

US EPA ARCHIVE DOCUMENT



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

March 18, 2014

OFFICE OF  
SOLID WASTE AND  
EMERGENCY RESPONSE

VIA E-MAIL

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

Re: Request for Action Plan regarding GenOn Energy- Keystone Generating Station

Dear Mr. Stone,

On September 13, 2012 the United States Environmental Protection Agency ("EPA") and its engineering contractors conducted a coal combustion residual (CCR) site assessment at the GenOn Energy- Keystone Generating 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 unit at the GenOn Energy- Keystone Generating 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 GenOn Energy- Keystone Generating 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 GenOn Energy- Keystone Generating 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 **April 18, 2014**. Please send your response to:

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

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**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

**GenOn Energy- Keystone Generating Station Recommendations (from the final assessment report)**

**CONCLUSIONS**

Conclusions are based on visual observations from a one-day site visit on September 13, 2012, and review of technical documentation provided by GenOn Energy.

**Conclusions Regarding the Structural Soundness of the Management Unit(s)**

The Ash Filter Ponds dike, Thermal Pond dam, and the associated outlet structures appear to be structurally sound, based on a November 2013 seismic analysis performed by Geosyntec for the utility (see Appendix A – Doc 11 of the final report). The report shows that under both static and seismic conditions the Ash Filter Pond dikes and the Thermal Pond dam have factors of safety that exceed minimum requirements. These findings are consistent with the review of the engineering data provided by GenOn's technical staff and Dewberry engineers' observations during the site visit, as well as conservative simple calculations to check stability of the Ash Filter Ponds dike provided in the Draft report.

**Conclusions Regarding the Hydrologic/Hydraulic Safety of the Management Unit(s)**

The Ash Filter Ponds and the Thermal Pond, which do not receive off-site runoff, have adequate hydrologic/hydraulic safety against design rainfall events as calculated by Geosyntec and presented in the November 2013 report (see Appendix A – Doc 11 of the final report). This conclusion confirms conclusions made by Dewberry in the Draft report based on a review of furnished technical information.

**Conclusions Regarding the Adequacy of Supporting Technical Documentation**

The furnished supporting technical documentation for the Thermal Pond is adequate. The furnished project documentation for the Ash Filter Ponds is adequate

**Conclusions Regarding the Description of the Management Unit(s)**

Overall, the descriptions of the subject management units provided by GenOn are generally accurate representations of what Dewberry observed in the field. We note there is a discrepancy in the downstream slope geometry both observed during the site visit and used in the Geosyntec slope stability analyses versus furnished design documents. This discrepancy does not affect the conclusions that the units have adequate factors of safety since the steeper slope values were used in the analysis.

**Conclusions Regarding the Field Observations**

Dewberry staff was provided access to all areas in the vicinity of the subject management units required to conduct a thorough field observation. The visible parts of the impounding embankments and outlet structures were observed to have no signs of overstress, significant settlement, shear failure, or other signs of instability although visual observations were hampered by the presence of thick vegetation in some areas, particularly on the outside slope of the highest dike embankment at the Ash Filter Ponds. The embankments appeared structurally sound. There were no apparent indications of unsafe conditions or conditions needing emergency remedial action. Based on the field observations, minor maintenance items are recommended.

**Conclusions Regarding the Adequacy of Maintenance and Methods of Operation**

The current maintenance and methods of operation for both the Ash Filter Ponds and the Thermal Pond appear to be adequate. There was no evidence of significant embankment repairs or prior releases observed during the field inspection.

**Conclusions Regarding the Adequacy of the Surveillance and Monitoring Program**

The surveillance program for the Ash Filter Ponds was formalized in 2013 and is adequate. The Thermal Pond surveillance program was in place at the time of the site visit and is adequate. The Geosyntec study (see Appendix A – Doc 11 of the final report) found that the seeps near the Thermal Pond are not due to liner failure and do not require further monitoring.

There is no dam performance monitoring instrumentation in place at either the Ash Filter Ponds or the Thermal Pond. No problem or suspect condition, such as excessive settlement, significant flowing seepage, shear failure, or displacement was observed in the field that might be reason for

installation of instrumentation for long-term performance monitoring.

Therefore, there is no need for performance monitoring instrumentation at this time.

### **Classification Regarding Suitability for Continued Safe and Reliable Operation**

Both the Ash Filter Ponds and the Thermal Pond are rated SATISFACTORY for continued safe and reliable operation. No existing or potential management unit safety deficiencies are recognized. Acceptable performance is expected under all applicable loading conditions (static, hydrologic, seismic) in accordance with the applicable criteria.

## **RECOMMENDATIONS**

### **Recommendations Regarding the Structural Stability**

No recommendations for remedial work to ensure structural stability appear warranted at this time.

### **Recommendations Regarding the Hydrologic/Hydraulic Safety**

No recommendations for remedial work to ensure hydrologic/hydraulic safety appear warranted at this time.

### **Recommendations Regarding the Supporting Technical Documentation**

No recommendations for additional supporting technical documentation are warranted at this time.

### **Recommendations Regarding the Field Observations**

#### **Ash Filter Ponds and Thermal Pond**

Based on the field observations, some minor maintenance recommendations are provided as follows:

- 1) Control burrowing animals (e.g. ground hogs) and appropriately fill-in burrows in the embankments around the ponds.
- 2) Schedule and complete mowing of the embankments just before the quarterly inspections that are conducted during the growing season. According to a November 2013 e-mail from GenOn an adequate inspection and mowing program recently has been established (see Appendix A – Docs 12 and 13 of the final report).

### **Recommendations Regarding the Maintenance and Methods of Operation**

No recommendations appear warranted at this time for maintenance procedures and methods of operation.

### **Recommendations Regarding the Surveillance and Monitoring Program**

#### **Ash Filter Ponds**

There are no recommendations regarding surveillance of the Ash Filter Ponds now that they are included in the plant's formal surveillance program.

#### **Thermal Pond**

There are no recommendations for additional monitoring of the Thermal Pond since the seeps were adequately investigated in 2013 (see Appendix A – Doc 11 of the final report) and the source was not due to liner failure.

### **Recommendations Regarding Continued Safe and Reliable Operation**

No additional recommendations appear warranted at this time.

Implementation of the above recommendations will help ensure continued safe and reliable operation of the Keystone CCR management units and upgraded rating.