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

April 20, 2011

OFFICE OF
SOLID WASTE AND
EMERGENCY RESPONSE

VIA E-MAIL AND FEDERAL EXPRESS

Mr. Thomas Mason, General Manager
Lower Colorado River Authority
P.O. Box 220
Austin, Texas 78767-0220

Dear Mr. Mason:

On June 23, 2010 the United States Environmental Protection Agency ("EPA") and its engineering contractors conducted a coal combustion residual (CCR) site assessment at the Fayette 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 Fayette 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 Fayette facility is enclosed. This report includes a specific rating or 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 Fayette 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 May 20, 2011. Please send your response to:

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

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

Mr. Stephen Hoffman
US Environmental Protection Agency
Two Potomac Yard
2733 S. Crystal Drive
5th Floor, N-237
Arlington, VA 22202-2733

You may also provide a response by e-mail to hoffman.stephen@epa.gov

This request has been approved by the Office of Management and Budget under EPA ICR Number 2350.01.

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.

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 ongoing efforts to ensure protection of human health and the environment.

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

Enclosures

4.3 Maintaining and Controlling Vegetation Growth

Tall vegetation, brush, and trees up to 30 inches in diameter obscured visual observations on the east embankment exterior slope and at the toe of the north embankment at the Reclaim Pond. Some small trees and brush were observed at the toe of the CADP south embankment. CDM recommends that vegetation be cut on a regular basis to ensure that adequate visual observations can be made by LCRA personnel during routine inspections.

Huisache trees up to 30 inches in diameter were observed on the embankments. CDM recommends the huisache trees (including the root ball) be removed and filled with compacted fill under the supervision of a qualified dam engineer. CDM also recommends continued maintenance and brush removal.

4.4 Erosion Protection and Repair

Tractor ruts were observed at various locations along the crest of the Reclaim Pond. On the interior slopes there were some areas with little or no riprap armor. The east embankment interior slope of the Reclaim Pond had an eroded area at the abandoned pipe outlet from concentrated water flow. The spillway approach channel had some riprap missing and was overgrown. Erosion features should be filled in with compacted material and otherwise stabilized. CDM recommends on-going maintenance to reduce erosion from run-off including minor grading to divert surface runoff, establishment of vegetative cover, or other measures. CDM also recommends replacing riprap in areas with little or no armor.

Multiple rodent holes were observed on the exterior slopes of the CADP east embankment. Multiple surface depressions (that are likely collapsed rodent holes) were also observed. Animal control measures should be implemented to reduce embankment disturbance. All affected areas should be backfilled with compacted fill, graded to match the surrounding topography, and seeded with appropriate noninvasive grassy vegetation.

4.5 Impoundment Hydraulic and Stability Analysis

LCRA did not provide CDM with a current hydraulic analysis of the CADP demonstrating the ability of the impoundments to safely pass or store the applicable design storm, which appears to be the full PMF event based on Bechtel (1976). However, LCRA has submitted a closure plan to TCEQ and the impoundment is planned for closure. It is our understanding that the cap for the impoundment is being designed to handle run-off for a 24-hour, 100-year rainfall event.
LCRA did not provide CDM with a hydraulic analysis of the Reclaim Pond demonstrating the ability of the impoundments to store safely pass or store the applicable design storm, which appears to be the 50% PMF event. However, a preliminary evaluation performed by CDM suggests there is enough storage capacity at the current operating pool levels to safely store precipitation from the full PMF. CDM recommends LCRA perform a detailed study to confirm this conclusion and update the study if operating levels of the pond change in the future.

Based on CDMs review of available information for the impoundments, the following analyses are recommended to be performed to confirm that the embankments are adequately stable under the loading conditions outlined in Section 3.

Coal Ash Disposal Pond

- Evaluate the stability of the embankment under seismic conditions, including an evaluation of liquefaction potential of stored fines, at proposed water levels after closure.

Reclaim Pond

- Evaluate the stability of the north and east embankment under various appropriate loading conditions. Representative cross-sections of the embankment should be evaluated.
- Evaluate the stability of the embankments under normal pool and maximum surcharge pool (flood) conditions.
- Evaluate the stability of the interior and exterior slopes under seismic loading, including an evaluation of the liquefaction potential of stored fines and steady state seepage loading conditions.
- Perform a liquefaction potential analysis.
- Evaluate the stability of the interior slope under rapid drawdown loading conditions. While a rapid drawdown is not a scenario that has a high probability of occurrence, it should be demonstrated that this condition meets the industry recommended factor of safety in the event that a catastrophic condition develops whereby a rapid drawdown situation occurs.

4.6 Instrumentation

Water levels in the impoundments are recorded twice daily by LCRA personnel. Plant personnel also record water levels in the monitoring wells on a quarterly basis. CDM recommends that an updated monitoring well network plan be prepared to identify the locations of all functioning wells so that they can be utilized to monitor future water levels.

Four monitoring wells are reportedly located on the crest of the CADP east embankment. CDM recommends the monitoring wells be located in the field and returned to service or that they be properly abandoned.

4.7 Seepage Control and Closure Dewatering

Minor amounts of seepage were observed at the CADP, including the seep that is currently being contained. LCRA's current seepage containment system does not appear to be a viable long-term solution once the impoundment is closed. An alternative method of collecting and managing the seepage should be evaluated as part of the closure plans.

In addition, CDM recommends LCRA investigate the hydraulic connection between the impoundment and the Cedar Creek Dam as part of the closure design in order to evaluate potential impacts resulting from changes in groundwater levels and pore water pressures. Where the impoundment is built on the downstream slope of the dam, dewatering activities performed to stabilize the CCW and construct the cap may impact the phreatic level within the embankment of the dam. Changes to the phreatic level in the Cedar Creek Dam may result in potentially unstable slopes, settlement, or other undesirable consequences. Dewatering of CCW during closure activities should be staged to prevent excess pore pressure build-up and conducted in a manner to prevent significant seepage gradients, which could affect the stability of the Cedar Creek Dam. LCRA should also evaluate the anticipated long-term seepage from the Cedar Creek Dam into the impoundment and its impact on closure.

4.8 Inspection Recommendations

Based on the information reviewed by CDM, it appears LCRA has adequate inspection practices for the CADP. Inspections are performed routinely and documented via daily status reports. Detailed inspections are documented and are completed for the CADP on a quarterly basis. Annual inspections are completed by an engineer. LCRA should also perform inspections in a similar manner for the Reclaim Pond. It is recommended that the quarterly inspection records be retained at the facility for a minimum of three (3) years.

4.9 Operations

There is no formal operation and maintenance manual for the impoundments. CDM recommends that written operation and maintenance guidelines be developed outlining procedures for the maintenance of the embankments and operational procedures for the impoundments and appurtenant structures.

There is no formal emergency action plan (EAP) for the impoundments. Both impoundments have a low hazard classification. However, failure or misoperation of the impoundments could result in a condition that needs to be managed from an environmental and property damage standpoint. Detailed emergency action procedures should be developed to identify roles and responsibilities and to facilitate internal and external communication necessary to manage an impoundment failure. The procedures should include coordination with Cedar Creek Dam operations in event of an unintended release or breach of the impoundments, since failure of the Coal Ash Disposal Pond or the Coal Pile Run-off Pond could have adverse effects on the dam.

4.10 Closure Recommendations

The closure plan indicates proposed grades for the new cap will range from 1% to 4.45%. TCEQ TG No. 3 recommends final covers are graded with sufficient slopes to provide positive drainage, typically between 3% and 5%. Common practice is to create a minimum of a 2% slope to allow for surface water conveyance and prevent pooling. In addition, a 1% grade is difficult to construct and differential settlement in the CCW could result in low areas and subsequent pooling if such a small grade is used. CDM recommends that LCRA evaluate the slope of the cap and potential future settlement to ensure that the cap functions as intended.