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

SEP 15 2009

OFFICE OF
SOLID WASTE AND
EMERGENCY RESPONSE

VIA E-MAIL AND FEDERAL EXPRESS

Mr. Craig Shamory
PPL Services Corporation
2 North 9th Street
Allentown, Pa. 18101

Dear Mr. Shamory

On June 2-3, 2009 the United States Environmental Protection Agency ("EPA") and its engineering contractors conducted a site assessment of the Units 1 & 2 Bottom Ash Ponds, Units 1 & 2 Pond "A", Units 1 & 2 Stage Two Evaporation Pond (STEP) and Units 3 & 4 Effluent Holding Pond (EHP) at the Colstrip facility. The purpose of this visit was to assess the structural stability of the impoundments or other similar management units that contain "wet" handled coal combustion residuals (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 Colstrip 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 Colstrip facility 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 Colstrip facility. These recommendations are found on pages 44-45 in the final assessment report and 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 within 14 calendar days of receipt of this letter. 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 of 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

This request has been approved by the Office of Management and Budget under EPA ICR Number 2350.01.

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.

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,

Matt Hale

Matt Hale, Director
Office of Resource Conservation and Recovery

Enclosures

Enclosure 2
Colstrip Recommendations

12.1 Corrective Measures for the Structures

12.1.1 Units 1 & 2 Bottom Ash Pond Embankments

1. A check slope stability analysis was performed by GEI because an existing analysis was not available. The check stability analysis indicates the west embankment of the Bottom Ash Ponds meets the minimum required factors of safety in accordance with the FERC. However, we recommend that slope stability analyses be performed and documented for these embankments based on site-specific information.
2. Modify the 24-inch HDPE carrier pipe in the southwest corner of the west cell to prevent a potential seepage path at higher reservoir elevations through the HDPE lining to the interior of the embankment.
3. Remove the out-of-service box culvert located near the embankment crest on the east cell and backfill with engineered fill.
4. Implement rodent control measures on the downstream slope of the embankment to reduce the potential for shortened seepage pathways through the burrows.
5. Place engineered fill and regrade the downstream toe of the embankment to eliminate oversteepened slopes.
6. Remove and backfill the out-of-service manhole at the downstream toe of the northwest corner of the west cell to eliminate this potential seepage pathway. Careful construction is required working at the toe of a dam to not destabilize the slope.
7. Design and install piezometers to monitor water pressures in the embankment and foundation. Collect and evaluate data at least twice per year.

12.1.2 Units 1 & 2 "A" Pond Embankments

1. Slope stability check analyses performed by GEI indicate the south part of the west embankment of Pond "A" has a factor of safety that is somewhat less than required for the rapid drawdown loading condition. The application of a full rapid drawdown analysis to this pond is considered a conservative analysis and the resulting calculated factor of safety is considered adequate. We recommend further documentation of the stability of these embankments be performed using site-specific soil strength information.
2. Implement rodent control measures on the downstream slope of the embankment to reduce the potential for shortened seepage pathways through the burrows.
3. Fill and regrade the oversteepened areas at the downstream toe of the embankment.
4. Design and install piezometers to monitor water pressures in the embankment and foundation. Collect and evaluate data at least twice per year.

12.1.3 Units 1 & 2 STEP Dam

1. Correct the low area of the dam crest at the right abutment by placing engineered fill.
2. Repair the erosion on the upstream slope near the right groin. Correct surface water run-on to eliminate the water source for future erosion. Repair the minor surface erosion on the upstream and downstream slopes of the STEP Dam.
3. Design and install piezometers and movement monuments in the dam to monitor water pressures and displacement. Install a means of measuring seepage flow collected by the internal drain system. Collect and evaluate data at least twice per year.

12.1.4 Units 3 & 4 EHP Main Dam

1. Design and install additional instrumentation in the dam and sandstone layer in the dam abutments. Some of these instruments should obtain data in the downstream shell and in the abutment at a location downstream of the core. Collect and evaluate data at least twice per year.

2. Perform seepage and stability analyses to develop understanding of the potentially critical abutment seepage conditions in the baked shale and sandstone layer with respect to potential for seepage erosion at the dam-abutment contact and the generation of high pore pressures in the downstream shell.
3. Continue to monitor water levels in the dam and abutments and the associated seep that surfaces downstream of the Main Dam and the 1999 seep area downstream of the Saddle Dam.
4. Evaluate and document whether the small saddle fill located about 500 feet left of the left abutment functions as part of the Main Dam. If determined to be part of the Main Dam, the fill should be analyzed for slope stability and inspected regularly like other portions of the dam.
5. Implement rodent control measures on the downstream slope of the dam to reduce the potential for seepage through burrows.
6. Continue to monitor and repair minor surface erosion rills on the downstream slope of the Main Dam.
7. Maintain the free water level restriction in the Old Clearwell at a maximum of El. 3,238.

12.1.5 Units 3 & 4 EHP Saddle Dam

1. The 1999 seepage event that resulted in internal erosion of the Saddle Dam embankment and core was addressed by lowering and restricting the water level behind the dam, but no repairs were made to the dam. The water level restriction that was established in December 1999 should be continued and storage for the appropriate inflow design flood maintained. The dam is not considered safe if water levels are allowed to rise significantly above El. 3,237 because the potential for internal seepage erosion remains. PPL has noted that their studies attribute the seepage event to differential settlement at the concrete cutoff wall location between the upstream, saturated, part of the embankment, which settled, and the downstream part, which did not settle. However, the EHP ponds impounded by the Saddle Dam are currently being filled with paste consisting of 68 percent solids that cures to a solid. Filling the ponds with paste could greatly reduce seepage pressures on the dams and an engineering analysis of the potential to store paste above the restriction level should be documented.
2. Backfill the test pit located on the downstream slope of the dam after repairing the damaged toe drain pipe and restoring the granular drain materials.
3. Continue to monitor and repair minor surface erosion rills on the downstream slope of the Saddle Dam.
4. Maintain the free water level restriction in the "G" cell at a maximum of El. 3,237.
5. Evaluate the high water level readings in two Saddle Dam piezometers that indicate minimal head loss between the reservoir and the piezometers

12.2 Corrective Measures Required for Maintenance and Surveillance Procedures

None.

12.3 Corrective Measures Required for the Methods of Operation of the Project Works

None.

12.4 Any New or Additional Monitoring Instruments, Periodic Observations, or Other Methods of Monitoring Project Works or Conditions That May Be Required

The visual inspections and the instrumentation monitoring plan currently in place for the impoundments generally appears to be adequate.
The instrumentation for the dams is inadequate. Install additional instruments in the Units 3 & 4 Main Dam to enable engineering evaluation of water pressures within the core and

downstream shell and within the abutment sandstone layer downstream of the core. Install instruments for monitoring water pressures and movement within the Units 1 & 2 STEP dam embankment and in the abutments, particularly the left abutment that is protected by the upstream soil blanket. Install instruments for monitoring water pressures within the Units 1 & 2 Bottom Ash and "A" Pond embankments.