

US EPA ARCHIVE DOCUMENT



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

June 27, 2011

OFFICE OF
SOLID WASTE AND
EMERGENCY RESPONSE

VIA E-MAIL AND FEDERAL EXPRESS

Mr. Michael Menne, Vice President Environmental Services
Ameren Energy
One Ameren Plaza
1901 Chouteau Avenue
P.O. Box 66149
St Louis, Mo. 63166-6149

Dear Mr. Menne,

On August 12, 2010 the United States Environmental Protection Agency ("EPA") and its engineering contractors conducted a coal combustion residual (CCR) site assessment at the Coffeen 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 Coffeen 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 Coffeen facility is enclosed. 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 Coffeen facility. These recommendations are listed in Enclosure 2.

Since these recommendations relate to actions which could affect the structural stability of the CCR management units 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 explain why. Please provide a response to this request by July 27, 2011. 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

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

Enclosures

Priority 1 Recommendation: Priority 1 Recommendations involve the correction of severe deficiencies where action is required to ensure the structural safety and operational integrity of a facility or that may threaten the safety of the impoundment.

Priority 2 Recommendation: Priority 2 Recommendations are where action is needed or required to prevent or reduce further damage or impaired operation of the facility and/or improve or enhance the O&M of the facility, that do not appear to threaten the safety of the impoundment.

Based on observations during the site assessment, it is recommended that the following actions be taken at the Coffeen Power Generating Station.

6.2 Priority 1 Recommendations

- 1. Prepare an Emergency Action Plan (EAP) for the Recycle Pond and Gypsum Reclaim Pond by 08/01/2011.** An EAP should be prepared for the Recycle Pond and Gypsum Reclaim Pond as well as any other pertinent features related to the impoundments.
- 2. Perform a hydrologic and hydraulic study by 08/01/2011.** A hydrology and hydraulic (H&H) study should be performed for the Recycle Pond to determine if it is capable of impounding the appropriate inflow design flood without overtopping. At a minimum, documentation required for this evaluation will include a current topographic survey of the site and surrounding drainage basin, basin characteristics (surface runoff/infiltration condition), and sufficient hydrologic data to determine the design storm event. The capacity of the CMP outlet should also be determined. A complete set of calculations, assumptions, and methods for the Gypsum Reclaim Pond's hydrologic and hydraulic analysis should also be provided for review.
- 3. Establish seepage and ground water monitoring program by 08/01/2011.** As discussed in Section, 3.5, ponded water was observed at various locations along the downstream embankment of the Recycle Pond. The presence of water at the downstream toe of the embankment raises questions regarding the integrity and the stability of the embankment. Therefore, a detailed monitoring program should be established to quantify various important factors, including the source of the water (seepage or surface runoff) and, if seepage is the source of the ponded water, seepage quantities through the embankment, the amount of sediments carried by the seepage water, and the fluctuation of ground water levels.
- 4. Perform embankment and structure stability analyses by 08/01/2011.** The slopes of the Recycle Pond were steep, appearing to be 1.5H:1V in some cases, and their stability is unknown. Due to the lack of documented engineering design analysis, new stability analyses of both impoundments should be performed, or recently performed stability analyses should be provided for review. The analyses should incorporate seepage monitoring data and include evaluation of the embankments and the structures under seismic loading scenarios. According to Ameren, this task is currently being completed by another consultant retained by Ameren Energy. The results of this evaluation and the stability evaluation for the Gypsum Reclaim Pond should be provided to the EPA for review.
- 5. Perform video assessments of CMP outlet on the Recycle Pond by 08/01/2011.** A video inspection should be performed on this outlet to assess

the condition of the conduit and its ability to pass the appropriate design event.

6. Control vegetation on the upstream and downstream slopes by 08/01/2011.

Refer to Federal Emergency Management Agency's (FEMA) Manual 534, "Impact of Plants on Earthen Impoundments", for guidance on vegetation removal. This manual is available on the FEMA website.

7. Repair sloughs on South and East embankments of Recycle Pond by 08/01/2011. Minor sloughing on the south and east embankments should be repaired with engineered fill and sod cover re-established.

6.3 Priority 2 Recommendations

1. Repair erosion of embankment by 08/01/2011. Minor surface erosion was noted at both the Recycle Pond and Gypsum Reclaim Pond. Areas where erosion has occurred should be filled in and re-dressed with appropriate fill in order to prevent erosion from cutting further into the embankments.

2. Maintain a log of maintenance and other activities at the impoundments and supporting facilities. We believe that this log will provide continuity during periods of staff change.

3. Develop an Operation and Maintenance (O&M) manual for the Recycle Pond by 08/01/2011. The O&M manual should include at least the following three key elements:

- Procedures needed for operation and maintenance of the impoundment during typical operating conditions
- Procedures for monitoring performance of the impoundment, including visible changes (i.e. surface erosion, settlement and sloughing), internal embankment changes (i.e. erosion due to uncontrolled seepage), and fluctuations in groundwater level
- Emergency Action Plan (also part of Priority 1 Recommendations)