

**Department of Environmental Quality  
Rules for Ore Processing by Cyanidation  
IDAPA 58.01.13**

**Docket No. 58-0113-1901**

**Negotiated Rulemaking Summary**  
**[Idaho Code § 67-5220\(3\)\(f\)](#)**

This rulemaking was initiated in response to Idaho Mining Association's request for rulemaking.

On April 23, 2019, DEQ posted notice of the negotiated rulemaking on its website. On May 1, 2019, the notice of negotiated rulemaking was published in the Idaho Administrative Bulletin. Meetings were held on May 3 and 31, 2019. On June 26, 2019, a preliminary draft rule was posted on DEQ's website. Eight additional meetings were held between June 2019 and June 2020. Stakeholders and members of the public participated by signing up for email notifications, attending the meetings, and submitting comments. Key information was posted on DEQ's website and distributed to persons who participated in the negotiated rulemaking.

All comments received during the negotiated rulemaking process were considered by DEQ when making decisions regarding the development of the rule. Certain issues remain unresolved and are summarized in the attached response to comments document. At the conclusion of the negotiated rulemaking process, DEQ submitted the draft rule to the Division of Financial Management to review for compliance with [Executive Order No. 2020-01, Zero-Based Regulation](#). Based on that review, DEQ has formatted the draft for publication as a proposed rule. DEQ is now seeking public comment on the proposed rule. The negotiated rulemaking record, which includes the negotiated rule drafts, documents distributed during the negotiated rulemaking process, and the negotiated rulemaking summary, is available at [deg.idaho.gov/58-0113-1901](http://deg.idaho.gov/58-0113-1901).

**Department of Environmental Quality's  
Response to Comments/Negotiated Rulemaking Summary  
Docket No. 58-0113-1901**

1. Idaho Conservation League
2. Idaho Mining Association
3. Idaho Rivers United

#	Commenter	Rule Section/Subject Matter	Comment Summary	Response
1	2	100.03.r Engineering plans and specifications	It is unnecessary to comment on the construction approval requirements as they are redundant with subsequent sections of the rule.	<p>Rulemaking participants previously requested section 100.03.r include text allowing for submittal of preliminary designs for future phases of the facility as part of the permit application. The requested text was incorporated into the rule. With the addition of that requested text, it is also necessary to clearly specify the requirements that accompany this approach including the requirement for department review and approval of final plans and specifications and the timing for submittal of these materials. Although the construction approval requirement is similar to subsequent sections of the rule, the subsequent sections of the rule do not include the concept allowing for submittal of preliminary designs as part of the permit application. The following text was added to the proposed rule to reference the subsequent section of the rule that includes the review and approval requirements prior to construction.</p> <p><i>Preliminary designs for future phases of the cyanidation facility may be submitted as part of the permit application, provided that, pursuant to subsection 500.02, the Department review and approval of final plans and specifications is required before construction of those phases may begin.</i></p>

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2	2	100.04 Cost recovery agreement	<p>Recommend revising the last sentence in this section as follows:</p> <p><i>The cost recovery agreement may provide for actual costs incurred by the Department for any other service rendered pursuant to these rules or a permit so long as agreed to in advance by the applicant.</i></p>	The commenter's recommended text clarifies but does not change provisions already included as part of the rule. This text was incorporated without revision.
3	3	200.05 Freeboard	Require increased minimum freeboard requirements to accommodate wave run up.	Section 200.05 of the proposed rule requires a minimum of 2 feet of freeboard during storage or conveyance of the 100 year storm plus maximum expected normal operating levels. The rule requirements will result in greater than 2 feet of freeboard under all but the most extreme conditions. The Idaho Department of Water Resources (IDWR) regulates design and construction of large scale dams and mine tailing impoundments where this concern may be applicable. Consideration of wave run up is included as part of the IDWR regulations. IDWR may regulate any water storage embankment for public safety if the potential failure consequences would result in significant damage to downstream life or property.

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4	3	200.06.b.ii Compacted soil layer	Require random sampling of the compacted soil layer during performance of compaction testing	Section 100.03.r requires engineering plans and specifications signed by an Idaho licensed engineer that include quality assurance/quality control procedures. The quality assurance/quality control plan must specify the sampling requirements to ensure compaction meets the requirements of 200.06.b.ii. The quality assurance/quality control plan will specify the sampling necessary to confirm that the requirements included as part of the rule have been attained for numerous aspects of the facility during construction. Although random sampling may be one element considered to ensure requirements are met, there are other site specific factors that will be considered by the Department prior to approval of the quality assurance/quality control plan. It is not necessary to include this specific detail related to sampling within the rule when the review and approval of the proposed quality assurance/quality control plan will be guided by site specific circumstances and standard engineering principles and practices.
5	3	200.06.b.iii Alternative to compacted soil layer	Include additional criteria to allow for a comprehensive, site-specific, and performance-based assessment of an equivalent layer proposed for replacement of the soil layer required by 200.06.b.ii	The requirements in section 200.06 of the proposed rule include similar criteria to those recommended by the commenter. The criteria recommended by the commenter are copied directly from Nevada Administrative Code and are intended to address tailings impoundments. Section 200.06 includes criteria for all facilities that contain process water. Therefore, some of the criteria proposed by the commenter are not applicable to the other types of facilities included in section 200.06. All evaluation criteria recommended by the commenter are included as part of the tailings impoundment enhanced containment evaluation criteria in section 204.02 of the proposed rule.
6	3	200.06.b.iv Geomembrane liner	Include seepage test requirements in the rule.	Section 100.03.r requires engineering plans and specifications signed by an Idaho licensed engineer that include quality assurance/quality control procedures. Section 200.06.a.vii requires development and execution of a quality assurance/quality control plan for the construction of

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				<p>containment systems which would also include liner systems and welded seams. Seepage testing may be employed as part of a quality assurance/quality control plan, but is not mandated in the rule.</p> <p>The proposed rule includes prescriptive requirements for construction of containment systems that far exceed the performance based requirements specified in the Wastewater Rule (58.01.16). Seepage testing is necessary as part of the Wastewater Rule to verify the performance criteria are met. The prescriptive requirements for containment systems included in the cyanidation rule are proven designs that minimize seepage rates.</p> <p>Several provisions included in the rule specifically require monitoring of containment systems. Section 200.10.a requires an overall plan that includes techniques for evaluating the integrity and performance of all containment systems. Section 200.11 requires site specific monitoring and reporting that are dependent on location, design and operation of the cyanidation facilities included in the overall operating plan. In addition, ponds, leach pads, and tailings impoundments require monitoring points that provide for early detection of discharges of pollutants.</p> <p>Many provisions are included in the rule to prevent seepage from entering the environment. Section 202 of the proposed rule, requires process water ponds to include a double geomembrane liner with leak detection and leak collection system between the two liners. This design includes a lower geomembrane liner that will collect any seepage through the upper geomembrane liner. Seepage collected by the lower liner flows to collection points for treatment or containment. Minimal seepage will occur through the lower geomembrane liner which is underlain by two feet compact soil with a hydraulic</p>

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				<p>conductivity less than or equal to <math>10^{-6}</math> cm/sec because minimal hydraulic head will be exerted upon this liner.</p> <p>Section 201 of the proposed rule, requires leach pads to limit hydraulic head pressure on the liner system to 12 inches or less. Leach pads must be designed to promote horizontal flow not to impound water. Because leach pads are not design to impound water seepage testing is not a feasible approach to performing quality assurance/quality control. The inclusion of limitations on hydraulic head, a 80 milli-inch geosynthetic liner underlain by a two foot compact soil layer with a hydraulic conductivity less than or equal to <math>10^{-6}</math> cm/sec provides for a robust liner system that will result in minimal seepage.</p> <p>Section 204 of the proposed rule includes requirements for tailings impoundments which are designed as the final depository for processed ore. Tailings impoundments are required to include a 60 milli-inch geosynthetic liner underlain by a two feet of compact soil with a hydraulic conductivity less than or equal to <math>10^{-6}</math> cm/sec. The composite liner works in conjunction with the tailings which facilitate intimate contact between the compacted soil layer and the geomembrane liner. In addition, recent peer reviewed journal articles provide experimental and field results which indicate tailings reduce or mitigate seepage through the liner by sealing any holes that may be present.</p>
7	3	200.11 Monitoring	Include additional monitoring specific to process components by incorporating Nevada regulations NAC 445A.442.	Section 200.11 requires submittal of a water quality monitoring plan. The proposed rule includes site specific monitoring and reporting requirements that are dependent on location, design and operation of the cyanidation facilities included in the overall operating plan. The proposed rule already includes requirements addressing each of the elements contained in the Nevada regulation suggested for incorporation.

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8	1,3	204.01.b Minimizing hydraulic head on liners	Hydraulic head limits for tailing impoundment liners should be retained in the rule.	<p>The inclusion of a hydraulic head limit for a tailings impoundment liner will require the installation of a drainage layer above the liner and below the tailings which increases the risk of liner damage and increased leakage from the facility. The potential risk of liner damage and increased seepage associated with the over liner drainage layer provides strong support for removing the hydraulic head maximum standard. Recent peer reviewed journal articles provide experimental and field results that suggests seepage rates through a hole in a lined tailings impoundment without a drainage layer and head up to 500 feet are comparable to those seen for lined facilities where head is limited to 1 foot. This seepage comparison is for the case of a single hole. If multiple holes are created during placement of the drainage layer then seepage from the facility that includes a drainage layer may exceed that of a facility without the drainage layer. Section 204.01.b was revised to require the applicant to develop quantifiable metrics for limiting hydraulic head on the liner. Section 204.02.c provides the Department the ability to require an enhanced level of containment if hydraulic head is not sufficiently controlled.</p>

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9	2	204.01.b – d Minimizing hydraulic head on liners	<p>The following text was recommended to replace existing text:</p> <p><i>b. A system designed to limit hydraulic head over the geomembrane liner, where and when practical, while preserving the integrity and long-term performance of the liner system.</i></p> <p><i>c. A system designed to reduce excess pore pressure within the tailings, concurrent to or following deposition, while preserving the integrity and long-term performance of the liner system;</i></p> <p><i>d. A plan for managing the depth, area, and volume of process water occurring above the tailings surface and in direct contact with liner, including thresholds and contingency measures to manage excess accumulation of free process water in the facility; and</i></p>	<p>The following text is included in section 204.01 of the proposed rule:</p> <p><i>b. A system to limit hydraulic head over the geomembrane liner that preserves the integrity and long-term performance of the liner system and includes the following:</i></p> <p><i>i. A system to reduce excess pore pressure within the tailings; and</i></p> <p><i>ii. A plan for managing the depth, area, and volume of process water occurring above the tailings surface and in direct contact with the liner, including thresholds and contingency measures to manage excess accumulation of process water in the facility.</i></p> <p>The section was reorganized to better follow the organization of the rule, and a modified version of the commenter’s recommended language was incorporated. In 204.01.b and 204.01.b.i “<i>designed</i>” was not included in the rule text due to the subjective nature of its use. Similarly in 204.01.b the text “<i>where and when practical</i>” was excluded from the rule language due to its subjectivity. In 204.01.b.i a system to reduce excess pore pressure within the tailings is required. If the system will only be necessary or applicable at specific times this can be described in the application. The requirement for preserving the integrity and long-term performance of the liner system is captured in 204.01.b and does not need to be repeated. The text included in 204.01.b.ii is unchanged from the text suggested by the commenter.</p>

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10	3	204.02 Enhanced containment for tailings impoundments	Include the geomorphic and topographic characteristics of the site as additional factors that will be considered when determining the need for enhanced containment criteria.	The geomorphic and topographic characteristics of the site are a significant consideration of facility siting and design. However, the critical geomorphic and topographic considerations for determining if enhanced containment is necessary are already included among the factors being considered. These include soils and geology of the site, depth to groundwater, and proximity to surface water. Consideration of many other factors related to the geomorphic and topographic characteristics of the site are included within the rule but are used to determine if the facility should be sited in the proposed location and if the proposed design is suitable for the geomorphic and topographic characteristics of the site. The enhanced containment criteria are intended to evaluate facilities that achieve the minimum design and siting criteria.
11	2	204.02.c Enhanced containment criteria	The following text was recommended to replace existing text: <i>The degree to which the measures proposed under 204.01.b. through 204.01.d. are expected to limit hydraulic head, reduce tailings excess pore pressure, preserve liner system integrity and long-term performance, and control free process water area and volume;</i>	The proposed rule text is as follows:  <i>The methods employed and degree to which the hydraulic head on the liner is minimized;</i>  The additional text recommended by the commenter is unnecessary to convey the nature of the Department's evaluation. The Department's evaluation will consider the methods used and the degree to which hydraulic head is controlled both within the tailings and the free process water. The area and volume of process water is included as a separate evaluation factor under 204.02.e.
12	2	204.02.e Enhanced containment criteria	Recommended deleting this text and combining with recommended text in 204.02.c	This change was not necessary following the Department's revisions to Subsection 204.02.c.

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13	3	204.03 Tailings treatment	Include specific standards for water that can be discharged during operation or upon closing the facility. Include NAC 445A.430 Stabilization of spent ore and NAC 445A.431 Stabilization of tailings from Nevada Administrative Code.	The proposed rule does not authorize any discharge to or degradation of waters of the state; see sections 007.02.b and 100.03.t. Specific water quality standards and the requirements for discharges to waters of the state are included as part of IDAPA 58.01.02, "Water Quality Standards", IDAPA 58.012.11, "Ground Water Quality Rule", and IDAPA 58.01.25, "Rules Regulating the Idaho Pollutant Discharge Elimination System Program. The concepts presented in NAC 445A.430 and NAC 445A.431 are included in the proposed rule under operation and permanent closure requirements; see sections 100.03.s, 100.03.t, 200.10, 501 and 502.

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14	2	500 Permit conditions	<p>IMA believes that construction of a modern cyanidation facility, which may include a tailings facility, will likely take a number of years to complete before operation. It is simply not feasible for an applicant to submit final plans for all components of a facility prior to commencement of construction on individual components. IDEQ can retain its right to not allow operation of the facility under the permit until all final plans and specifications for all components of the cyanidation facility have been approved and a construction report has been submitted and approved. Thus, we would propose a new subsection to address this concept as follows:</p> <p><i>500.02. Construction. Construction of individual components of a cyanidation facility may commence upon approval by the Department of the final plans and specifications for that component. Provided that operation of the cyanidation facility will not be allowed until a Final Construction Report is approved by the Department in accordance with subsection 03.</i></p>	<p>The first sentence of the text recommended by the commenter was incorporated into section 500.02 of the proposed rule. This text clarifies but does not change provisions already included as part of the rule. The second sentence recommended by the commenter was not included as part of the proposed rule. The concept conveyed by the recommended text is already included in the next section, 500.03.</p>

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15	2	500.03 and Deleted text in section 100.03.r.xiii Permit conditions – record plans and specifications	<p>Manufacturers' specifications and warranties for much of the ore processing equipment and materials would not typically be available until near the end of construction, not for the permit application. Recommend that IDEQ clarify and reduce the scope of the requirement for submittal of manufacturer's specifications and warranties. Recommend moving most of the manufacturer's warranty submittals to the as-built (Final Construction Report) submittal (500.03), while retaining early review of critical liner components. The following text was recommended:</p> <p><i>100.03.r.xiii. Manufacturers' specifications and warranties for all manufactured components of process pond, leach pad, or tailings impoundment liner systems.</i></p> <p><i>500.03. Manufacturers' specifications and warranties for all major equipment and liner or containment components that will or may in the normal course of operations come in contact with process water.</i></p>	<p>The commenter's recommended text was not incorporated into the proposed rule. Revised text addressing the commenter's concerns was included in section 200.03 as follows:</p> <p><b>200.03. Manufacturer's Specifications.</b></p> <p><i>Manufacturer's specifications for materials and equipment that is necessary to meet the requirements of section 100.03.r and sections 200 through 205 for containment of process water shall be submitted to the Department with the plans and specifications required in Subsection 200.02 before construction may begin.</i></p> <p>With this revision, the rule no longer requires submittal of manufacturer's warranties for equipment and materials. By moving the requirement for submittal of manufacturer's specifications to section 200, the manufacturer's specifications are no longer strictly required as part of the application. The manufacturer's specifications are required at the time the final plans and specifications are submitted to the department for review and approval which must occur prior to construction. The Departments review must consider whether the manufactures specifications meet the requirements of the rule and the criteria proposed by the applicant to ensure public safety and environmental protection prior to construction, not after. The revised text narrows the scope of manufacturer's specification submittals to only materials and equipment that are necessary to meet rule requirements for containment of process water.</p>
16	3	501.02 Completion of Permanent Closure	IRU supports the current draft rule that requires the permittee to submit a permanent closure report to the Department for review and approval.	Thank you for your comment.

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17	2	501 and 502 Completion of permanent closure and decision to approve or disapprove of a permanent closure report	<p>While we disagree that IDEQ review and approval of a permanent closure report is required or appropriate as permit condition, we believe there needs to be coordination and cooperation between IDL and IDEQ. We would recommend striking the last two sentences in Section 502.02 and replace with the following language:</p> <p><i>The Department and the Idaho Department of Lands will cooperate in evaluating and approving a permanent closure report.</i></p>	<p>Consistent with the coordination requirement in Idaho Code § 47-1506(h), the following text was incorporated into the proposed rule: <i>The Department will coordinate the evaluation of the permanent closure report with the Idaho Department of Lands.</i></p> <p>With respect to the commenter’s request to strike the last two sentences of section 502.02 in the draft rule, the first of those sentences was deleted and the second was revised as follows:</p> <p><i>The Director’s determination will be based on applicable statutes or rules administered by the Department.</i></p> <p>This revision is an expression of the Department’s authority to permit closure of cyanidation facilities under Idaho Code § 39-118A(2). Section 500.10 of the existing rule contains a similar expression of that authority: “The Department may evaluate permanent closure based on different performance standards than those used by the Idaho Department of Lands.” The Department agrees with the commenter to the extent that the existing language in section 500.10 is not necessary as a permit condition in the proposed rule. However, the Department finds the revised language above is necessary in section 502 to clarify that cyanidation facility closure will be evaluated based on the Department’s legal authorities.</p>