

US EPA ARCHIVE DOCUMENT



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

December 14, 2009

OFFICE OF
SOLID WASTE AND
EMERGENCY RESPONSE

VIA E-MAIL AND FEDERAL EXPRESS

Mr. William Beck
Plant Manager
Salt River Project
Mail station CGS 600
P.O. Box 1018
St Johns, Arizona 85936

Dear Mr. Beck,

On September 9-10, 2009 the United States Environmental Protection Agency ("EPA") and its engineering contractors conducted a coal combustion residual (CCR) site assessment at the Coronado 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 Coronado 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 Coronado facility is enclosed. This report includes a specific 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 Coronado 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 January 15, 2010. 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 or 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,
/Matt Hale/, Director
Office of Resource Conservation and Recovery

Enclosures

Enclosure 2
Coronado Recommendations

The following recommendations and remedial measures generally describe the recommended approach to address current deficiencies at the dam. Prior to undertaking recommended maintenance, repairs, or remedial measures, the applicability of environmental permits needs to be determined for activities that may occur within resource areas under the jurisdiction of the appropriate regulatory agencies.

3.2 Studies and Analyses

GZA recommends the following studies and analyses:

1. Confirm and update the hydrologic and hydraulic analysis for the dam using updated methodology and the as-built configuration of the dam. The analysis should consider flooding up to the Probable Maximum Flood (PMF), and should verify the maximum operating pool for the Pond with respect to the regulatory Spillway Design Flood (SDF), which is currently defined as the ½ PMF using U.S Army Corps of Engineers criteria. The analysis should also consider the construction of a fixed weir in the spillway channel and the armoring of the spillway side slopes.
2. Evaluate the surface crack on top of the left slope of the emergency spillway channel (along the dam axis by surface settlement monument #10). Monitor the surface crack for signs of additional movement or enlargement.
3. Conduct a camera survey of the interior of the left and right toe drain seepage collection pipes to evaluate the condition of the pipe section alignment, joints, and any potential blockage.
4. Investigate operability of the six embankment piezometers. If the piezometers are found to be operable, then make baseline readings and implement an annual monitoring program. If the piezometers are found to be inoperable, then attempt to make repairs. If repairs are not possible, GZA recommends decommissioning and abandoning the piezometers and installing new open tube piezometers in the embankment.
5. Monitor toe drain seepage clarity at the toe drain manhole (rather than sump), including visual observations of water clarity and monthly measurements of turbidity. A contingency plan should also be prepared if high flow rates or increased turbidity is observed in the seepage water.
6. Evaluate the impacts of the new flue gas desulfurization system (under construction) on SO₂ slurry discharge rates to the Evaporation Pond, including an evaluation of the longterm filling rate of the Evaporation Pond and the potential for future Stage 2 dam construction.
7. Collect/develop documentation of the “As-Built” configuration of the two settling pond embankments and appurtenant structures.
8. Investigate the potential impacts of an embankment failure of the two settling pond embankments, including an evaluation of the resulting flood wave impact to the Evaporation Pond Dam.

3.3 Recurrent Operation & Maintenance Recommendations

GZA recommends the following operation and maintenance level activities:

1. Develop a formal, written Operations and Maintenance Plan. The Plan should combine ADEQ APP, ADWR, and other regulatory requirements with routine operations and

maintenance procedures and record-keeping activities for the Dam.

2. Make monthly measurements of Pond water surface elevation and wastewater/slurry flow to Pond.
3. If operable, take annual readings at the embankment piezometers.
4. Monitor left toe drain discharge channel and downstream secondary containment area for presence of wet, soggy soil or unusual vegetative growth.
5. Clear vegetation from emergency spillway approach channel area, and remove sediment as it accumulates.
6. Repair/replace staff gage markers so that Pond water surface elevation can be easily read from the upstream slope of the dam. A distinct marking should be provided at the maximum operating level.
7. Investigate operability of the meteorological instruments on top of the dam. Remove instruments if inoperable.

3.4 Repair Recommendations

GZA recommends the following minor repairs which may improve the overall condition of the dam, but do not alter the current design of the dam. The recommendations may require design by a professional engineer and construction contractor experienced in dam construction.

1. Repair erosion gullies along the left and right downstream abutment groins, the left upstream abutment groin, and near the downstream toe of the dam at the secondary containment structure. Repair eroded upstream slope at the left abutment and reset any displaced riprap stones. Implement erosion control measures (riprap lining, check dams, vegetative barriers, etc.) to prevent further channel erosion and headcutting.
2. Remove roots from left toe drain manhole and repair any damage from shrub growth and/or root penetration.
3. Repair/replace leaking PVC piping connecting left toe drain manhole to sump. Minimizing leakage from this pipe will help eliminate a potential source of saturated soil in downstream secondary containment area.

3.5 Remedial Modifications Recommendations

GZA recommends the following major repairs which may improve the overall condition of the dam, and may alter the current design of the dam. The recommendations may require design by a professional engineer and construction contractor experienced in dam construction.

1. In conjunction with the results of the updated hydrologic and hydraulic analyses, repair the emergency spillway side slopes along the length of the channel. Provide grading and/or other means to direct surface runoff away from the channel slopes, especially along the axis of the dam. Repairs must address the area along the dam axis where a longitudinal crack at the top of the left spillway side slope was observed. Consider improvements, as needed, to stabilize the spillway side slopes and invert control elevation