

**Phase I Trimble County Landfill & CCRT Project**  
**Quarterly Report – Update #12**  
**January 30, 2019**

**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 fourth quarter of 2018.

Safety performance to date remains excellent with an inception-to-date OSHA Recordable Incident Rate of 0.67, compared to the industry average of 3.2 and 0.79 reported in the last report.

The Project’s total forecasted cost remains \$290.6 million (net) as reported last quarter,<sup>2</sup> which reflects a reduction from the last forecast of \$301.9 million and a significant reduction from \$321.9 million (net) as provided in Case No. 2015-00194. The forecast reflects that all major contracts have been awarded, as well as accounts for spend to date and progress on construction. Total spend to date has increased from \$225.7 million (net) to \$238.5 million (net) through December 31, 2018.

As previously reported, all necessary permits to construct the Project have been received. The commissioning and pre-performance testing activities for the CCRT Fly Ash and Gypsum subprojects continue with both systems being operational. Performance testing for these systems was deferred to the first quarter of 2019 to allow the completion of punchlist items identified during commissioning to be completed prior to testing. The delay has not hampered operation of the station as both systems are being utilized. The Project background information (i.e., scope, contract awards, conceptual design layouts, and permitting status) is located in the Appendix.

Construction of the CCRT subprojects continues to progress very well; construction activities are winding down and most work is focused on punchlist activities. Commissioning and pre-performance testing activities for the gypsum dewatering and fly ash systems continue. Construction on the CCR Transport subproject scope during the quarter has consisted of installation of structural steel support frames for the pipe conveyor truck loading facility, erection of the landfill emergency CCR storage building, and major earthmoving and civil construction 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 approach slabs for the bridge over KY 1838. The new bridge is being utilized for construction traffic to reduce impacts to local roads. Construction on the Landfill subproject scope continues by Charah, also a local company. Charah continues maintaining site erosion control measures,

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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 10.

<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.

stripping and grading slopes, rock blasting associated with landfill leachate and storm-water basins, and structural fill placement in the future landfill cell. The forecasted end dates of the subprojects have not changed. No additional land purchases occurred during the quarter; however, the Companies continue to intermittently discuss land purchases with a few adjacent property owners to the future landfill as it relates to providing additional buffer areas between the landfill and residents.

### 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 updates and planning. Commissioning review meetings are held when needed, which can be daily if required.

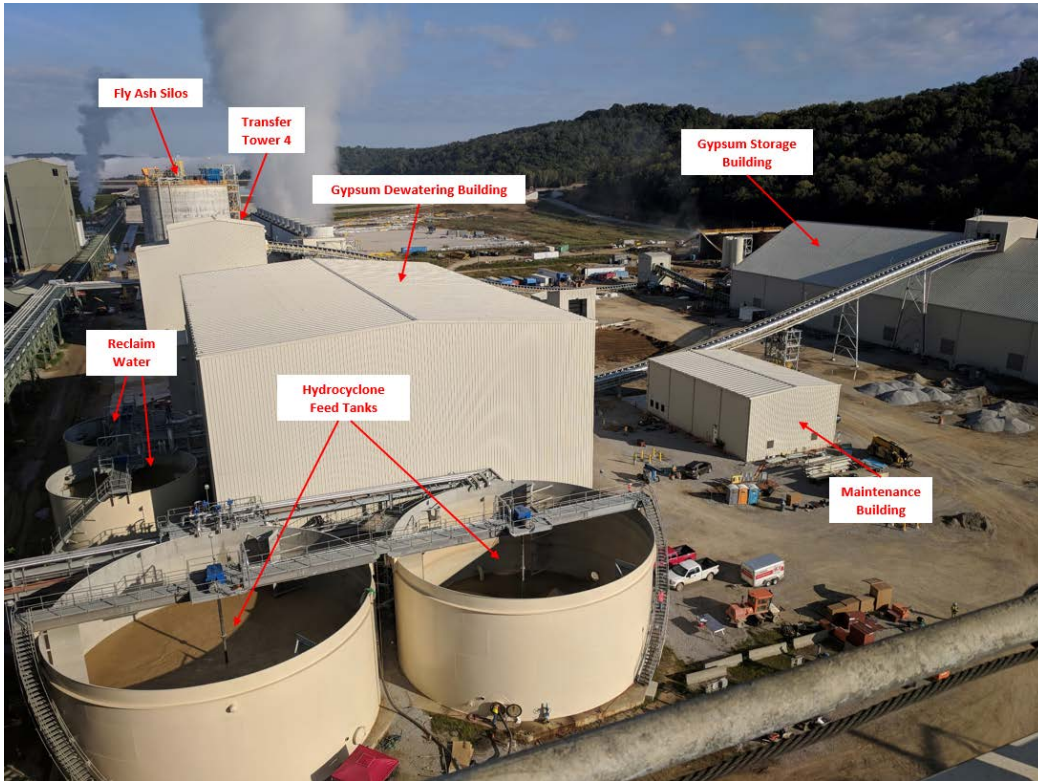
The procurement and construction status for the major equipment is summarized in the table below:

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	Commissioning activities continue with the equipment now being in operation.
Gypsum Dewatering Vacuum Belt Filter System	FLSmidth	Commissioning activities continue with the equipment now being in operation.
Gypsum Portal Scraper Reclaimer	Ameco (same vendor as Ghent’s portal reclaimer commissioned in December 2014)	Commissioning activities continue with the equipment now being in operation.
Pipe Conveyor	Beumer Group (same vendor as Ghent’s pipe conveyor commissioned in December 2014)	The pipe conveyor is constructed with work now focused on the truck loading facility located at the future landfill.

AMEC, with involvement from the Companies, has completed engineering with the exception of accounting for “as built” conditions on the final documents. The CCRT scope continues to progress well with construction winding down and the focus now on commissioning and testing of equipment. A significant milestone was met during the quarter by AMEC when they achieved Mechanical Completion of the fly ash subproject. AMEC met Mechanical Completion of the gypsum subproject last quarter.

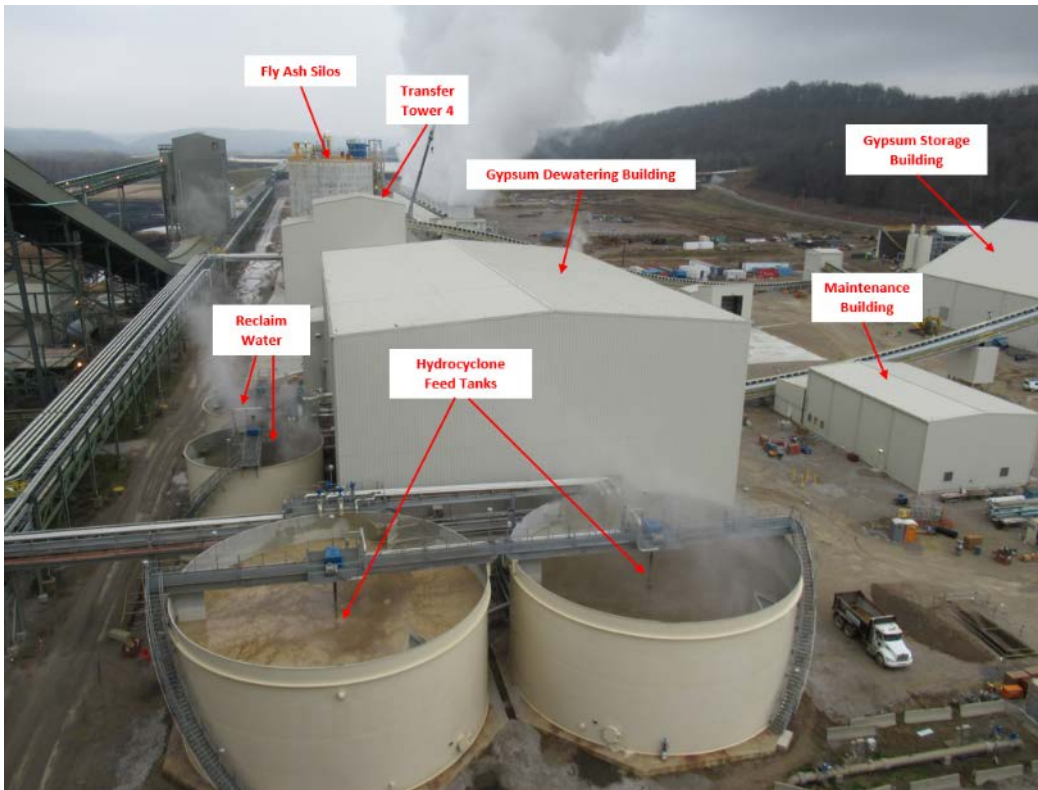
The CCR Transport scope is also progressing well. During the reporting period, AMEC and their subcontractors continued major earthwork activities. AMEC’s subcontractor, Louisville Paving, completed the approach slabs and bridge moment slabs during the fourth quarter and began constructing the moment slabs along the haul road that will support and anchor the permanent concrete traffic barriers. They also continued constructing the permanent fabric form-lined ditches along the haul road to capture storm-water runoff. Blasting for the CCRT Transport subproject has been completed. AMEC has completed installing all pipe conveyor and Truck Unloading Facility transfer tower, storage enclosure and electrical building foundations. AMEC has completed installation of structural steel at the Truck Unloading Facility for the transfer tower and electrical building. Beumer and their subcontractor, Bowen, completed installing the

structural steel support frames for the pipe conveyor from the Fly Ash Silos to the Truck Unloading Facility at the Landfill, with the exception of the section that spans the bridge.

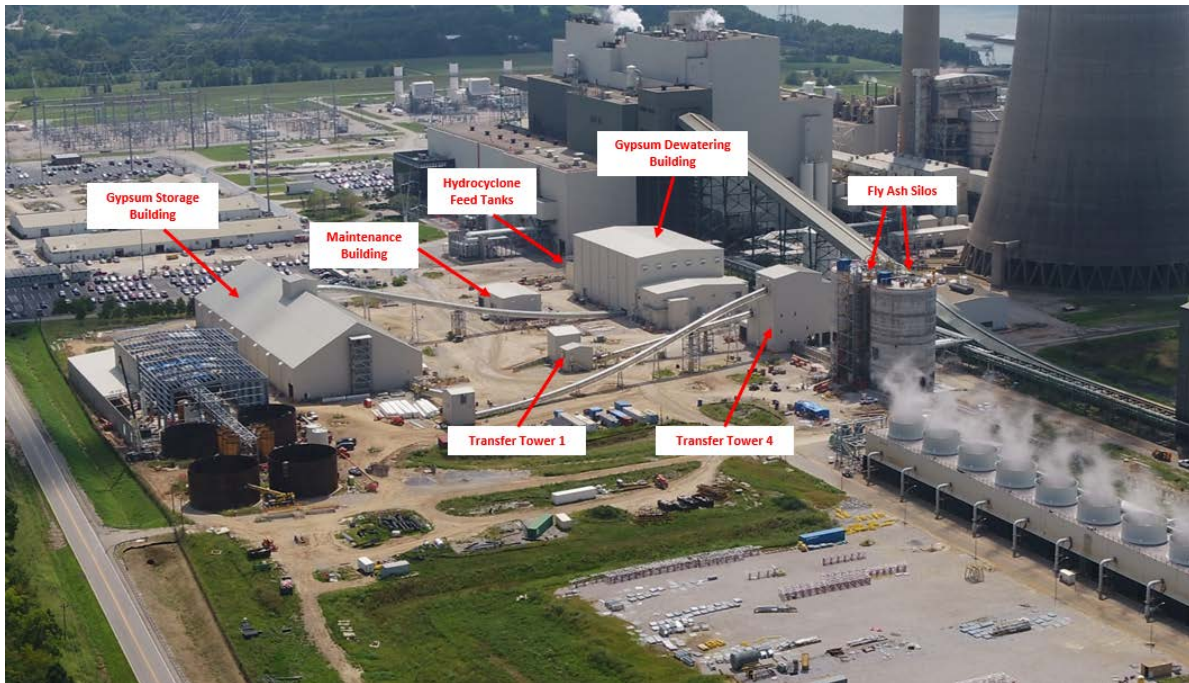


*CCRT Project Area Looking North – September 2018*





*CCRT Project Area Looking North – December 2018*



*CCRT Project Area Looking South – August 2018*





*CCRT Project Area Looking South – December 2018*



*CCRT Transport Corridor – View of Bridge Over KY 1838 to Landfill (Looking West) – August 2018*



*CCRT Transport Corridor – View of Bridge Over KY 1838 to Landfill (Looking West) –December 2018*



## **Landfill Quarterly Status Update**

Charah continues to receive deliveries of landfill infrastructure components including concrete culverts, storm-water structures, piping and rock. Charah and its subcontractors continue stripping and grading slopes, blasting of rock, major excavation and construction of the access road to the ravine landfill lower work area (i.e., sediment pond, storm-water pond, leachate pond), and placement of structural fill in the future landfill cell. Charah's subcontractor, MAC Construction, completed installing the solid wall underdrain piping and manhole structures in the sediment and leachate pond area, while Charah began installing perforated underdrain piping in the footprint of the future landfill cell. The outfall structures associated with the ponds continue progressing very well. Overall progress on the landfill was impacted by the record rainfalls during the last four months of 2018. Charah began implementing a recovery plan during the quarter that will extend into 2019. No impacts to operations are expected from the implementation of Charah's new work plan as they progress towards completion in late 2019.

AMEC Foster Wheeler Environment & Infrastructure's construction quality assurance activities for the landfill this quarter included visual inspections, testing compaction of fill material, attending meetings, and reviewing informational submittals and drawings.



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

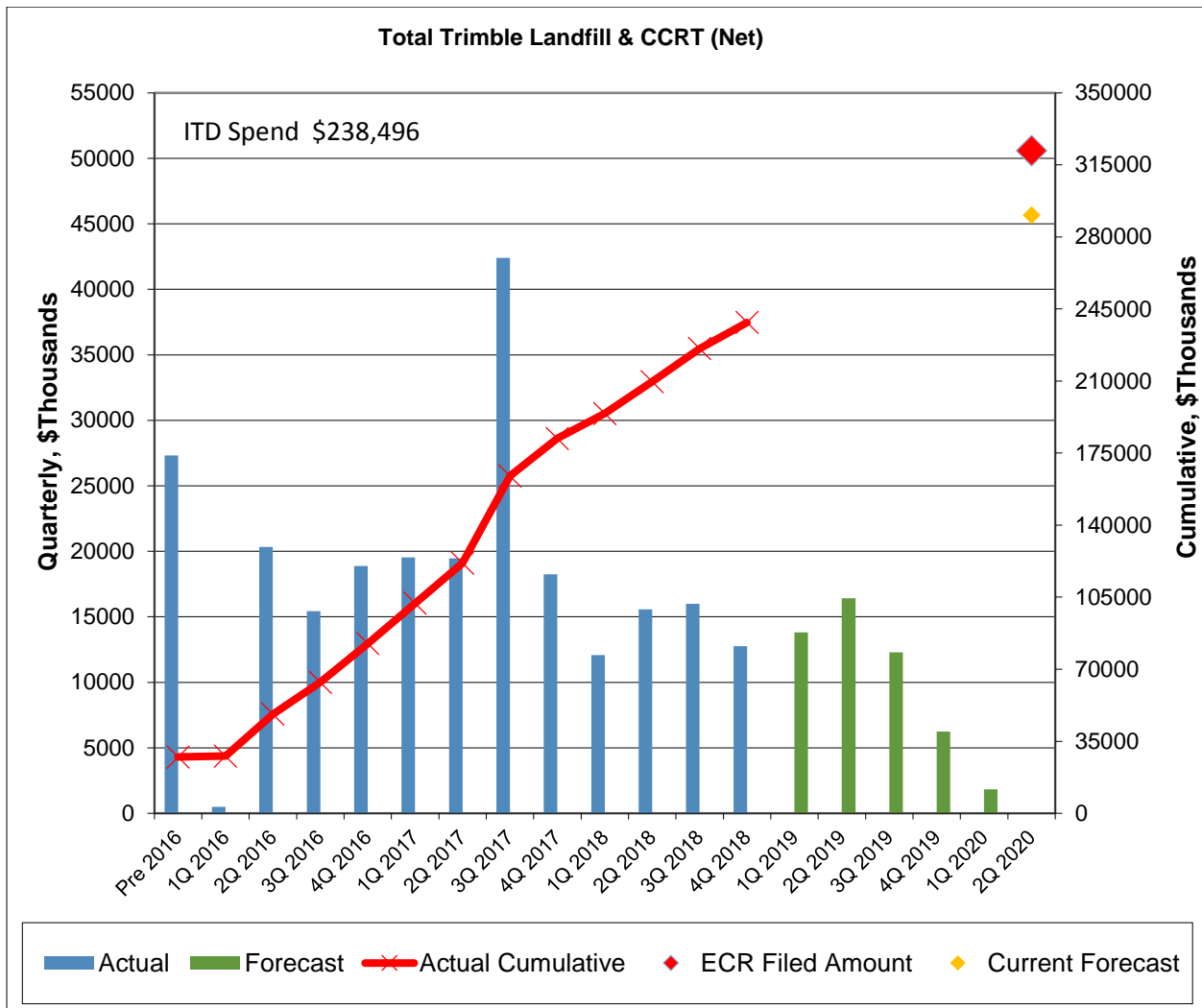


*CCR Landfill Overview – View from Station (Looking East) –December 2018*



## Financials

The Project’s total forecasted cost remains \$290.6 million (net), which reflects the reduction made in the third quarter of 2018 and is a significant reduction from \$321.9 million (net) as provided in Case No. 2015-00194. The forecast reflects all major contracts that have been awarded, spend and progress to date on construction. Total spend to date has increased from \$225.7 million (net) to \$238.5 million (net) (KU \$109.2 / LG&E \$129.3) through December 31, 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**

AMEC will continue commissioning and pre-testing activities with work primarily focused on working down punchlist items, commissioning of the various subsystems, and performance testing of the gypsum dewatering and fly ash subsystems.

### **Transport**

AMEC's subcontractor, Louisville Paving, will continue constructing moment slabs, permanent concrete traffic barriers, and miscellaneous infrastructure components for the haul road. AMEC will continue installing interior and exterior building elements for the truck unloading facility, landfill electrical enclosure, and emergency CCR storage building.

### **Landfill**

Charah will continue with major earthwork and blasting activities associated with Phase I landfill construction. The Companies remain open to purchasing additional land within very close proximity of the landfill to 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 was awarded in Case Nos. 2009-00197 and -00198 and affirmed in Case No. 2015-00194.

### Previously Reported Contract Awards

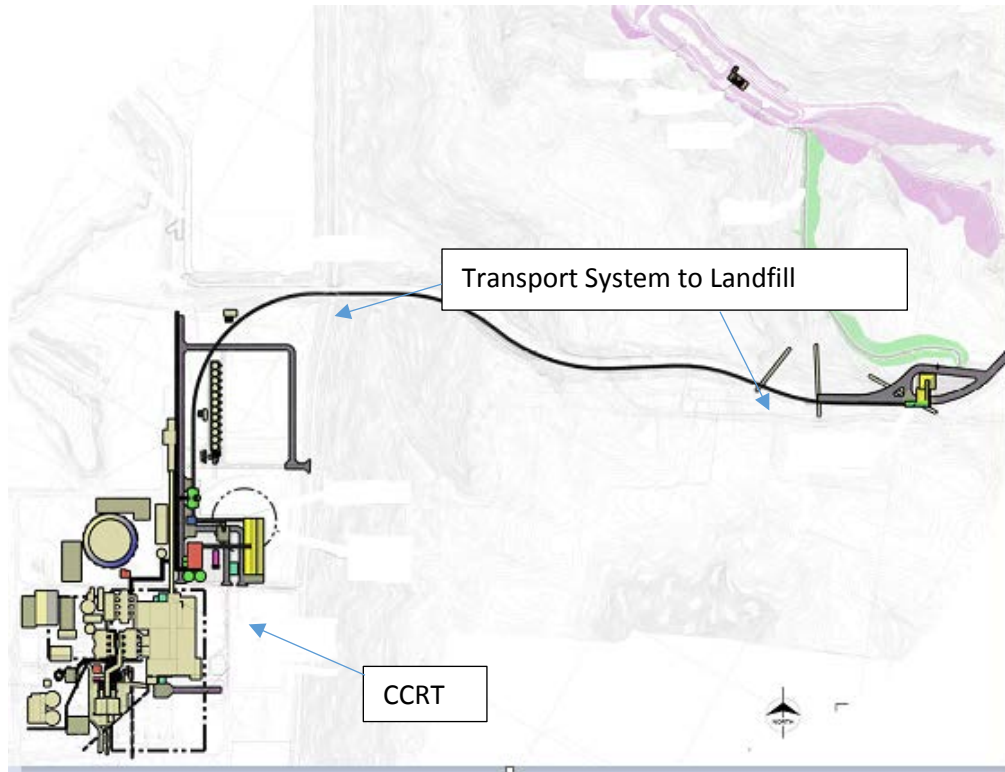
The CCRT Owner's Engineer contract was awarded to B&McD. B&McD has supported various projects for LG&E and KU, and recently supported the Trimble County Unit 1 PJFF capital project. B&McD assisted in the specification development for the CCRT and bottom ash scopes of work, and assisted in the bid evaluations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

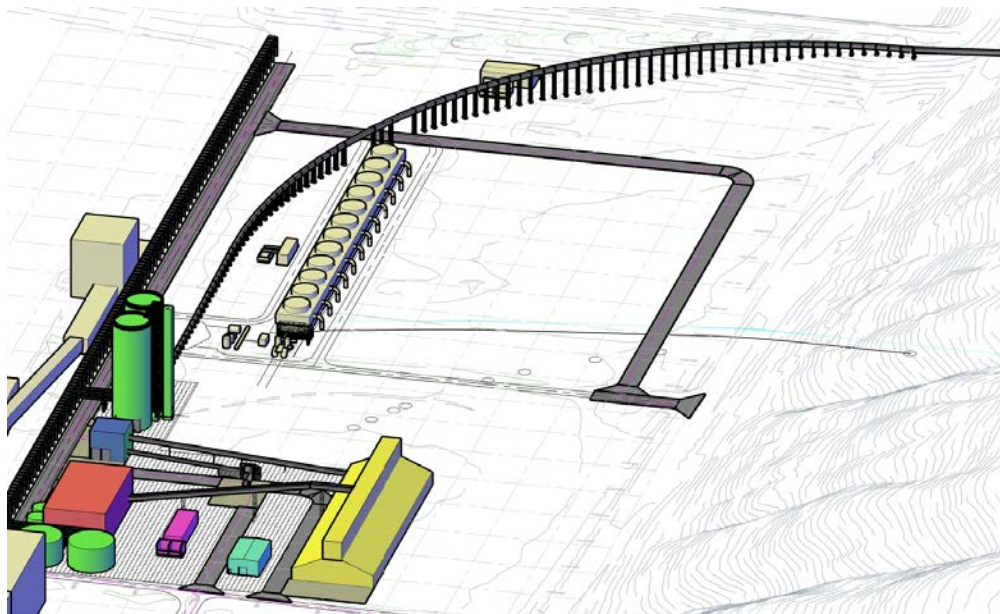
The CCRT and Transport portion of the project was awarded to AMEC. An EPC was executed with AMEC on April 7, 2016. AMEC has performed very well for the Companies in the recent past with completion of the E.W. Brown Unit 3 and Trimble County Unit 1 baghouse projects. AMEC has also been awarded the CCR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