

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. Rick Dericx, Senior Director-Operations Environmental Compliance
Dynegy Midwest Generation
604 Pierce Blvd.
O'Fallon, Illinois 62269

Re: Request for Action Plan regarding Dynegy Midwest Generation LLC's – Hennepin Power Station

Dear Mr. Dericx,

On May 23, 2011 the United States Environmental Protection Agency ("EPA") and its engineering contractors conducted a coal combustion residual (CCR) site assessment at the Dynegy Midwest Generation LLC's – Hennepin 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 Dynegy Midwest Generation LLC's – Hennepin 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 Dynegy Midwest Generation LLC's – Hennepin 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/UVJqV282V3J0d0dVQU1UQw>

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 Dynegy Midwest Generation LLC's – Hennepin 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

**Dynegy Midwest Generation LLC's – Hennepin Power Station Recommendations
(from the final assessment report)**

CONCLUSIONS

In general, the EAPS impoundment was found to have the following deficiencies:

1. Trees were present along the upstream and downstream slopes;
2. Minor potholes and rutting along the crest gravel access road; and,
3. The stability analysis completed indicates that the 1979 embankments that support the underlying ash along the Illinois River have a calculated factor of safety less than the generally accepted value and assumptions in the analysis about subsurface conditions should be verified.

In general, the AEAPS impoundments were found to have the following deficiencies:

1. Minor potholes and rutting along the crest gravel access road;
2. Trees were present along the downstream slope of the northern embankment; and,
3. The stability analysis completed indicates that the 1979 embankments that support the underlying ash along the Illinois River have a calculated factor of safety less than the generally accepted value.

In general, the WAPS impoundment was found to have the following deficiencies:

1. Thick vegetation and trees along the downstream slopes;
2. Minor potholes and rutting along the crest gravel access road;
3. Erosion along the downstream slope of the northern embankment;
4. No seepage and/or stability analysis has been performed for the WAPS; and
5. No hydraulic/hydrologic analysis has been performed to confirm adequate freeboard and decant capacity at the design storm event.

RECOMMENDATIONS

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

Studies and Analyses

GZA recommends that HPS/Dynegy conduct the following studies and analysis:

1. Conduct an analysis of the hydraulic/hydrologic condition of the WAPS to establish the rise in water level that occurs during the 100-year, 24-hour rain event to confirm that adequate freeboard is maintained and adequate decant and spillway capacity is available. The loading conditions established during the design storm event should be used in the evaluation of the seepage and stability evaluation of the embankments.
2. Perform a complete structural and seepage stability analysis of the WAPS impoundment including static, seismic and liquefaction loading.
3. Generate a remedial design to address the inadequate factor of safety along the northern embankment of the EAPS and AEAPS adjacent to the Illinois River.

Recurrent Operation & Maintenance Recommendations

GZA recommends the following operation and maintenance level activities:

1. Increased mowing of the grasses on the embankments to facilitate assessments and reduce the risk of burrowing animals;
2. Repair wave action erosion on the downstream slope of the WAPS;

- 3. Repair the potholes present in the gravel crest access roads. Grade the road to provide better drainage and reduce future potholing; and,
- 4. Clear trees and other deep rooted vegetation from the slopes and crests of the embankments.

Repair Recommendations

GZA recommends the following repairs to address observed deficiencies that may affect the stability of the embankments. The recommendations may require design by a professional engineer and construction contractor experienced in impoundment construction.

- 1. Pending the results of the hydraulic/hydrologic analysis, modify the design or operation of the WAPS to provide adequate capacity.
- 2. Pending the results of the complete seepage and stability analysis for the WAPS, modify the design or operation of the impoundments to provide conditions that result in embankments that meet the generally accepted factors of safety.
- 3. Based on the geotechnical results for the EAPS and AEAPS embankments, which produced inadequate minimum factors of safety, develop design modifications for those embankments along the Illinois River. These improvements are to result in the embankments meeting generally accepted factors of safety and protect the slope from future erosion.