

US EPA ARCHIVE DOCUMENT



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

May 12, 2014

OFFICE OF  
SOLID WASTE AND  
EMERGENCY RESPONSE

VIA E-MAIL

Mr. Greg Seipel, Vice President Engineering & Operations  
Prairie Power Inc.  
P.O. Box 610  
Jacksonville, Illinois 62651

Re: Request for Action Plan regarding Prairie Power, Inc. - Pearl Power Plant

Dear Mr. Seipel,

On August 20 and 21, 2012 the United States Environmental Protection Agency ("EPA") and its engineering contractors conducted a coal combustion residual (CCR) site assessment at the Prairie Power, Inc. - Pearl Power Plant facility. The purpose of this visit was to assess the structural stability of the impoundment or other similar management unit 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 unit at the Prairie Power, Inc. - Pearl Power Plant 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 Prairie Power, Inc. - Pearl Power Plant facility is attached.

This report includes a specific condition rating for the CCR management unit and recommendations and actions that our engineering contractors believe should be undertaken to ensure the stability of the CCR impoundment located at the Prairie Power, Inc. - Pearl Power Plant facility. These recommendations are listed in Enclosure 1.

Since these recommendations relate to actions which could affect the structural stability of the CCR management unit 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 **June 11, 2014**. Please send your response to:

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

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**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  
5<sup>th</sup> Floor, N-5838  
Arlington, VA 22202-2733

You may also provide a response by e-mail to [hoffman.stephen@epa.gov](mailto:hoffman.stephen@epa.gov), [dufficy.craig@epa.gov](mailto:dufficy.craig@epa.gov), [kelly.patrickm@epa.gov](mailto:kelly.patrickm@epa.gov) and [englander.jana@epa.gov](mailto: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 unit, 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

**Prairie Power, Inc. - Pearl Power Plant Recommendations (from the final assessment report)**

**CONCLUSIONS**

Prior to CDM Smith's visit to the PPP, plant representatives indicated that the facility was off-line and was in the process of being closed. Regardless of this reported status by the plant manager, the USEPA indicated it had no confirmation that the plant was permanently closed and requested CDM Smith to proceed with the CCW impoundment assessment. During CDM Smith's visit to the site, the plant was not in operation. The following are CDM Smith's conclusions.

**Conclusions Regarding the Structural Soundness of the CCW Impoundment**

Evaluation of the structural soundness of the Ash Pond is generally based on available information for the impoundment in the following four areas:

- Design and Construction Data
- Operating Records
- Post-Construction Modifications to the Impoundment
- Static and Seismic Stability

Visual observations made by CDM Smith during the field visit did not reveal any major structural defects to the Ash Pond. Requests to the manager of the facility and discussions with Kevin Hill (a plant representative (PR) present during CDM Smith's site visit) did not yield sufficient information for evaluation of the four areas of concern for structural soundness. Records pertaining to these four areas of structural evaluation were very limited, and in most cases little or no documentation to evaluate and assess structural stability and soundness of the impoundment was provided by PPI. The limited information available for CDM Smith's review regarding structural soundness is in our opinion not sufficient for an assessment of the structural soundness of the Ash Pond at this time.

**Conclusions Regarding the Hydrologic/Hydraulic Safety of the CCW Impoundment**

The PR indicated that the impoundment has not had a major breach or overtopping event to his knowledge. Requests were made to the PR and the plant manager regarding documentation related to hydraulic safety of the Ash Pond. These requests included information on peak water levels and discharge rates into the impoundment, drainage rates for discharge of water from the impoundment, and written procedures followed in case of an embankment breach or overtopping event.

Documentation regarding the information requested on the impoundments history was not provided by the plant manager. Based on the lack of supporting documentation, an evaluation of the hydrologic/hydraulic safety of the Ash Pond is not possible at this time.

**Conclusions Regarding the Adequacy of Supporting Technical Documentation**

Supporting technical information regarding the site subsurface conditions, the facility's design and construction (including engineering analysis of stability and hydrology), documented history of maintenance, and any modification to the facility after its completion is considered inadequate. The plant manager did not provide the majority of information requested. The information requested is the minimum required for CDM Smith to evaluate the facility, and we cannot make these assessments of the impoundment without this documentation.

**Conclusions Regarding the Description of the CCW Impoundment**

Documentation in the form of plans and specifications for the initial construction and any postconstruction modifications of the Ash Pond were not provided by the plant manager. An 8-1/2 by 11- inch site plan was provided with very little detail of the facility. The available plans and related documentation describing this facility is insufficient to make an assessment of the physical description of the Ash Pond.

### **Conclusions Regarding the Field Observations**

CDM Smith staff was provided access by plant personnel to all areas of the Ash Pond for observation and inspection. The PR provided CDM Smith with some of the requested documents and provided a tour of the facility.

Visual examination of the impoundment embankments not obstructed by vegetation or stockpiled fly ash showed no evidence of prior ash/water releases through the embankment, and no signs of seepage or previous repairs. However, there was evidence of isolated shallow slides and erosion failures on the interior slopes of some embankments. In general, the impoundment embankments were overgrown with vegetation in several areas. The vegetation obstructed view of some of the embankments forming the impoundment.

The west embankment crest supports both lanes of State Highway 100, and the south embankment also serves as the north embankment of the storm water pond immediately south of the ash impoundment. Visual observations of the outlet structure found the outfall portion of the pipe assembly broken and removed. The PR indicated there has been some soil sloughing of the interior embankment slopes along State Highway 100, and that it was occasionally necessary to place fill materials on these slides to build up the grade.

Visual observations of the east side of the impoundment indicated that stockpiled ash has covered the southern half of the east embankment. It is also apparent that the stockpiled ash has been placed beyond the eastern boundary of the impoundment, extending east toward the coal overhead conveyor (roughly aligned north-south between the plant and the Illinois River). Coal ash placed outside the limits of the impoundment are not contained and therefore subject to surface water runoff. Repeated rainfalls and/or a rise in the Illinois River could wash the ash waste materials downslope, eventually discharging into the Illinois River. This condition does not appear to represent an immediate threat to the environment. However, the condition should be remediated in the near-term. An animal burrow, about 8 inches in diameter, was observed on the interior slope of the east embankment.

Visual observations of the interior of the Ash Pond indicated the eastern half of this area was filled and stockpiled with fly ash. The ash was dry at the surface and stockpiled into a long oval shape aligned in a north-south direction. The height of the ash pile varied from a low of approximately 3 to 5 feet below the top of the embankment, to a high of about 15 to 20 feet above the embankment crest.

Western portions of the interior of the impounded area contained standing water. In the northern portion of this standing water, dense overgrown vegetation obscured most of the water surface.

### **Conclusions Regarding the Adequacy of Maintenance and Methods of Operation**

Operating records provide a means for evaluation of the impoundment performance under maximum loading conditions. The PR indicated that the impoundment was inspected every quarter, but documentation was not available to confirm these inspections.

Scheduled maintenance is critical in keeping the crests, slopes, and toe of the slopes clearly visible for early detection of hazards such as rodent excavation, erosion, shallow slides, etc. Although the PR indicated embankments of the Ash Pond were periodically mowed, visual observations indicate the last mowing was limited to some northern areas of the impoundment, and vegetation overgrowth was still a problem in many areas of the embankment slopes. The PR could not provide documentation of regular maintenance beyond a verbal comment that maintenance was performed at least twice a year, as needed.

### **Conclusions Regarding the Adequacy of the Surveillance and Monitoring Program**

Observation wells were recently installed at the site and were monitored during CDM Smith's visit. The PR indicated locations where wells were recently installed. These wells were associated with gathering information required in the plant's closing, but no further detail on the scope and/or progress of these previous studies was available for review. The PR pointed out previous monitoring well installations installed on two separate occasions in the past, but could not provide information on these well installations. Although observation wells have been installed at the site, documentation of information obtained from these wells and associated

evaluations was not provided by PPI. CDM Smith is unable to evaluate the adequacy of the surveillance and monitoring program due to lack of documentation.

**RECOMMENDATIONS**

There are no formal recommendations, as the Ash Pond is no longer within the scope of the US EPA Coal Ash Assessment Program.