

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:)	
)	R 2020-019
STANDARDS FOR THE DISPOSAL)	
OF COAL COMBUSTION RESIDUALS)	(Rulemaking - Water)
IN SURFACE IMPOUNDMENTS:)	
PROPOSED NEW 35 ILL. ADM.)	
CODE 845)	

NOTICE OF FILING

PLEASE TAKE NOTICE that I have today filed with the Office of the Clerk of the Illinois Pollution Control Board **ILLINOIS ENVIRONMENTAL PROTECTION AGENCY’S RESPONSE TO ENVIRONMENTAL LAW & POLICY CENTER, PRAIRIE RIVERS NETWORK, SIERRA CLUB, AND LITTLE VILLAGE ENVIRONMENTAL JUSTICE ORGANIZATION’S SUPPLEMENTAL POST-HEARING COMMENTS**, a copy of which is herewith served upon you.

Respectfully submitted,

Dated: December 15, 2020

ILLINOIS ENVIRONMENTAL
PROTECTION AGENCY,

Christine Zeivel
Division of Legal Counsel
Illinois Environmental Protection Agency
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Petitioner,

BY: /s/ Christine Zeivel
Christine Zeivel

THIS FILING IS SUBMITTED ELECTRONICALLY

SERVICE LIST

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ILLINOIS ENVIRONMENTAL PROTECTION AGENCY’S RESPONSE TO ENVIRONMENTAL LAW & POLICY CENTER, PRAIRIE RIVERS NETWORK, SIERRA CLUB, AND LITTLE VILLAGE ENVIRONMENTAL JUSTICE ORGANIZATION’S SUPPLEMENTAL POST-HEARING COMMENTS

NOW COMES the Illinois Environmental Protection Agency (“Illinois EPA” or “Agency”), by and through its counsel, and hereby submits its Response to Environmental Law and Policy Center, Prairie Rivers Network, Sierra Club, and Little Village Environmental Justice Organization’s (“Environmental Groups” collectively) Supplemental Post Hearing Comments, and states the following.

1. The Illinois EPA filed its proposed rulemaking for coal combustion residual (“CCR”) surface impoundments on March 31, 2020 pursuant to Section 22.59 of the Illinois Environmental Protection Act.

2. On April 16, 2020, the Illinois Pollution Control Board (“Board”) accepted the proposal for hearing (R2020-019). Following two public hearings, the rulemaking record in R2020-019 closed on November 6, 2020.

3. On November 24, 2020, the Environmental Groups filed, and requested the Board consider, Supplemental Post Hearing Comments (“PC 140”) that they characterize as “critical information for the Board’s review.” PC 140, p. 2-3. Citing its authority to accept comments after

the comment period has ended in order to avoid material prejudice, 35 Ill. Adm. Code 102.108(d), the Board granted the request to file the untimely public comments and set a deadline of December 15, 2020 for responses. Hearing Officer Order, December 8, 2020.

4. First, the Environmental Groups requested that the Board consider the decision of Montana Department of Environmental Quality (“MDEQ”) to require closure by removal of CCR from certain surface impoundments, stating that “where regulators have taken a close look at CCR surface impoundments in contact with groundwater, they have often concluded that closure by removal is the only closure method that provides adequate protection for communities and the environment.” PC 140 at 1. The Environmental Groups provided a newspaper article with their comments, which states that the CCR surface impoundments associated with Units 1 and 2 at the Colstrip power plant in Montana have been ordered by MDEQ to close by removal, though that order can be appealed. What the newspaper article does not make clear is why the CCR surface impoundments associated with Colstrip Units 3 and 4, which have also contaminated groundwater and are also in contact with groundwater, have been approved by MDEQ to close in place. *See* the attached MDEQ Fact Sheet.

5. It is unclear what site-specific details may have caused the MDEQ to arrive at the conclusion that different methods of closure are appropriate for two similarly situated CCR surface impoundments. However, the robust nature and site-specific information required by Part 845.710, Closure Alternatives Analysis, could yield a similar situation. The detailed information provided will allow the Agency to thoroughly evaluate closure options put forward by owners and operators, with input from the local community under Parts 845.240 and 845.260, which will assure that best fit closures occur. The closure alternatives can be evaluated in conjunction with the corrective action process under Parts 845.660 and 845.670, which also includes public participation and input

from the local community. As proposed, Part 845 would equip the Agency with the necessary site-specific data to close CCR surface impoundments in the most appropriate manner at any given location.

6. Second, Illinois EPA concurs with the Environmental Groups that the recent agreement between the United States Environmental Protection Agency (“USEPA”) and the Texas Commission on Environmental Quality (“TCEQ”) resolving civil rights claims generally supports recommendations for enhanced notice, interpretation, and other public participation opportunities for limited English speaking communities, including those provided for CCR surface impoundment permits as proposed by Illinois EPA. *See* Illinois EPA’s Final Post Hearing Comments, Attachment A. Illinois EPA notes that some portions of the agreement, such as the requirement to develop written public participation procedures, are not directly relevant to this rulemaking. The Illinois EPA Office of Environmental Justice has already developed such procedures, which can be found in the Illinois EPA Environmental Justice Public Participation Policy located at <https://www2.illinois.gov/epa/topics/environmental-justice/Documents/ejPUBLICPP.pdf>. *See* Hrg. Ex. 7.

Wherefore, the Agency maintains that PC 140 does not contain any “critical information” that further informs topics already thoroughly explored on the record during the rulemaking and public comment period for R2020-019, and respectfully requests that the Board adopt rules as proposed by the Agency.

Respectfully submitted,

ILLINOIS ENVIRONMENTAL
PROTECTION AGENCY,

Petitioner,

BY: /s/ Christine Zeivel
Christine Zeivel

Dated: December 15, 2020

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Colstrip Steam Electric Station Units 3&4 Coal Ash Ponds

Units 3&4 Remedy Evaluation Overview

February 2020

Introduction

The Montana Department of Environmental Quality (DEQ) is providing this fact sheet on the Units 3&4 Remedy Evaluation Report as part of a responsiveness summary addressing public comments received by DEQ.

In August 2012, DEQ and Talen Montana entered into an Administrative Order on Consent (AOC) to address impacts from ash pond seepage. The AOC is an enforcement action taken by DEQ, and involves a step-by-step plan for remediation of the groundwater downgradient of the ash ponds. For each of the three sets of ponds, Talen submits four reports to DEQ:

- A Site Characterization Report
- A Cleanup Criteria and Risk Assessment Report
- A Remedy Evaluation Report
- A Remedial Design/Remedial Action Report



This Fact Sheet is intended to summarize the remedial alternatives analyzed by Talen in the Remedy Evaluation Report for the Units 3&4 Effluent Holding Pond (EHP) Area, and to provide additional information received from Talen since the submittal of the report in August 2019. The full report can be found at the following link: <https://deq.mt.gov/DEQAdmin/mfs/ColstripSteamElectricStation>

Summary of Evaluated Alternatives

To determine the most effective remedy for the 3&4 Area, Talen evaluated five remedial alternatives:

- Alternative 1: No Further Action: Used as a baseline to evaluate what would happen if no additional remedial actions were taken.
- Alternative 2: Cap and dewater ponds; continue run-

ning existing capture system

- Alternative 3: Cap and dewater ponds; expand groundwater capture system
- Alternative 4: Cap and dewater ponds; expand groundwater capture system; install clean water injection wells
- Alternative 5: Excavation and relocation of ash to a new, lined landfill; expand groundwater capture system

Talen modeled each of the alternatives to determine the relative effectiveness of the various remedies. Based on the models and other site data, Talen has identified Alternative 4 as the preferred remedial alternative. The main rationale for this decision is that the ponds will not remain in contact with groundwater after they are dewatered and capped. Site data and modeling indicate the majority of contamination that needs to be addressed is contamination already present in the groundwater from historical pond seepage. Talen has already begun taking measures to reduce pond seepage, including using a paste process that removes water from the ash before it is placed in the impoundments. Additionally, by July 2022, Talen is required to switch to dry ash storage at the 3&4 ponds, reducing future seepage from additional ash deposition. These practices, along with dewatering the ash using the existing underdrain and capping the ponds with a geosynthetic liner system, will prevent additional pond seepage and eliminate contact between the ponds and the groundwater.

Excavation (Alternative 5) was not selected as the most effective alternative because of the time required for implementation and movement of the material to a new potential source. Excavation would require planning and permitting a new landfill and moving the large amount of material to a new location; this process would take years, leaving the ash exposed to additional precipitation, meaning the ash would be saturated for a longer period of time. Additionally, because the majority of contamination is the result of historical seepage, groundwater remediation would still be required in the 3&4 area; the model indicates that groundwater cleanup would take longer under Alternative 5 due to continued seepage from the ash during the excavation phase.

Selected Alternative Overview

DEQ has selected Alternative 4 with modifications in the form of additional contingencies that must be addressed as the remedy is implemented. Because the majority of the contamination in the 3&4 area is the result of exist-

ing contamination from historical pond seepage, Alternative 4 includes aggressive measures to remove this contamination from the groundwater. While more mobile contaminants (such as sulfate) can be removed from the groundwater using groundwater capture wells, less mobile contaminants (such as boron) have a tendency to stick to the aquifer material, making it harder to remove them with capture wells alone. When the less mobile contaminants remain in the aquifer material, they have the potential to re-mobilize, making them a secondary source that could re-contaminate the aquifer in the future. Using clean water injection wells helps avoid this scenario: clean water is injected into the aquifer, which forces the less-mobile contaminants to become "unstuck" from the aquifer material, allowing them to be removed from the groundwater by the capture wells. The injection and capture wells are strategically placed so all the water that is injected is captured immediately down-gradient, preventing the contamination from spreading.



Based on modeling, active remediation followed by "Monitored Natural Attenuation" or MNA is predicted to achieve the cleanup criteria at the point of compliance (the edge of the ponds) in most areas, with the exception of the deepest geological unit. No identifiable alternative (including excavation) would achieve the cleanup criteria at the point of compliance. This is primarily due to the geology in the 3&4 area. The Sub-McKay is the deepest unit and is composed of tight bedrock, making it harder to flush and pump this particular unit. However, in many cases, plumes will naturally decrease in size and concentration over time so long as the source is eliminated. When this is the case, MNA can be implemented. MNA consists of long-term monitoring that demonstrates the plume is stable, not expanding, and not a risk to human health or the environment. Talen is proposing to use this method after the capture system is shut down to continue to address less mobile contaminants that may remain. Talen has conducted an initial desktop study that indicated the use of MNA is promising, but Talen needs to conduct additional studies, both in a lab and in the field, to verify the plume will stabilize and decrease over time. If Talen cannot demonstrate this, DEQ will require additional methods (for example, continued pumping) to ensure the plume will be stable and that cleanup criteria will be met.

Contingencies

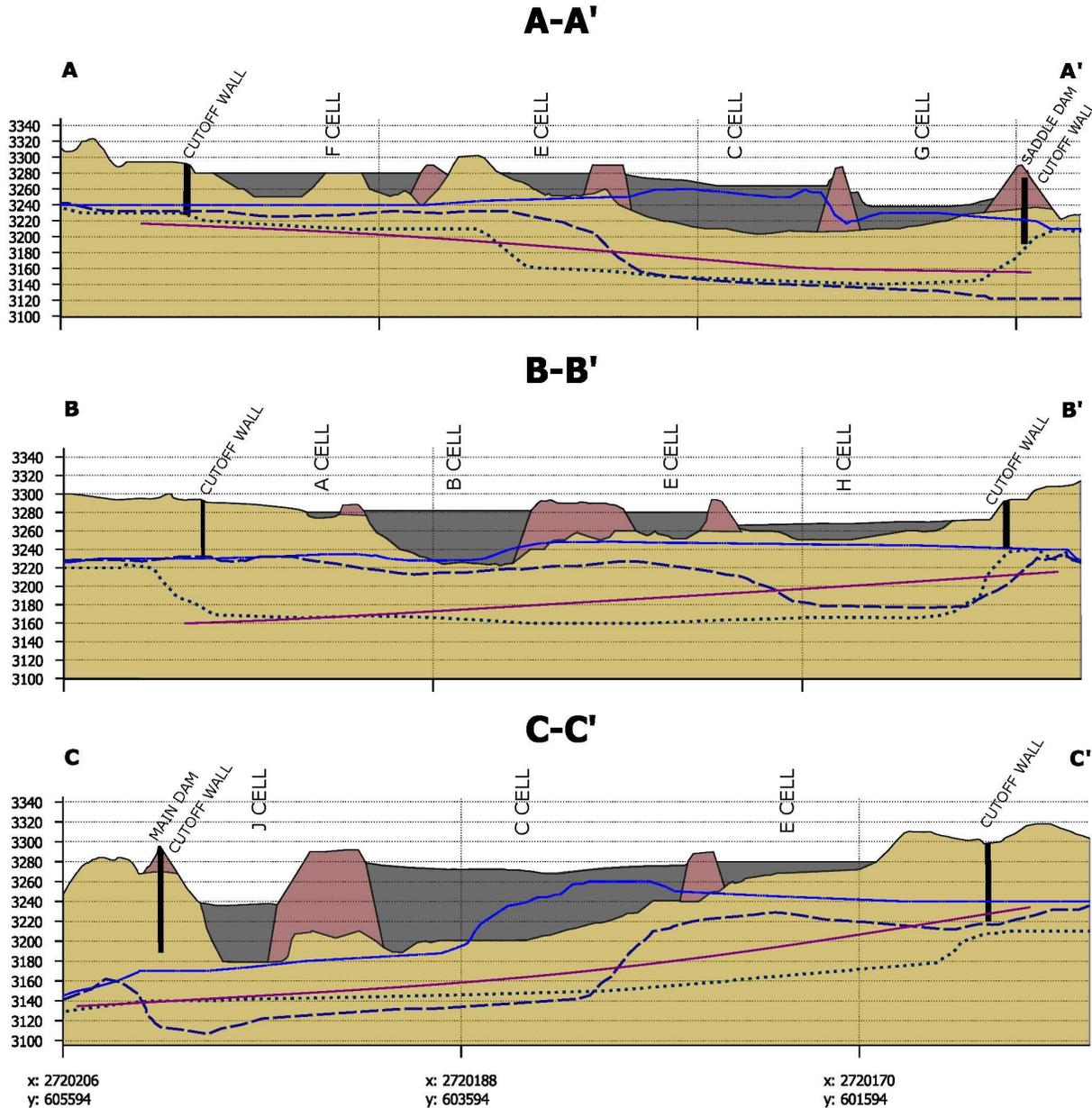
DEQ believes the capture/injection system combined with capping and dewatering the ponds will be effective, and is issuing a conditional approval of the Units 3&4 Remedy Evaluation Report. The conditional approval will require Talen to submit financial assurance in the amount of \$107 million. However, DEQ is requesting additional data be collected, and additional measures be evaluated to ensure all aspects of the proposed remedy will be optimized to achieve plume stabilization and mitigate any impacts to human health and the environment in a timely manner. Under the AOC, DEQ has the authority to request changes or additional measures at any time. Additionally, financial assurance will be updated on an annual basis, to account for changes that may be needed. DEQ is requesting the following contingencies be evaluated as part of the conditional approval of the report:

- Conduct a pumping test on the underdrain to ensure it will completely dewater the ponds. If the underdrain will not be effective, additional methods will be required (ex: well points) to dewater the pond in a timely manner.
- Provide additional information about the water budget at the 3&4 ponds to ensure the underdrain can be turned on as soon as possible. If there is not enough storage for the underdrain to be turned on by 2021, additional storage will need to be constructed.
- Additional data needs to be collected to support the predicted timeframe for MNA. This includes geochemical data from pond leachate and aquifer solids beneath the ponds, which may act as a secondary source. This will help determine how long active remediation (injection and capture) needs to continue.
- Provide more detail regarding the water table below the ponds during capture/injection system operation, and after the system shuts down.
- Conduct feasibility studies to determine if a Permeable Reactive Barrier would be appropriate in this area.
- Update the model to include any new data collected.
- Install additional capture and injection wells as appropriate. If data indicates the remedy would benefit from running the injection and/or capture wells for a longer duration, financial assurance will be requested to keep the system running.

Next Steps

Due to the complexity of the Units 1&2 Pond area, the Remedy Evaluation Report for has been split into two parts. Part 1 addresses the groundwater remediation for existing groundwater contamination, and Part 2 will address long-term source control for all of the ponds. DEQ is currently responding to Part 1 comments and a Fact Sheet will be provided as part of the responses, and will be posted on DEQ's website. DEQ anticipates receiving Part 2 for review in Spring 2020.

Talen provided the figure below showing the elevation of the water table relative to the bottom of the ponds in 2020 (current), 2040 (during pumping) and 2070 (20 years after pumping ceases). Although the ponds are currently within the water table, modeling shows the water table will drop below the base of the ponds once they are dewatered and capped.



Legend

- 2020 Model Predicted Water Table
- - - 2040 Model Predicted Water Table
- 2070 Model Predicted Water Table
- CCR Rule Upper Most Aquifer
- Dike Material
- Ash
- Bedrock

Location

C: 2720206, 605594 Scale: 1:6,400
 C': 2720159, 600438 Vertical exaggeration: 5x



* 2020 water levels are the result of saturated ash that will be dewatered as part of the remedy
 * The 2040 water table is higher than the 2070 water table in most locations due to active fresh water injection for flushing. The 2040 water table is lower than the 2070 water table in a few locations due to active extraction.
 * The CCR rule upper most aquifer is an interpolated surface based on eight historical water levels from pre-pond construction



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CERTIFICATE OF SERVICE

I, the undersigned, on affirmation state the following:

That I have served the attached **NOTICE OF FILING** and **ILLINOIS ENVIRONMENTAL PROTECTION AGENCY'S RESPONSE TO ENVIRONMENTAL LAW & POLICY CENTER, PRAIRIE RIVERS NETWORK, SIERRA CLUB, AND LITTLE VILLAGE ENVIRONMENTAL JUSTICE ORGANIZATION'S SUPPLEMENTAL POST-HEARING COMMENTS** by e-mail upon Don Brown at the e-mail address of don.brown@illinois.gov, upon Renee Snow at the e-mail address of Renee.Snow@Illinois.Gov, upon Matt Dunn at the e-mail address of mdunn@atg.state.il.us, upon Stephen Sylvester at the e-mail address of ssylvester@atg.state.il.us, upon Andrew Armstrong at the e-mail address of aarmstrong@atg.state.il.us, upon Kathryn A. Pamenter at the e-mail address of KPamenter@atg.state.il.us, upon Virginia I. Yang at the e-mail address of virginia.yang@illinois.gov, upon Nick San Diego at the e-mail address of nick.sandiego@illinois.gov, upon Robert G. Mool at the e-mail address of bob.mool@illinois.gov, upon Vanessa Horton at the e-mail address of Vanessa.Horton@Illinois.gov, upon Paul Mauer at the e-mail address of Paul.Mauer@illinois.gov, upon Deborah Williams at the e-mail address of Deborah.Williams@cwlp.com, upon Kim Knowles at the e-mail address of Kknowles@prairierivers.org, upon Andrew Rehn at the e-mail address of Arehn@prairierivers.org, upon Faith Bugel at the e-mail address of fbugel@gmail.com, upon Jeffrey Hammons at the e-mail address of Jhammons@elpc.org, upon Keith Harley at the e-mail address of kharley@kentlaw.edu, upon Daryl Grable at the e-mail address of dgrable@clclaw.org, upon Michael Smallwood at the e-mail address of Msmallwood@ameren.com, upon Mark A. Bilut at the e-mail address of Mbilut@mwe.com, upon Abel Russ at the e-mail address of aruss@environmentalintegrity.org, upon Susan M. Franzetti at the e-mail address of Sf@nijmanfranzetti.com, upon Kristen Laughridge Gale at the e-mail address of kg@nijmanfranzetti.com, upon Vincent R. Angermeier at the e-mail address of va@nijmanfranzetti.com, upon Alec M. Davis at the e-mail address of adavis@ierg.org, upon Jennifer M. Martin at the e-mail address of Jmartin@heplerbroom.com, upon Kelly Thompson at the e-mail address of kthompson@ierg.org, upon Walter Stone at the e-mail address of Walter.stone@nrgenergy.com, upon Cynthia Skrukud at the e-mail address of Cynthia.Skrukud@sierraclub.org, upon Jack Darin at the e-mail address of Jack.Darin@sierraclub.org, upon Christine Nannicelli at the e-mail address of christine.nannicelli@sierraclub.org, upon Stephen J. Bonebrake at the e-mail address of sbonebrake@schiffhardin.com, upon Joshua R. More at the e-mail address of jmore@schiffhardin.com, upon Ryan C. Granholm at the e-mail address of rgranholm@schiffhardin.com, upon N. LaDonna Driver at the e-mail address of LaDonna.Driver@heplerbroom.com, upon Alisha Anker at the e-mail address of aanker@ppi.coop, upon Chris Newman at the e-mail address of newman.christopherm@epa.gov, upon Claire A. Manning at the e-mail address of cmanning@bhslaw.com, upon Anthony D. Schuering at the e-mail address of aschuering@bhslaw.com, upon Jennifer Cassel at the e-mail address of jcassel@earthjustice.org, upon Melissa Brown at the e-mail address of Melissa.Brown@heplerbroom.com, upon Thomas Cmar at the e-mail address of tcmar@earthjustice.org, and upon Kiana Courtney at the e-mail address of KCourtney@elpc.org.

That my e-mail address is Christine.Zeivel@illinois.gov

That the number of pages in the e-mail transmission is thirteen (13).

That the e-mail transmission took place before 4:30 p.m. on the date of December 15, 2020.

/s/ Christine Zeivel
December 15, 2020