

**BEFORE THE ILLINOIS POLLUTION CONTROL BOARD**

IN THE MATTER OF: )  
 ) R14-10  
COAL COMBUSTION WASTE (CCW) )  
SURFACE IMPOUNDMENTS AT POWER ) (Rulemaking- Water)  
GENERATING FACILITIES: PROPOSED )  
NEW 35 ILL. ADM. CODE 841 )

**NOTICE OF FILING**

PLEASE TAKE NOTICE that I have filed today with the Illinois Pollution Control Board the ILLINOIS DEPARTMENT OF NATURAL RESOURCES' APPEARANCE and POST HEARING COMMENTS, copies of which are herewith served upon you.

Respectfully submitted,

ILLINOIS DEPARTMENT OF  
NATURAL RESOURCES

By: Robert G. Mool

Robert G. Mool  
Legal Counsel  
Illinois Department of Natural Resources

Date: 10-20-14

Illinois Department of Natural Resources  
1 Natural Resources Way  
Springfield, IL 62702-1271  
(217) 782-1809

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**ILLINOIS DEPARTMENT OF NATURAL RESOURCES' APPEARANCE**

The undersigned hereby enters his appearance as an attorney on behalf of the Illinois Department of Natural Resources.

Respectfully submitted,

ILLINOIS DEPARTMENT OF  
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**ILLINOIS DEPARTMENT OF NATURAL RESOURCES'**  
**POST HEARING COMMENTS**

NOW COMES the ILLINOIS DEPARTMENT OF NATURAL RESOURCES,  
(Department or DNR) by and through its counsel, and hereby submits its Post Hearing  
Comments as directed by the Hearing Officer Order entered on July 25, 2014, in the above  
captioned rulemaking:

**GENERAL DISCUSSION**

As directed by the Illinois Legislature at 615 ILCS 5/23a the Illinois Department of Natural Resources promulgated an administrative rule for the regulation of dam safety in the state. The Department's administrative rule appears at 17 Ill. Adm. Code Ch. I, Sec. 3702 (Part 3702) and became effective on September 2, 1980. Part 3702 addresses all technical aspects of dam safety design, construction, operation, maintenance and removal.

Part 3702 defines a dam as any manmade structure intended to impound or divert water. With regard to the proposed IEPA Part 841 rule (IEPA Proposed Rule), all impoundments that currently exist or that will be constructed for the purpose of collecting or retaining coal combustion residues (CCR) transported by water will be jurisdictional under Part 3702.

The Department of Natural Resources' dam safety staff has provided comments during the development of the IEPA Proposed Rule. The impounding structures that will fall under the IEPA Proposed Rule are already regulated under Part 3702. Of approximately 90 structures/substructures listed by IEPA as CCR impoundments, approximately 50 are currently under an active permit issued under Part 3702. The Department initiated a review of the application of Part 3702 after the 2008 failure at the Kingston TVA Power Plant. As a result of that review, the Department has determined to increase the consideration of economic damages that may occur due to dam failures in its application of Part 3702. The effect of this change will raise the regulatory classifications of the CCR impoundments, thereby requiring the owners of all CCR impoundments to obtain an operating permit for their impoundments. Thus, after January

1, 2016, the Department expects that all existing CCR impoundments will be under permit, and all new CCR impoundments will require a Department permit prior to construction.

With regard to the sufficiency of Part 3702 to protect against structural failures, the Department notes that the program has been reviewed by the Federal Dam Safety Board and Part 3702 meets 99% of the recommendations in the Model Dam Safety Program. Since the implementation of Part 3702, no dam failures resulting in loss of impounded water have occurred at permitted structures. The Department continuously updates requirements to maintain state-of-practice design for dam safety.

With regard to IEPA regulation of impoundments, the Department draws on its experience in multiple agency regulation of impounding structures related to the coal industry, and recommends that rules not create conflicting duties or requirements, but foster certainty between regulators, design engineers, dam operators, and dam owners. Reliance on the Department's Part 3702 for regulation of CCR impoundments will provide clear direction with regard to design and operation of the impoundments.

The Department also notes that Part 3702 applies for the life of the impounding structure. Dam safety permits will be in effect after the proposed closure under the IEPA Proposed Rule.

There have been references to the inspection activity completed by the U. S. EPA. Those inspections were completed for active CCR disposal impoundments over a 3 year period. In Illinois the U.S. EPA rated 35 structures. The U.S. EPA ratings were Satisfactory – 4, Fair - 17, Poor – 14, Unsafe – 0. The Department's Senior Dam Safety Engineer conducted a follow-up inspection of impoundments at power plants in Illinois. The state inspection program included all impoundments, including 'closed' ash ponds. The inspection program covered 18 power plants where impoundments have been identified. Our inspection program included 2 plants not inspected under the U.S. EPA program. The IDNR inspections covered 81 impoundments (99 if sub-impoundments are counted individually). Based upon the condition of the impoundments observed by IDNR, 74 impoundments are now in the Satisfactory category, 7 impoundments are in the Fair category and no impoundments are in the Poor or Unsafe categories. These ratings use the U.S. EPA rating criteria. Three of the impoundments rated Fair by IDNR were not included in the site assessments completed by U.S. EPA. A Part 3702 Permit has been issued for the construction required to bring one structure rated Poor by U.S.EPA and Fair by IDNR to a satisfactory rating. The Fair ratings by IDNR were all related to excessive tree growth on the embankments. The majority of structural support studies requested in the Recommendations section of the U.S. EPA reports have been submitted. Those reports have been accepted by U.S. EPA, with the analysis at one site still under consideration for approval. There is no evidence that these impoundments pose imminent hazards to the public based on their structural condition.

## QUESTIONS FOR THE AGENCY

### **Section 841.415 Final Slope and Stabilization**

**4. The Environmental Groups stated that, under the Agency's proposed section 841.420, CCW used in establishing the final grade and slope for the unit and earthen berms**

surrounding the unit would not necessarily be covered by the final cover system. As such, the Environmental Groups expressed concern that the proposed final cover system would not specifically require erosion of berms containing CCW to be minimized. The Environmental Groups cite to Dr. Soderberg's testimony that this could lead to exposed CCW on the berms. PC 1879 at 18-19. Are there any revisions you would suggest for proposed Section 841.420 Final Cover System to clarify the reach of the final cover system to encompass all CCW used in establishing the final grade and slope?

4. Regarding the issue of covering of CCR to prevent subsequent erosion, the Department's Part 3702 requires the control of erosion on all parts of impounding structure embankments for the life of the structure. Exposure of CCR used as a structural component of the embankment is not allowed outside the normal construction period. After construction, Part 3702 would require CCR to be covered with a medium providing for vegetation growth to ensure embankment stability and to prevent erosion. The Department reviews such erosion prevention issues in its review of Part 3702 permit applications.

**5. In response to question 43(c) in the Board 's Hearing Officer Order dated February 5, 2014, the Agency stated, "[I]n 2013, the Agency discussed with IDNR [Illinois Department of Natural Resources] including a reference to the dam safety regulations [35 Ill. Adm. Code 3702] in the proposed rule to ensure any work done on the impoundment dams would comply with the dam safety regulations." Exh. 5 at 22. The latest proposal from the Agency doesn't appear to reference the dam safety regulations. Please comment on including a reference to IDNR s dam safety regulations in proposed Section 841.415 or elsewhere, and consider suggesting language.**

5. The Department's position is that a reference to Part 3702 in the IEPA Proposed Rule is not required, but the Department does not object to such a reference. All CCR impounding structures will be under the Department's jurisdiction whether there is a reference or not. Lack of a reference will not prevent Agency staff from indicating the need to comply with Part 3702, or any other applicable state or federal regulation.

#### QUESTIONS FOR THE ENVIRONMENTAL GROUPS

##### Section 841.170 Inspection

**15. The proposed subsection (e) requires owners or operators of units that have incorporated earthen dams in their design to "install, maintain, and monitor instruments to monitor the water content or pore water pressures within the earthen dam." Exh. 21 at 15.**

- (a) Please clarify whether the monitoring of moisture content or pore water pressure is intended to provide indication of dam stability or some other information.
- (b) If so, is there a moisture content or pore water pressure threshold above which an owner or operator may have to take any response actions?

**(c) Also, comment on whether parameters concerning dam safety issues, including any monitoring of moisture content or pore water pressure, is addressed by the Illinois Department of Natural Resources as part of its dam safety program.**

15. Regarding the use of instruments to monitor the water content or pore water pressures within earthen dams to ensure structural integrity, instrumentation of dams is a common practice intended to identify conditions that are beyond the design parameters. The monitoring of pore water pressure is designed to provide early warning of the presence of water at levels that could cause structural failure. In the case of large on-stream dams, this condition is critical due to the variable depth of free water against the upstream face. However, for CCR impoundments, the structural design assumes a fully saturated embankment. Therefore, under CCR impoundment design assumptions, the use of piezometers is unnecessary to assess or provide warning of dangers resulting from soil saturation, because the saturation level cannot exceed the design assumption of full saturation. When instrumentation is called for under the state-of-the-practice for dams, it will be required under Part 3702. Criteria for instruments to monitor the water content or pore water pressures within earthen dams in the IEPA Proposed Rule may create conflicting or confusing situations with Part 3702.

The Department does not currently monitor or test for flow or leaching from coal slurry impoundments and as such does not require piezometers for that purpose or to gather "other information."

Questions regarding the foregoing Department comments can be addressed to Paul Mauer,  
Senior Dam Safety Engineer for the Department.

Respectfully submitted,

ILLINOIS DEPARTMENT OF  
NATURAL RESOURCES

By: Robert G. Mool

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Legal Counsel  
Illinois Department of Natural Resources

Date: 10-20-14

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Springfield, IL 62702-1271  
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**CERTIFICATE OF SERVICE**

The undersigned certifies that a copy of the foregoing NOTICE OF FILING, ILLINOIS DEPARTMENT OF NATURAL RESOURCES' APPEARANCE and ILLINOIS DEPARTMENT OF NATURAL RESOURCES' POST HEARING COMMENTS were served upon persons listed on the Service List by mailing, unless otherwise noted on the Service List, a true copy thereof in an envelope duly addressed bearing proper first class postage and deposited in the United States mail at Springfield, Illinois on 10-20-14.

By: Robert G. Mool

Robert G. Mool  
Legal Counsel  
Illinois Department of Natural Resources

Date: 10-20-14

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