

US EPA ARCHIVE DOCUMENT



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

March 13, 2013

OFFICE OF
SOLID WASTE AND
EMERGENCY RESPONSE

VIA E-MAIL

Ms. Marie Joe Roth, Environmental Affairs
Great River Energy
12300 Elm Creek Blvd
Maple Grove, MN 55369-4718

Re: Request for Action Plan regarding Great River Energy's –Stanton Power Station

Dear Ms. Roth,

On May 18, 2011 the United States Environmental Protection Agency ("EPA") and its engineering contractors conducted a coal combustion residual (CCR) site assessment at the Great River Energy's –Stanton 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 Great River Energy's –Stanton 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 Great River Energy's –Stanton 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/UVJqV281Y3I0Ni9MYnRVag>

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 Great River Energy's –Stanton 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
Great River Energy's –Stanton Power Station Recommendations (from the final assessment report)

CONCLUSIONS

Structural Stability

All three impoundment (North Ash Pond, South Ash Pond, and Center Drainage Pond) embankments were evaluated by Golder for static and seismic stability. All perimeter and interior berms were evaluated for dual scenarios assuming the water level at the crest of the embankment and with and without the geomembrane pond liners. The minimum computed factor of safety (FOS) of 1.9 exceeds the minimum desired FOS of 1.5 for permanent structures. The minimum dynamic FOS for any of the seismic loading conditions was 2.1, which exceeds the required minimum value of 1.0 necessary to meet criteria. As stated in Section 3.5, the dynamic factor of safety calculated for the saturated upstream berm with no water was erroneously reported and the calculated FOS of 2.5 appears to be calculated from an unsaturated scenario based on Golder's 2011 Stability Evaluation of Bottom Ash Surface Impoundment Report. The dynamic FOS should be calculated with the saturated berm case to ensure an adequate FOS.

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. In light of this situation, we have noted several items as follows that present some concern in this regard:

- Several animal burrows were observed. Some of the burrows were quite large – up to a 10-inch diameter opening. This condition should be remedied with a more aggressive animal control program, as the entire pond complex is constructed of earth and clay embankment. While the ponds do have a plastic liner on the inside of the pools, that component could be torn or chewed through.
- Several areas of minor surface sloughs and scarps were observed on the lower east embankment. One small erosion scarp occurred in September 2010 due to a small leak in an overhead slurry line resulting from a loose pipe joint. That incident was quickly detected and corrected by plant personnel. These areas should be repaired with an engineered fill and revegetated to prevent further erosion. Kleinfelder understands that GRE documented this issue as an "Action Item." The outlet culvert from the Center Drainage Pond was submerged and could not be observed. There is currently no evidence of distress within the outlet pipe, but it should be internally inspected if the plant is taken offline for a sufficient amount of time to allow dewatering of the pond and outlet piping.
- 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 impoundment(s). While a failure of an embankment would not constitute a life threatening 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 is currently in place for the site. The O&M document should be updated to include 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 Great River Energy and outside consultant 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. Those

factors include, but are not limited to monitoring for seepage, monitoring condition of minor scarps observed, noting effectiveness of animal control measures, and documenting any fluctuations of groundwater levels.

RECOMMENDATIONS

PRIORITY 1 RECOMMENDATIONS

1. **Prepare an Emergency Action Plan (EAP) for the facility by July 1, 2013.** An EAP should be prepared for the Ash Pond Facilities. The EAP could be a very short and straightforward document that basically documents that sufficient volume exists on GRE property to contain releases, and outlines procedures to undertake in the event of an unplanned release, including spill mitigation procedures and phone calls to key plant personnel and any interested and potentially impacted parties.
2. **Control burrowing animals on the downstream slopes. Develop and implement an animal control program by July 1, 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.
3. **Perform a hydraulics and hydrology study for the facility by July 1, 2013.** An analysis should be performed *that* compares the impoundment freeboard with the Probable Maximum Precipitation (PMP) to determine potential for overtopping.

PRIORITY 2 RECOMMENDATIONS

1. **Repair embankment scarps and sloughs by July 1, 2013.** Minor surface scarps or sloughs were noted at the toe of the north outer embankment at the North Ash Pond and on the slope of the east outer embankment of all three ponds. These minor scarps should be repaired and revegetated to prevent progressive failures.
2. **Maintain a log of maintenance and other activities at the impoundments and supporting facilities by July 1, 2013.** We have seen examples of monthly walk around inspection reports of the ponds. 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 July 1, 2013.** The O&M manual should include the EAP (discussed above) and a section on animal control.