

US EPA ARCHIVE DOCUMENT



July 1, 2014

Submitted Electronically

Mr. Stephen Hoffman
U.S. Environmental Protection Agency (5304P)
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Mr. Hoffman:

Re: Request for Action Plan regarding City Utilities of Springfield – John Twitty Energy Center (JTEC); June 2, 2014

City Utilities (CU) is pleased to respond to the June 2, 2014, communication from Mr. Barnes Johnson, Director of EPA's Office of Resource Conservation and Recovery. That letter included findings and recommendations from a recent structural stability assessment for the wet impoundments at our John Twitty Energy Center. This assessment was conducted by CDM Smith under contract to USEPA, and the June 2 communication indicates that the findings and recommendations are those of the contractor. The letter requested this response and the action plan provided herein by July 2, 2014. This response will address the findings and recommendations in turn.

Response to Findings:

1. Structural Soundness

CU shares in the CDM Smith conclusion regarding the adequate structural soundness of the impoundments. We also agree that any unlikely breach would not be expected to result in significant damage to infrastructure, bodily injury, or loss of life.

2. Hydrologic/Hydraulic Safety

CU affirms that there has been no overtopping of the impoundment in the past and that current operational practices would effectively avoid an overtopping event. We would point out, as indicated in an earlier response, there was at least one instance in the mid-1980s when

water was allowed to overflow the pond through the spillway “windows.” Our current practices maintain a lower working pond level with greater freeboard and do not allow this to occur, and, as CDM Smith found, the design capacity is adequate to pass the 100-year storm event.

3. Supporting Documentation

We were gratified to read that CDM Smith found the supporting technical documentation submitted with our January 2014 responses to be adequate.

4. Description of the Impoundment

We acknowledge that the drawings and descriptions provided to the contractor by JTEC personnel were consistent with onsite visual observations.

5. Field Observations

CDM Smith observed the embankments and outlet structures to be in good condition and we would concur in that finding.

6. Maintenance and Operation Methods

CDM Smith found the operations and maintenance methods associated with the impoundments to be adequate; we concur.

7. Surveillance and Monitoring Program

CDM Smith believes that the monitoring well field installed in 2013 to serve the adjacent landfill is too far removed from the impoundment to facilitate measurement of the phreatic surface within the embankments. The contractor further references four piezometers installed in early 2014 by Palmerton & Parrish (PPI), noting that these were scheduled for abandonment and grouting. For these reasons CDM Smith considers the existing surveillance and monitoring measures to be inadequate. City Utilities does not agree that continued operation of an embankment piezometer is warranted in this instance. As indicated by the data submitted on March 18, the PPI piezometers indicated only a slight presence of moisture along the bedrock surface, at an elevation ten feet lower than the toe of the embankment. Piezometers can be useful in evaluating water levels where structural compromise is expected. However, as the bulk of this report points out, that situation does not present itself at JTEC. CU's Professional Engineers consulted with PPI Registered Geologists and PPI considered but rejected the possibility of leaving one or more of these piezometers in place, based primarily on the favorable observations exhibited in all four. Accordingly, the piezometers have been decommissioned and plugged in accordance with Missouri regulatory requirements.

8. Reliable and Safe Operation

We wholeheartedly agree with CDM Smith findings that the JTEC impoundments are currently providing acceptable performance and should be classified as Satisfactory for continued safe and reliable operation.

Response to Recommendations:

1. Hydrologic/Hydraulic Safety
No recommendations
2. Technical Documentation
No recommendations
3. Field Observations
 - a. CDM Smith opined that USEPA requires coal combustion waste impoundments to prepare an Emergency Action Plan and recommends that CU prepare one for JTEC. They note that this requirement is irrespective of the applicability of state dam safety regulations. CU respectfully disagrees. As elucidated by Ms. Jana Englander of EPA's Office of Solid Waste and Emergency Response, the requirement referenced by the contractor is embodied in a 2010 proposed regulation which has yet to be finalized. Promulgation has been postponed numerous times and the current operational deadline for finalization is in December 2014. Until that time, CU would not have guidance on whether or how to prepare a formal EAP. CU does intend to comply with whatever EAP requirements of the final Coal Combustion Residuals (CCR) rule, and will commit to preparing an interim response plan as explained in the Action Plan below.
 - b. The contractor recommends that CU review and revise operating procedures to mitigate the potential for long-term pumpage that could lead to rapid draw-down conditions. Although we believe our stability analysis indicated minimal potential for any negative impacts from rapid draw-down, CU will review and revise our procedures, as necessary, in accordance with this suggestion.
 - c. The report recommends trimming and maintaining dense and tall vegetation on interior embankment slopes to facilitate inspection. CU agrees that vegetation management is an important aspect of impoundment maintenance and will revise JTEC procedures to accommodate this recommendation.
 - d. In this same vein, CDM Smith recommends reseeding to fill in any embankment bare spots and periodic mowing to promote healthy grass cover. CU will incorporate these suggestions into our overall embankment vegetation management practices.
4. Surveillance and Monitoring

CDM Smith recommended that the current PPI piezometers be left in place for future use or that a system of groundwater wells be installed and monitored in the future. As stated above, the PPI monitors were decommissioned by mutual agreement of CU and PPI. CU believes that a groundwater monitoring network is very likely to be required by the pending CCR rule and will take steps to comply within the timeline required by that regulation. In addition, we will observe the good engineering practice of installing monitoring piezometers within the embankment in the event of visible seepage or other indication that the pond integrity is in danger of being compromised.
5. Continued Safe and Reliable Operation

CDM Smith found the JTEC impoundments to be Satisfactory for continued safe and reliable operation, and therefore did not consider any of the above recommendations to be urgent in nature. A suggested implementation period of one year, if possible, was proposed. CU agrees that the bulk of the contractor's recommendations can be implemented within one year. However, any recommendations that are contingent upon or dovetail with provisions of the pending CCR regulation could not be undertaken until final publication of that rule. Final implementation of those measures would then be in full accord with the applicable regulatory compliance deadlines.

Action Plan:

In response to the foregoing, City Utilities has considered this report and will take the following actions:

1. Emergency Action Plan

City Utilities will prepare an interim inspection and response plan to facilitate the detection and repair of any potential breach of the ash management impoundments. This plan will be completed on or before January 31, 2015. CU will further monitor development of the pending CCR rule and will supplement the interim plan, if necessary, to fully comply with EAP requirements of the final rule pursuant to the applicable regulatory deadline.

2. Pumpage and Draw-Down

On or before October 1, 2014 CU will review the current operating procedures to determine an acceptable rate of pumpage and draw-down for the JTEC impoundments. These will be incorporated in standard operating procedures by January 31, 2015.

3. Vegetation Management

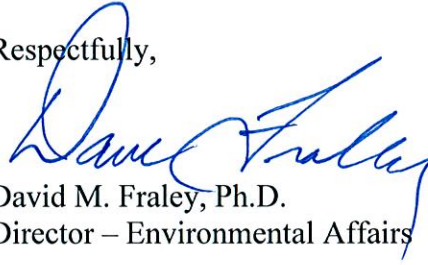
By September 1, 2014, CU will commit to inspect and trim any dense or tall vegetation on the interior embankment slopes. Also by September 1, 2014, CU will review existing written O&M procedures for vegetation management and ensure that embankment mowing and trimming is specified to be no less frequent than annually. Between September 1 and October 1, 2014, CU will reseed any bare areas on the earth embankment.

4. Groundwater Level Monitoring

CU will monitor development of both the CCR rulemaking and the pending Steam-Electric Effluent Limitation Guidelines as either may pertain to the installation of groundwater monitoring piezometers or monitoring wells. CU will attain full compliance with any regulatory requirements on or before the applicable regulatory deadlines. In the interim and beyond, CU will observe the good engineering practice of installing monitoring piezometers within or near the embankment in the event of visible seepage or other indication that the pond integrity is in danger of being compromised.

City Utilities appreciates the consideration afforded by OSWER throughout this assessment process. If there are any questions or additional comments concerning these matters, please do not hesitate to contact Ted Salveter, P.E. of my staff at 417.831.8848 or to contact me directly at 417.831.8778.

Respectfully,



David M. Fraley, Ph.D.
Director – Environmental Affairs

cc. Craig Dufficy – USEPA
Patrick Kelly – USEPA
Jana Englander – USEPA
Ted Salveter – CU
Keith Smith – CU
Mark Haden – CU