May 3, 2010

VIA ELECTRONIC DELIVERY

Mr. Stephen Hoffman
U.S. Environmental Protection Agency
Two Potomac Yard
2733 South Crystal Drive
5th Floor, N-5237
Arlington, VA 22202-2733

Dear Mr. Hoffman:

The Dayton Power and Light Company (DP&L) has received the final report dated March 26, 2010 related to the site assessment of the coal combustion residual impoundments at the J.M. Stuart Generating Station. The site assessment was conducted on October 27-28, 2009 by U.S. EPA's engineering contractor, CHA. The cover letter accompanying the final report includes several recommendations related to the operation and maintenance of the impoundments at the station and requests that a response containing specific plans and schedules for addressing the recommendations be submitted to USEPA by May 3, 2010. Enclosed with this letter is a listing of those recommendations along with actions that DP&L is planning or those that are already underway for implementation. DP&L is also including additional clarifications from the CHA final reports.

DP&L appreciates this opportunity to respond to the final impoundment assessment report for J.M. Stuart Station. If you have any questions please contact Mr. Craig Spangler at (937) 549-2641 extension 5556.

Sincerely,

Cc: JoAnne Rau – DP&L
Craig Spangler – DP&L

DP&L J.M. Stuart Station Response to Recommendations
Contained in Coal Combustion Surface Impoundments Site Assessment
March 26, 2010 Final Report

4.2 Maintaining Vegetation Growth

Trees and brush should be cleared from all of the interior and exterior slopes of all the ash pond dikes. Heavy brush cover precludes observation of erosion, sloughing, rodent activity, or other causes of embankment deterioration.

Tree roots can allow for seepage of the retained water through the dikes, which could lead to internal erosion. Internal erosion could weaken the dikes and cause slope failures. Additionally, the uprooting of trees during storms can create large voids in the embankments that are then susceptible to erosion. Considering the progressive erosion that could occur during a storm which blows the tree over during heavy rains (i.e., hurricane type storm systems) progressive erosion could potentially result in enough loss of soil from the dike to create an unstable situation, which if failure occurs could result in a release of ash.

CHA recommends that vegetation be cut on a regular basis to ensure that adequate visual observations are being made during routine inspections.

J.M. Stuart Station is implementing a more aggressive maintenance and inspection program to control large vegetation that could impact the ash pond dikes. This includes removal of the few small trees encroaching on the Pond 5 dike, removal of the vegetation on the downstream slope of the east dike of Pond 6/7A and removal of smaller trees/brush along the downstream south dike of Pond 7/7A above the toe of the dike. Heavy vegetation below the toe of the dike, including large trees, is below the ordinary high water mark for the Ohio River, and provides erosion protection against Ohio River flooding. This vegetation will not be removed by DP&L. This vegetation control program is in addition to the routine mowing already conducted by DP&L.

4.3 Erosion Protection and Repair

Erosion rills and subsequent loss of grass cover were observed on multiple embankment slopes of the ash ponds as discussed in Section 2.3.1. Thinning and loss of grass cover

due to concentrated flow was noted on the embankment slopes. CHA recommends repairing these areas by filling all rills with compacted material and re-seeding to establish grass where applicable (i.e. exterior embankment slopes).

During the 2010 construction season, J.M. Stuart Station will make repairs to erosion rills and re-establish grass vegetation on the dike slopes as appropriate. DP&L will also evaluate potential improvements to the dikes which may include additional stone riprap protection in limited areas susceptible to erosion and regrading of exterior dike slopes to improve mowing conditions and reduce runoff velocities.

4.4 Animal Control

Evidence of animal burrows was observed on the downstream side of the several of the dikes. Thick vegetation cover may have obscured borrow (sic) *at locations not identified herein. CHA recommends vigilance by DP&L personnel to make note of areas disturbed by animal activity, trap the animals, and make repairs to areas to protect the integrity of the dikes.*

Animals that are actively burrowing into the dikes will be trapped and removed, and the burrows will be repaired by filling with low-strength grout as recommended by ODNR. DP&L will also establish an animal control program to prevent future burrows. DP&L will be inspecting the facilities more frequently to identify such issues in the future to mitigate their development.

4.5 Operations and Maintenance

A discrepancy was noted between the Pond 5 crest elevation shown on the 1968 design drawings and the crest elevation reported on the Ohio Dam Inventory Sheet. CHA recommends that a survey be performed to determine the current crest elevation around the dikes.

CHA recommends that existing conditions survey plans be developed for Pond 3A, Pond 5, Pond 6, and Pond 7/7A. The drawings should indicate the crest elevations, outlet location and rim elevation, outlet pipe diameter and pipe material, and information on the discharge location.

CHA recommends that DP&L implement a documented inspection program to be conducted at regular intervals. CHA has not been provided with a copy of an OM&I manual or EAP for Pond 3A, Pond 5, Pond 6, and Pond 7/7A.

DP&L is having these ponds surveyed. DP&L is also reviewing draft versions of the OM&I and EAP for these ponds.

4.6 Stability Analysis

It is recommended that detailed stability analyses be performed for Pond 5, Pond 6, and Pond 7/7A. CHA was not provided with information regarding stability analyses performed prior to or following construction of these ponds nor was information regarding properties of the embankment and foundation soils provided. The southern dike of Pond 3A should also be analyzed with respect to the liquefaction condition for reasons noted below and a flood surcharge condition during steady state seepage.

The stability analyses for each pond should include a subsurface investigation to determine existing soil parameters in the embankments and foundation soils and the installation of piezometers to determine the current phreatic surface. Loading conditions that should be modeled should include those listed in Table 4 in Section 3.3. The liquefaction loading condition should be emphasized for Pond 3A because the ash impounded beneath the southern dike of Pond 3A was in a loose to very loose, saturated condition when sampled during the original geotechnical investigation. Although the ash has been loaded for a considerable period of time, the low permeability of the clay and silty clay soils noted in the bottom of the basin and in the older dike impounding the ash may have limited the amount of consolidation that could occur. This would increase the potential for those conditions to currently exist.

DP&L has retained the services of BBC&M of Columbus, Ohio to perform the requested stability analyses with exception to the liquefaction condition noted for Pond 3A which was not included in the original report. BBC&M has completed their field sampling and will complete the report in the near future. Piezometers will be considered as need is determined by the results of the stability analysis. DP&L will review available information relative to subsurface conditions and will consider performing the liquefaction study in the future if warranted.

4.7 Liquefaction Analysis – Pond 10

Borings advanced for Pond 10 encountered very loose to loose, silty to clayey sands and poorly to well graded clean sand with gravel to depths ranging from 9 to 25 feet below the original surface grades which may be susceptible to liquefaction under seismic loading. We recommend a liquefaction analysis of these soils below the dikes be performed to determine the liquefaction potential and possible settlement magnitudes the Pond 10 dikes might experience.

DP&L will review the Pond 10 initial design information and conduct a liquefaction analysis if warranted.

4.8 Hydrologic and Hydraulic Analysis

DP&L has not provided CHA with a hydraulic analysis showing the ability of Pond 3A, Pond 5, Pond 6, and Pond 7/7A to safely store or pass the 50% PMP event. CHA had insufficient information to perform preliminary analyses. CHA recommends that evaluations be prepared for the ponds to determine the ability of the ponds to safely store or pass the 50% PMP with the actual available storage capacity. This recommended hydrologic and hydraulic analysis is of particular importance for the active Pond 6 and Pond 7 because the available freeboard on these ponds does not meet the required 5-foot minimum above maximum operating pool. If a variance to the freeboard requirement is to be requested and granted, it should be shown that the design flood event can be contained within the available freeboard, which may be as little as 18 inches.

This was not requested during the initial data gathering. DP&L will perform a hydrologic and hydraulic analysis of these ponds.

4.9 Pond 6 and Pond 7 Freeboard Requirement

The State of Ohio Administrative Code (OAC) 1501:21-13-07 states that, "For class I and class II dams that are upground reservoirs, the minimum elevation of the top of the dam shall be at least five feet higher than the elevation of the designed maximum operating pool level unless otherwise approved by the chief." As an impoundment created with dikes classified as Class II structures, Pond 6 and Pond 7 are technically subject to this regulation. At present, it would appear as if the operating pool level will

have to be reduced or the south dike crest increased in elevation. OAC 1501:21-13-07 offers an alternative provision by stating, "The chief may approve a lower freeboard requirement if the dam is armored against overtopping erosion." The eventual course of action DP&L chooses in this case should be submitted to the state for final approval.

DP&L will seek a variance to the 5ft freeboard for ponds 6 and 7 if the hydrologic and hydraulic analysis is favorable.

Clarifications to Assessment of Dam Safety Final Report prepared by CHA

- Page 3 of the final report says Stuart Station is operating pursuant to NPDES permit 0IB00049*ND. This is the draft permit that OEPA issued but which has not been finalized. Stuart Station is currently operating under the expired permit 0IB00049*MD.
- Page 5 of the final report refers to Figure 5B showing Sections A-A, B-B and D-D for Pond 5. This figure is not in the final report.
- Page 6 indicats that Pond 7A was constructed in 1977. Pond 7A was subdivided from Pond 7 in c1983.
- Page 7 of the final report refers to an elevation of 531.5' for the divider dike between Ponds 6 and 7. DP&L drawings and surveys show that the elevation is 533.5. This is also shown on Figure 6A.
- Page 7 states that Pond 6 receives water from Ponds 7 & 3A. Pond 6 can receive water from Pond 10 when active, waste water sump 7 and stormwater runoff from Landfill 11.
- Page 8 fails to indicate that the bottom ash core dike of Pond 10 also has a clay liner.
- Page 29, Section 2.2.2 should have referenced DP&L drawing 300-12-1320 which shows the outfall in its present location as modified in 1983.
- Page 30 photos were taken of a constructed slope north of Pond 6 and are not part of the Pond 6 dike.