

US EPA ARCHIVE DOCUMENT



POWERSOUTH™
ENERGY COOPERATIVE
A Cooperative Member of the American Electric Power Company

Elizabeth C. Woodard
VICE-PRESIDENT, LEGAL & CORPORATE AFFAIRS

June 17, 2011

VIA OVERNIGHT DELIVERY AND E-MAIL TO
hoffman.stephen@epa.gov

Mr. Stephen Hoffman
U.S. Environmental Protection Agency
Two Potomac Yard
2733 South Crystal Drive
Fifth Floor, N-237
Arlington, Virginia 22202-2733

**Re: Assessment of Dam Safety of Coal Combustion Surface Impoundments,
PowerSouth Energy Cooperative, Charles R. Lowman Power Plant,
Carson Road, Leroy, Alabama (Mar. 30, 2011)
CDM Project No.: 76658.1801.034.SIT.LOWMAN**

Dear Mr. Hoffman:

On July 1 and 2, 2010, CDM performed a site assessment of facilities for the storage of coal combustion residuals ("CCRs") at the Charles R. Lowman Power Plant ("Lowman") of PowerSouth Energy Cooperative ("PowerSouth"). CDM presented its findings and conclusions in the above-referenced report, dated March 30, 2011 ("CDM Report"). This letter responds to the CDM Report on behalf of PowerSouth.

PowerSouth concurs in the conclusion of the CDM Report that the CCR facilities at Lowman do not pose a high hazard potential. That rating is reserved for facilities that would likely cause a loss of human life in the event of a facility failure, without regard to the likelihood of facility failure. Even in the unlikely event a CCR facility at Lowman should fail, PowerSouth agrees that there would be no probable loss of human life.

The CDM Report includes a series of findings and recommendations in Sections 4.3 through 4.10. Following are the responses of PowerSouth to those items. This letter uses the same terminology as the CDM Report to describe the four CCR disposal facilities that are the subject of the assessment, namely, the #1 Bottom Ash Pond; the #2/#3 Bottom Ash Pond; the Scrubber Waste Pond; and the Process Waste Pond.

4.3 Maintaining and Controlling Vegetation Growth

Section 4.3 describes the state of vegetation around the four CCR facilities and makes recommendations to reduce or remove vegetation in some areas and establish vegetation in others. PowerSouth generally concurs in the recommendations provided in Section 4.3 and is making diligent efforts to implement actions in response.

The schedule for completing vegetation removal depends in part on a project that PowerSouth has undertaken on portions of the perimeter berm located to the east and north of the Process Waste Pond, the Scrubber Waste Pond, and the #2/#3 Bottom Ash Pond. PowerSouth refers to this project as the "Toe Berm Project." As part of that project, PowerSouth intends to remove vegetation and any root systems and, where appropriate, flatten the slope of certain sections of the outer embankment. PowerSouth has already obtained a Section 404 permit from the Corps of Engineers because of anticipated impacts to wetlands in the area immediately adjacent to the existing structure. PowerSouth intends to proceed with substantial care and caution due to the presence of jurisdictional areas. An important consideration is to time the project so that work can proceed during the relatively dry part of the year, again to minimize impacts to wetlands. We are in the process of identifying a contractor with suitable experience and capabilities to undertake work in an appropriate manner where wetlands are present.

We have determined that it will be most effective to remove vegetation during execution of the Toe Berm Project, rather than attempting to remove vegetation in the area of the Toe Berm Project separately. Assuming variables such as the weather do not impede progress any more than expected, PowerSouth estimates that the Toe Berm Project will be completed by the end of the summer of 2012. Accordingly, PowerSouth estimates that vegetation removal in areas to be addressed by the Toe Berm Project will be completed on that same schedule.

PowerSouth has already initiated efforts to remove vegetation in other areas and to establish grassy vegetation in bare areas. PowerSouth has recently expended significant funds for the purchase of a new slope mower and rotary mower to facilitate a robust program of vegetation management and removal for the foreseeable future. PowerSouth will also seed bare areas using appropriate regional grass species. On the interior slope of the #1 Bottom Ash Pond, PowerSouth intends to grass the area down to the normal surface elevation of the pond. Vegetation growing through rip-rap will be removed through chemical spraying. We expect to accomplish vegetation removal and reseeding activities in areas outside the Toe Berm Project by the end of summer 2011, recognizing that heavy precipitation can impede vegetation removal activities and dry weather may impact the establishment of new grass.

4.4 Erosion Protection and Repair

PowerSouth generally concurs in the recommendations provided in Section 4.4 and is making diligent efforts to implement actions in response. PowerSouth has contracted with CDG Engineers & Associates ("CDG") to develop specifications to guide ongoing repair of embankment slopes. The specifications will include fill material requirements, backfilling

procedures, density testing, and slope stabilization. PowerSouth has already placed excavation and hauling equipment on site and has acquired access to sources of fill, to repair all erosion issues noted in the CDM Report and that may be identified in future inspections. PowerSouth also intends to task CDG with review of design documentation and inspection of dike structures to identify any areas where rip-rap is deemed desirable but may require repair, replacement, or installation. The area noted in the CDM Report that was excavated for a sluice line repair will be graded and stabilized, using engineering specifications as determined by CDG. PowerSouth and CDG are working diligently on these matters and expect to have them substantially completed by the end of spring 2012, weather and other influencing factors permitting.

4.5 Animal Control

PowerSouth generally concurs in the recommendations provided in Section 4.5 and is making diligent efforts to implement actions in response. PowerSouth plans to fill any existing burrows and monitor for any new burrows through its regular inspection program (which is described further under Section 4.9 below). To the extent any existing burrows can be adequately addressed by Lowman personnel, we expect those activities to be completed this summer. PowerSouth will engage CDG to review conditions and offer recommendations as to actions that may be necessary, if any, in the event we identify deeper burrows. We expect those activities to be complete by the end of spring 2012, weather and other factors permitting.

4.6 Instrumentation

PowerSouth generally concurs in the recommendations provided in Section 4.6 and is making diligent efforts to implement actions in response. PowerSouth has engaged CDG to identify appropriate locations for additional piezometers. The Toe Berm Project will influence the determination of where to place additional instrumentation. Accordingly, PowerSouth intends to have a plan for new instrumentation upon completion of the Toe Berm Project, the schedule for which is discussed under Section 4.3 above. Depending on completion of the Toe Berm Project, weather conditions, the availability of qualified contractors with suitable equipment, and other potentially limiting factors, PowerSouth intends to install instrumentation in accordance with the plan by the end of spring 2013.

4.7 Impoundment Hydraulic and Stability Analysis

PowerSouth generally concurs in the recommendations provided in Section 4.7 and is making diligent efforts to implement actions in response. The CDM Report recommends a number of activities toward further evaluation of a number of factors, including additional cross sections to include subsurface evaluation of existing soil parameters in embankments and foundation soils; installation of additional piezometers; additional hydraulic and hydrologic analysis; and stability analysis under seismic and steady-state loading conditions. PowerSouth has engaged CDG to undertake additional analyses. PowerSouth will request that CDG undertake borings, analysis, and such other actions as may be necessary to develop an initial

work plan by the end of the spring of 2012. The content of that plan and the time required for execution will depend on CDG's findings.

The CDM Report also recommends "evaluating the stability of the interior slope under rapid drawdown loading conditions." PowerSouth raises one response to the extent this recommendation is intended to pertain to interior structures, as opposed to perimeter embankments. The interior dikes are those that separate the Process Waste Pond, the Scrubber Waste Pond, and the #2/#3 Bottom Ash Pond from one other. By contrast, a unified perimeter dike extends from the south and east of the #2/#3 Bottom Ash Pond, continues along the east side of the Scrubber Waste Pond, and ultimately terminates to the north of the Process Waste Pond. Among those three CCR facilities, only the perimeter dike provides a barrier between the contents of the pond and the surrounding area. PowerSouth intends to demonstrate and maintain a protective margin of safety with respect to every dike that separates CCR disposal ponds from the environment. However, no amount of analysis or improvement to an interior dike influences the safety factor of the perimeter dike. Further, portions of the interior dikes house piping and provide other operational functions that may render certain modifications impracticable or impossible. Accordingly, PowerSouth intends to concentrate its efforts with respect to structural integrity on the perimeter dike. Should EPA deem further discussion of this issue to be appropriate, PowerSouth will make the engineers of CDG available to EPA and CDM.

4.8 Seepage Control

PowerSouth generally concurs in the recommendations provided in Section 4.8 and is making diligent efforts to implement actions in response. PowerSouth has consistently monitored seepage in the past and will continue to do so. In response to the recommendations of the CDM Report, PowerSouth will incorporate more specific seepage monitoring elements into its regular inspection program (as described under Section 4.9, below). PowerSouth will evaluate and respond appropriately to any points of seepage identified through regular monitoring and inspection on an as needed basis.

4.9 Inspection Recommendations

PowerSouth generally concurs in the recommendations provided in Section 4.9 and is making diligent efforts to implement actions in response. PowerSouth has engaged CDG to oversee a program by which a civil engineer with expertise in dam safety will conduct a detailed and exhaustive inspection on an annual basis, to be documented in a formal report. PowerSouth will provide training to Lowman personnel to execute inspections on at least a weekly basis. The weekly inspections will include documentation by means of an inspection form to be developed in consultation with a civil engineer with expertise in dam safety. Program development is underway. PowerSouth intends to have its inspection program in place by the end of calendar year 2011. The next annual inspection by a dam safety expert is scheduled for April/May 2012.

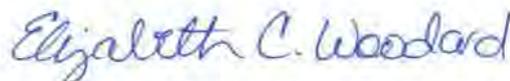
4.10 Emergency Action Plan

PowerSouth generally concurs in the recommendations provided in Section 4.10 and is making diligent efforts to implement actions in response. Lowman has an emergency action plan. In response to the recommendation of the CDM Report, PowerSouth will review that plan and make any revisions deemed to be necessary by the end of calendar year 2011.

PowerSouth has made conservative estimates for the schedules for all planned activities described in this letter, subject to various contingencies that are explained above. We have attempted to account for any foreseeable limiting factors, including typical weather patterns and contracting procedures and availability. However, PowerSouth also must proceed in a manner that is safe, effective and reasonable. We are aware of EPA's intent to verify PowerSouth's execution of its activities on our self-imposed schedule. Should any unanticipated externality (unusual weather, contractor issues, etc.) affect PowerSouth's ability to execute this plan of action within the schedule provided, we will maintain sufficient documentation to allow adequate explanation of PowerSouth's actions.

Thank you for this opportunity to review and respond to the CDM Report. Please feel free to contact me if you should have any questions about PowerSouth's responses.

Sincerely,



Elizabeth C. Woodard
Vice President
Legal & Corporate Affairs