

US EPA ARCHIVE DOCUMENT

EPA Comments on Draft Report on Ameren- Duck Creek Power Generating Station

Limited hydraulic and hydrologic information was available for review during this assessment. These calculations follow standard engineering procedures and appear to show the adequacy of the impoundments for their intended functions at the time that the calculations were made. Other documents such as hydrologic studies, additional hydraulic design calculations and assumptions, and impoundment break analyses were not available for our review.

Surface erosion up to 12 inches in depth can be seen along the crest and slope of the majority of the internal dikes. Sparse vegetation can be observed on the slopes of the dikes, but provides little or no protection against surface erosion.

An Emergency Action Plan (EAP) is not currently in place at the site to mitigate damage in the event of an emergency related to failure of the impoundment(s).

We understand that an Operation and Maintenance (O&M) Manual is not currently in place for the site. Developing an O&M manual, which includes a section that discusses the safety inspection and monitoring program, would be recommended to standardize safety inspection and monitoring practice.

Documentation of the impoundment capacity at Fly Ash Pond Number 1 under potential hydrologic and hydraulic loading is not currently available for review.

**Review stability and seismic analyses that are being prepared by Ameren Energy for Fly Ash Pond Number 1 and Fly Ash Pond Number 2.** Due to the lack of documented stability analyses under current conditions, new stability analyses of both impoundments should be performed. The analyses should incorporate current groundwater data and include an evaluation of the embankments and the outlet pipe for Fly Ash Pond Number 2 under seismic loading scenarios. According to Ameren, we understand that this task is currently being completed by another consultant retained by Ameren Energy. The results of this evaluation should be reviewed by Kleinfelder.

**Ameren Response to Ameren Energy's Coal Ash Impoundment  
Site Assessment Draft Reports**

Meredosia Site Assessment

Page 7, Section 2.1 Attendees - Please correct spelling of AmerenEnergy employee name from "Schnelter" to "Schnelten" and add "Mitch White – AmerenEnergy" to the list of attendees.

Page 9 – Revise the last paragraph on this page to be consistent with the AmerenEnergy Generating Company Response in Appendix C, Meredosia Power Station, Paragraph 9.

Appendix C - AmerenEnergy Generating Company Responses to USEPA request for information includes all plants. Request that you include only the Meredosia response for this site assessment report.

Edwards Site Assessment

Page 8, Section 2.1 Attendees - Please correct AmerenEnergy employee name "Mike Davis" to read "Mark Davis".

Page 8, Section 2.2 Impoundments Assessed - General Note: The impoundment is a single pond divided into 3 cells, not individual ponds as indicated in the report. All interior dikes are of ash construction. This configuration has evolved based on operational requirements for removal of bottom ash and fly ash from the impoundment.

Page 10, third paragraph: Revise sentence "Prior to the current layout, trains delivering coal to the site had to stop, disconnect and single car, unload the car at the coal stockpile..." to read "Prior to the current layout, trains delivering coal to the site had to stop, break the train into groups of cars, unload the cars at the dumper house, then move the cars and dump the next group."

Page 11, Paragraph D - Capacity of the entire impoundment (all three cells) is approximately 1800 acre-ft.

Page 12, Paragraph F, Outlet Works, Clarification Pond, 5. Outlet Structure – Revise "36-inch CMP connected to a flap gate" to read "36-inch CMP connected to a slide gate and flap gate."

Page 12 – Paragraph F, Outlet Works, Clarification Pond, 5. Outlet Structure, a. Outlet Invert Elevation – Revise "unknown" to read "447.1'."

Page 21, Section 4.4, Second paragraph – Revise sentence "Currently, there is not an EAP for the site" to read "Currently, there is not an EAP for the impoundment."

Page 24, Section 6.2.4 – It should be noted that the movement of the west slope is due to a shallow slide on the face of the embankment. The topsoil and ash fill that has been constructed over the original embankment became saturated. The pond level in that area has been lowered to alleviate this problem.

Page 24, Sections 6.2 and 6.3 – Priority 1 and 2 recommendations show completion dates; some of which have already passed. Please omit.

Appendix C – AmerenEnergy Generating Company Responses to USEPA request for information includes all plants. Request that you include only the Edwards response.

#### Newton Site Assessment

Page 8, 3.2.A.10. and Page 13, 3.8 Hazard Classification – We propose that the Secondary Ash pond be classified as Low Hazard Classification. The volume of the pond and its location adjacent to the lake do not warrant a Significant Hazard Classification.

Page 9, Paragraph C. Drainage Basin – Area of the Ash Pond Drainage Basin is equal to the area of the pond(s).

Page 11 – “The extents of the drainage area for the Primary Ash Pond cannot be determined without an updated survey of the impoundments...” The impoundment is a perched pond and has no stormwater inflow from adjacent areas.

Figure 2 – It should be noted that there are 2 discharge locations from the plant at the north end of the ash pond. The east discharge (Unit 2) is a bottom ash sluice pipe and the west discharge (Unit 1) is bottom ash and fly ash sluice pipe.

#### Duck Creek Site Assessment

Page 8 – It should be noted that the Recycle Pond has gone thru a Clean Closure since the inspection on August 11<sup>th</sup>. Ash Pond 1 and Ash Pond 2 are continuing to be dewatered and are slated for closure in 2013/2014.

#### Coffeen Site Assessment

Page 8 – The decommissioned ash pond was capped circa 1981.

Page 9, C. Drainage Basin – The recycle pond and reclaim pond are both perched ponds, therefore the drainage basin is the area of the pond itself.

Page 11 – The water level in the recycle pond is checked by plant operations personnel on a daily basis. If the water level in the recycle pond rises, flow is diverted from the

looped system into the coal pile settling basin, which is a permitted discharge per Illinois Department of Natural Resources. Water in the coal pile settling basin is then discharged to Coffeen Lake thru the NPDES outlet.

Page 11 – The water level in the recycle pond is checked by plant operations personnel on a daily basis. If the water level in the recycle pond rises, flow is diverted from the looped system into the coal pile settling basin, which is a permitted discharge per Illinois **EPA** Department of Natural Resources. Water in the coal pile settling basin is then discharged to Coffeen Lake thru the NPDES outlet.

Page 12, First Paragraph, last sentence – delete “and will be equipped with a stop log structure to control the overflow” as the structure was omitted from the plans due to the “gypsum stack” being revised to a non-stacking “gypsum impoundment”.