November 13, 2020

Sent via email to: paula.wilson@deq.idaho.gov; Michael.McCurdy@deq.idaho.gov

RULES FOR THE DESIGN AND CONSTRUCTION OF PHOSPHOGYPSUM STACKS

Mr. Michael McCurdy
Administrator
Waste Management and Remediation
Idaho Department of Environmental Quality
1410 N. Hilton, Boise, ID 83706

Dear Mr. McCurdy:

The Department of Environmental Quality (Department) is conducting a negotiated rulemaking to implement House Bill No. 367, which was passed by the State of Idaho Legislature in the 2020 Session and signed into law by Governor Little. House Bill No. 367 was written to “fill a gap” in Idaho’s waste management regulations by establishing design and construction standards that are protective of Idaho’s environment for phosphogypsum stacks.

The J.R. Simplot Company (Simplot), as a member of the Idaho Mining Association, was very active in the creation of House Bill 367. Simplot has operated a phosphoric acid and/or phosphate fertilizer manufacturing facility just west of Pocatello since 1944. Thus, Simplot has a direct interest in this rulemaking to establish “Rules for the Design and Construction of Phosphogypsum Stacks.”

As a part of the rulemaking process, the Department recently conducted a negotiated rulemaking meeting and distributed Draft No. 2 for comment. As stated during the rulemaking meeting, Simplot believes that Draft No. 2 contains a number of requirements that exceed the scope of the rulemaking established by House Bill No. 367. Substantive changes are needed for the rule to conform to the statute. Once these changes are made, then details on the actual standards themselves can be worked on to obtain the intent of the legislation. The majority of the attached comments are focused on aspects in Draft No. 2 that are inconsistent with or outside the scope of House Bill No. 367.
Please contact me at (208) 780-7365 if you have any questions about these comments.

Sincerely,

[Signature]

Alan L. Prouty
Vice President, Environmental & Regulatory Affairs

Attachment

Cc:

Alex LaBeau, Idaho Association of Commerce and Industry
Jess Bryne, Idaho Department of Environmental Quality
Paula Wilson, Idaho Department of Environmental Quality
Ben Davenport, Idaho Mining Association
Monty Johnson, J.R. Simplot Company
Thomas Perry, J.R. Simplot Company
Sam Eaton, State of Idaho, Governor’s Office
These comments are from the review of Draft Number 2 of the Rules for the Design and Construction of Phosphogypsum Stacks. Simplot previously provided on April 28, 2020 extensive comments on Draft Number 1; those comments included suggested rule modification language. A second comment letter was submitted on June 9, 2020 to address several specific topics that the Department requested comments on. Draft Number 2 has a number of changes from Draft Number 1; these comments by the J.R. Simplot Company (Simplot) discuss some of these changes and aspects of the Draft Rule that were discussed in our April 28 comments.

At this time, Simplot is not providing comments on Section 120 (site preparation), the technical details on liner and leachate control systems (Section 140), and Section 150 (construction of new perimeter dikes). Instead these comments are focused on aspects in Draft No. 2 that are inconsistent with or outside the scope of the origination of this rulemaking: House Bill 367.

000. Legal Authority

Comment No. 1: Proposed language
No comments on proposed new language.

001. Title, Scope and Applicability

Comment No. 2: Deleted language

02. Scope
Draft Number 2 deletes language explaining the purpose, applicability and limitation of these rules; as written the rule references a portion of the applicable statute. Simplot understands that this change was made to conform to an Executive Order regarding regulations. However, removing this language hinders understanding of the regulation and adds complexity, as now it is necessary to review actual statute language to fully understand the rule.

Recommendation: that the deleted text be re-inserted.

Comment No. 3: Use or reuse of phosphogypsum

02.b. Use or reuse of phosphogypsum
The Department at the April 16, 2020 negotiated rulemaking meeting proposed a definition of “stored” as it relates to what is “stored” within the definition of a phosphogypsum stack or phosphogypsum stack system. The May 28, 2020 comments by Simplot pointed out that the proposed definition was: (1) inconsistent with the statute and (2) beyond the scope of this rulemaking.

The Department has removed the definition of stored and now included the following language as part of the scope:
"b. Nothing in these rules will be construed to allow the use or reuse of phosphogypsum not otherwise allowed by law."

Simplot does not believe that such language is needed. The statute does not address or authorize reuse or the use of phosphogypsum. The statute specifically:

“establishes minimum design and construction requirements to ensure that phosphogypsum stack system impoundments meet critical safety standards and do not cause unplanned releases into the environment.”

Any potential use or reuse of phosphogypsum is already governed by existing Department rules. Key regulatory documents regarding phosphogypsum include:

- Historical information on phosphogypsum being a solid waste excluded from identification as a hazardous waste is discussed in a 1989 Federal Register notice.¹
- The potential beneficial use of phosphogypsum is discussed in a 1999 Federal Register notice of final rule.²
- 40 CFR 61 (which has been adopted by the State of Idaho) has requirements for phosphogypsum use. Specifically in § 61.202, there is the following standard:

  “…Phosphogypsum may be removed from a phosphogypsum stack only as expressly provided by this subpart.” [Emphasis added.]

This is the governing requirement by EPA and by the Department for removing phosphogypsum from a phosphogypsum stack.

As stated earlier, House Bill No. 367 made no changes and does not reference in any way the use or reuse of phosphogypsum; there is no need for the language proposed by the Department as to the use or reuse of phosphogypsum.

Recommendation: Removal of 001.02.b.

010. Definitions

Comment No. 4: Deleted language

Draft Number 2 deletes a number of key definitions; as written the rule references a portion of the applicable statute. Simplot understands that this change was made to conform to an Executive Order intended to minimize the length and size of regulations. However, removing this language hinders understanding of the

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regulation and adds complexity, as now it is necessary to review actual statute language to understand the definitions.

Recommendation: that the deleted text be re-inserted.

Comment No. 5: Definition of Intermediate Liner
The proposed definition of intermediate liner includes the words “a composite liner system...”. As described in Simplot’s prior comments, “composite” is not needed. During the negotiated rulemaking meeting on October 30, Department staff requested more information from the industry on intermediate liners. Simplot did provide in the June 9, 2020 comments further information on intermediate liners.

An intermediate liner is typically used for two situations for existing phosphogypsum stacks:

- To place a synthetic liner in stack in which the stack was originally constructed without a liner or where there is a concern over degradation of the original liner.
- To place a synthetic liner in an existing stack to facilitate recovery of the process water within the phosphogypsum stack so as to decrease the process water/leachate that will be generated during the closure process.

The Department has proposed that an “intermediate liner” be a “composite liner.” Such a requirement is not needed as the installation of an intermediate liner will take place on top of existing phosphogypsum.

Recommendation: Change definition to: Intermediate liner: A synthetic liner placed on top of an existing phosphogypsum stack.

Comment No. 6: Vertical Expansion
Proposed language addresses comments provided previously about this definition.

100. Design and Construction Plan Submittal
Comment No. 7: Design and Construction Plan Components – Siting Criteria
The requirement to address siting criteria needs to be deleted as the statute (House Bill No. 367) does not include siting criteria. The statute authorizes the Board of Environmental Quality to:

“initiate negotiated rulemaking consistent with the sections 39-176A through 39-176F, Idaho Code.”

These sections of the Idaho Code include the following:
• Scope and applicability
• Definitions
• Board powers
• Construction requirements
• Plan approval or rejection

Siting is not included in these sections. In contrast, the Idaho Solid Waste Facilities Act specifically discusses siting. In fact, the entirety of the Act is all about siting. Section 39-7408C lists out the information to be included in the application for siting to the Department including:

(a) The name and residence of the applicant;
(b) The location of the proposed commercial solid waste facility;
(c) Engineering, hydrogeologic and air quality information to indicate compliance with technical criteria as may be provided by law;
(d) A description of the types of wastes proposed to be handled at the facility;
(e) Information showing that harm to scenic, public health, historic, cultural or recreational values is not substantial or can be mitigated;
(f) Information showing that the risk and impact of accidents during transportation of solid waste is not substantial or can be mitigated;
(g) Information showing that the impact on local government is not adverse regarding health, safety, cost and consistency with local planning and existing development or can be mitigated;

However, the new section of statute created by House Bill 367 has no such language or requirements. As the Department knows, phosphogypsum stacks have already been established in Idaho. Any expansion of these stack systems or entirely new stacks at these existing facilities will be sited at these existing facilities. Thus, the “siting” has already occurred.

Recommendation: Delete 100.01.a requiring siting criteria to be addressed in the design and construction plan.

Comment No. 8: Design and Construction Plan Components – Siting Criteria
The requirement for including seepage test procedures for lined ponds has been deleted in Draft Number 2. Simplot supports this deletion; this deletion is consistent with a prior Department rulemakings in which it was decided that such seepage testing would not be applicable to mining and mineral processing facilities.³ And as pointed out, there are technical issues with using the seepage

³ See IDAPA 58.01.16.493.01.a and Simplot’s April 28, 2020 comments.
test for large impoundments. In particular, for a phosphogypsum stack itself, which includes drains to the decant system, such a test is not feasible to conduct.

110. Siting Criteria

**Comment No. 9:** Siting Criteria
The section needs to be deleted. As discussed in Comment No. 7, House Bill No. 367 did not give the Board of Environmental Quality the authority to establish siting criteria.

140. Liner and Leachate Control Systems.

**Comment No. 10:**
140.01 General Liner Requirements
Simplot supports the change in the language in 140.01.

**Comment No. 11:**
140.02 Synthetic and Non-Synthetic Components
Language is needed in 140.02.a and 140.02.b to make it clear that an approved alternative is acceptable. Such language is consistent with House Bill No. 367.4

**Recommendation:** add the following language

140.02 must provide for all of the following or an approved alternative of equivalent conductivity and durability.

140.02.b will consist of either of the following or an approved alternative of equivalent conductivity and durability

**Comment No. 12:**
140.02.d Intermediate Liner
The purposes of an intermediate liner were discussed in Simplot’s June 9, 2020 comments, during the October 30, 2020 negotiated rulemaking and in Comment No. 5. The requirements in 140.02.d are not needed. As described, for the existing phosphogypsum stacks in Idaho, the addition of an intermediate liner would most likely be for the purposes of draining the process water in the lower portion of a phosphogypsum stack. Thus, this is really a “process water management” tool. It is not clear what the purpose or objective that the Department is trying to achieve with the language in 140.02.d.

**Recommendation:** delete 140.02.d.

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4 See 39-176E.(2)(a).
Comment No. 13:

140.06 Liquid Containment and Conveyance Systems
The Department has made a number of changes to Subsection 06, Liquid Containment and Conveyance Systems, which has included adding new requirements for certain types of ponds that were not in Draft Number 1. Table 1 lists the different types of impoundments and applicable requirements described in the House Bill No. 367 and what is in Draft No. 2.

Table 1
Comparison of Draft No. 2 with House Bill No. 367 for Impoundments

<table>
<thead>
<tr>
<th>Impoundment Type</th>
<th>House Bill No. 367</th>
<th>Draft No. 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphogypsum stack</td>
<td>Composite liner or an approved alternative.</td>
<td>Composite liner or an approved alternative. [140.01]</td>
</tr>
<tr>
<td>Collection pond/decant pond</td>
<td>Composite liner or an approved alternative</td>
<td>Composite liner or an approved alternative. [140.06.a]</td>
</tr>
<tr>
<td>Auxiliary holding ponds</td>
<td>Synthetic liner or an approved alternative.</td>
<td>Synthetic liner or an approved alternative. [140.06.b]</td>
</tr>
<tr>
<td>Process wastewater conveyances</td>
<td>Shall be constructed with a liner or pipe.</td>
<td>Must be constructed with a liner or pipe. Pump and piping systems associated with the transport of phosphogypsum or process wastewater that cross surface waters of the state must be double contained with chemically compatible materials in a manner that assures that all materials under pumped flow are contained within a lined system in the event of a leak or piping system failure. [140.06.c]</td>
</tr>
<tr>
<td>Cooling ponds</td>
<td>Not addressed.</td>
<td>Composite liner or an approved alternative.[140.06.a]</td>
</tr>
<tr>
<td>Surge ponds</td>
<td>Not addressed</td>
<td>Composite liner or an approved alternative. [140.06.a]</td>
</tr>
</tbody>
</table>

As Table 1 clearly shows, the Department has added new substantive requirements for that were not in House Bill No. 367.

Recommendation: discussion occur within the negotiated rulemaking as to:
(1) does the rule need to address liner requirements for cooling ponds and surge ponds?
(2) if the answer to question 1, is yes, what are the appropriate liner requirements?
(3) what are the appropriate requirements are for process wastewaters that cross waters of the state?

**Recommendation**: Subsection 06 be modified to be consistent with HB No. 367:

a. Collection (decant ponds) must be constructed with a composite liner as required by Subsections 140.01 and 140.02, or a Department approved alternative of equivalent hydraulic conductivity and durability.

b. Auxiliary holding ponds must be constructed with a synthetic liner or an approved alternative of equivalent hydraulic conductivity and durability.

c. Conveyances associated with phosphogypsum transport, cooling water, and return of process wastewater must be constructed with a liner or pipe.

d. For the installation of synthetic liner, the requirements in 140.03 must be met.

e. For the installation of a non-synthetic liner, the requirements in 140.04 must be met.

160. Groundwater Monitoring Plan
The Department has made a number of changes in this section as compared to Draft No.1; a number of the changes are re-writing the same requirements and moving them to a different place in the subsection. Draft No. 2 though does contain additional requirements not in Draft No. 1.

Simplot’s April 28, 2020 comments noted that several components of the groundwater monitoring plan in Draft No. 1 covered operation related or corrective action activities, none of which are relevant to a groundwater monitoring plan. Furthermore, the level of detail and prescriptive requirements in Draft No. 2 is not appropriate for a regulation. Specific comments are detailed below:

**Comment No. 14**:  
160.02.a Groundwater monitoring plan components  
This paragraph contains a requirement for monitoring interconnected surface waters. This section is about groundwater monitoring; House Bill No. 367 specifies the submittal of a groundwater monitoring plan. Monitoring surface water is not groundwater monitoring.

**Recommendation**: Modification of the last sentence to read: The monitoring plan must be designed to detect statistically significant degradation of the underlying aquifer(s), and/or interconnected surface water from the operation of the
phosphogypsum stack(s).—[NOTE in Comment No. 22 a proposed re-write of Section 160 is provided.]

Comment No. 15:
160.02.c Groundwater monitoring plan components
This paragraph contains references to “upset conditions” and “non-compliance.”

- What type of “upset condition” is this a reference to?
- What is meant by “non-compliance” – not meeting groundwater standards?

IDAPA 58.01.11 (Ground Water Quality Rule) lists groundwater standards, provides rules as to the degradation of groundwater including measures taken in response to degradation. If a groundwater quality standard is exceeded, then the appropriate regulatory requirements are found in 58.01.11 and should be referred to.

Recommendation: re-write paragraph c. [NOTE in Comment No. 22 a proposed re-write of Section 160 is provided.]

Comment No. 16:
160.2.d Groundwater monitoring plan components
This paragraph discusses including in the groundwater monitoring plan “compliance criteria” in accordance with the Ground Water Quality Rule and Water Quality Standards. There are multiple problems with this paragraph:

- The Department is confusing “compliance” with “standards”. The Rules cited contain groundwater standards and surface water quality standards. And in those rules, there are descriptions of how the standards are applied, exceptions to those standards, etc. The intent of House Bill No. 367 is to establish in Idaho law design standards so as to protect Idaho’s environmental resources (such as groundwater) when a phosphogypsum stack is built. However, the language in this paragraph needs correction in regards to the use of “compliance” with groundwater standards.
- The reference to surface water standards needs to be deleted. This is a groundwater monitoring plan. If a phosphogypsum stack has an IPDES permit, such surface water monitoring would be included in such permit conditions.

Recommendation: delete paragraph d and include a reference to the Ground Water Quality Rule in a different part of 160.2.

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5 See IDAPA 58.01.11.400.02.
Comment No. 17
160.2.e.i Groundwater monitoring plan components
The subparagraphs requires measurements of surface water quality including determining statistically significant degradation. The issue of surface water monitoring in the groundwater monitoring plan was discussed in Comment No. 14. Furthermore, determining a “statistically significant” change in surface water quality is extremely problematic and has no regulatory basis. Also, some of the language in “i” is covered in other parts of the Draft Rule.

Recommendation: delete “i”.

Comment No. 18:
160.2.e.ii and iii Groundwater monitoring plan components
These subparagraphs contain duplicative language; subparagraphs “ii” and “iii” are covered elsewhere the Draft No. 2.

Recommendation: delete “ii” and “iii”.

Comment No. 19:
160.2.e.iv Groundwater monitoring plan components
Subparagraph “iv” is requiring operational data. This is not relevant to a groundwater monitoring plan. This information is relevant to the operation of the phosphogypsum stack; it is not groundwater monitoring data nor is information related to the design and construction of phosphogypsum stacks.

Recommendation: delete “iv”.

Comment No. 20:
160.2.e.v and vi Groundwater monitoring plan components
These proposed requirements go beyond a groundwater monitoring plan; these proposed requirements are focused on any corrective actions that might be required to comply with a specific consent order, the Idaho Groundwater Rule or similar regulation. Such requirements can be incorporated into any required actions that are appropriate for such situations. These are not requirements for a groundwater monitoring program and as such need to be deleted.

Recommendation: delete “v” and “vi”.
Comment No. 21:
160.2.f Groundwater monitoring plan components
Like other parts of Section 160, this paragraph contains language that is
duplicative, and contains a requirement for a “monitoring assessment report” (not
sure what that is).

Recommendation: delete paragraph f.

Comment No. 22:
160. Groundwater monitoring plan
Section 160 has a number of significant issues:

- Duplicative language
- A confusion as to “compliance” with “environmental standards.”
- Inclusion of requirements such as monitoring surface water, determining
  what is statistical degradation for surface waters, providing operational data
  and corrective action data that are outside of the what HB 367 requires.
- The organization of what is required is disjointed.

Recommendation: Section 160 be re-written as to this:

01. Groundwater Monitoring Plan Submittal. The groundwater
    monitoring plan shall bear the imprint of an Idaho licensed professional
    engineer’s seal that is both dated and signed by the engineer or signed and
    dated by a professional geologist.

02. Groundwater Monitoring Plan Components. The required
    components of the groundwater monitoring plan include:

    a. Description of existing groundwater conditions (including the
       quantity, quality, and direction(s) of groundwater flow underlying the
       phosphogypsum stack) prior to construction. The operator is
       encouraged to utilize a statistically based process for establishing
       background groundwater quality consistent with the Department’s
       Statistical Guidance for Determining Background Groundwater
       Quality and Degradation available at www.deq.idaho.gov;
    b. The monitoring plan shall be designed to detect statistically
       significant degradation of the underlying aquifer(s);
    c. Identify the locations of the proposed monitoring and/or existing
       monitoring wells that will be used to establish background and
       monitor groundwater quality. The plan also will include proposed
       drilling and well construction details, and development procedures
       for any new wells that will be installed;
    d. Identify the frequency with which monitoring will be conducted;
       and water sampling procedures and analytical methods including a
quality assurance/quality control plan and sampling for data collection and analysis and any verification and/or confirmation sampling that will be necessary.

03. Reporting Requirements.
   a. On a quarterly basis, or other frequency agreed to with the operator, the operator shall submit reports to the Department on all monitoring wells that include the following:

   i. Monitoring well location, the collection methods, and testing methods of samples;
   ii. The type, number, concentration and analyses of constituents or parameters;
   iii. Groundwater quality and water level data will be submitted in tabular as well as graphical form as concentrations of key contaminants of concern or elevations versus time. Deviations from normal sampling, laboratory, or quality assurance/quality control procedures that may be affecting the data will be described;

04. Department Notification. When requested by the Department, the operator must notify the Department at least thirty (30) days prior to the next scheduled sampling event so that a representative may be present to oversee sampling and/or obtain split samples.

170 Design and Construction Plan Review
   Comment No. 23
   170.05 Deviations from design and construction plan
       This language is a condensed version of what was previously in Section 200 of Draft No. 1. This language is a good approach as to how to communicate and handle deviations from the design and construction plan.

180. Cost Recovery
   Comment No. 24
   The statute at 39-176F(7) provides for a fee to recovery agency costs. The Draft Rule has the following language:

   “...operator shall enter into an agreement with the Department for actual costs incurred for the review and approval of plans and associated documents.”

   The Draft Rule needs to be modified to be consistent with the statute for the payment of a fee instead of an agreement for costs incurred. The concept for the fee is the same that is in the Idaho Solid Waste Facilities Act and in
the Solid Waste Management Rules at IDAPA 58.01.06.664.

Recommendation: that a fee schedule be developed for the review and approval of plans and associated documents.

190 Construction Report and Final Inspection

Comment No. 25

190.01 Monthly Construction Report
The Draft Rule has the following provisions:

"01. Monthly Construction Report. A monthly construction report must be provided to the Department within ten (10) working days of the end of each month for which construction activities are performed. The monthly construction report must include a narrative of work performed during that period along with tables summarizing the various samples collected, indicating sample ID's and dates collected."

The statute in 39-176F(1) requires and provides for the Department to review a design and construction plan; the statute does not require monthly updates to the Department on construction or for DEQ review and oversight of the construction. Furthermore, the Department does not have any similar regulatory requirements for other solid waste infrastructure that is built in the state. This requirement in the Draft Rule goes beyond what is required by the statute and needs to be deleted.

Recommendation: Delete 190.01.

Comment No. 26

190.02 Final Inspection
The requirements in Section 190.02 are for a final inspection and issuance of a "notice of a substantial completion." However, none of these requirements are in the statute. The statute is very clear about the responsibility of the owner/operator and the Department’s actions (see 39-176F(2):

"(2) Upon determination by the department of environmental quality that a design and construction plan submitted by an Operator meets the requirements of this section, the department shall deliver to the operator, in writing, a notice of approval of such plan, ...(emphasis added)."

The statute lays out the Department’s actions:

- Review the submitted design and construction plan.
o Determine whether or not the submitted plan meets the requirements of this section.

o Issue either a “notice of approval” or a “notice of rejection.”

Once the design and construction plan is approved by the Department, the operator has the responsibility to follow the approved plan. This plan describes the nature and extent of the obligations of the Operator.

“…and thereafter said plan shall govern and determine the nature and extent of the obligations of the Operator for compliance with this section, with respect to the Phosphogypsum stack system for which the plan was submitted.”

The requirements in 190.02 are not in the statute and need to be deleted.

**Recommendation:** delete 190.02

**Comment No. 26**

190.03. Construction completion report.

This paragraph references the completion construction report, which as discussed in Comment No. 25, is not required by the statute.

**Recommendation.** Delete the 2\(^{nd}\) sentence of 1909.03.