

## **Phase I Trimble County Landfill & CCRT Project**

### **Quarterly Report – Update #10**

**July 30, 2018**

#### **Executive Summary**

This report covers LG&E and KU’s (“Companies”) progress on the Phase I Trimble County Landfill and CCRT.<sup>1</sup> Project through the second quarter of 2018.

Safety performance to date is excellent with a year-to-date OSHA Recordable Incident Rate improving to 0.68 and an inception-to-date OSHA Recordable Incident Rate improving to 0.77, compared to the industry average of 3.20.

The Project’s total forecasted cost remains \$301.9 million (net)<sup>2</sup>, which reflects a reduction from \$321.9 million (net) as provided in Case 2015-00194. The forecast reflects that the Companies have awarded all major Engineering, Procurement and Construction (“EPC”) contracts required to complete the Project. Total spend to date has increased from \$194.2 million (net) to \$209.8 million (net) through June 30, 2018.

As previously reported, all necessary permits to construct the Project have been received. The forecasted period for commissioning the CCRT Fly Ash and Gypsum subprojects remains the summer of 2018 as originally planned and commissioning activities have begun. The Project background information (i.e., scope, contract awards, conceptual design layouts, and permitting status) is located in the Appendix.

Construction of the CCRT subproject continues to progress very well to plan with most work now focused on the final setting of equipment and completing the installation of the various mechanical and electrical subsystems. Commissioning activities for the gypsum dewatering system of the CCRT subproject has begun as planned. Construction on the CCR Transport subproject scope during the quarter has consisted of rock blasting, construction of pipe conveyor foundations, and major earthmoving efforts for the landfill sediment pond and roadway corridor from the generating station to the future landfill site. AMEC’s subcontractor, Louisville Paving, a local company, has completed the bridge deck for the bridge over KY 1838 which allows the bridge to be utilized for limited construction traffic. Construction on the Landfill subproject scope continues by Charah, a local company. Charah is maintaining the site erosion control measures, continues clearing trees, stripping and grading slopes, and blasting associated with landfill leachate and storm-water basins. The forecasted end date of the subprojects has not changed.

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<sup>1</sup> The Coal Combustion Residuals Treatment (“CCRT”) subproject scope is described in detail in the Appendix found on page 14.

<sup>2</sup> Co-Owners of the Trimble County plant: Illinois Municipal Electric Agency (IMEA) and Indiana Municipal Power Agency (IMPA) are responsible for 25%. IMEA owns 12.12% and IMPA owns 12.88%. Co-owner share is not included in the costs provided in this report.

## CCRT & Transport Quarterly Status Update

The Companies continue to hold project review meetings with AMEC and the station. Activities at weekly project engineering and construction meetings include the review of engineering drawings, 3D models, construction plans and schedules, and final equipment installation and commissioning planning.

The procurement and construction status for the major equipment is summarized in the table below:

Equipment	Awarded Contractor	Status
Unit 1 Bottom Ash Submerged Chain Conveyor	United Conveyor Corporation	Equipment placed into service in November 2017 as planned.
Fly Ash Conditioner and Conveying System	United Conveyor Corporation	Equipment Delivered Construction in progress and on schedule.
Gypsum Dewatering Vacuum Belt Filter System	FLSmidth	Equipment Delivered Construction in progress and on schedule, commissioning has begun.
Gypsum Portal Scraper Reclaimer	Ameco (same vendor as Ghent’s portal reclaimer commissioned in December 2014)	Equipment Delivered Construction in progress and on schedule.
Pipe Conveyor	Beumer Group (same vendor as Ghent’s pipe conveyor commissioned in December 2014)	Equipment being delivered Construction of support foundations in progress.

AMEC, with involvement from the Companies, continues to receive equipment and materials, and is nearing completion on engineering. The CCRT scope continues to progress well with construction focused on equipment installation, erection of conveyor belt assemblies, installation of pipe conveyor foundations, testing of electrical switchgear, transformers and motor control centers, testing of air compressors and associated piping, finalizing the fly ash and gypsum dewatering equipment and piping, finalizing construction of the fly ash silos, stair tower and elevator, and installation and testing of the distributed controls system remote input and output logic and graphic equipment. Installation, testing, and energizing of the second half of the 14kv CCRT Power Center was completed during the quarter.

The CCR Transport scope is also progressing well. During the reporting period, AMEC and their subcontractors continued major earthwork activities. AMEC’s subcontractor, Louisville Paving, completed the bridge deck for the bridge over KY 1838. They also continued blasting operations for rock excavation for the future access road corridor. Blasting, as part of the CCRT Transport subproject, is nearing completion. AMEC continues to receive pipe conveyor parts from Beumer and is progressing well on the pipe conveyor foundations.

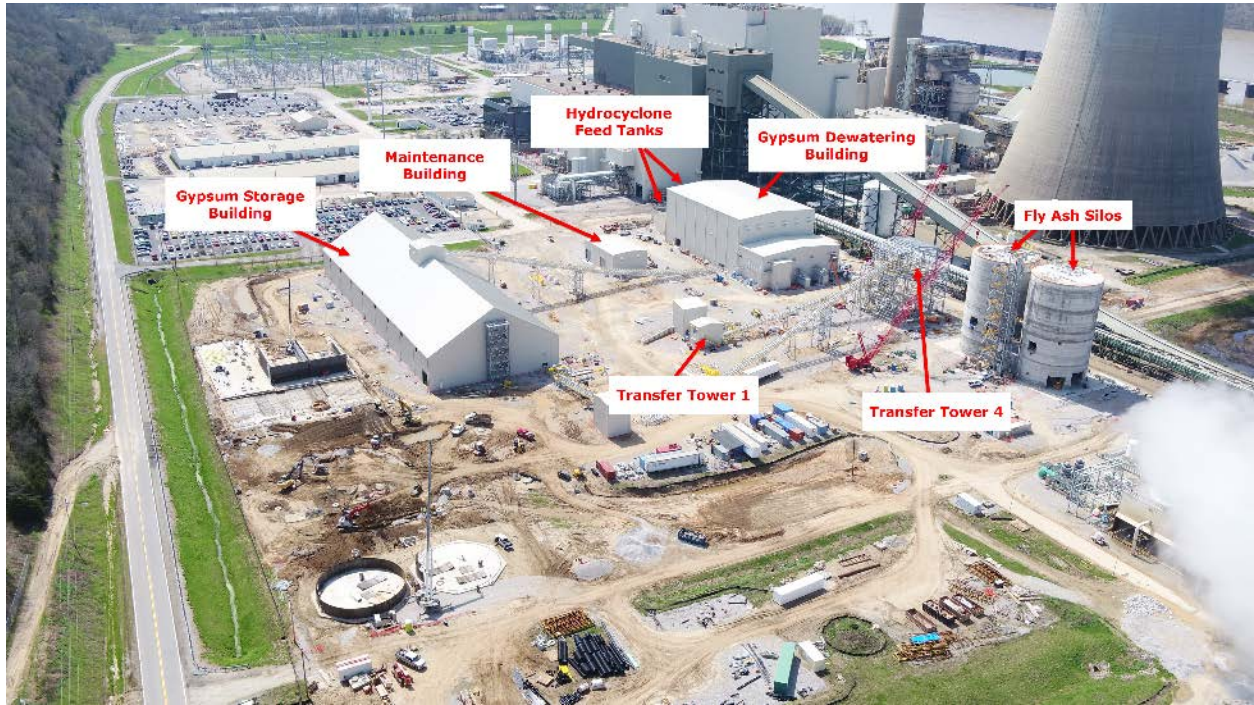


CCRT Project Area Looking North – Photo from the April 2018 Report

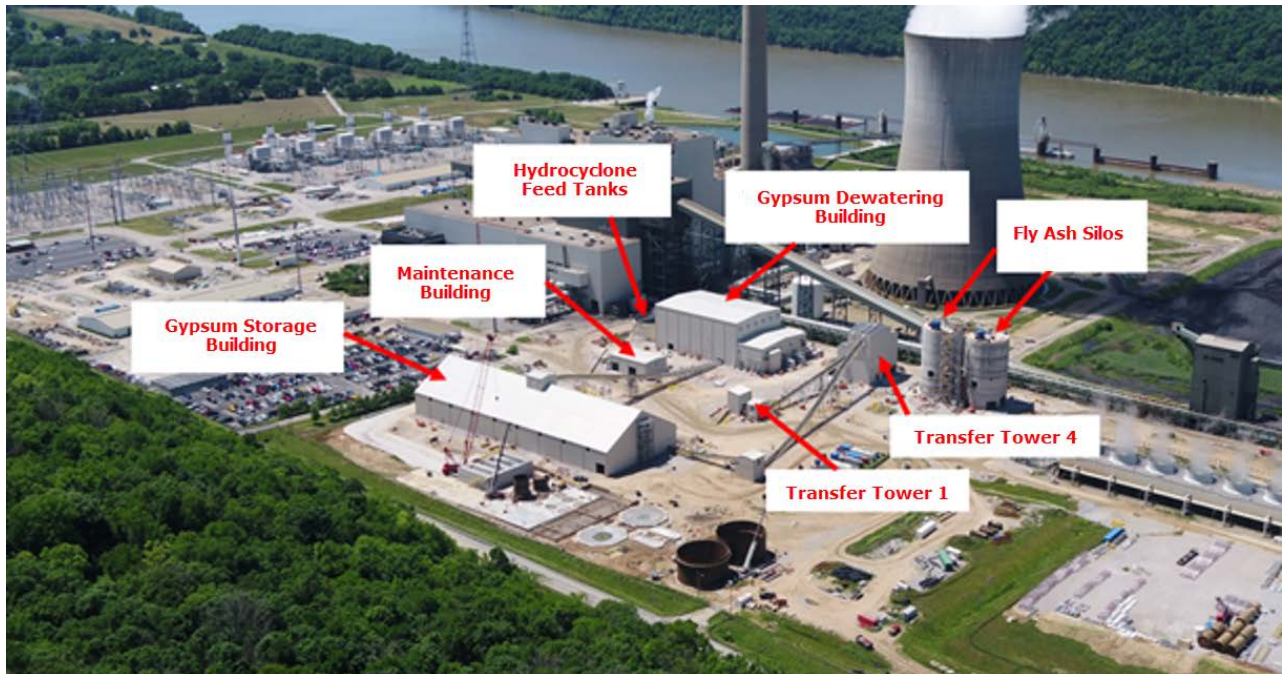


CCRT Project Area Looking North –June 2018





CCRT Project Area Looking South – Photo from the April 2018 Report



CCRT Project Area Looking South – June 2018





CCR Transport Corridor – View from Bridge over KY 1838 to Landfill (Looking East) –  
Photo from the April 2018 Report



CCR Transport Corridor – View of Bridge over KY 1838 to Landfill (Looking North) – June 2018

## **Landfill Quarterly Status Update**

Charah continues to receive deliveries of landfill infrastructure components including concrete culverts, storm-water PVC piping, and rock. Charah and its subcontractors continue clearing trees, blasting of rock, and have begun major excavation and construction of the access road to the ravine landfill lower work area (i.e., sediment pond, storm-water pond, leachate pond). The outfall structures associated with the ponds are progressing very well.

AMEC Foster Wheeler Environment & Infrastructure's construction quality assurance activities for the landfill this quarter include visual inspections, attending meetings and reviewing informational submittals and drawings. One land purchase on Ogden Ridge Road of approximately 9 acres was executed during the second quarter.





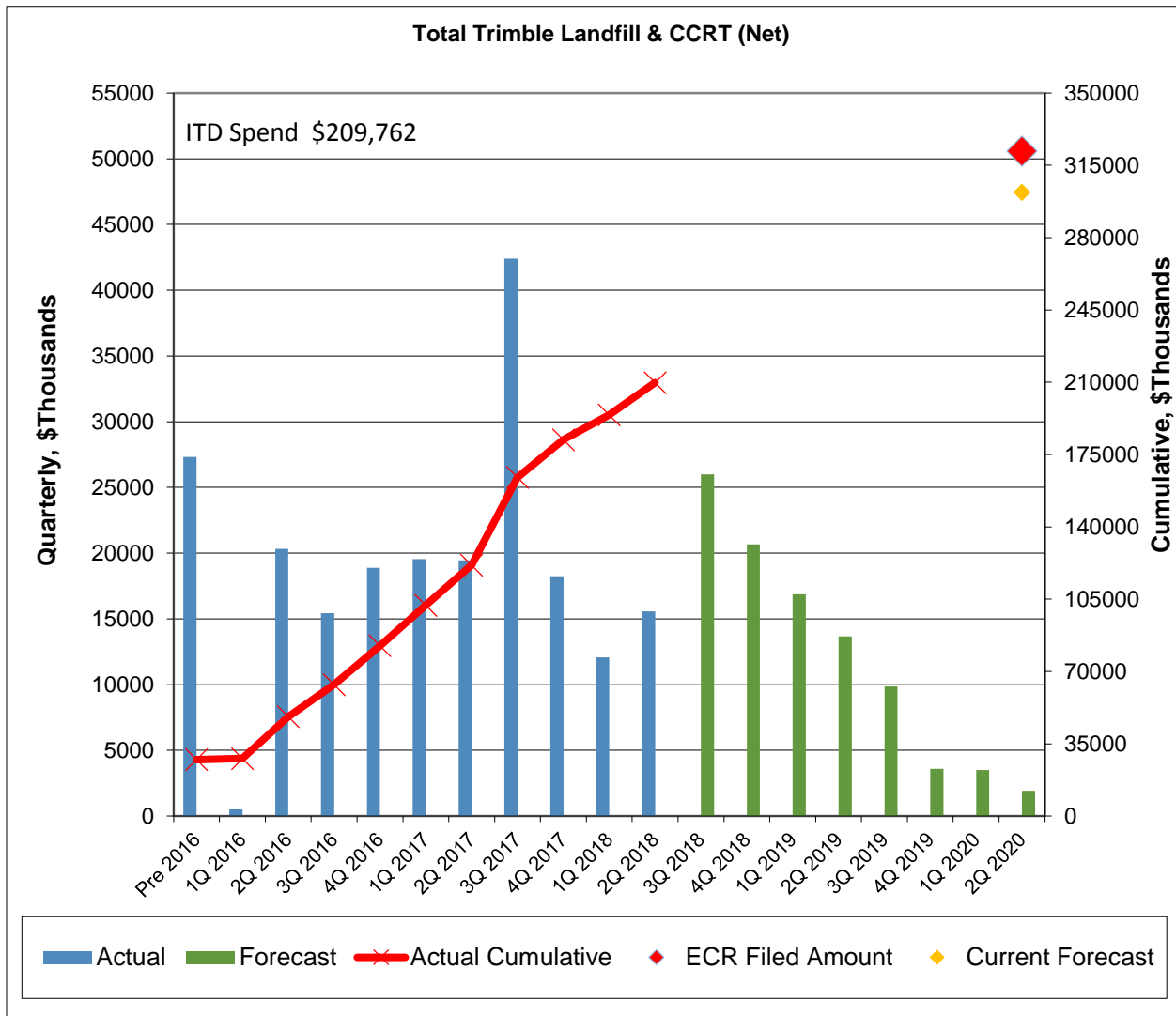
CCR Landfill Overview – View from Station (Looking East) – Photo from the April 2018 Report



CCR Landfill Overview – View from Station (Looking East) – June 2018

## Financials

The Project’s total forecasted cost remains \$301.9 million (net) as reported previously, which reflects a reduction from \$321.9 million (net) as provided in Case 2015-00194. The forecast reflects all major EPC contracts being signed that are required to complete the Project. Total spend to date has increased from \$194.2 million (net) to \$209.8 million (net) (KU \$96.1M / LG&E \$113.7M) through June 30, 2018. Note for the graph below: (1) includes a symbol ( ◆ ) to show the current forecast to completion; and (2) Inception-to-Date (ITD) Spend is shown in the upper left corner.





## **Planned Activities for Next Quarter**

### **CCRT**

The Companies will continue oversight of the construction and commissioning activities, as well as continue reviews of the engineering that is nearing completion. AMEC will continue receiving equipment and material during the third quarter. AMEC's site activities will include continued construction of underground electrical duct banks, setting of equipment and erection of process and handling equipment assemblies, and commissioning of the gypsum dewatering system. Planning for the summer commissioning activities of the various systems will continue.

### **Transport**

As previously stated, AMEC's subcontractor, Louisville Paving, a local company, has completed the bridge deck for the bridge over KY 1838. They will now begin installing the approach slabs for the bridge over KY 1838, as well as continue to perform earthwork and grading activities for the future road from the generating station to the landfill. AMEC will continue the construction of the pipe conveyor foundations.

### **Landfill**

Charah will continue with tree clearing, major earthwork and blasting activities associated with Phase I landfill construction. While one land purchase was made during the second quarter of 2018, the Companies remain open to purchase additional land within close proximity of the landfill. The acquisition of this additional land will facilitate future clay or soil borrowing for the long-term operation of the landfill and provide a further buffer area between local residents and landfill operations.

## APPENDIX

### Scope

The Trimble County Landfill and CCRT Project scopes include: CCR Treatment facilities, CCR Transport system, and Phase I of a dry CCR Landfill.

The CCR Treatment facilities include the Unit 1 bottom ash dewatering system, conversion of station fly ash transport from wet to dry conveyance, fly ash storage and treatment equipment and the station gypsum dewatering system and associated gypsum storage/reclaim system. The CCR Transport system includes a pipe conveyor (approximately 1.5 miles) from the CCR Treatment area to the landfill location, a bridge over KY 1838, and a road from the station to the new dry CCR landfill. The CCR Landfill includes Phase I of a new dry CCR landfill that is designed to receive and manage CCR generated over approximately 37 years. The Landfill will be developed in multiple phases with each fully integrated as an extension of the adjacent landfill phase or cell. Only Phase I is included in the CCRT and Landfill project. The certificate of public convenience and necessity for this project awarded in Case Nos. 2009-00197 and -00198 and affirmed in Case No. 2015-00194.

### Previously Reported Contract Awards

The CCRT Owner's Engineer contract was awarded to B&McD. B&McD has supported various projects for LG&E and KU, and recently supported the Trimble County Unit 1 PJFF capital project. B&McD assisted in the specification development for the CCRT and bottom ash scopes of work, and assisted in the bid evaluations and EPC finalization.

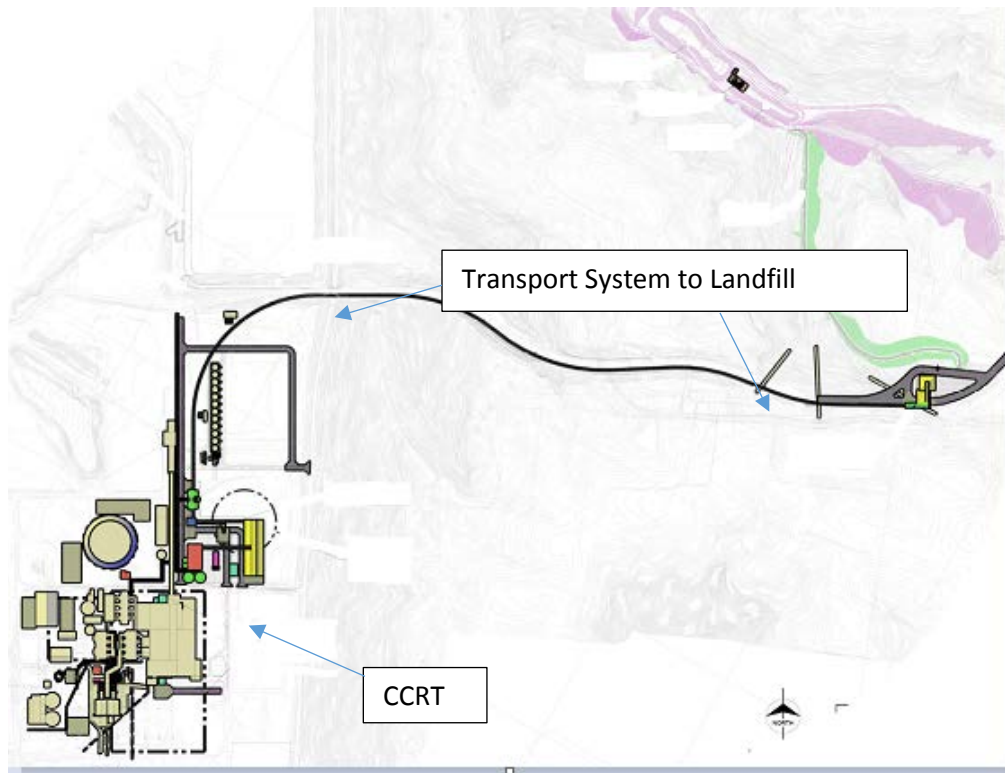
The Landfill Owner's Engineer contract was awarded to GAI. GAI has been the Engineer of Record through the permitting and landfill design phases, as well as the engineering firm that developed the specifications for the road and bridge work.

The CCRT and Transport portion of the project was awarded to AMEC. An EPC was executed with AMEC on April 7, 2016. AMEC has performed very well for the Companies in the recent past with completion of the E.W. Brown Unit 3 and Trimble County Unit 1 baghouse projects. AMEC has also been awarded the CCR Rule Process Water System projects for Trimble County and Mill Creek generating stations.

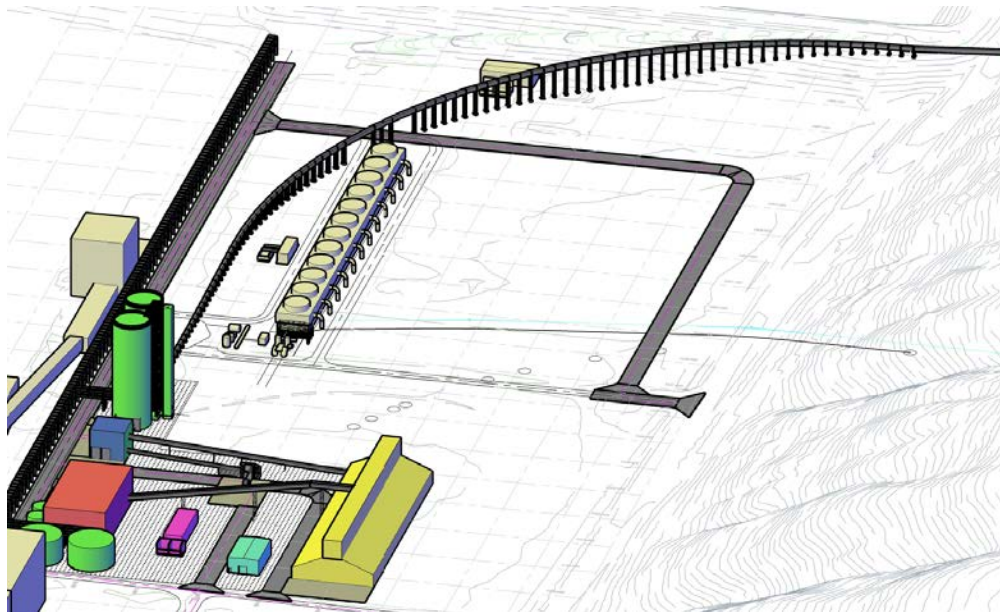
The Phase I Landfill portion of the project was awarded to Charah, a local company. Charah has previously completed successful projects for the Companies, such as the Ghent and E.W. Brown Landfill Phase I projects.



## Conceptual Site Layout Graphics



Graphic 1 - Conceptual Layout of the CCRT and Transport System



Graphic 2 - Conceptual 3D Site Layout of the CCRT

**Table 1 - Landfill Permitting Status**

<u>Required Regulatory Permit</u>	<u>Submitted</u>	<u>Date Submitted</u>	<u>Date Received</u>
Kentucky Division of Waste Management Landfill Permit	Yes	January 3, 2014	<u>February 2017</u>
US Army Corps of Engineers 404 Permit	Yes	April 25, 2014	<u>June 28, 2017</u>
US Army Corps of Engineers Nationwide Permit (Monitoring Wells)	Yes	September 9, 2013	September 2014
Kentucky Division of Water 401 Water Quality Certificate	Yes	April 25, 2014	<u>October 24, 2016</u>
Kentucky Division of Water Dam Safety Permit	Yes	<u>February 15, 2016</u>	<u>August 2016</u>
Kentucky Transportation Cabinet Bridge Permit	Yes	January 30, 2014	February 2015
Kentucky Division for Air Quality Title V Revised Air Permit	Yes	<u>October 12, 2015</u>	<u>December 2015</u>

Note: The underlined dates reflect updates from Application Exhibit 3 in Case No. 2015-00156 filed on May 22, 2015, which the Commission by order later consolidated into Case No. 2015-00194.