standards. This failure to truly modernize the regulation is made clear by reviewing the findings of the Senes Report to the Amendments Working Group on Best Available Technologies.

**Comparison Between Canada And International Countries On  
Metal Mining Liquid Effluent Monthly Average Limits**

Parameter	Canada (mg/L)	Countries with lower limits than Canada
TSS	15	Brazil : 1 mg/L
Nickel	0.5	Sweden : 0.1 mg/L Vietnam : 0.1 mg/L Finland* : 0.3 - 1.0 mg/L
Copper	0.3	USA : 0.15 mg/L Sweden : 0.1 mg/L Finland* : 0.05 - 3.0 mg/L Italy : 0.1 mg/L Vietnam : 0.1 mg/L Papua New Guinea : 0.03 mg/L (for discharge into marine environment)
Lead	0.2	Sweden : 0.1 mg/L Ghana : 0.1 mg/L South Africa : 0.1 mg/L Vietnam : 0.05 mg/L Indonesia : 0.1 mg/L Japan : 0.1 mg/L Tasmania : 0.05 mg/L (for discharge into freshwater system) Papua New Guinea** : 0.005 & 0.004 mg/L
Total Cyanide	1.0	Finland : 0.5 mg/L South Africa : 0.5 mg/L Indonesia : 0.1 mg/L Tasmania** : 0.05 & 0.2 mg/L Papua New Guinea** : 0.005 & 0.01 mg/L Philippines** : 0.2 & 0.2 mg/L
Zinc	0.5	None
Radium 226	0.37 Bq/L	None for countries that provided their data. However, only 1 country provided data

**NOTE:**

\* Data for Finland - range of limits in effect at 6 mines in Finland

\*\* Values of discharges into freshwater system and marine environment respectively

**REFERENCE:**

Report on Technologies Applicable to the Management of Canadian Mining Effluents”, Final Report, March 1999 by SENES Consultants Ltd & Lakefield Research Ltd, page S-3 and Table 4.2.1 on pages 54 - 56;  
Comparative Summary provided by the Canadian Environmental Defence Fund

While we make this comment in the context of the RIAS report, the concern obviously carries over into the draft regulation itself.

### Definitions

Two of the definitions included in the proposed regulation are problematic; we propose amendment as per the following comments:

- Acutely lethal effluent is currently defined as meaning “an effluent at 100 percent concentration that kills more than 50 percent of the rainbow trout subjected to it during a 96-hour period when tested in accordance with the acute lethality test”. While the draft regulation currently requires that only 50 percent of rainbow trout survive for 96 hours, the definition of acute lethality itself should not be made specific to this single test species. We suggest a rewrite to the effect of “an effluent at 100 percent concentration that kills more than 50 percent of the test organism subjected to it during a 96-hour period when tested in accordance with the acute lethality test”.
- The definitions for a mine or a mine under development or new mine do not include a clear delineation between the three, or the relationship of those definitions to the regulation; for example, the draft states that the regulation applies when the effluent flow rate is greater than 50 m<sup>3</sup> per day, but it is not clear how or if there is a relationship between that trigger and the definitions

### Application

We have three concerns with respect to the scope and application of the regulation, two of which we raised in the course of discussions at the Amendments Working Group, with the third being a concern that has emerged, for us, more recently. Our concerns are:

- As noted during AWG discussions, we are concerned that the regulations do not apply to mines that stopped commercial operation before the registration of these Regulations, unless they are reopened after the registration of these Regulations; this is an inappropriate test or trigger. The applicability of the regulation should be based on the ability or potential of the operation to adversely impact on the aquatic environment, rather than arbitrary thresholds built around definitions of commercial operation or dates of registration for the regulation;
- As noted during AWG discussions, we are very concerned that placer mining operations are excluded from these regulations; these operations very definitely and profoundly impact on the aquatic environment, and should be caught by the regulation, as are other gold mining operations; and
- The regulation applies only to surface water, and not groundwater. While we share with Environment Canada and other groups at the table the failure to raise this during the review process, some recent developments have brought to our attention the need to have groundwater impacts caught by the Regulation. One example is the closure plan for Inmet’s Winston Lake Mine in northern Ontario, which has recently been approved by Ontario’s Ministry of Northern Development and Mines. The proposal was approved -

and by now may be fully implemented - to pump the contaminated tailings pond water to the underground workings. Part of the rationale provided by the Company's consultants was that, in so doing, the requirement to meet surface water quality standards would be avoided. This example, and we believe there may well be many others, illustrates the need to have a seamless regulatory regime in general, and to have groundwater impacts of mine discharge addressed in a federal regulation in particular.

### Reporting

We were pleased to learn of Environment Canada's plan to increase reporting frequency (to the public) from every four years to every year, and consider this to be a very positive commitment. However, we are concerned that this commitment does not appear anywhere in the regulation. We would strongly advocate it being included in the regulation, in order to strengthen the likelihood of resources being made consistently available, and the commitment so being consistently kept.

We are also concerned that there appears to be no public access to mine monitoring information on a more regular basis. Given that the mine operators are required to provide an effluent monitoring report on a quarterly basis we see no reason why this information should not be made public on a quarterly basis. While an annual report may be sufficient where a mine is operating without difficulty, the community has a right to know as immediately as possible when a mine's effluent is potentially having an adverse affect on the areas surface or groundwater. A quarterly reporting system seems to be a compromise between immediate and annual reporting, and one which could be easily achieved, particularly in the age of electronic communications.

Of great concern is the seeming absence of any requirement to publicly report on out of normal events, or any public role in reviewing and commenting on the emergency response plan. Our recommendation is that these sections (28 through 30) be amended to a) provide a public role in development and approval of emergency response plans; b) require public reporting of a deposit out of the normal course of events of a deleterious substance, c) include in the report of out of normal events an analysis of why the event occurred, rather than simply a description of the circumstances of the deposit; and d) include an independent review and analysis of the effectiveness of the emergency response plan and mitigating measures which were taken following an event.

### Recognized Closed Mines

We are extremely concerned with Part 4 of the draft regulation, dealing with the recognition of closed mines, and were surprised to see new text on such significant provisions of the regulation.

In particular, we are very concerned with the proposal that a determination of whether a mine is to be considered "closed" or not could be based on something as arbitrary and as potentially easy to manipulate as having maintained the "mine's rate of production at less than 25 percent of its design rated capacity for a continuous period of three years". Given that a mine having achieved this "closed" status would mean that the Regulation no longer applies, we are shocked that Environment Canada would promote such a notion. Yes, we understand that the prohibitions of 36(3) of the Fisheries Act (which forbids the deposit of deleterious substances into waters frequented by fish) will apply. But given that there has not been a single prosecution even under

the regulation, and given that requirement to monitor and report will also be lost, we find it little comfort to know that the general provisions of the Act will apply. Without monitoring and reporting there is even fainter hope of enforcement; without monitoring and reporting there is almost no ability left the public to know if or how the aquatic environment is being adversely affected. And there is little cause to believe that any adverse impacts will be identified, or action taken in response.

We recommend that a measure based on environmental performance or outputs be used, rather than the test of reduced rate of production. Further, we recommend that the requirement for monitoring and reporting be continued until the effluent has reached normal or natural background levels for a period of at least three years.

### Transitional Authorizations

We continue in our concern about the use of transitional authorizations. The potentially affected mines have had a great deal of notice on the changes which will be required as a result of this modest strengthening of the regulation, and we can find no sound reason to further delay the revised regulation's coming into force, as would be the case with the issuing of transitional authorizations.

Without prejudice to that concern, we note that the draft regulation provides no role for the public in reviewing or commenting on any requests for a transitional authorization. In our review of the draft regulation, we were able to identify only an after-the-fact possibility of any public access or knowledge of the transitional authorizations, that being in Section 34 (3) which states that "authorization officers shall maintain a public record of all transitional authorizations issued for mines located in the province where they perform their functions." While we expect that the issuance of a transitional authorization would be the subject of a screening under the Canadian Environmental Assessment Act, public participation at the screening level is at the discretion of the responsible authorities. To provide consistency and predictability - two key principles of environmental assessment - we recommend that the regulation be amended to provide for a) public notice of an request for a transitional authorization, and b) an opportunity for the public to review and comment on any such application.

### Outstanding Concerns

As we have expressed previously, including at numerous points during the review process, we have a number of concerns with the draft regulation and its ability to adequately protect the aquatic environment. Our concerns include:

- Acutely Lethal Effluent While the requirement that effluent be non-acutely lethal is a key improvement, we continue in our concern that the draft regulation goes only half the necessary distance, in that it requires non-acutely lethal effluent for only Rainbow trout and not for *Daphnia magna*. These two indicators provide different information about the lethal effects of effluent, and the acute lethality of effluent cannot be assessed with any reasonable confidence if only Rainbow trout are used in the test. In our view, the failure to include a non-acutely lethal effluent test for *daphnia* demonstrates a downgrading of the federal government's position.

- Allowable Levels of Pollutants The proposed limits are too high. Other than the suspended solids limit, all other limits remain the same as they were in the original MMLER from over 20 years ago. The proposed limits will not be technology forcing, they are concentration-based rather than based on loadings and the allowed limits have remained almost entirely unchanged after 22 years, illustrating the overall failure to modernise the regulation to be more protective of the environment and more consistent with the federal government's stated principles of environmental protection and sustainable development. The limits are simply too high. Key substances, such as mercury and cadmium, have still not been added to the regulation.
- Environmental Effects Monitoring Linkage An effective EEM program is integral to the effective functioning of the regulation. With a National EEM program in place, a body of information will grow for which a certain set of criteria have been applied and to which a certain standard of tools and methods have been used. Further, as it becomes evident that the national regulation is not sufficiently protective in a given location, the EEM program results provide a basis to develop a site-specific regulation. However, the current draft of the regulation contains no direct linkage between the EEM program results and the regulation, and no legal tool to require a site specific regulation be developed and applied when monitoring results show it to be warranted, or that the national regulation be reviewed and revised based on EEM learnings.
- Reporting of Toxicity Results As discussed in an earlier part of this submission dealing with reporting, the current draft is inadequate in terms of public reporting provisions. Monitoring data, inspection data, prosecution data, EEM material, and all other information should be easily available to the public. A web page for MMER information may be the most efficient way to present the data, however, it may not be necessary to describe the specifics of the delivery mechanism in the actual regulation. What is clearly necessary is a setting out within the regulation of the requirement to provide to the public the monitoring, inspection, and prosecution data, and EEM conclusions, in a comprehensive and accessible fashion, and the requirement to establish a National Toxicity Registry.

In closing, I would like to thank you again for the opportunity to contribute to the review of this important regulation, and to comment on the draft text for the revised Metal Mining Effluent Regulation. Please do not hesitate to contact me if you would like any clarification of the comments contained in this submission.

Yours,

Brennain Lloyd  
Northwatch

cc. Aquamin Reference Group, Mining Caucus, Canadian Environmental Network