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Sent via email to: paula.wilson@deq.idaho.gov
**RULES FOR THE DESIGN AND CONSTRUCTION OF
PHOSPHOGYPSUM STACKS**

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

Dear Ms. Wilson:

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. 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."

The Department, at the May 28, 2020 negotiated rulemaking meeting, asked for comments on six topics. Simplot has the following comments on these topics.

A. Timeline and Schedule for Rulemaking

A number of questions and issues have been raised associated with this rulemaking. Working through these matters will take a number of months; an appropriate schedule would be to have a draft rule for consideration by the Idaho Board of Environmental Quality in 2021.

B. EPA Mineral Processing Enforcement Initiative

The Environmental Protection Agency (EPA) in 2004, through a national enforcement initiative on mineral processing, began developing design, operation, closure and financial assurance requirements for phosphogypsum impoundments (i.e., the gypsum stacks). These requirements contain detailed design and construction requirements for phosphogypsum stacks and phosphogypsum stack systems.

The framework for House Bill 367 came from a settlement EPA reached several years ago with a phosphoric acid manufacturer. The intent of the sponsors of HB 367 is for the State of Idaho to develop standards that would be the same or

functionally equivalent to the detailed construction and design requirements developed through this EPA enforcement initiative.

A new settlement is expected this summer which will provide additional details on phosphogypsum stack design; the information from the settlement should be helpful in this negotiated rulemaking. Simplot recommends that no further negotiated rulemaking meetings occur till this settlement is made public.

C. Definition of “Stored.”

The Department, at the negotiated rulemaking on April 16, proposed a definition for “stored” as it relates to what is “stored” within the definition of a phosphogypsum stack or phosphogypsum stack system. The language proposed by the Department is:

“**Stored.** For the purposes of this rule, “stored” applies only to the process wastewater that resides above the liner on the phosphogypsum stack system, whether within or above the phosphogypsum or within ancillary conveyance equipment such as pipes or lined decant ponds.”

As discussed at the negotiated rulemaking meetings on April 16 and May 28, this proposed definition by the Department raises a number of issues, two of which will be discussed in this comment letter.

1. The Proposed Definition is Inconsistent with the Statute

This proposed definition excludes phosphogypsum as being “stored” in a phosphogypsum stack or phosphogypsum stack system. Thus, omitting phosphogypsum from this definition is an attempt to change the definitions provided in the statute. The definitions in the statute clearly state that phosphogypsum is stored in a phosphogypsum stack or phosphogypsum stack system:¹

(7) Phosphogypsum Stack. Any defined geographic area associated with a phosphoric acid production facility in which **phosphogypsum** and process wastewater from phosphoric acid production are disposed of **or stored**, other than within a fully enclosed building, container, or tank.

(8) Phosphogypsum Stack System. The defined geographic area associated with the phosphoric acid production facility in which **phosphogypsum** and process wastewater are

¹ Idaho Code, Chapter 1, 39-176C.

disposed of or **stored together**, including all components, such as pumps, piping, ditches, drainage, conveyances, water control structures, collection ponds, cooling ponds, decant ponds, surge ponds, auxiliary holding ponds, and any other collection or conveyance system associated with the transport of phosphogypsum from the plant to the phosphogypsum stack, its management at the stack, and the process water return to the phosphoric acid production to the phosphogypsum stack. This includes toe drain systems and ditches and other leachate collection systems, but does not include conveyances within the confines of the fertilizer production plant or emergency diversion impoundments used in emergency circumstances caused by power outages or rainfall events.

[Emphasis added.]

The statute makes it very clear: phosphogypsum is both stored and disposed of in a phosphogypsum stack. By proposing a definition for “stored,” the Department is attempting to change what the legislature approved and placed into statute. The regulation developed to implement HB 367 must be consistent with the statute. This proposed definition is not needed.

2. The Proposed Definition Is Beyond the Scope of this Rulemaking

As discussed on May 28, this issue of whether phosphogypsum is disposed of and/or stored in a phosphogypsum stack has no bearing on the construction and design standards for phosphogypsum stacks. Simplot twice asked the Department during the May 28 rulemaking meeting why this definition was needed to determine construction and design standards. The answer given was that this definition is needed to determine whether/how phosphogypsum can be used if it is not disposed of in a phosphogypsum sack. HB 367 does not establish operational requirements for phosphogypsum stacks (which would include potential phosphogypsum use); HB 367 established design and construction standards for phosphogypsum stacks.

Summary: The proposed definition is inconsistent with the statute and the question of whether phosphogypsum is being stored or disposed of in a phosphogypsum stack is beyond the scope of establishing design and construction requirements. The elements (liner systems, underdrain system, safety factors, groundwater monitoring system) and design/construction standards for a phosphogypsum stack are going to be

the same whether phosphogypsum is stored and disposed or just disposed. The Department can find historical information on phosphogypsum being a solid waste excluded from identification as a hazardous waste in a 1989 Federal Register notice² and the potential beneficial use of phosphogypsum is discussed in a 1999 Federal Register notice of final rule.³

D. Intermediate Liner and Vertical Expansion

The May 28 meeting had a discussion on two terms associated with phosphogypsum stacks.

1. Intermediate Liner

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. The installation of an intermediate liner will take place on top of existing phosphogypsum and phosphogypsum will be placed on the surface of the new synthetic (intermediate liner). During the discussion on May 28, Department personnel stated that the rule needs to specify that an intermediate liner is a composite liner to make sure that the “base” layer (phosphogypsum) is prepared properly. However, proper preparation of the “base” layer is important for any type of synthetic liner installation and as such can be handled in the construction and design submittal to the agency.

2. Vertical Expansion

There are two aspects to “vertical expansion.” The first is the normal increase of height in the growth of the phosphogypsum stack. Another aspect of vertical expansion is when the phosphogypsum stack is being built up against a slope. In which case, not only is the stack *rising vertically but also horizontally*. *It is important that for such cases, that this vertical and horizontal expansion (which will occur as additional gypsum is added) is not be considered a lateral expansion in of itself as long as such expansion is within the footprint of the*

² Federal Register. 1989. Vol 54 (72) p. 15,316.

³ Federal Register. 1999. Vol 64 (22) p. 5574.

*approved design and construction plan.*⁴ Thus, the definition does need to be revised to include this concept (which is applicable to the gypsum stack at the Don Plant).

E. Seepage Testing

The proposed rule by the Department requires seepage testing of the “lined ponds that are part of the phosphogypsum system” prior to use. Simplot’s April 28, 2020 comments discussed extensively the regulatory history of seepage testing and that current DEQ rules exclude industrial lagoons and tailings ponds from seepage testing.⁵ These April 28 comments also discussed a number of technical issues associated with conducting seepage testing on large impoundments. For these reasons (and others), Simplot does not believe that seepage testing is needed or appropriate for lined ponds associated with phosphogypsum systems.

During the rulemaking meeting on May 28, several questions were raised about the implementation of this proposed requirement:

- Is it the Department’s intent that seepage testing would apply to all lined ponds, including the phosphogypsum stack itself?
- What would be the seepage rate criteria that would have to be met?
- The proposed rule states that this testing would be done prior to use; how does this testing fit with the DEQ proposed “final inspection” and issuance of “notice of substantial completion” letter?

F. Monthly Construction Reports and Final Inspection

Simplot’s April 28 comments discussed that several of the proposed requirements in the draft rule were outside of the scope of the statute. This included:

- The Department assessing actual costs for plan review and approval instead of a fee.
- A requirement for a monthly construction report.

⁴ A lateral expansion is defined as “a horizontal expansion of the waste boundaries of an existing phosphogypsum stack system.” When building a phosphogypsum stack against a slope, as the stack increases in vertical height it also increases in horizontal length. This is nuanced distinction in the shape of the stack as compared to phosphogypsum stacks that are not built against a slope.

⁵ See IDAPA 58.01.16.493.01.a.

- The Department issuing a letter of approval to begin use of the phosphogypsum stack/system.

During the May 28 rulemaking meeting there was some discussion about these requirements. It is Simplot's opinion that some of the views expressed by the Department on this subject are confusing as to what a party subject to a corrective action order or similar order might be required to do versus what is required by regulations on design and construction requirements. The Department's rules provide a number of examples relevant to this discussion.

1. Fees vs. Actual Costs

HB 367 states: "the Board may require a fee sufficient for the review and approval of plans and associated documents required by this section." 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 Department's rules have a number of examples related to the establishment of fees for review and approval of plans or applications.

- IDAPA 58.01.06.994: provides for a commercial solid waste license fee.
- IDAPA 58.01.05.355: provides for a hazardous waste facility siting license fee.
- IDAPA 58.01.01.225: provides for an (air quality) permit to construct processing fee.

The statute uses the word "*fee*"; the Department's rules have examples of charging fees to cover the costs or a portion of the costs associated with the review and approval of plans.⁶ The Department needs to revise the draft rule to provide a fee schedule.

2. Monthly Reports and Authorization to Use

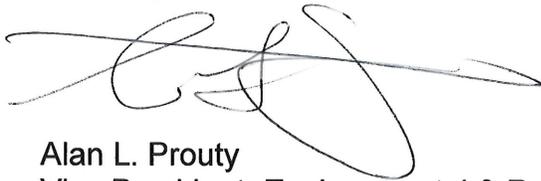
The Department has extensive rules discussing design standards for a number of activities, especially for wastewater treatment (IDAPA 58.01.16) and solid waste management facilities (IDAPA 58.01.06). Both of these regulations have

⁶ The concept of entering an agreement to recover costs is often typical of an order in which corrective action or similar activities will occur. As noted in these comments, Simplot believes that the Department is confusing requirements under an order with those typically found in design review and approval.

requirements for design review and approval (including for industrial facilities). None of these regulations require monthly construction reports, regular oversight by the Department or an authorization by the Department for the facility to begin operation.⁷ What these rules do require is design/plan review and approval, a process for dealing with material changes in design and plans, and that a final set of drawings be provided to the Department upon completion. The Department's proposed language in the draft rule is inconsistent with the statute and the Departments' own rules as to design review and approvals.

We appreciate the ability to provide these comments. Please contact me at (208) 780-7365 if you have any questions.

Sincerely,



Alan L. Prouty
Vice President, Environmental & Regulatory Affairs

Attachment

Cc:

Alex LaBeau, Idaho Association of Commerce and Industry
Ben Davenport, Idaho Mining Association
Monty Johnson, J.R. Simplot Company
Thomas Perry, J.R. Simplot Company

⁷ As noted in the earlier footnote, monthly reports and a final review and authorization are commonly found requirements in orders associated with corrective action.