

Annual Emergency Action Plan (EAP) Meeting for Coal Combustion Residual (CCR) Rule

Xcel Energy
Sherburne County Generating Plant
Becker, MN

April 2, 2018

Why is Meeting Necessary?

- CCR Rule [40 CFR 257.73(a)(3)(E)] requires:
“Include provisions for an annual face-to-face meeting or exercise between representatives of the owner or operator of the CCR unit and the local emergency responders.”

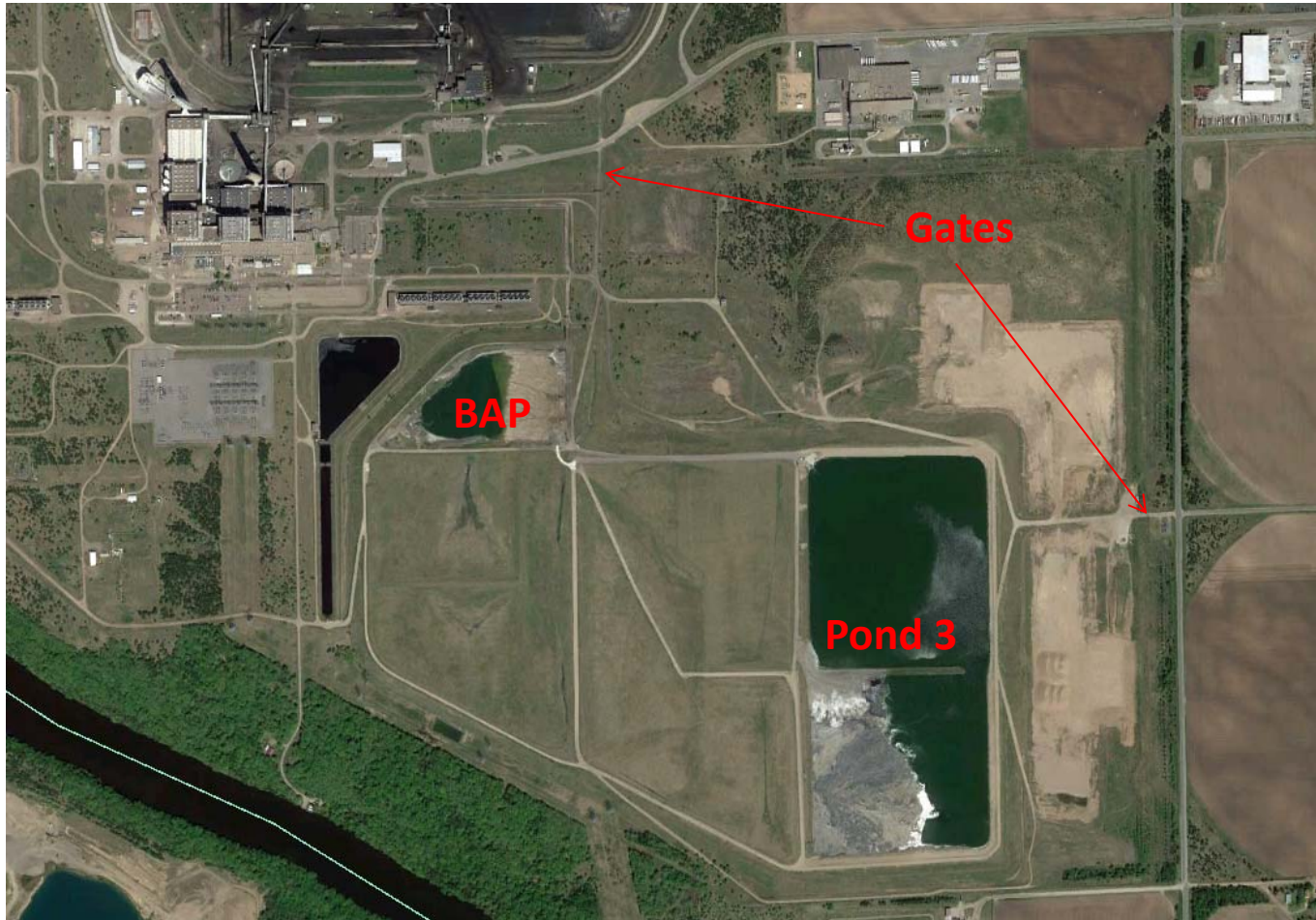
Sherco CCR Emergency Action Plans

- Written by Carlson McCain Engineers and placed in Xcel Energy's CCR web-site (April 2017).
 - *https://www.xcelenergy.com/environment/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.

Sherco CCR Ponds

- Bottom Ash Pond (1975)
- Scrubber Solids Pond 3 (2004)
- Both Ponds:
 - Were permitted by MPCA and MDNR at time of construction
 - Have bottom liners
 - Have an 8 ft (min) wide clay barrier in the dikes

Location of Bottom Ash Pond



Bottom Ash Pond

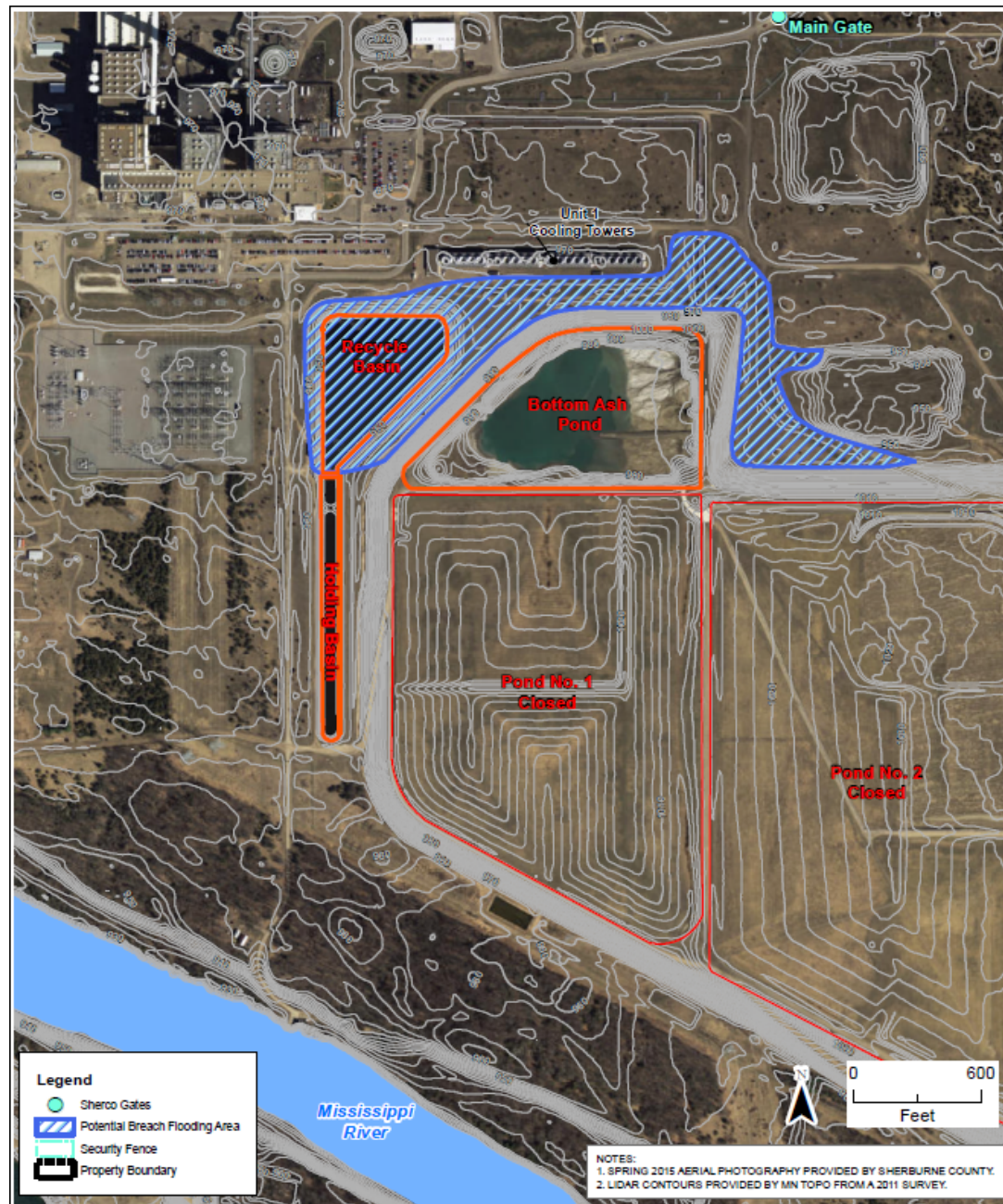
- 18 Acres
- 1 Million cubic yard capacity
- Ash varies from coarse (class 5) to fines
- Ash is excavated annually
 - Used on-site, primarily in Pond 3
 - Water level cycles annually, between 964 to 986 ft
 - Top of dike at 1000 ft
- Needed until shut down of all 3 units



BA Pond – East Dike looking West



BAP Possible Safety Emergencies

- Water Level Overtopping Dikes
 - Very unlikely because water level is controlled by stop logs – which we have to place by crane
 - Excess water drains to Recycle Basin
- Sudden Dike Failure
 - Not likely due to engineered design
 - 2009 EPA inspection rating - Satisfactory
- Ash Transport Pipe Leak - Eroding Dike
 - Would start slow, but could grow quickly



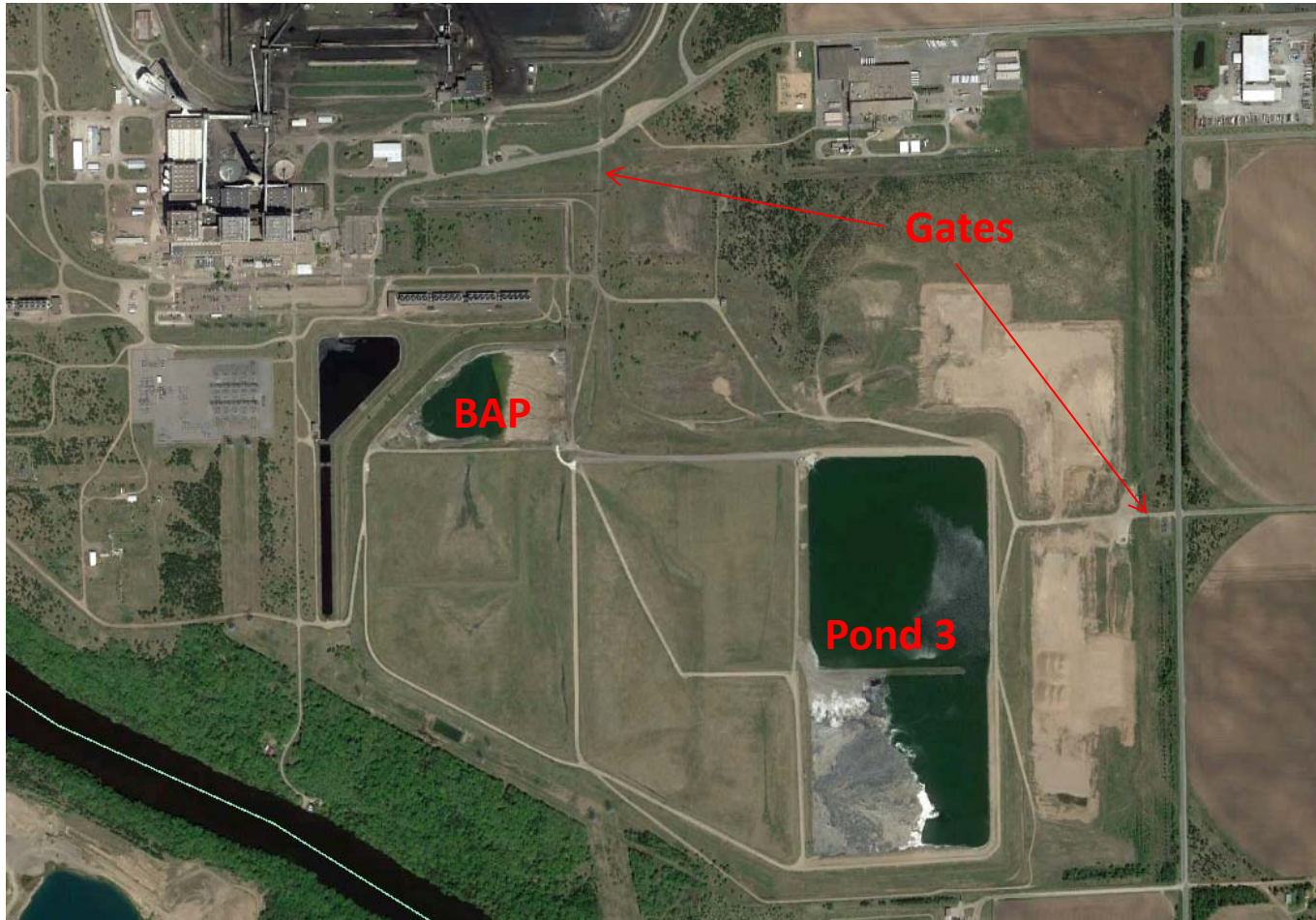
 ENVIRONMENTAL · ENGINEERING · SURVEYING	EMERGENCY ACTION PLAN BOTTOM ASH POND  Sherburne County Generating Plant Becker, Minnesota	FIGURE 2 POTENTIAL BREACH FLOODING AREAS
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4/3/2018

BAP EAP – Diike Failure Impacts

- N & W dike failure impacts
 - Water and ash would flow primarily N & W
 - Any flow to E would be captured in borrow pit
 - Would not expect any off-site impacts
 - Unit 1 Cooling Tower
 - Recycle & Holding Basin
 - Some water could reach River via the Holding Basin Discharge – if not immediately closed

Location of Pond 3



Pond 3

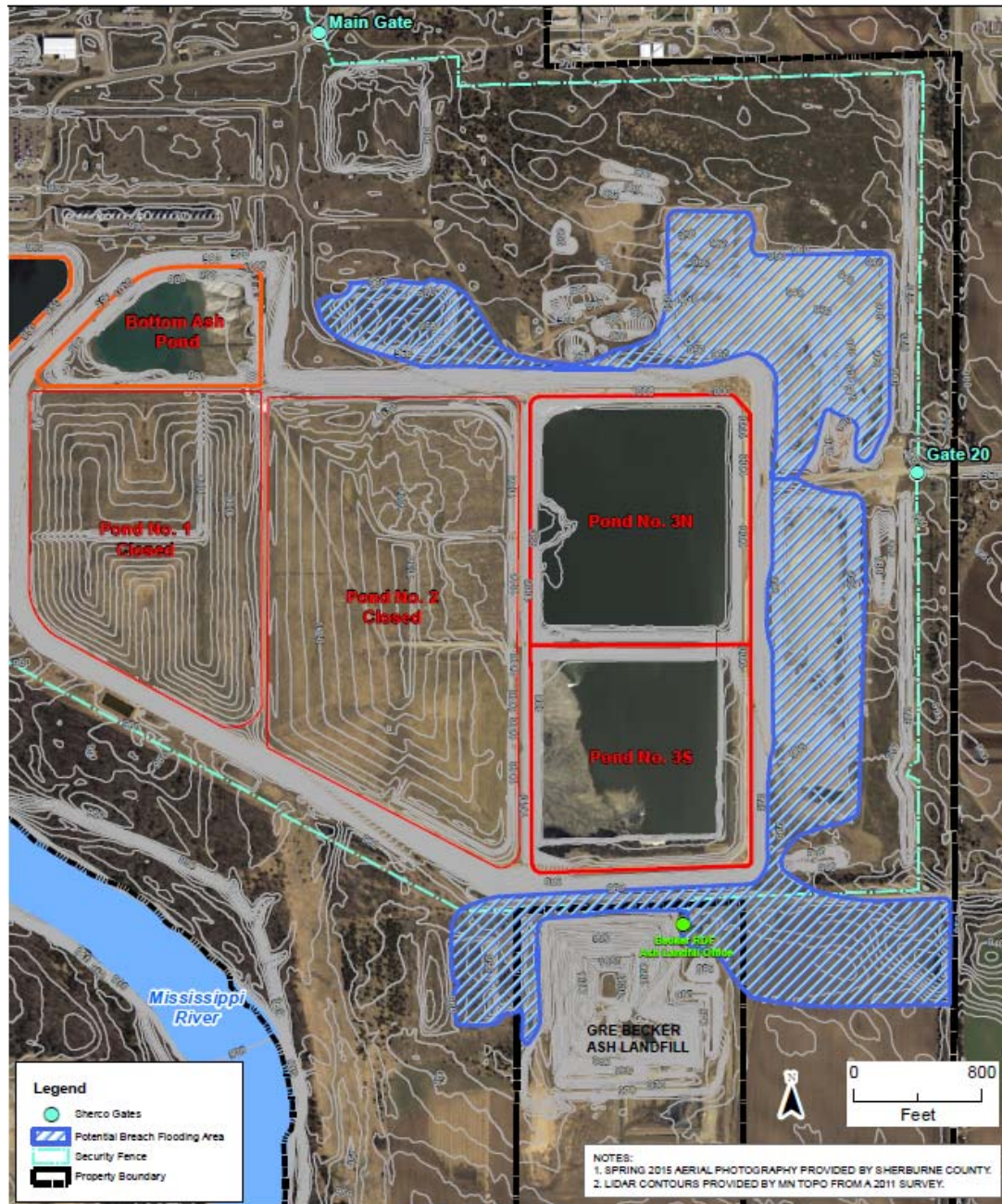
- 100 Acres
- 7 Million cubic yards capacity
- 5.5 Million cy of ash and water (currently)
- More fines and water than BA Pond
 - Water level gradually increases, currently at 997 ft
 - Dike top 1006 ft (will be raised to 1012 this year)
- Needed until shut down of all 3 units
- Fill from S to N - Phase I cap projected in 2022

Pond 3 - South Dike Looking North



Pond 3 Possible Safety Emergencies

- Water Level Overtopping Dikes
 - Not likely - excess water is pumped to Pond 3
 - Stop pumping or hold water on-site
 - Construct new pond capacity
- Sudden Dike Failure
 - Not likely due to engineered design
 - 2009 EPA inspection rating - Satisfactory
- Ash Transport Line Leak – Eroding Dike
 - Would start slow, but could grow quickly



Pond 3 EAP – Dike Failure Impacts

- Would impact a larger area than BAP failure
 - finer ash particles and more water
- S dike less likely to fail - as it fills with ash
- Flow from N & E dikes limited by:
 - Large borrow pits on N and E sides
 - Screening berm along Sherburne Ave
 - E/W center dike has overflow weir @ 972 ft
- GRE Landfill could be impacted

Notification Procedure

- Xcel Personnel will contact Sherburne County Emergency Response Office Dispatcher (911)
- 911 Dispatcher 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.

Follow-up

- Future annual “face-to-face” meetings or exercise with local emergency responders
- Questions?
 - [REDACTED]
 - [REDACTED]