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

June 2, 2014

OFFICE OF
SOLID WASTE AND
EMERGENCY RESPONSE

VIA E-MAIL

Mr. Robert Hunzinger, General Manager
Gainesville Regional Utilities
301 SE 4th Avenue
Gainesville, Florida 32601

Re: Request for Action Plan regarding Gainesville Regional Utilities – Deerhaven Power Plant

Dear Mr. Hunzinger,

On August 28 and 29, 2012 the United States Environmental Protection Agency ("EPA") and its engineering contractors conducted a coal combustion residual (CCR) site assessment at the Gainesville Regional Utilities – Deerhaven Power Plant 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 Gainesville Regional Utilities – Deerhaven Power Plant 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 Gainesville Regional Utilities – Deerhaven Power Plant 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 Gainesville Regional Utilities – Deerhaven Power Plant 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 **July 2, 2014**. 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 this report 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

Enclosure 1

Gainesville Regional Utilities – Deerhaven Power Plant Recommendations (from the final assessment report)

CONCLUSIONS

The following conclusions are based on our visual observations during site assessments on August 28 and 29, 2012 and a review of the limited documentation provided by GRU.

Conclusions Regarding Structural Soundness of the CCW impoundments

CCW impoundments appear to be structurally sound based on visual observations of the structural element components (i.e. inlet structures, earth embankments, and outlet structures). No documentation to evaluate and assess structural stability and soundness of the impoundments was provided.

Conclusions Regarding the Hydrologic/Hydraulic Safety of CCW impoundments

Supporting technical documentation was not provided regarding the hydrologic/hydraulic safety for the CCW impoundments as recommended in Federal Emergency Management Agency (FEMA) guidelines. FEMA guidelines address management practices and procedures but do not attempt to establish technical standards. They do, however, provide the most complete and authoritative statement available of the desired management practices for promoting dam safety and the welfare of the public. The guidelines encourage strict safety standards in the practices and procedures employed by federal agencies or required of dam owners regulated by the federal agencies. Current practice in the design of dams is to use the Inflow Design Flood (IDF), based on a percent of the Probable Maximum Precipitation (PMP) for a 6-hour storm event over a 10 square-mile area in the vicinity of the site. The percent of the PMP used to calculate the IDF is based on the evaluated hazard potential of the dam and reservoir such that the spillways and outlet works can be designed to safely accommodate the flood flow without risking the loss of the dam or endangering downstream areas.

FEMA guidelines recommend that dams with a High Hazard rating be designed to accommodate 100% PMP; dams with a Significant Hazard rating be designed to accommodate 50% PMP; and dams with a Low Hazard rating be designed to accommodate a storm with an average return frequency of no less than 100 years.

Visual examination of the impoundment earth structures did not show evidence of previous overtopping of the embankments.

Conclusions Regarding Adequacy of Supporting Technical Documentation

Supporting data and documentation have not been provided. Liquefaction potential analyses for embankment foundations have not been performed, and original record drawings available for the Process Water Ponds are incomplete. Therefore, supporting documentation was not sufficient with regard to a complete analysis of impoundment safety.

Conclusions Regarding Description of the CCW impoundments

The description of the CCW impoundments provided by a GRU representative was generally consistent with the visual observations by CDM Smith during our site assessment. However, only four (4) sheets of the record drawings were provided, making it difficult to assess potential discrepancies against the intended design of the CCW impoundments. Drawings provided are included in Appendix A-1 of the final report.

Conclusions Regarding Field Observations

During visual observations and site assessments, minor signs of areas of erosion, erosion rills, and scarps were observed on the exterior and interior slopes of the embankments. No apparent unsafe conditions or conditions in need of immediate remedial action were observed.

Conclusions Regarding Adequacy of Maintenance and Methods of Operation

Current maintenance and operation procedures appear to be adequate. There was no evidence of previous spills and release of impounded coal ash slurry outside of the impoundments.

Conclusions Regarding Adequacy of Surveillance and Monitoring Program

The impoundments at the Deerhaven plant function as a zero-discharge facility; wastewater is treated on-site and is reused in the plant process. Therefore, there is no National Pollutant

Discharge Elimination System (NPDES) Permit from the Florida Department of Environmental Protection (FDEP) that requires a continuing surveillance and monitoring program. Saturated areas at the toe of slope of the embankments were observed, indicating potential seepage may be occurring. The GRU representative indicated several monitoring wells are installed around the site to monitor for water levels and water quality. One monitoring well was observed southeast of the Pump Back Cell #1. At CDM's request, GRU provided the 2012 and 2013 quarterly Groundwater Monitoring Reports for thirteen on-site wells. The quarterly reports submitted provided data for a single day each quarter.

While the data provided include a groundwater elevation reading, this limited information is insufficient for monitoring and/or evaluating potential seepage conditions.

The limited amount of data available documenting the maintenance and operation procedures for the management unit is not sufficient to allow CDM Smith to make an evaluation of the adequacy of the maintenance and operations for the impoundment. The lack of regular documentation for current maintenance and methods of operation of this management unit makes these practices inadequate.

Conclusions Regarding Suitability for Continued Safe and Reliable Operation

The primary embankments do not show evidence of unsafe conditions requiring immediate remedial efforts, although maintenance to correct deficiencies noted above is required.

RECOMMENDATIONS

Based on CDM Smith visual assessment of the Process Water Ponds and a review of documentation provided by GRU, the following recommendations are provided.

Recommendations Regarding the Hydrologic/Hydraulic Safety

It is recommended that a qualified professional engineer assist GRU in evaluating the hydrologic and hydraulic capacity of the CCW impoundments to withstand design storm events, without overtopping.

Recommendations Regarding the Technical Documentation for Structural Stability

A complete set of record drawings and/or as-built drawings should be developed or made readily available for future reference. It is recommended that a qualified professional engineer assist GRU in the evaluation of the Process Water Ponds embankment stability, including liquefaction analyses.

Recommendations Regarding Field Observations

Erosion rills and scarps were observed on the interior and exterior slopes of the Ash Cell #1 and Ash Cell #2 embankments, primarily on the northwest embankment. These areas should be repaired with compacted structural fill and regraded to match adjacent existing contours. After slope restoration, it is recommended that the exposed surface of the interior embankment slopes be stabilized with riprap consisting of a heterogeneous mixture of irregular-shaped rocks placed over the compacted fill and a geotextile fabric to match existing riprap stabilization.

Animal burrows were observed on the southeast and northwest embankments exterior slopes. Although not seen in other areas, high vegetation cover on the embankments may have hidden other animal burrows. CDM Smith recommends documenting areas disturbed by animal activity, removing the animals and backfilling the burrows with compacted structural fill to protect the integrity of the embankments. Vegetation should be maintained at a height that potential animal burrows can be readily observed.

Recommendations Regarding Surveillance and Monitoring Program

CDM Smith recommends an instrumentation monitoring program to monitor potential areas of seepage along the southeast, southwest, and northwest embankments of Ash Cell #1 and Ash Cell #2 and Pump Back Cell #1.

Recommendations Regarding Continued Safe and Reliable Operation

Inspections should be made following periods of heavy and/or prolonged rainfall, and the occurrence of these events should be documented. Inspection records should be retained at the facility for a minimum of three years.

Major repairs and slope restoration should be designed by a registered professional engineer experienced with earthen dam design.
None of the conditions observed requires immediate attention or remediation. However, the above recommendations should be implemented during a reasonable time frame to maintain continued safe and reliable operation of the CCW impoundments.