

US EPA ARCHIVE DOCUMENT

August 22, 2011

Mr. Stephen Hoffman
U.S. Environmental Protection Agency (5304P)
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: Response to July 26th letter related to the USEPA Final
Report for the "Coal Combustion Waste Impoundment Round 7 – Dam Assessment Report", dated
April 2011.

Dear Mr. Hoffman:

On July 26, 2011 Xcel Energy received the US Environmental Protection Agency (EPA) "Coal Combustion Waste Impoundment Round 7 – Dam Assessment Report." The EPA included a cover letter with the final report requesting Xcel Energy's acceptance of the final report's recommendations and our implementation plans/schedules of those recommendations.

Xcel Energy has carefully reviewed the findings and the recommendations detailed in the final report. Based on our review, we have responded to the applicability of the final report's recommendations and Xcel Energy's plans for implementation in Attachment 1.

We also reiterate that we understand the only reason the assessment report provides a Fair rating was due to the lack of direct engineering documentation to demonstrate the "Structural Integrity" or the "Hydrologic/Hydraulic Adequacy" of the four ponds. However, despite this lack of paper documentation, the embankments have performed satisfactorily through their life and under widely varied conditions, which empirically demonstrates that the pond embankment geometry and construction is adequate.

Please direct any questions concerning this submittal to my attention at the address listed below.

Sincerely,



Roger Clarke
Environmental Manager
Xcel Energy
414 Nicollet Mall MP7B
Minneapolis, MN 55401

Attachment 1: Implementation of USEPA Inspection Recommendations for
Northern States Power Company, Sherburne County Generating Plant

Attachment 1

EPA Request for Information regarding Implementation of EPA Inspection Recommendations August 22nd, 2011

Recommendations Regarding the Structural Stability

Maintain frequent inspections of the Pond 3 and Pond 4 embankments along Black Dog Lake. Operator inspections should occur monthly; during and after significant rain events; and, during and after the rise and fall of flood events on Black Dog Lake. After NSP-M reviewed the draft version of this report, NSP-M proposed to add a visual structural integrity component to their existing inspection program, to be performed by an engineer, which will be implemented biannually in the Spring and Fall of each year.

Northern States Power Co Response:

As indicated in Section 7.3, the plant regularly inspects the ponds as part of the NPDES Site Storm Water Permit. Although we believe these operator inspections would ordinarily be sufficient to identify any adverse conditions in a timely manner, we agree that supplementing this activity with periodic inspections by an engineer would provide additional assurance. NSP-M has implemented an inspection program which includes a monthly inspection completed by the plant's staff and a bi-annual inspection that is performed by an engineer that is competent in evaluating earthen water retention structures. We do not plan on conducting monthly inspections during the winter months due to the presence of snow which inhibits our ability discern any physical changes in the berms and due to the potential presence of ice. Consequently monthly inspections will not occur from December through March of each year.

Due to the high water in Black Dog Lake throughout the spring and summer, the first bi-annual inspection occurred on August 5, 2011. The monthly inspections will begin starting in September, 2011.

Recommendations Regarding the Hydrologic/Hydraulic Safety

Hydrologic and Hydraulic calculations of the four ponds were not provided. It is recommended that a hydrologic and hydraulic analysis be provided or performed to evaluate the capacity of the ponds' existing spillway system and its ability to handle internal drainage flows from the Plant site for a large localized storm event (i.e. 100-year storm). After NSP-M reviewed the draft version of this report, NSP-M proposes to perform a Hydrologic and Hydraulic analysis to demonstrate there is not an issue with the capacity of any of the existing ponds.

Northern States Power Co Response:

Each pond's watershed is small and effectively results in a raise in pool elevation commensurate with the design storm's precipitation amount. However, to demonstrate the sufficiency of the capacity of the pond to retain the 100 year storm event, NSP-M contracted Barr Engineering, Minneapolis, Minnesota to perform a Hydrologic and Hydraulic analysis to verify the ability of the ponds to retain and safely discharge storm water. Barr Engineering's conclusion is that with the 4 pond system, we have more than twice the volume needed to contain a 100 year 24 hour storm event , even when ponds are at the typical maximum pond discharge height of 701'.

Recommendations Regarding the Maintenance and Methods of Operation

It was noted during the field assessment that there was significant vegetation and tree growth along the outside slope of the earthen embankment between Black Dog Lake and Ponds 3 and 4 that made it difficult to observe its condition. It is recommended that the outside slope of this embankment be maintained in such a way that adequate inspections of the slope can be made in the future. In response to recommendations made in the draft version of this report, NSP-M proposes to remove all understory brush (vegetation with a trunk diameter less than 2 inches) to help facilitate the inspection of the embankment. NSP-M believes that removal of trees larger than 2 inches in diameter would compromise the existing embankment and should be retained unless conditions change to the point where they pose a potential risk. This condition will be monitored by the additional biannual structural integrity inspection proposed by NSP-M above.

Northern States Power Co Response:

The West slope embankment vegetation is a combination of large trees, with extensive root systems and understory brush, the latter having a trunk diameter of less than 2 inches. We agree that the understory brush makes inspection of the embankment along Black Dog Lake difficult. We also agree that the understory brush (vegetation with a trunk diameter less than 2 inches) can be removed without serious adverse impact and would substantially improve the ability to inspect that portion of the embankment. However, we believe removal of the large trees would be detrimental to the embankment and such trees should be retained unless conditions change to the point where they pose a potential risk. The biannual inspections of Item 1 above will monitor for this.

The plant intends to remove the brush and small trees that have a trunk diameter less than 2 inches along the Black Dog Lake side of ponds 3 and 4 once the flood waters have receded. It is expected that the clearing work will be completed this fall as the waters continue to recede.