

Status Update Report Phase I Trimble County Landfill & CCRT Project Quarterly Report – Update #7 October 30, 2017

Executive Summary

This report covers LG&E and KU's ("Companies") progress on the Phase I Trimble County Landfill and CCRT¹ project through the third quarter of 2017.

Safety performance to date remains excellent with a year-to-date Recordable Incident Rate of 0.50 and an inception-to-date Recordable Incident Rate of 0.47 compared to the industry average of 3.90. During the third quarter, the prime Engineering, Procurement and Construction ("EPC") contractor AMEC - Foster Wheeler (AMEC) experienced a subcontractor employee non-lost time recordable injury in July 2017 when a subcontractor employee lost his balance and experienced a same-level fall fracturing his tailbone.

The project's total projected cost has been reduced from \$321.9 million (net)² as provided in Case 2015-00194 to \$301.9 million (net). The updated forecast reflects all EPC contracts signed to date, including the last major EPC signed with Charah in August 2017 for construction of only Phase I of the Landfill.³ Total spend to date has increased from \$121.5 million (net) to \$163.9 million (net) through September 30, 2017. The contractual in-service dates remain the fall of 2017 for the Unit 1 Bottom Ash Subproject and the summer of 2018 for the CCRT Fly Ash and Gypsum Subprojects.

On June 28, 2017, the US Army Corps of Engineers ("COE") issued the 404 landfill permit. This is the last permit the Companies needed to receive in order to begin constructing the Landfill. With receipt of the COE 404 permit, the Companies remitted payment of the required COE landfill permitting mitigation In Lieu of Fees in July 2017.⁴ Upon confirmation from the COE of receipt of the Companies' payment, AMEC was released in July 2017 to perform the Transport subproject (road to landfill, bridge, and pipe conveyor) with completion planned to occur in November 2019. The Project background information (i.e., scope, contract awards, conceptual design layouts, and permitting status) is located in the Appendix.

In August 2017, Charah was awarded the Landfill Phase 1 construction scope. Charah has completed mobilization to the site and is clearing trees and establishing site erosion control measures.

¹ The Coal Combustion Residuals Treatment ("CCRT") Project scope is described in detail in the Appendix found on page 8.

² 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.

³ Phase I's footprint has decreased from the approximately 52 acres in the filing to approximately 34 acres to account for the use of Coal Combustion Residuals ("CCR") to be used in construction of the closures of the Bottom Ash Pond and Gypsum Storage Ponds per the Federal CCR Rule. The closure work is being performed under the approved 2016 ECR Plans in Case Nos. 2016-00026 and 2016-00027.

⁴ In Lieu of Fees are COE regulatory required fees to be paid prior to disturbance of bat habitat or the taking of streams. The Indiana Bat mitigation fees (approximately \$2.4 million) account for the clearing of trees in the landfill and transport scope footprint that potentially are used for bat breeding. The stream mitigation fees (approximately \$25.6 million) account for the total lineal footage of streams that will be disturbed within the footprint of the entire permitted landfill affective area.



CCRT & Transport Quarterly Status Update

Companies continue to hold monthly project review meetings with AMEC. Activities at weekly project engineering meetings include the review of general arrangements, model reviews and final equipment sizing. The ongoing engineering and design work is nearly complete for the following equipment:

Equipment	Awarded Contractor		
Unit 1 bottom ash			
submerged chain	United Conveyor Corporation		
conveyor			
Fly ash conditioner and	United Conveyor Corporation		
conveying system			
Gypsum dewatering			
vacuum belt filter	FLSmidth		
system			
Gypsum portal scraper	Ameco (same vendor as Ghent's portal reclaimer commissioned in		
reclaimer	December 2014);		
Pipe conveyor	Beumer Group (same vendor as Ghent's pipe conveyor commissioned in		
	December 2014).		

AMEC, with involvement from the Companies, continues to procure equipment, receive materials, and perform the electrical control design/programming subcontract work. Ongoing construction, equipment installation and design activities include installation of Trimble County Unit 1's bottom ash equipment during the ongoing planned fall outage, erection of various CCRT buildings, construction of underground electrical duct banks, installation of miscellaneous concrete foundations for conveyor bents, construction of the fly ash silos and review of Distributed Controls System remote input and output logic and graphic descriptions. Installation of site construction power continues.

The CCR Transport scope has been contractually defined and included in the EPC contract with AMEC. In July 2017, procurement and construction was fully released after receipt of the COE 404 permit and the required mitigation fees were paid and confirmed by the COE. In August 2017, AMEC and their subcontractors began clearing trees in the bridge and haul road areas and performed major earthwork activities. Through this reporting period, AMEC has cleared approximately 37 acres of trees and has begun blasting operations for rock excavation through the future access road corridor. The schedule reflects current permit issuance timeframes. As previously reported, the Companies have released AMEC to order the pipe conveyor to maintain the pipe conveyor delivery schedule. Site photographs for the CCRT and Transport systems are provided below:





CCRT Project Area Looking North - Photo from the July 2017 Report



CCRT Project Area Looking North - Current





CCRT Project Area Looking South - From the July 2017 Report



CCRT Project Area Looking South - Current



Landfill Quarterly Status Update

Permitting:

All permits required for the construction of the Landfill have been received. A permit listing is included as Table 1 in the Appendix.

Construction:

In August 2017, the Landfill Phase 1 project was awarded to Charah. Charah completed mobilization to the site, including set-up of office trailers and deliveries of various pieces of large earthwork equipment. Charah and its subcontractors have begun clearing trees and establishing site erosion control measures. Through this reporting period, Charah has cleared approximately 2 acres of trees.

Work continues on the 345kV transmission line relocation in the future landfill area. The Companies' Transmission department continues to work with various Contractors to install new towers, including foundations and steel erection.

Financials

The forecasted cost for Phase I of the Landfill and the CCRT and Transport scopes has been reduced from \$321.9 million (net) to \$301.9 million (net) as explained on page 1. Total spend through September 30, 2017 is \$163.9 million (net) (KU \$73.2M / LG&E \$90.7M). Please note for the graph below: (1) the chart reflects the awarded EPC contract for the CCRT that was awarded to AMEC as well as the EPC contract awarded to Charah for the Landfill Phase I construction; (2) the chart includes a symbol () to show the current forecast to completion; and (3) Inception-to-Date (ITD) Spend is shown in the upper left corner.





Planned Activities for Next Quarter

CCRT and Transport

In coordination with the Companies' Owner's Engineer ("OE"), Burns & McDonnell ("B&McD"), review of AMEC's engineering and procurement documents is in progress. AMEC will refine its equipment and piping design model based on field data laser scans and site surveys. AMEC will continue releases of purchase orders for equipment and material during the fourth quarter of 2017. AMEC site work activities will include continued construction of underground electrical duct bank, concrete foundations, structural steel for buildings and equipment, and assembling and setting equipment. AMEC will also install the Unit 1 Bottom Ash system during the ongoing Unit 1 scheduled fall outage. The major subcontractor to AMEC that is responsible for constructing the fly ash silos has completed the slip form concrete pours for both silo shells and will continue with construction of interior silo components.



Landfill

Charah will continue with tree clearing and begin major earthwork activities associated with landfill Phase 1 construction. Work will continue on the 345kV transmission line relocation in the future landfill area.

While no land purchases were made in the quarter, the Companies continue to pursue the purchase of land within close proximity of the landfill area. 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 the future landfill operation.



APPENDIX

Scope

The Trimble County Landfill and CCRT Project scopes are comprised of three sub-scopes: 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 KY1838, 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 with this certificate of public convenience and necessity awarded in Case No. 2015-00156.

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. It is anticipated that GAI will be retained to assist construction oversight and adherence to the specifications and permit conditions.

The CCRT and Transport portion of the project was awarded to AMEC. The initial RFQ was issued in July 2015. Four (4) bids were received in October 2015. Negotiations with the shortlisted bidders began in January 2016. AMEC emerged as the best evaluated bidder. Final negotiations and finalization of scope continued with AMEC through March 2016. An EPC was executed with AMEC on April 7, 2016.



Conceptual Site Layout Graphics



Graphic 1 - Conceptual Layout of the CCRT and Transport System



Graphic 2 - Conceptual 3D Site Layout of the CCRT



Required Regulatory Permit	Submitted	Date Submitted	Date Received
Kentucky Division of Waste Management Landfill Permit	Yes	January 3, 2014	February 2017
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>	December 2015

Table 1 - Landfill Permitting Status

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.

NOTE: Past reports have listed a Kentucky Division of Water Flood Plain permit with a footnote stating "This permit is not required for landfill construction." Since this permit is not required for construction of the landfill, it has been removed from the list in this report and future reports.