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208.345.6933 • PO Box 844, Boise, ID 83702 • [www.idahoconservation.org](http://www.idahoconservation.org)

October 16, 2020

Paula Wilson  
Idaho Department of Environmental Quality  
1410 N. Hilton  
Boise, ID 83706

Submitted via email to: [paula.wilson@deq.idaho.gov](mailto:paula.wilson@deq.idaho.gov)

**RE: Idaho Conservation League's Comments for the Final Draft Rule: Ore Processing by Cyanidation; Docket No. 58-0113-1901**

Dear Ms. Wilson:

Thank you for the opportunity to submit the Idaho Conservation League's comments regarding the final draft of Idaho Department of Environmental Quality's (IDEQ) negotiated rulemaking for ore processing by cyanidation.

Since 1973, the Idaho Conservation League (ICL) has been Idaho's leading voice for clean water, clean air, and wilderness - values that are the foundation for Idaho's extraordinary quality of life. As a 501(c)(3) nonprofit organization, ICL works to protect these values through public education, outreach, advocacy, and policy development. ICL is Idaho's largest state-based conservation organization and represents over 30,000 supporters, many of whom have a deep personal interest in protecting Idaho's water quality, aquatic species, and human health.

Our comments are provided in the document following this letter. We appreciate the opportunity to provide comments on this matter and share our perspective. If you have any questions regarding our comments or recommendations, please do not hesitate to contact us through the information provided below. We look forward to working with IDEQ on this and future rulemakings and projects.

Respectfully submitted,

Randy Fox

Austin Walkins

Conservation Associate  
Idaho Conservation League  
[rfox@idahoconservation.org](mailto:rfox@idahoconservation.org)  
(208) 345-6933 x 110

Climate Campaign Coordinator  
Idaho Conservation League  
[awalkins@idahoconservation.org](mailto:awalkins@idahoconservation.org)  
(208) 345-6933 x 123

## Idaho Conservation League's Comments for the Final Draft Rule: Ore Processing by Cyanidation; Docket No. 58-0113-1901

### **050.01 - Pre-Application Conference**

The text currently states, "Any person who intends to apply...*should* contact the Department during the initial stages of site characterization to schedule a pre-application conference." We recommend IDEQ change this to read "*must* contact the Department," making the pre-application conference a requirement to begin the application process. This allows IDEQ and the application to have open conversations regarding the requirements, which facilitates the design planning, permitting process, and cost recovery agreements, reducing the chances of misinterpretation and providing the benefit of ensuring applications have current and correct information and possess a full understanding of the rule prior to investing time, materials, and funds in an untenable project. This supports the requirements of 050.02 - Information Required for Preliminary Design Report.

### **200.04 - Siting and Preparation**

We recommend adding avalanches and seismic activity such as tremors and earthquakes to the list of "adequately protected against factors." Several potential mines or their primary access routes are located in avalanche-prone areas and the recent 6.5 magnitude earthquake in Central Idaho demonstrates the need to acknowledge this as a potential ongoing risk. Avalanche prone areas can be identified from previous observations and evidence. The USGS has an Earthquakes Hazards Program that tracks historic and recent earthquake activity.

### **200.06.v - Minimum Plans and Specifications (wildlife exclusions)**

IDEQ is electing to use 50 mg/L WAD as the standard for wildlife protection because it is considered an international standard. Under this justification, IDEQ must incorporate all other aspects of the international standards into this rule. In addition to the 50 mg/L numeric criteria, the International Cyanide Management Code<sup>1</sup> (Cyanide Code) also includes matters such as training staff, QA/QC, water balance contingency, monitoring regimes, real-time WAD cyanide measures, management contingencies in place, etc. In order to be effective, the Cyanide Code should be incorporated in its entirety; anything less would be ineffective at adequately protecting wildlife.

Further, IDEQ adds that they "may require additional measures if wildlife mortality is observed." Section 4.4 of the Cyanide Code explicitly requires facilities to "[I]mplement measures to protect birds, other wildlife and livestock from adverse effects of cyanide process solutions."<sup>2</sup> These requirements are not contingent upon observing wildlife mortality because the general presumption is that adverse effects to wildlife or wildlife mortality will occur. We remind IDEQ that industry standards call for netting over process ponds rather than fencing to provide protections for bats and birds; netting around tailings impoundments is not adequate to protect

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<sup>1</sup> Available online: [www.cyanidecode.org](http://www.cyanidecode.org)

<sup>2</sup> See *Id.*

birds and bats. Perimeter netting should be designed to prevent large mammals such as elk and deer as well as smaller vertebrates such as amphibians from accessing ponds. This may require incorporating two different netting designs. Further, numerous studies have expounded upon the difficulties of appropriately monitoring and quantifying the impacts to wildlife at cyanidation facilities (e.g. - Donato et al., 2007; Donato et al., 2017). Given the explicit requirement in the Cyanide Code, and peer-reviewed studies indicating the difficulties associated with monitoring, it is inappropriate for IDEQ to rely on reactive policies to wildlife deaths. Instead these rules should be proactive in requiring wildlife interactions and cyanide monitoring protocols, such as those implemented in Australia as a leading practice (Griffiths, 2014a; M.E. Smith et al., 2008; G.B. Smith et al., 2008; Adams et al., 2008; Smith et al., 2010; Donato and Smith, 2007). Management measures, in addition to specific WAD Cyanide Thresholds are critically important. These should include closely monitoring inflow into all process wastewater ponds to identify whether spikes in concentrations occur and to implement specific measures to respond immediately to any of these events.

According to Dr. David Donato<sup>3</sup>, an expert in matters of wildlife toxicology and ecology associated with mine tailings impoundments and industry risks, there are four industry Best Management Practices he recommends for cyanide processing:

1. Install Auto Free CN analysers on the tank immediately after the dosage tank, auto FCN analyzer installed on the last CI:L tank and the desired set point (in free CN) automates the dosage rate in the dosed tank. QA and QC performed by manual 4-hourly titration of tanks to check on auto analyzer.
2. AutoWAD analyzer sampling and recording every 15 minutes on the last CIL tank or thickened underflow is one installed. This represents the Tailings Storage Facility (TSF) spigot sample.
3. If the AutoWAD analyzer reaches 45 mg/L (a management trigger value) then they implement their controls.
4. Controls can be:
  - a. Reduce CN addition by changing dosage tank set point
  - b. Introduce the TSF return water back into the discharge stream (diluting effect)
  - c. Hydrogen peroxide polishing of TSF return water tank is introduced back into the discharge stream (improved diluting effect)
  - d. Turn on cyanide destruction circuit if one exists

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<sup>3</sup> Dr. Donato is Principal of Donato Environmental Services (DES) and has 25 years' experience consulting to industry on a wide range of environmental management issues. Donato is widely regarded by industry peers as an expert in matters of wildlife toxicology and ecology associated with mine tailings impoundments and industry risks. Dr. Donato, an accredited environmental auditor (ISO19011), and an accredited Lead Auditor with the International Cyanide Management Code, has focused on environmental toxicological risks and Code compliance in industry in Australia, USA, Africa and New Zealand. Over the last 20 years Donato has published relevant papers on cyanide code management, environmental auditing, toxicology, mine wastewater management, threatened species management, as well as more widely on ecology. Through DES, Donato has produced about 100 consult reports and presented at numerous international conferences.

ICL recommends that IDEQ adopt these four management practices for cyanide processing facilities, placing an emphasis on management practice as opposed to regulatory stipulations. We also recommend incorporating an SO<sub>2</sub>/INCO cyanide destruct system to help achieve the recommended 45 mg/L management trigger value.

#### **200.12 - Monitoring Wells Siting and Construction Plans**

The current language reads, “The applicant is encouraged to submit a report...”. This should not be an opt-in requisite, it should be a requirement of the Water Quality monitoring plan. In fact, it forms the foundation for an operators monitoring plan. ICL recommends changing the language to, “The applicant is required to submit a report...” This ties directly to Subsection 151.02.

Further, by submitting a report describing the purpose, objectives, location and proposed construction of monitoring wells, the applicant is further protected from misguided or misinterpreted information distribution, and ensures a line of communication between the applicant and IDEQ to highlight potential problem areas prior to investing capacity, funds, time, and materials, and collectively protects and assures the general public that IDEQ continues working to protect the public’s interests and Idaho’s Water Quality.

#### **201.01 - Minimal Hydraulic Head**

We appreciate IDEQ limiting process water hydraulic head to twelve (12) inches or less on the liner systems. However, this sole reference to hydraulic head limits may create confusion in later sections referring to hydraulic head. We recommend IDEQ repeat this standard in appropriate sections of the proposed rule to avoid confusion and misinterpretation.

#### **202.02 - Temporary Containment**

IDEQ does not provide liner specifications for temporary containment facilities in this section. ICL recommends the Department include specifications for a potential single-liner here to avoid potential confusion and plainly state the Department expectations. Any liner system or microdrain liner/leak detection configuration should be functional over the length of time that the liner will be needed to protect water quality standards.

#### **203 - Design Criteria for Containers that Confine Process Water**

This section contains a grammatical error. The language currently states, “a double liner *in* not required.” We believe this should read, “a double liner *is* not required.”

#### **800.01 - Transfer of Permits Allowed**

We recommend adding a fourth (4th) stipulation in this section (d), that indicates that a permit cannot be transferred to a new permittee that is currently or in the recent past in violation of Federal or Idaho State Water Quality standards or is involved in ongoing litigation regarding violations of Federal, Idaho State, or local regulations, or if a new permittee has a previously revoked permit for facilities within the U.S. The addition of this stipulation would work towards limiting liability for the original permittee and IDEQ and helps ensure a responsible party receives the transferred permit.

### **Transparency and Accountability**

Inspection reports and permit compliance records need to be publicly available on the IDL website. Posting this already-existing information on the agency webpages will eliminate the need for Public Records Requests and increase both project transparency and applicant accountability.