UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

March 13, 2013

OFFICE OF
SOLID WASTE AND
EMERGENCY RESPONSE

VIA E-MAIL

Mr. Mark Thoma, Environmental Affairs
Otter Tail Power Company
215 South Cascade Street
Fergus Falls, MN 56538-0496

Re: Request for Action Plan regarding Otter Tail Power Company's – Coyote Power Station

Dear Mr. Thoma,

On May 19, 2011 the United States Environmental Protection Agency ("EPA") and its engineering contractors conducted a coal combustion residual (CCR) site assessment at the Otter Tail Power Company's – Coyote Power Station facility. The purpose of this visit was to assess the structural stability of the impoundments or other similar management units that contain "wet" handled CCRs. We thank you and your staff for your cooperation during the site visit. Subsequent to the site visit, EPA sent you a copy of the draft report evaluating the structural stability of the units at the Otter Tail Power Company's – Coyote Power Station facility and requested that you submit comments on the factual accuracy of the draft report to EPA. Your comments were considered in the preparation of the final report.

The final report for the Otter Tail Power Company's – Coyote Power Station facility can be accessed at the secured link below. The secured link will expire in 60 days.

Here is the link: http://www.yousendit.com/download/UVJqV281Y3l0TWxqQTlVag

This report includes a specific condition rating for each CCR management unit and recommendations and actions that our engineering contractors believe should be undertaken to ensure the stability of the CCR impoundment(s) located at the Otter Tail Power Company's – Coyote Power Station facility. These recommendations are listed in Enclosure 1.

Since these recommendations relate to actions which could affect the structural stability of the CCR management unit(s) and, therefore, protection of human health and the environment, EPA believes their implementation should receive the highest priority. Therefore, we request that you inform us on how you intend to address each of the recommendations found in the final report. Your response should include specific plans and schedules for implementing each of the recommendations. If you will not implement a recommendation, please provide a rationale. Please provide a response to this request by **April 15, 2013**. Please send your response to:

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

If you are using overnight or hand delivery mail, please use the following address:

Mr. Stephen Hoffman
U.S. Environmental Protection Agency
Two Potomac Yard
2733 S. Crystal Drive
5th Floor, N-5838
Arlington, VA 22202-2733

You may also provide a response by e-mail to hoffman.stephen@epa.gov, dufficy.craig@epa.gov, kelly.patrickm@epa.gov and englander.jana@epa.gov.

You may assert a business confidentiality claim covering all or part of the information requested, in the manner described by 40 C. F. R. Part 2, Subpart B. Information covered by such a claim will be disclosed by EPA only to the extent and only by means of the procedures set forth in 40 C.F.R. Part 2, Subpart B. If no such claim accompanies the information when EPA receives it, the information may be made available to the public by EPA without further notice to you. If you wish EPA to treat any of your response as "confidential" you must so advise EPA when you submit your response.

EPA will be closely monitoring your progress in implementing the recommendations from these reports and could decide to take additional action if the circumstances warrant.

You should be aware that EPA will be posting the report for this facility on the Agency website shortly.

Given that the site visit related solely to structural stability of the management units, this report and its conclusions in no way relate to compliance with RCRA, CWA, or any other environmental law and are not intended to convey any position related to statutory or regulatory compliance.

Please be advised that providing false, fictitious, or fraudulent statements of representation may subject you to criminal penalties under 18 U.S.C. § 1001.

If you have any questions concerning this matter, please contact Mr. Hoffman in the Office of Resource Conservation and Recovery at (703) 308-8413. Thank you for your continued efforts to ensure protection of human health and the environment.

Sincerely,
/Suzanne Rudzinski/, Director
Office of Resource Conservation and Recovery

Enclosure

Enclosure 1

Otter Tail Power Company's – Coyote Power Station Recommendations (from the final assessment report)

CONCLUSIONS

Structural Stability of the Impoundments

Kleinfelder reviewed the slope stability analysis performed by Bechtel as part of the Soils Design and Geology Report. We conclude the analysis calculated a reasonable factor of safety against embankment failure of the Nelsen Pond. Results of the analysis are discussed in Section 3.5 of the final report.

Safety of the Impoundments Including Maintenance and Methods of Operation

We understand that the impoundments have a history of safe performance. However, the future performance of these impoundments will depend on a variety of factors that may change over time, including changes in groundwater levels, maintenance and monitoring procedures, changes in embankment integrity, etc. Nelsen Pond constitutes a more significant hazard because it has an embankment at its southeast (outlet) end. Both the Sluice Pond and Ash Pond are incised and thus pose little threat of an unintended pond release. In light of this situation, we have noted several items as follows that present some concern in this regard:

• No stability analyses for the Nelsen Pond embankment section have been located, and plant staff could not confirm that those analyses have been completed.
• No seismic loading analyses have been located for review for Nelsen Pond.
• Numerous animal burrows were observed on the embankment portion of Nelsen Pond. All of the burrows were small – typically less than a 2-inch diameter opening. Most of the burrow openings were located on the crest or higher up on the land side embankment. This condition should be remedied with a more aggressive animal control program, as about two-thirds of Nelsen Pond is constructed of an earth and clay embankment, with no plastic liner on the inside of the pool to provide a secondary barrier.
• The outlet culvert from Nelsen Pond into the Sluice Pond could not be inspected. There is currently no evidence of distress within the outlet pipe, but it should be internally inspected while the pond is not in active use.
• The Sluice Pond outlet drop structure was not observed to have a trash rack. The current outlet configuration appeared to function as intended; however, it is an open hydraulic structure with

exposed rebar that presents a fall hazard. A trashrack should better ensure employee safety and inhibit debris blockage.
• An EAP is not currently in place at the site to mitigate damage in the event of an emergency related to breach failure of the Nelsen Pond embankment adjacent to the Sluice Pond. While a failure of the embankment should not present a probable loss of life situation, a short, simple document should be prepared to formally outline the procedures to undertake in the event of such a failure. We do not envision that any type of detailed dambreak analyses would be necessary. The EAP should be added to the O&M Manual, and should also serve as a stand-alone document.
• An O&M Manual for pond operations was not provided for review. If that document exists, the EAP should be added. If an O&M Manual cannot be located, one should be prepared that includes pond operations, the EAP, and discussion of a more robust animal control program.

Adequacy of Program for Monitoring Performance of the Impoundments
The present monitoring program primarily involves visual inspections by plant personnel and by OTPC technical staff on occasion. These visual inspections seem to be adequate to address issues such as surface erosion and general condition of the impoundments. However, a more detailed monitoring program is recommended to be established to quantify various important factors associated with embankment stability and integrity and outlet pipe functionality for Nelsen Pond. Those factors include, but are not limited to monitoring for seepage, monitoring condition of any minor scarps observed, noting effectiveness of animal control measures, documenting any fluctuations of groundwater levels, and noting pipe discharge capacity when the Nelsen Pond is in operation.

RECOMMENDATIONS
PRIORITY 1 RECOMMENDATIONS
1. **Perform a stability analysis on the Nelsen Pond embankment by August 31, 2013.** The stability analysis should evaluate a conservative loading condition such as the pond full to the crest with wet CCW dredge material, and demonstrate that a factor of safety equal to or greater than 1.5 exists. The analysis should include an instrumentation plan recommendation, or lack thereof, based on the results of the analysis.
2. **Perform a Hydraulics and Hydrology study for Nelsen Pond by August 31, 2013.** An analysis should be performed that compares the impoundment freeboard with the Probable Maximum Precipitation (PMP) to determine potential for overtopping.
3. **Perform a seismic loading analysis on the Nelsen Pond embankment by August 31, 2013.** The seismic analysis should evaluate a loading condition in accordance with the EPA 1995 RCRA Subtitle D seismic design guidelines, and demonstrate that a factor of safety equal to or greater than 1.0 exists.
4. **Prepare an Emergency Action Plan (EAP) for the facility by August 31, 2013.** An EAP should be prepared for Nelsen Pond. The EAP could be a very short and straightforward document basically confirming that a full pond release would be adequately contained on OTPC or the adjacent mine property, and outlines procedures to undertake in the event of an unplanned release, including phone calls to interested and potentially impacted parties.
5. **Control animal burrowing on the downstream slopes of Nelsen Pond. Develop and implement an animal control program by August 31, 2013.** Refer to FEMA publication 473,

Technical Manual for Dam Owners, Impacts of Animals on Earthen Dams. That manual is available on the FEMA website.

PRIORITY 2 RECOMMENDATIONS

1. **Perform video assessments of Nelsen Pond outlet piping by August 31, 2013.** This would include only the outlet piping from Nelsen Pond. The video survey should determine the condition of both the 12-inch diameter ductile iron dewatering pipe (including the perforated PVC portion) and the 12-inch ductile iron spillway pipe.
2. **Maintain a log of maintenance and other activities at the impoundments and supporting facilities by August 31, 2013.** This would include weekly or monthly walk around inspection of the ponds, with an emphasis on Nelsen Pond when it is in active service. Other documentation may exist that catalogs routine maintenance and repair activities, and if so, those should be collected and bound in a notebook in a secure location if that practice is not being followed currently. We believe that this log will provide continuity during periods of staff change.
3. **Update the Operation and Maintenance (O&M) Manual for the impoundments and the facility by August 31, 2013.** The O&M manual should either be located and updated, or a new one prepared that includes O&M procedures, the EAP (discussed above), and a section on animal control.