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)
- 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
BAP EAP – Dike 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?