

Emergency Action Plan (EAP) for Coal Combustion Residuals (CCR)

April 15, 2022 Update

BACKGROUND / PURPOSE

- CCR Rules require opportunity for annual face-to-face meeting with first responders to discuss Ash Pond Emergency Action Plan
- First met April 2018
- Most recent meeting May 2021
- Today's meeting
 - Review Pond Layout and Operation
 -

Sherco CCR Ponds

Bottom Ash Pond

Bottom Ash Pond 2

Scrubber Solids Ponds 1&2 (Capped)

Scrubber Solids Pond 3

Mississippi River

Google Earth

2000 ft

N



CCR RULE REQUIREMENTS

- Federal Requirement for all CCR disposal facilities
 - Ponds and Landfills
- EPA updated and by Carlson McCain Engineers and placed in Xcel Energy CCR web-site
 - https://xcelenergy.com/environmental/responsible_operations/coal_ash_management
 - Web-site also contains other reports on the design, operation, permitting and inspections of the CCR facilities.
 - EAP is required for each Pond – not the Landfill
- Other State permits for the Ponds
 - MPCA NPDES – liner requirements and protection of groundwater
 - DNR – dam safety permit

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ASH PONDS

Bottom Ash

- Heavier Ash collects in Bottom of Boiler
- Larger sized material – rocky gravel to sand
- 150,000 cy per year from Units 1-3

Scrubber Solids (Fly Ash)

- Lighter Ash collected with SO₂ solids in air scrubber
- Finer, clay sized material
- 300,000 cy per year from Units 1&2

SCRUBBER SOLIDS PONDS 1&2

- Inactive closed ponds
 - 162 acres
 - No free-standing water
 - Barrier over top to keep precipitation out
 - Wells installed to pump out remaining pore water
 - Pond 1 pore water level is already below surrounding grade
 - Not CCR regulated

SCRUBBER SOLIDS POND 3

- 115 acre, active Pond
- Water level 35' above surrounding grade
- Mostly flowable fine particles
- Also used to store excess process water inventory
 - May need to build another Pond for additional water storage
- Ash filling from South to North
- Will be closed in phases
- North end will continue to operate years past 2030
 - Time to treat/discharge remaining water

Sherco CCR Ponds

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Scrubber Solids Ponds 1&2 (Capped)

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N



BOTTOM ASH PONDS 1&2

BAP (BAP 1)

- 18 acre inactive pond – not yet capped
- Stopped receiving ash and water Oct 31, 2020
 - Liner didn't meet current CCR minimum requirements
- Water level is currently at surrounding grade
- 2024 closure

BAP 2

- 18 acre pond active pond
- Started using Oct 2020
- Water level currently controlled 10 to 15' above surrounding grade
- 2031 closure

DIKE FAILURE SCENARIOS

Water Level Overtopping Dikes

- BAP2 has overflow pipe back to Recycle Basin
- Must keep water levels 3 ft below top of liner
 - All are well below maximum operating levels

Dike Structural Failure

- Dikes designed to meet Professional Engineer safety standards
- Interior dikes designed with backup containment by the primary dikes

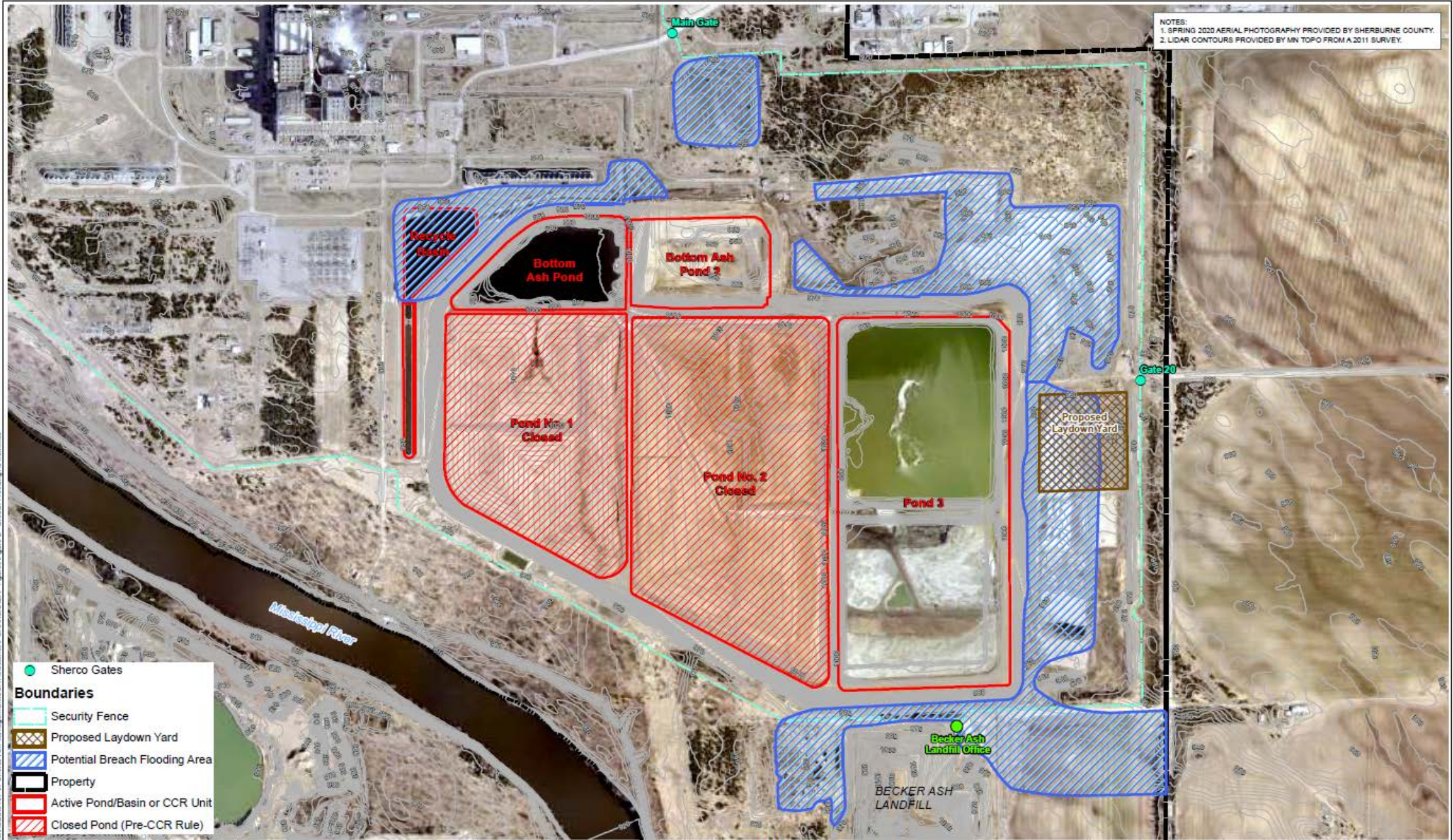
Inspections conducted weekly with an annual PE inspection report

- 2009 EPA inspection rating – Satisfactory

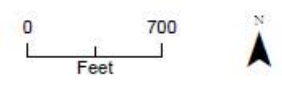
DIKE FAILURE IMPACTS

- Inundation area map
- Should be contained on-site within adjacent borrow pits
- Closest neighbor at risk is RDF Ash Landfill
- BAP2 failure could flood Recycle Basin/Holding Basin
 - Xcel Stop discharge to Mississippi by pumping water to Pond 3

NOTES:
 1. SPRING 2020 AERIAL PHOTOGRAPHY PROVIDED BY SHERBURNE COUNTY.
 2. LIDAR CONTOURS PROVIDED BY MN TOPO FROM A 2011 SURVEY.



- Sherco Gates
- Boundaries**
- - - Security Fence
- ▤ Proposed Laydown Yard
- ▨ Potential Breach Flooding Area
- ▭ Property
- ▭ Active Pond/Basin or CCR Unit
- ▨ Closed Pond (Pre-CCR Rule)



**EMERGENCY ACTION
 PLANNING**
Sherco BAP, BAP2 and Pond 3
 Sherburne County Generating Plant
 Becker, Minnesota

FIGURE
**POTENTIAL BREACH
 FLOODING AREAS**

DOCUMENT PATH: P:\PROJECTS\2024\24-01-Sherco BAP\24-01-Sherco BAP\24-01-Sherco BAP\Figures\Figure 2 - Potential Breach Flooding Areas.mxd

NOTIFICATION PROCEDURE

- If it appears that a significant dike breach could occur:
 - Xcel will contact Sherburne County Emergency Response Office via 911
 - 911 will dispatch emergency resources (e.g., Police and Fire) to Sherco
 - Xcel Staff will meet Emergency Responders at Main Gate and escort them to the site of the emergency.
 - Xcel Landfill and Yard crews will initiate repairs.
 - Additional earthwork contractor support called in as needed.
 - Sand and topsoil is available from the existing borrow pits and stockpiles at the Pond and also at the Sherco Landfill.

BOTTOM ASH POND



BOTTOM ASH POND 2



SCRUBBER SOLIDS POND 3

