

- 1) Provide the 2015 and current estimates for both the broad category (General Conditions) and the subparts (e.g., water treatment, water management, etc.) that were included in the presentation at the informal conference on June 11, 2019.

General Conditions	June 2015 "Estimate"	March 2019 "Revised Estimate"	Delta
Water treatment	\$ -	\$ 5,940,822	\$ 5,940,822
Water management	\$ 823,726	\$ 9,932,563	\$ 9,108,837
Contractor general conditions	\$ 3,670,037	\$ 8,273,269	\$ 4,603,232
Miscellaneous site / construction contracts		\$ 510,921	\$ 510,921
Outside professional services	\$ -	\$ 685,833	\$ 685,833
AEP purchased material		\$ 989,532	\$ 989,532
TOTAL	\$ 4,493,764	\$ 26,332,940	\$ 21,839,177
Material Excavation & Fill	June 2015 "Estimate"	March 2019 "Revised Estimate"	Delta
Ash excavation & placement	\$ 9,808,326	\$ 12,272,077	\$ 2,463,751
Borrow material excavation, processing (if needed) & fill placement	\$ 11,283,894	\$ 13,097,049	\$ 1,813,155
TOTAL	\$ 21,092,220	\$ 25,369,126	\$ 4,276,906
AEP Internal Costs	June 2015 "Estimate"	March 2019 "Revised Estimate"	Delta
Internal labor (PME&C)	\$ 2,850,000	\$ 5,362,133	\$ 2,512,133
Plant Services (GSC)	\$ -	\$ 2,512,420	\$ 2,512,420
Overhead	\$ -	\$ 3,297,334	\$ 3,297,334
TOTAL	\$ 2,850,000	\$ 11,171,887	\$ 8,321,887

- 2) How much of the project's total costs to date can be attributed to the vacuum well point system?

Prior to cessation of the vacuum well-point system, that technology was properly functioning in dewatering the ash prior to excavation and placement for subgrade. It enabled the Company to complete a portion of the work at a substantially lower cost than would have been required if traditional means and methods had been employed. Kentucky Power would have continued to use the system but for the high levels of metals in the outflow.

The cost of the vacuum well-point system was not explicitly itemized in the contract for the work; instead, it was included in the unit price to excavate, load, haul, and place the pond ash to establish the required elevation of designed subgrade. The all-inclusive unit price to establish the subgrade using the vacuum well-point system was \$14.64 per cubic yard. Kentucky Power estimates the cost associated with the well-point system in the unit price was \$6.27 per excavated cubic yard. As a result of the vacuum well-point system operation being discontinued due to permitted outfall impacts, 667,348 cubic yards of material was excavated and placed per the contract unit price. The calculated cost of the vacuum well-point system to the project was \$4,184,272, or 43 percent of the total cost of \$9,769,975 to excavate, load, haul, and place the pond ash to establish the designed subgrade.

The bids received from other contractors for excavation, loading, hauling, and placing pond ash using traditional means were significantly higher than the accepted bid using the vacuum well-point system. Although the vacuum well-point system could not be used for the entire project, the work that was completed using the vacuum well-point system was done at a lower total cost than would have been required to complete the same work using traditional means and methods.

3) Has the vacuum well point system been used at any other AEP sites, and if so, what were the results?

No. Each fly ash impoundment is unique due to its geography, geology, coal ash characteristics, operational constraints, and other considerations. The Big Sandy Fly Ash Impoundment Closure is one of three such projects that AEP has managed. The Amos Project was completed in 2017 and the contractor that performed the work lacked the technology to use the vacuum well-point system. The Big Sandy Contractor is also currently closing the impoundment at Gavin Plant in Cheshire, OH for AEP. The vacuum well-point system has not been used to date at Gavin. Use of a well-point system at Gavin continues to be evaluated and may be an option for dewatering some portions of that project in the future.


Well-point systems have been successfully used for dewatering by the Big Sandy and Gavin contractor in several petrochemical waste pond applications. In evaluating the contractor's bid, AEP construction personnel visited a petrochemical waste pond site to observe the execution of the technology and were satisfied that it could be successfully implemented on AEP projects.

The bid received using the vacuum well-point system in connection with the closure of the Big Sandy Ash Pond was the lowest bid received for the project. The bids from other contractors, who proposed using the more traditional trench excavation, stockpiling and drying techniques to stabilize the ash, were significantly higher.

Witnesses: Robert E. Brunner and Stephen F. Wells

VERIFICATION

The undersigned, Robert E. Brunner, being duly sworn, deposes and says he is the Generation Projects Manager Principle for American Electric Power, that he has personal knowledge of the matters set forth in the foregoing responses and the information contained therein is true and correct to the best of his information, knowledge, and belief.



Robert E. Brunner

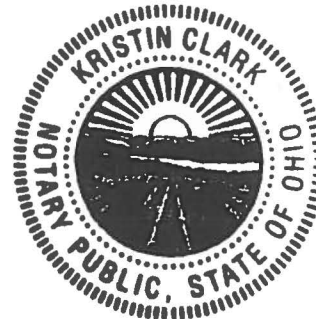
Commonwealth of Kentucky)
)
County of Boyd) Case No. 2015-00152

Subscribed and sworn before me, a Notary Public, by Robert E. Brunner this
25th day of June, 2019.



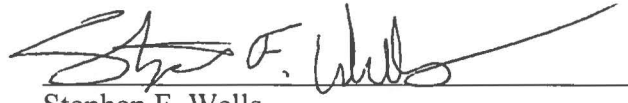
Notary Public

My Commission Expires 10-08-2023



VERIFICATION

The undersigned, Stephen F. Wells, being duly sworn, deposes and says he is the Environmental Engineer Senior for American Electric Power, that he has personal knowledge of the matters set forth in the foregoing responses and the information contained therein is true and correct to the best of his information, knowledge, and belief.


Stephen F. Wells

Commonwealth of Kentucky)
) Case No. 2015-00152
County of Boyd)

Subscribed and sworn before me, a Notary Public, by Stephen F. Wells this
25th day of June, 2019.


Notary Public

My Commission Expires 10-08-2023

