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

June 2, 2014

OFFICE OF
SOLID WASTE AND
EMERGENCY RESPONSE

VIA E-MAIL

Dr. David Fraley, Director, Environmental Affairs
City Utilities of Springfield
P.O. Box 551
Springfield, Mo. 65801

Re: Request for Action Plan regarding City Utilities of Springfield – John Twitty Energy Center (JTEC)

Dear Dr. Fraley,

On August 21, 2012 the United States Environmental Protection Agency ("EPA") and its engineering contractors conducted a coal combustion residual (CCR) site assessment at the City Utilities of Springfield – John Twitty Energy Center (JTEC) facility. 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 City Utilities of Springfield – JTEC 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 City Utilities of Springfield – JTEC facility is attached.

This report includes a specific condition rating for the CCR management units and recommendations and actions that our engineering contractors believe should be undertaken to ensure the stability of the CCR impoundments located at the City Utilities of Springfield – JTEC facility. These recommendations are listed in Enclosure 1.

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 provide a rationale. Please provide a response to this request by **July 2, 2014**. Please send your response to:

Mr. Stephen Hoffman
U.S. 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
U.S. Environmental Protection Agency
Two Potomac Yard
2733 S. Crystal Drive
5th Floor, N-5838
Arlington, VA 22202-2733

You may also provide a response by e-mail to hoffman.stephen@epa.gov, dufficy.craig@epa.gov, kelly.patrickm@epa.gov and englander.jana@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 this report 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 efforts to ensure protection of human health and the environment.

Sincerely,
/Barnes Johnson /, Director
Office of Resource Conservation and Recovery

Enclosures

Enclosure 1
City Utilities of Springfield – JTEC Recommendations (from the final assessment report)

CONCLUSIONS

Conclusions are based on visual observations during the assessment on August 27 and 28, and review of technical documentation provided by JTEC.

Conclusions Regarding the Structural Soundness of the Impoundments

Visual observations by CDM Smith during a field visit did not reveal any major structural defects; the embankments appeared structurally sound. JTEC personnel provided CDM Smith with full technical documentation to confirm the visual observations. CDM Smith concludes the structural soundness of the impoundments is adequate.

If a breach in the current embankments forming the impoundments were to occur, the path of water discharged from such a breach would generally flow south of the plant and enter Wilson's Creek. The route to Wilson's Creek and potential for overflow of the banks would be expected to remain on land used primarily for agricultural purposes, with no expected significant damage to infrastructure or loss of life.

Conclusions Regarding the Hydrologic/Hydraulic Safety of the Impoundments

According to plant personnel, there has been no overtopping of the impoundments since original operation of the impoundments first use. The toe of the embankment slope around the outer perimeter appeared dry, with no observed evidence of seepage at the time of our visit. The plant has two CCW impoundments, but plant personnel indicated only one impoundment is in service at any given time.

Hydrologic/hydraulic (H & H) analysis regarding potential overtopping of the perimeter embankment for the 100-year, 24-hour storm event was provided to CDM Smith. Plant personnel indicated that the impoundment not in service would be opened to retain excess water to avoid overtopping of the operational impoundment.

Information gathered during CDM Smith's investigation of plant records, visual observations of the facility, and H & H analyses provided by JTEC personnel indicate the impoundments have adequate capacity to pass the 100-year, 24-hour storm event.

Conclusions Regarding the Adequacy of Supporting Technical Documentation

Technical documentation available to CDM Smith with regard to the impoundments' design included a survey of the site around the CCW impoundments, and some cross sections of the embankments.

Documentation of stability or hydrologic/hydraulic analyses of the impoundments were provided by JTEC. In the opinion of CDM Smith, the supporting technical documentation is adequate.

Conclusions Regarding the Description of the Impoundments

CDM Smith's on-site visit confirmed the presence of two impoundments with the capability to switch discharge into the impoundments from one impoundment to the other. The drawings and descriptions of the CCW impoundments provided by JTEC personnel appear to be consistent with the visual observations by CDM Smith during site assessment.

Conclusions Regarding the Field Observations

CDM Smith staff was provided access to all areas of the impoundments for observation and assessment. In addition, two plant representatives accompanied CDM Smith staff on the assessment.

No evidence was observed of prior releases, failures, or repairs. In general, the embankments appeared to be in good condition. The outlet structures, located near the south end of the common dividing embankment, appeared to be in good condition with water flowing freely through the system during the time of our visit.

Conclusions Regarding the Adequacy of Maintenance and Methods of Operation

According to the plant representatives, the impoundments are inspected quarterly. A copy of a recently completed inspection checklist used by the plant staff was provided to CDM Smith. In addition, the embankments are periodically mowed. In general, methods of operation and

maintenance for the impoundments appeared adequate based on on-site observations and conversations regarding operating procedures with the plant representatives.

Conclusions Regarding the Adequacy of the Surveillance and Monitoring Program

The impoundments are inspected by plant personnel on a daily basis. Inspection reports are completed and kept on file in the plant's administrative offices. There was no monitoring and surveillance instrumentation for the impoundments at the time of CDM Smith's on-site visit. Subsequent to CDM Smith's site visit JTEC installed a series of monitoring wells around the perimeter of the on-site landfill. City Utilities drawing "JTPS102", dated August 26, 2013, shows the well locations to be more than 500 feet from the CCW Impoundments. The location of the landfill monitoring will not facilitate measurement of the phreatic surface within the embankments.

Palmerton and Parrish, Inc. (PPI) installed four piezometers in borings completed January 2014, as part of their geotechnical exploration program and stability assessment of the CCW impoundments.

Groundwater readings were provided in the PPI report for the dates of February 19 and March 3, 2014. PPI indicates in their report to JTEC dated March 17, 2014 that they plan to abandon/grout the piezometers. Because of the plan to abandon/grout the piezometers and due to the lack of other instrumentation to monitor phreatic surfaces at the CCW impoundments, the surveillance and monitoring of the impoundments is considered inadequate.

Classification Regarding Suitability for Continued Safe and Reliable Operation

Based on visual observations and conversations with plant personnel, it appeared the impoundments are currently providing acceptable performance. According to the NPDES permit for the impoundments, the design flow for the outfall is 9.6 million gallons per day (MGD) and the actual flow is 0.5 MGD, making the risk of overtopping unlikely. Although current performance is considered acceptable, conditions can change with time. Based on review of documentation provided by JTEC and observations made during our site visit, it is the opinion of CDM Smith that the impoundments at the JTEC should be classified as **SATISFACTORY** for continued safe and reliable operation.

RECOMMENDATIONS

Recommendations Regarding the Hydrologic/Hydraulic Safety

None.

Recommendations Regarding the Technical Documentation for Structural Stability

None.

Recommendations Regarding the Field Observations

The following are CDM Smith's recommendations:

a. The State of Missouri does not require coal plants to have an emergency action plan (EAP) in case of a CCW impoundment release; however the USEPA does require an EAP for CCW impoundments. Information JTEC provided CDM Smith did not contain an EAP. CDM Smith recommends an EAP be prepared for the impoundments;

b. JTEC should review and revise operating procedures to mitigate potential for long-term pumping of clear water from the impoundment(s) that could lead to a rapid drawdown condition.

c. Dense and tall vegetation on inside slopes should be trimmed and maintained to allow easy inspection of the embankment slopes;

d. Healthy grass cover should be established on the earth embankments to fill in the bare areas; and

e. Vegetation should be cut at least annually following the first cutting, and more often if necessary to allow a healthy grass cover to grow on the earth embankments.

Recommendations Regarding the Surveillance and Monitoring Program

There was no surveillance and monitoring instrumentation installed at the time of CDM Smith's onsite visit. Subsequent to our on-site visit two sets of monitoring wells were installed. The

location of the landfill monitoring wells will not facilitate measurement of the phreatic surface CCW impoundment's embankments. Piezometers installed by PPI in January 2014 are scheduled to be abandoned/grouted full. CDM Smith recommends the PPI piezometers be left operational and monitored on a regular basis or that a system of groundwater monitoring wells be installed and regular measurements of water levels recorded.

Recommendations Regarding Continued Safe and Reliable Operation

CDM Smith does not consider the above recommendations urgent, but they should be implemented within the next year, if possible, to ensure continued safe and reliable operation of the impoundments.