

Idaho Department of Environmental Quality

Rules for Ore Processing by
Cyanidation, IDAPA 58.01.13

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Overview

- Recap of Rulemaking
- Proposed 39-118A Statute revision
- Comment summary from June 27 meeting
- Reorganization of Section 200
- Questions for Nevada Regulators
- Next steps



Recap Negotiated Rulemaking

- May 3, 2019 meeting
- May 31, 2019 meeting
- June 27, 2019 meeting
- August 6, 2019 meeting



Recap Negotiated Rulemaking

- Corrections
 - Rule and statute citation title changes
 - new definitions for outstanding resource water and sensitive resource aquifer



Recap Negotiated Rulemaking

- Red Tape Reduction Act
 - Unnecessary/Obsolete provisions
 - Section 007.27 – special resource water definition
 - Section 010 – location of copy of rule
 - Redundant provisions
 - Section 100.03.t.i-x – covered in IDAPA 20.03.02
 - Section 200 – multiple references to plans and specifications signed/stamped by a professional engineer
 - Consistency
 - Tailings impoundments instead of tailings ponds
 - Department instead of Idaho Department of Environmental Quality



Recap Negotiated Rulemaking

- Section 050
 - Inclusion of alternative under conceptual design approval subsections
- Section 100.03
 - Include requirements in section 200 as part of Contents of Application; gaps between section 100.03 and section 200
- Section 100.05
 - Agreement for costs incurred if choose/utilize the process in section 201 for alternative design proposal
- Section 200
 - Introductory paragraph references section 201 for alternative
- Section 200.03
 - Restructured minimum design criteria for clarity
- New section 201
 - Added alternative design criteria for tailings impoundments



Idaho Code 39-118A

- 39-118A(3)(b)

After the effective date of rules promulgated under chapter 15, title 47, Idaho Code, the department shall not issue a permit under subsection (2) of this section unless the cyanidation facility has satisfied ~~submitted~~ the ~~financial assurance requirements~~ permanent closure cost estimate required by of chapter 15, title 47, Idaho Code, relating to ore processing by cyanidation. Financial assurance for the permanent closure plan must be submitted as required by chapter 15, title 47, Idaho Code, before construction of the newly permitted cyanidation facility starts. OR Any permit issued under subsection (2) of this section shall prohibit construction of the cyanidation facility until the permittee submits proof acceptable to the department that financial assurance for the permanent closure of the cyanidation facility has been submitted as required by chapter 15, title 47, Idaho Code OR something similar.



IDAPA 58.01.13.650.01 – Financial Assurance

Financial Assurance Required. The permittee is required to provide financial assurance pursuant to the Idaho ~~Surface Mining~~ Mined Land Reclamation Act, Chapter 15, Title 47, Idaho Code, and the rules promulgated thereunder. **The Department shall not issue a permit under these rules to a cyanidation facility unless the cyanidation facility has satisfied such financial assurance requirements.**



IDAPA 58.01.13.100.03.t – Permanent Closure Plan

Initial proposed revision (June 27):

~~Permanent Closure Plan.~~ The permanent closure plan ~~may be the same as the plan submitted to~~ approved by the Idaho Department of Lands, and evidence that the applicant has satisfied the financial assurance requirements relating to ore processing by cyanidation, pursuant to the Idaho ~~Surface Mining~~ Mined Land Reclamation Act, Chapter 15, Title 47, Idaho Code and the rules promulgated thereunder.

Revision:

~~Permanent Closure Plan.~~ The permanent closure plan may be the same as the plan submitted to ~~approved by~~ the Idaho Department of Lands, ~~and evidence that the applicant has satisfied the financial assurance requirements relating to ore processing by cyanidation,~~ pursuant to the Idaho ~~Surface Mining~~ Mined Land Reclamation Act, Chapter 15, Title 47, Idaho Code and the rules promulgated thereunder.



Comment Summary

- Idaho Conservation League (July 15)
 - Suggested replacing ‘**appropriate**’ with ‘**meets all requirements necessary**’ in the new section of the draft rule (201.03).
 - 201.03. Department Review. In evaluating alternative design proposals, the Department shall consider the WAD cyanide concentration and other materials contained in facilities receiving process water, site hydrogeology, advances in liner technology, alternative designs implemented at other facilities receiving process water, and other site-specific factors in determining if a proposed alternative is **appropriate** to protect water quality and the public health.



Comment Summary

- Idaho Mining Association (July 29)
 - Rather than continue to make minor modifications to the subject rule, IMA proposes to revise the rule in it's entirety to be more aligned with the performance-based approach to the design and construction of cyanidation facilities that is already in place in the State of Nevada.



Potential Reorganization of IDAPA

58.01.13.200

- 200 – General/Universal requirements for water quality protection for all facilities
 - Siting and preparation (200.01)
 - Process water storage sizing (200.02)
 - Minimum Plans and Specifications for Facilities Designed to Contain Process Water (200.03), reference criteria in 201-205 for the type of facility and include liner criteria (NAC445A-438)
 - Buildings, chemical storage, etc. (200.04)
 - Cap and cover (200.05)
 - Plumbing and conveyance (200.06)
 - Operation and maintenance plan (200.07)
 - Water quality monitoring/reporting (200.08)
 - Monitoring well siting/design (200.09)
 - Land application (200.10)
 - Temporary/seasonal closure (200.11)
 - Employee education (200.12)



Potential Reorganization of IDAPA 58.01.13.200

- 200.03 – Minimum Plans and Specifications for Facilities Designed to Contain Process Water (200.03)
 - a. General design criteria. Unless the Department approves an alternative design under section 205, the plans and specifications for any portion of a cyanidation facility that will contain process water must satisfy the design criteria identified in section 201-204 based on the type of facility receiving process water, and the liner criteria in this subsection.



Potential Reorganization of IDAPA

58.01.13.200

- 200.03 – Minimum Plans and Specifications for Facilities Designed to Contain Process Water (200.03)
 - b. Liner design criteria. Criteria from NAC 445A.438.
 - i. When placed on native materials, soil liners must have a minimum thickness of 12 inches and be compacted in lifts which are no more than 6 inches thick. Except when used in tailing impoundments, a soil liner must have a permeability of not more than that exhibited by 12 inches of 1×10^{-7} cm/sec material.
 - ii. Synthetic liners must be rated as having a resistance to the passage of process fluids equal to a coefficient of permeability of 1×10^{-11} cm/sec.
 - iii. The Department shall review for completeness the applicant's evaluation of the following design parameters, where applicable, for a liner:
 - (a) The type of foundation, slope and stability;
 - (b) The over liner protection and provisions for hydraulic relief;
 - (c) The load and means of applying load;
 - (d) The compatibility of a liner with process solutions;
 - (e) The complexity of the leak detection and recovery systems;
 - (f) The depth from the surface to all groundwater; and
 - (g) The liner's ability to remain functionally competent until permanent closure has been completed.



Potential Reorganization of IDAPA

58.01.13.200

- 201 – Design for Leach pads (200.03 and NAC445A-434)

01. Process fluids must exert only minimal hydraulic head on the liner.

02. Containment of process fluids must consist of an engineered liner system which provides containment equal to or greater than that provided by a synthetic liner placed on top of a prepared subbase of 12 inches of native, imported or amended soil, which has a maximum recompacted in place coefficient of permeability:

a. Of 1×10^{-6} cm/sec; or

b. Of 1×10^{-5} cm/sec when combined with a system for the detection of leaks which must be located at least beneath those portions of the liner which have the greater potential for leakage. The potential for leakage must be determined by:

i. The extent of the hydraulic head exerted on a portion of the liner; and

ii. The period of time a portion of the liner is exposed to process fluids.

03. If leach pads or other nonimpounding surfaces are located above areas where groundwater is considered near the surface, the Department may require a liner system with a higher level of engineered containment.

04. When a material or system which provides hydraulic relief is installed beneath a single liner, including, but not limited to, sand, french drains and geotextiles, regardless of the intent of its design, it must function as a leak detection system and include a means for recovering process fluids.

05. Depending on the methods and materials used for their construction, the Department may require all open channels which routinely transport process fluids to be traced by a leak detection system.



Potential Reorganization of IDAPA

58.01.13.200

- 202 – Design for Process ponds (200.03 and NAC445A-435)

01. All ponds which are intended to contain process fluids must have a primary synthetic liner and a secondary liner. Between the liners there must be a material which has the ability to rapidly transport any fluids entering it to a collection point which:

- a. Is accessible; and
- b. Has a system for recovering those fluids.

02. When the material between the liners is unable to collect, transport and remove all liquids at a rate that will prevent hydraulic head transference from the primary liner to the secondary liner, the pond must be shut down.

03. Ponds which are primarily designed to contain excess quantities of process fluids that result from storm events for limited periods may be constructed with a single liner if approved by the Department.

04. Ponds containing nonprocess fluids may be required to be lined depending on their potential to degrade waters of the State.



Potential Reorganization of IDAPA

58.01.13.200

- 203 – Design for Vats, tanks and other containers (NAC445A-436)

Vats, tanks and other containers which confine process fluids and can be inspected for leaks visually do not require double liners if an area for secondary containment equal to 110 percent of the largest container is provided. Vats, tanks or other containers that are partially buried and cannot be visually inspected must have a system to detect leaks.



Potential Reorganization of IDAPA

58.01.13.200

- 204 – Design for Tailings impoundments
(NAC445A-437)

01. A tailings impoundment must utilize a system of containment equivalent to:
 - a. Twelve inches of recompacted native, imported, or amended soils which have an in place recompacted coefficient of permeability of no more than 1×10^{-6} cm/sec; or
 - b. Competent bedrock or other geologic formations underlying the site which has been demonstrated to provide a degree of containment equivalent to paragraph (a).
02. An alternate level of containment may be required by the Department for all of the tailings impoundment or for a portion thereof after considering the following factors:
 - a. The anticipated characteristics of the material to be deposited;
 - b. The characteristics of the soil and geology of the site;
 - c. The degree to which the hydraulic head on the impoundment liner is minimized;
 - d. The extent and methods used for recycling or detoxifying fluids;
 - e. Pond area and volume;
 - f. The depth from the surface to all groundwater; and
 - g. The methods employed in depositing the impounded material.



Potential Reorganization of IDAPA 58.01.13.200

- 205 – Design for Alternative

Insert proposed new section 201 to be renumbered to 205 and make applicable to all facilities in 201-204, not just tailings impoundments.



Questions for Nevada Regulators

1. What pre-application discussion and interaction occurs between Nevada regulators and the mining company regarding a permit for processing operations?



Next Steps

- Comments due August 13, 2019
- Next meeting: Sept 17, 2019; 9am-12:30pm (MDT)
- Schedule
 - Continue negotiated rulemaking fall 2019 and spring 2020
 - Complete negotiated rulemaking by end of June 2020
 - Mid-July 2020 proposed rule to DFM
 - Publish in September 2020 Administrative Bulletin
 - Before Board of Environmental Quality in mid-November 2020
 - Proposed rule to 2021 legislature



Thank you

