



Colstrip Steam Electric Station Units 1&2 Coal Ash Ponds

Units 1&2 Remedy Evaluation - Part One Overview

June 2020

Introduction

The Montana Department of Environmental Quality (DEQ) is providing this fact sheet on the Units 1&2 Remedy Evaluation Report – Part One 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 purposes of the AOC process, the site has been divided into three areas: the Plant Site complex, the Units 1&2 Ponds, and the Units 3&4 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 – Part One for the Units 1&2 Stage I and Stage II Pond Area, and to provide information regarding next steps for addressing source control for the ponds in Part Two of the Report. The full report can be found at the following link: <https://deq.mt.gov/DEQAdmin/mfs/ColstripSteamElectricStation>

Summary of Evaluated Alternatives

The Remedy Evaluation Report for the Units 1&2 Ponds has been split into two parts: the first part (Part One) addresses the existing groundwater contamination from historical pond seepage, and the second part (Part Two) will address the source of the contamination (the ponds). This was done to ensure DEQ could collect financial assurance for the aspects of the remedy that were known to be necessary (remediation of existing groundwater contamination), while additional work continues to determine the most effective method of controlling the contamination source. This Fact Sheet discusses the remedy selected for Part One, and the next steps to determine source control methods in Part Two.

Talen evaluated five alternatives in Part One of the Report:

- Alternative 1: No Further Action: Used as a baseline to evaluate what would happen if no additional remedial actions were taken.
- Alternative 2: Continue running existing capture system; cap Stage II Ponds
- Alternative 3: Expand groundwater capture system; cap Stage II Ponds
- Alternative 4: Expand groundwater capture system; install clean water injection wells; cap Stage II Ponds
- Alternative 5: Expand groundwater capture system; install clean water injection wells; dewater A and E Cells; cap Stage II Pond

Talen modeled each of the Alternatives to determine the relative effectiveness of the various remedies. Based on the models and other site data, Talen identified Alternative 5 as their preferred remedy for the existing groundwater contamination at the Units 1&2 Ponds.

Approved Part 1 Remedy Components

DEQ has selected Alternative 5, but is providing only partial, conditional approval of the Alternative and the Part One Report. During review of the Part One Report, DEQ noted that the Stage II Ponds were proposed to be capped in place, and would not be evaluated for excavation in Part Two of the Report. DEQ also received significant public comments on this issue. Although the Stage II Ponds that contain coal ash (A Cell, E Cell, and the Old Clearwell) each have a

single HDPE liner, the bottom of the ponds would remain in contact with groundwater in perpetuity under Alternative 5. Because the liners have an estimated 36 to 400-year lifespan, DEQ is requiring Talen to evaluate an excavation alternative for all ponds at the Units 1&2 area in Part Two of the Report.



Talen has identified components of Alternative 5 in the Part One Report that can be implemented regardless of the source control method that will be selected for the Units 1&2 Stage I and Stage II Ponds in the upcoming Part Two Report. Most aspects of Alternative 5 can be implemented, however components that would be affected by excavation of Stage I and II Ponds cannot be approved; this primarily affects the cap-in-place proposal for Stage II, and some wells that were planned to be installed within or in close proximity to the ponds.

DEQ is providing approval of the following components identified by Talen, which include:

- Dewatering systems installed in A and E Cells to dewater the ash;
- Increasing pumping rates at 8 existing capture wells;
- Installing 8 new capture wells north of Stage I Pond;
- Installing 31 new clean water injection wells north

of Stage I and east of Stage II Ponds;

- A pilot test demonstrating the operation of the new injection wells;
- Decommissioning of the Units 1&2 Scrubber Pipeline/North 1AD Drain Pond;
- Stage II B Cell post closure storm water management;
- Operation and maintenance of the capture/injection system;
- Demonstration studies for the use of Monitored Natural Attenuation to address contamination that may remain after capture system shutdown; and
- Evaluation of installing a Permeable Reactive Barrier to address boron and other less mobile constituents below the Stage II Dam and north of the Stage I Pond.

Approval of these components triggers the financial assurance requirement under the AOC; Talen will submit \$16,231,270 in the form of surety bonds to cover these costs. DEQ currently holds \$26,172,057 in financial assurance from approval of the Closure Plans for the Units 1&2 Ponds in December 2018. These closure plans may need to be modified based on the selected source control alternative in the Part 2 Report. DEQ currently holds a total of \$227 million in financial assurance for site-wide Colstrip Ash Pond Remediation.

Next Steps – Part 2 Report

During a monthly update meeting for Part 2 of the Report in February 2020, DEQ expressed its concern that Talen was not providing a thorough enough analysis of the excavation scenario for the Stage I Pond, and requested that Talen add an analysis of excavation of the Stage II Ponds. Talen estimated this analysis would require additional time; DEQ and Talen are working closely to narrow down a list of alternatives for further analysis in the Report. DEQ has sent a letter to Talen requesting a submittal date of July 3, 2020 for the full excavation alternative. DEQ expects to solicit public comment on the Part Two Report during Summer 2020, and a final alternative will be selected during Fall 2020.

For more information or to be added to the Colstrip email listserv, please contact:

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