

US EPA ARCHIVE DOCUMENT



March 27, 2009

Mr. Richard Kinch
US Environmental Protection Agency (5306P)
1200 Pennsylvania Avenue, NW
Washington, DC 20460

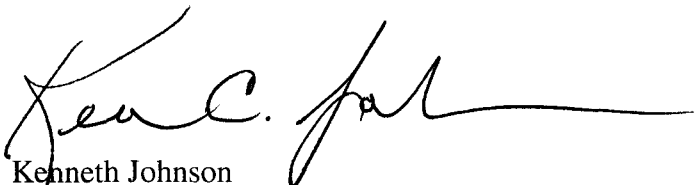
Re: Westar Energy, Jeffrey Energy Center
Reply to Request for Information Under Section 104 (e) of the Comprehensive
Environmental Response, Compensation, and Liability Act, 42 U.S.C. 9604(e)

Dear Mr. Kinch,

Enclosed is Westar Energy's Jeffrey Energy Center response to the recently received information collection request. The response details the applicable coal combustion waste management units and provides Westar's response to each question in the request.

I certify that the information contained in this response to EPA's request for information and the accompanying documents is true, accurate, and complete. As to the identified portions of this response for which I cannot personally verify their accuracy, I certify under penalty of law that this response and all attachments were prepared in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Sincerely,



Kenneth Johnson
VP Generation

Cc w/o enclosure: C. Swartzendruber, Topeka GO

Based on the recently received information collection request (ICR) concerning coal combustion waste (CCW) surface impoundments and similar diked or bermed management units, Westar Energy's Jeffrey Energy Center (Westar) is providing this response with respect to the three applicable areas at the facility. Based on the past and current operational scheme of the plant, the three areas deemed applicable to this request are the Bottom Ash Settling Pond, Bottom Ash Pond, and Bottom Ash Lake. The aerial photograph attached as Figure 1 provides an overview of the site CCW waste management areas.

In general, the facility sluices bottom ash from the boilers to the Bottom Ash Settling Pond where the majority of the ash solids are removed for beneficial use activities or permanent disposal. After settling, the water moves through the process to the Bottom Ash Pond and Bottom Ash Lake with each subsequent area containing a lower concentration of CCW. From the Bottom Ash Lake, water is returned to the plant for use in the bottom ash sluicing process.

The ten questions from EPA's ICR appear below followed by Westar's response. Attachments in support of the responses are included according to the following table.

Attachment	Management Unit	Attachment Description
1	Overall Site	Aerial Photograph
2	Bottom Ash Lake	S1601: Bottom Ash Storage Basin Dam, General Plan – Area 1
3	Bottom Ash Pond	Fines Containment Dam - Stability Report
4	Bottom Ash Pond	S3001: Fines Containment Dam Plan View and General Notes

1. Relative to the National Inventory of Dams criteria for High, Significant, Low, or Less than Low Hazard Potential, please provide the rating for each management unit and indicate which State or federal regulatory agency assigned that rating. If the unit does not have a rating, please note that fact.

The Bottom Ash Lake dam design and construction is equivalent to a "Significant" hazard dam. This rating is referenced in relation to the dam throughout documentation; however, an assigning agency is not known at the time of this submittal. The Bottom Ash Pond and Settling Pond are unclassified. However, both are located upstream of the much larger Bottom Ash Lake.

2. What year was each management unit commissioned and expanded?

The Bottom Ash Lake dam was commissioned in 1978 in conjunction with the original start-up of Jeffrey Energy Center, Unit 1. There has been no expansion of the original dam.

The Bottom Ash Pond dam was originally constructed by plant staff in the early 1980's. It is constructed of flyash, specifically Type "C" flyash as described in the dam stability report included as Attachment 3. The unit was expanded through the raising of the dam in 2000. At that time an emergency spillway and monitoring wells were added to the dam. The professional engineering firm of Black & Veatch performed a stability analysis on the existing structure and designed the expansion.

The Bottom Ash Settling Pond developed as a result of granular material settling out before reaching the bottom ash pond. In the mid 1980's a berm was built in that location to allow easy reclamation of bottom ash. As the pond fills in with ash, the unit is expanded by raising of the berm.

3. What materials are temporarily or permanently contained in the unit? Use the following categories to respond to this question: (1) fly ash; (2) bottom ash; (3) boiler slag; (4) flue gas emission control residuals; (5) other. If the management unit contains more than one type of material, please identify all that apply. Also, if you identify "other," please specify the other types of materials that are temporarily or permanently contained in the unit(s).

The Bottom Ash Settling Pond receives sluiced bottom ash. In addition this sluiced waste stream contains boiler slag intermixed through the collection process. A portion of the settled waste is removed and dispensed for beneficial use projects. The remainder that settles is permanently disposed at this location.

During planned normal operation, the Bottom Ash Pond receives the discharge from the Bottom Ash Settling Pond after the primary settling of the bottom ash and boiler slag. The majority of the remaining waste in this received stream settles out in the Bottom Ash Pond and remains for permanent disposal. In addition, the Bottom Ash Pond has at periods in the past and is presently receiving flue gas emission control residuals. The historical operations took place from 1981 to 1992 when the facility periodically operated scrubbers at the site. In 2008, the facility installed new scrubbers and began to again route flue gas emission control residues to the Bottom Ash Pond. This current operation is temporary until construction can be completed on a residue filtration system and gypsum dry landfill site. At this time, all material sluiced during this temporary operation and historical operations is planned to remain in the Bottom Ash Pond for permanent disposal.

In the current operational scheme, the Bottom Ash Lake receives little to no coal combustion waste. The small amount of fines received from discharge of the Bottom Ash Pond is classified as bottom ash. In addition, during a period of operation from 1978 to 1981, the facility intermittently placed flue gas emission control residue in this lake while installing and starting up a scrubber system and this material remains permanently disposed at this location.

4. Do you have a Professional Engineer's certification for the safety (structural integrity) of the management unit(s)? Please provide a copy if you have one. If you do not have such a certification, do you have other documentation attesting to the safety (structural integrity) of the management unit(s)? If so, please provide a copy of such documentation.

The Bottom Ash Lake dam was designed by the professional engineering firm Black & Veatch prior to 1977. A copy of the plan drawing is included as Attachment 2 and includes the signature and license number of the Professional Engineer.

The Bottom Ash Pond, once referred to as the "Fines Containment Dam", as it stands today was designed by the professional engineering firm Black & Veatch in 2000. Documentation on that design is included as Attachments 3 and 4. The final design in Westar's possession today does not include the Professional Engineer's signature or license number.

There is no Professional Engineer's certification for the Ash Settling Pond. Westar will initiate a formal professional engineering analysis of the berm structure and stability to be completed in 2010.

5. When did the company last assess or evaluate the safety (i.e., structural integrity) of the management unit(s)? Briefly describe the credentials of those conducting the structural integrity assessments/evaluations. Identify actions taken or planned by facility personnel as a result of these assessments or evaluations. If corrective actions were taken, briefly describe the credentials of those performing the corrective actions, whether they were company employees or contractors. If the company plans an assessment or evaluation in the future, when is it expected to occur?

The Bottom Ash Lake dam and the Bottom ash Pond dam are inspected visually each month by plant operations personnel and quarterly by a Westar Plant Support Engineer. Westar contracts with the engineering firm Black & Veatch (B&V) to perform on-site inspections of both dams annually. The most recent B&V inspection was performed on September 29th and 30th, 2008. The B&V inspections include gathering and analyzing data from visual inspections, surveys, test well piezometers, and vertical movement devices. Westar and B&V engineering inspections are performed by, or under the direct supervision of, Registered Professional Engineers.

The September 2008 B&V inspection identified no significant problems with either dam. Recommendations provided in the inspection report included; add rip-rap where rip-rap is weathered near the inlet to the Bottom Ash Lake emergency spillway, and clean silt from the Bottom Ash Lake toe-drain v-notch weir. Westar has plans to complete the weir cleaning during the summer of 2009 and assess the rip rap condition for possible placement of additional rip rap in 2010.

In addition to the routine inspections, the Bottom Ash Pond dam was inspected for structural stability prior to expansion in 2000, see the report included as Attachment 3 for detailed information.

The annual Black & Veatch inspection covering the Bottom Ash Lake and Bottom Ash Pond will be conducted again in the Fall of 2009.

The Ash Settling Pond berm is not formally inspected. Beginning in 2009, the Ash Settling Pond berm will be added to the annual inspection performed by B&V. As the bottom ash product readily drains and the large majority of the water is passed downstream, the berm holds a minimal amount of water.

6. When did a State or a Federal regulatory official last inspect or evaluate the safety (structural integrity) of the management unit(s)? If you are aware of a planned state or federal inspection or evaluation in the future, when is it expected to occur? Please identify the Federal or State regulatory agency or department which conducted or is planning the inspection or evaluation. Please provide a copy of the most recent official inspection report or evaluation.

State officials from the Kansas Department of Agriculture, the regulatory authority with respect to dam safety in Kansas, and other unknown state regulatory agencies inspected the Bottom Ash Pond dam during and after the expansion in 2000. Westar has no record of official reports resulting from those site visits.

While Westar has no knowledge of additional site inspections relating to dam structural integrity, the results of the annual engineering inspection referenced in the response to Question 5 are submitted to the Kansas Department of Agriculture.

Westar isn't aware of any planned state or federal site inspections.

7. Have assessments or evaluations, or inspections conducted by State or Federal regulatory officials conducted within the past year uncovered a safety issue(s) with the management unit(s), and, if so, describe the actions that have been or are being taken to deal with the issue or issues. Please provide any documentation that you have for these actions.

To Westar's knowledge, there have been no on-site inspections or evaluations conducted by State or Federal officials in the past year.

8. What is the surface area (acres) and total storage capacity of each of the management units? What is the volume of material currently stored in each of the management unit(s)? Please provide the date that the volume measurement was taken

Approximate surface area, capacity, and the most recently calculated volume for each unit is included in the following table.

Management Unit	Surface Area (acres)	Total Capacity (acre-ft)	Current Volume CCW Stored (acre-ft)	(Date of Measurement)
Bottom Ash Settling Pond	52.5	988	352	February 21, 2007
Bottom Ash Pond	72.1	550*	262	February 21, 2007
Bottom Ash Lake	117.2	3515	80	February 21, 2007

*This value has been updated based on 2007 topographic data; and therefore does not identically match the capacity value provided in the 2000 drawing of Attachment 3.

9. Please provide a brief history of known spills or unpermitted releases from the unit within the last ten years, whether or not these were reported to State or federal regulatory agencies. For purposes of this question, please include only releases to surface water or to the land (do not include releases to groundwater).

There are no known spills or unpermitted releases from any of the units in the last ten years. The Bottom Ash Lake is permitted to discharge overflow water through the emergency spillway as lake level necessitates. Westar interprets any releases under this permit allowance to be outside the scope of this request.

Westar entered into a consent agreement with the Kansas Department of Health and Environment in March 2008 concerning the operation of new flue gas scrubbers. This agreement allows for the temporary discharge of flue gas emission control residuals to the Bottom Ash Pond. Westar is not allowed to discharge from the Bottom Ash Lake during this temporary scrubber discharge. Since entering into the agreement, the lake level has been reduced and there have been no discharges of overflow water from the Bottom Ash Lake.

10. Please identify all current legal owner(s) and operator(s) at the facility.

The current operator of the Jeffrey Energy Center is Westar Energy, Inc.

The current legal owners of the Jeffrey Energy Center include Westar Energy, Inc., Kansas Gas and Electric Company, and KCP&L – Greater Missouri Operations Company.