

US EPA ARCHIVE DOCUMENT



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

April 14, 2014

OFFICE OF  
SOLID WASTE AND  
EMERGENCY RESPONSE

VIA E-MAIL

Mr. Walter Stone  
NRG Corporation  
1000 Main Street  
Houston, Texas 77002

Re: Request for Action Plan regarding NRG Power Midwest LP- Elrama Power Station

Dear Mr. Stone,

On September 26, 2012 the United States Environmental Protection Agency ("EPA") and its engineering contractors conducted a coal combustion residual (CCR) site assessment at the NRG Power Midwest LP- Elrama 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 NRG Power Midwest LP- Elrama 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 NRG Power Midwest LP- Elrama Power Station facility is attached.

This report includes a specific condition rating for the CCR management units and recommendations and actions that our engineering contractors believe should be undertaken to ensure the stability of the CCR impoundments located at the NRG Power Midwest LP- Elrama 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 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 provide a rationale. Please provide a response to this request by **May 15, 2014**. Please send your response to:

Mr. Stephen Hoffman  
U.S. Environmental Protection Agency (5304P)  
1200 Pennsylvania Avenue, NW

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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  
5<sup>th</sup> Floor, N-5838  
Arlington, VA 22202-2733

You may also provide a response by e-mail to [hoffman.stephen@epa.gov](mailto:hoffman.stephen@epa.gov), [dufficy.craig@epa.gov](mailto:dufficy.craig@epa.gov), [kelly.patrickm@epa.gov](mailto:kelly.patrickm@epa.gov) and [englander.jana@epa.gov](mailto: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,  
/Barnes Johnson /, Director  
Office of Resource Conservation and Recovery

Enclosures

**NRG Power Midwest LP- Elrama Power Station Recommendations (from the final assessment report)**

**CONCLUSIONS**

**Bottom Ash Settling Ponds SPD-1 and SPD-2**

Based on the ratings defined in the USEPA Task Order Performance Work Statement (Satisfactory, Fair, Poor and Unsatisfactory), the information reviewed and the visual assessment, the overall condition of Bottom Ash Settling Ponds SPD-1 and SPD-2 is considered to be POOR. Acceptable performance is expected; however, some deficiencies exist that require repair and/or additional studies or investigations.

While the visual condition of this management unit is fair, this rating must be given since no stability analyses are on file. Stability analysis requirements should be verified prior to conducting required investigations.

Minor deficiencies include the following:

- Erosion on the northwest corner inboard slope of Pond SPD-2.
- Erosion on the southern and eastern embankments outboard slopes of Pond SPD-1.
- Ponding along the toe of slope, especially at the southeast corner of Pond SPD-1.
- Ponding along the crest roadway.
- Erosion along the dividing dike slopes and narrowing of the crest.
- Erosion under the effluent weir boxes.
- Areas along the dividing dike, inboard and outboard slopes that either lacked adequate vegetation or contained undesirable vegetation such as tall grasses and shrubs.

Though no hydrologic & hydraulic analyses have been conducted to evaluate stormwater inflow into Bottom Ash Settling Ponds SPD-1 and SPD-2, the impounding structures are diked on all sides except for the southwest corner. Available volume provided by the normal operating freeboard of 3.3 feet is sufficient to contain a 24- hour 100-year storm or a PMP (Probable Maximum Precipitation) event without overtopping the ponds.

O'Brien & Gere understands that NRG deactivated the Elrama Power Station in October 2012. No CCW has reportedly been sluiced to the impoundments since October 2012. The CCW impoundments no longer being used should be inspected regularly until they are formally closed. Weekly inspections with additional inspections after rainfall events should be made as described below in the Recommendations section. The Elrama plant's staff maintains design and construction documents and inspection reports in a well organized manner for future reference. These documents should be maintained until and following impoundment closures.

**RECOMMENDATIONS**

Based on the findings of our visual assessment and review of the available records for Bottom Ash Settling Ponds SPD-1 and SPD-2, O'Brien & Gere recommends that additional maintenance of the embankments be performed to correct the erosion, vegetation, drainage, and other miscellaneous deficiencies cited above until such time as the impoundments are closed or all CCW is removed.

**URGENT ACTION ITEMS**

None of the recommendations are considered to be urgent, since the issues noted above do not appear to threaten the structural integrity of the dikes in the near term as long as the impoundments continue to be monitored regularly and adequately maintained in a drained condition.

**LONG TERM IMPROVEMENT**

The deficient conditions observed during the assessment do not require immediate attention, but should be implemented in the near future as part of a regular inspection and maintenance plan until impoundment closure. The recommended maintenance/improvement actions are provided below:

**Bottom Ash Settling Ponds SPD-1 and SPD-2**

- Inspect and maintain operable low level outlet structures to maintain a drained condition in the ponds.
- Repair severely eroded areas on the inboard and outboard slopes.
- Fill low areas along the outboard toe of slope and maintain cut vegetation along outboard slopes so they can be inspected for seepage.
- Establish better surface drainage along the outboard toe to eliminate or reduce stormwater ponding.
- A geotechnical investigation and slope stability analysis should be performed, potentially in conjunction with a decommissioning study and closure plan if embankments remain impounding CCW. The analysis should include static and seismic loading conditions along with liquefaction potential analysis.

Mowing equipment that may cause ruts or rills on the embankments should not be used. String trimmers or specialized arm-mounted slope mowers are a preferred option for cutting embankment vegetation.

**MONITORING AND FUTURE INSPECTION**

O'Brien & Gere recommends continued internal inspections by personnel trained in dam safety and periodic inspections by independent licensed dam safety engineers on at least a biennial basis until the ponds are formally closed. Regular visual inspections of the entire impoundment perimeter should be conducted weekly and after major rainfall events, to check for deficiencies such as seeps, cracks, holes, and freeboard. Inspections should continue to be performed with the goal of identifying, documenting, and repairing deficiencies early so that they do not develop into more serious problems. The utility should document all internal inspections in a report to serve as a record of conditions observed and the recommended action items.

**TIME FRAME FOR COMPLETION OF REPAIRS/IMPROVEMENTS**

Based on the findings of this assessment, O'Brien & Gere believes that NRG should implement and follow a post-operational inspection plan. It is recommended that a geotechnical investigation and slope stability analyses be completed in conjunction with a closure plan if embankments remain impounding CCW.