

US EPA ARCHIVE DOCUMENT



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

January 7, 2011

OFFICE OF
SOLID WASTE AND
EMERGENCY RESPONSE

VIA E-MAIL AND FEDERAL EXPRESS

Ms. Pamela Faggert
Vice President & Chief Environmental Officer
Dominion Resources services
5000 Dominion Blvd.,
Glen Allen, Va. 23060

Dear Mr. Faggert,

On April 28, 2010 the United States Environmental Protection Agency ("EPA") and its engineering contractors conducted a coal combustion residual (CCR) site assessment at the Possum Point Power Station. 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 Possum Point Power Station 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 Possum Point Power Station is enclosed. This report includes a specific 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 Possum Point Power Station. These recommendations are listed in Enclosure 2.

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 explain why. Please provide a response to this request by February 7, 2011. Please send your response to:

Mr. Stephen Hoffman
US 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
US Environmental Protection Agency
Two Potomac Yard
2733 S. Crystal Drive
5th Floor, N-237
Arlington, VA 22202-2733

You may also provide a response by e-mail to hoffman.stephen@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 ongoing efforts to ensure protection of human health and the environment.

Sincerely,
/Suzanne Rudzinski/, Director
Office of Resource Conservation and Recovery

Enclosures

Enclosure 2
Possum Point Station Recommendations

6.1. IMMEDIATE ACTION ITEMS

Ash Pond E

As noted, the hydraulic and stability analyses do not accurately reflect the current reservoir levels and operations or the configuration of and the phreatic levels within the embankment. The following additional investigations and analyses are recommended:

- A new survey should be performed to establish the embankment crest profile and the most critical cross sections of the dam. This survey should include bathymetric information to verify the configuration of the upstream slope, due to the rather steep slope of 1.5H:1V indicated in the records.
- New borings and piezometers should be installed to investigate the composition/condition of the foundation sand layer and to identify the current phreatic surface in the embankment, particularly in the vicinity of the saturated slope area along the western section of the embankment and at the critical cross-section(s).
- An updated hydraulic analysis should be performed using the current reservoir operating levels and conditions (no inflow from Ash Pond D) and the $\frac{1}{2}$ -PMF as required for "Significant Hazard" dams in Virginia. As an alternative or in addition, an incremental damage analysis could be performed to investigate the potential for reducing the Spillway Design Flood (possibly as low as the 100-year flood) as allowed by the new VDCR dam safety regulations.
- Based on the surveyed crest elevations and cross-sections of the dam, measured phreatic water levels in the piezometers, and current normal and maximum operating pools, an updated slope stability analysis should be performed for the embankment. This analysis should include all applicable loading conditions, including normal pool with earthquake.

6.2. LONG TERM IMPROVEMENTS

The deficient conditions observed during the inspection do not require immediate attention, but should be corrected in the near future as part of a regular maintenance plan. The recommended maintenance/improvement actions are presented below:

Ash Pond D

- The sloughed section on the upstream slope of the dam should be stabilized with grass cover. It is our understanding that Dominion Virginia Power (DVP) has already been making efforts to establish a vegetative cover in this area.
- The wet area located downstream of the dam should be monitored to confirm that seepage from the impoundment is not occurring along the embankment/natural ground interface in this location. It may be advisable to install a series of piezometers through this area to monitor this condition.
- Piezometers and monitoring wells should be measured once a year in order to provide historical performance data for the impoundment.
- Maintenance of the upstream and downstream slopes of the dam should continue, including mowing, deleterious vegetation removal, and rodent removal. As noted in the field, it is advisable to mow using alternate routes to prevent rutting of the slopes and benches of the dam. Existing ruts should be filled or regraded to prevent ponding of water in these locations.
- Measures should be taken to prevent the toe drain outlet pipe from becoming buried by erosion of the stream channel. It would also be advisable to install a V-notched weir to monitor the toe drain flow volume.

Ash Pond E

- Maintenance of the upstream and downstream slopes of the dam should continue, including vegetation control and rodent removal. As noted in the field, it is advisable to mow using alternate routes to prevent rutting on the slopes of the dam.
- Trees that are encroaching on the downstream toe of the slope should be removed to a distance of 10 – 20 feet from the toe of the dam to allow unobstructed inspection for potential seepage and stability issues, and to minimize potential damage to the embankment from uprooted trees.
- The drainage ditch along the southwestern section of the embankment has resulted in a 3 to 4-foot deep cut below the toe of the dam (See Photo 3, Appendix C). This ditch should be cleared of trees and regraded to provide a slope more consistent with the embankment itself (2H:1V).

-The crest elevation of the southwestern portion of the embankment should be raised to a uniform design elevation and installation of surveying monuments should be considered to monitor any future settlement in this area. Conversely, high sections of the crest could be cut to a lower uniform elevation, if the updated stability analyses indicate that this is more appropriate. However, modification of the operating procedures may be necessary to assure that adequate freeboard is maintained if the embankment crest is lowered.

-The area immediately downstream of the saturated section of the western embankment should be regraded to promote drainage away from the toe of the slope. This area should be monitored during future inspections for any increase in the amount or extent of seepage.

6.3. MONITORING AND FUTURE INSPECTION

DVP should continue to have Ash Pond E inspected on a quarterly basis by Station personnel and annually by a registered engineer. While Ash Pond D is not as critical, it should also be monitored at the same frequency.

6.4. TIME FRAME FOR COMPLETION OF REPAIRS/IMPROVEMENTS

It is O'Brien & Gere's recommendation that DVP initiate the hydraulic and stability analyses for Ash Pond E within the next 6 months. The results of these analyses should be provided to VDCR for their records. If the analyses indicate that remedial action is necessary, these improvements should be undertaken within 12 months.