

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

Mr. Kent Murphy and Ms. Michelle Bimson, Environmental and Safety Affairs
UGI Development Company
390 Route 11
Hunlock Creek, PA 18621-0224

Re: Request for Action Plan regarding UGI Development Company's – Hunlock Power Station

Dear Mr. Murphy and Ms. Bimson,

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 UGI Development Company's – Hunlock 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 UGI Development Company's – Hunlock 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 UGI Development Company's – Hunlock 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/UVJqV28wNXZsUi92bk1UQw>

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 UGI Development Company's – Hunlock 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

UGI Development Company's – Hunlock Power Station Recommendations (from the final assessment report)

CONCLUSIONS**The East Basin was found to have the following deficiencies:**

1. Rutting and depressions along the crest of the embankment primarily from construction vehicles.
2. Trees generally 3 to 4 inches in diameter, brush and overgrown vegetation at the downstream slope.
3. Animal burrows observed at the downstream slope of the south embankment.
4. Portion of exposed earth observed at the south east end of the downstream slope.
5. Large diameter trees (greater than 18 inches) at the toe of downstream slope.
6. No riprap or slope protection at the downstream toe and adjacent to the Susquehanna River.
7. Decant outflow structure appears to be near completely silted in.
8. No emergency/auxiliary spillway.
9. Sloughing of downstream riprap slope protection at decant structure outlet pipe.
10. No Geotechnical computations with respect to the embankments' stability were made available to GZA for review.
11. No Hydrologic/Hydraulic computations with respect to the impoundments' ability to safely pass the Spillway Design Flood (SDF) were made available to GZA for review.

The West Basin was found to have the following deficiencies:

1. Rutting and depressions along the crest of the embankment from construction vehicles.
2. Heavy tree cover up to 18 inches in diameter, brush and overgrown vegetation on the downstream slope of the north embankment.
3. Exposed earth and limited to no grass cover at the downstream slope.
4. Downstream embankment slopes appeared on average to be over-steep, approximately 1.5H:1V (locally steeper).
5. Sloughing and erosion along the upstream slope, near the waterline, at the west end of the impoundment.
6. No emergency/auxiliary spillway.
7. Minor erosion at the downstream slope in various locations.
8. No riprap or erosion protection at the decant structure outlet pipe.
9. No Geotechnical computations with respect to the embankments' stability were made available to GZA for review.
10. No Hydrologic/Hydraulic computations with respect to the impoundments' ability to safely pass the Spillway Design Flood (SDF) were made available to GZA for review.

RECOMMENDATIONS

The following recommendations and remedial measures generally describe the recommended approach to address current deficiencies. 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.

Studies and Analyses**GZA recommends the following studies and analyses:**

1. Perform a detailed hydrologic and hydraulic study using current methodology to evaluate the impoundment's ability to safely pass the SDF at the East and West Basins.

2. Perform a geotechnical stability analysis of the East and West Basin embankments under all applicable loading conditions, including earthquake-induced loading.
3. Perform a slope stability and seepage analysis to assess the factor of safety against slope and piping failure, at the East and West Basins.
4. Consider development of an Emergency Action Plan to establish protocols to be undertaken and warning notifications to be implemented in the event of an emergency concerning the operational integrity of the CCW impoundments.

Recurrent Operation & Maintenance Recommendations

GZA recommends the following operation and maintenance level activities:

1. Fill ruts and animal burrows.
2. Record and maintain monthly measurements of the pond water surface elevation and observation wells and establish response action protocols for various elevation levels as appropriate.
3. Monitor and repair sloughing at the upstream slope at the West Basin and the East Basin decant structure outlet pipe.
4. Clear inappropriate woody vegetation, including trees and brush and maintain grass cover on the downstream slope and toe area approximately 15 feet beyond. The USACE recommends vegetation be kept less than 12 inches in height on embankments.
5. Monitor decant outflow structures and clear silt or debris which may block or impede outflow.
6. Remove stoplogs from the weir intake at each decant outlet structure so that the normal water level in the impoundment cannot rise above elevation 531.8 feet.

Minor Repair Recommendations

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

1. Remove trees, stumps, and their associated root systems from the embankments.
2. Reset any displaced riprap at the East Basin.
3. Provide riprap or erosion protection at the West Basin outfall.

Remedial Measures Recommendations

1. In conjunction with the results of the updated hydrologic and hydraulic analyses, make provisions for an emergency overflow spillway.
2. In conjunction with the results of the slope and seepage analyses, make provisions to address over-steep slopes as/if necessary.

It is GZA's opinion that the slopes appeared to be stable based on observed conditions at the time of assessment, and no imminent signs of distress were observed. It should be noted that during the over the 12 months time since the filing our Draft Report and receipt of comments from the EPA thereon, it is GZA's understanding that decommissioning of the Basins has been ongoing. According to UGI, a Draft Closure Plan was submitted for approval by UGI to PADEP Division of Waste Management in June 2011, which included the removal of CCW and decommissioning of the East and West Basins. Expedient implementation of the CCW removal activities (approximately 288,000 tons) as defined by the scope of work in the Draft Closure Plan began on May 2, 2011. Based on their current engineering estimate and anticipated schedule, UGI anticipates removal of the remaining 112,000 tons of CCW will be completed by May 2013 and the impoundments officially decommissioned shortly thereafter.

These ongoing events may therefore make moot most, if not all, of the comments and recommendations in this report. However, in keeping with good engineering practice, it is our opinion that it would be prudent for UGI to at least implement the above recommended

Recurrent Operations and Maintenance activities to the extent practicable until permanent closure status is obtained for the two Basins. This includes at a minimum that all stop logs be removed from the decant outlet structures so as to limit maximum pool elevation to the top of weir elevation of 531.8 feet. We acknowledge that implementation of the above Studies and Analyses, Minor Repair Recommendations and Remedial Measures Recommendations are no longer critical given the nature of and current extent of actions being undertaken to decommission the impoundments coupled with the fact that failure of the impoundments, in our opinion, is unlikely to result in the loss of life and losses (economic or environmental) would be principally limited to the owner's property.

It must be noted however that full implementation of all of our recommendations should be undertaken if the time to obtain permanent closure status for the basins (in accordance with applicable engineering and regulatory requirements) is extended beyond UGI's expected two year time frame.