

2016 ECR Plan Status Update Report Quarterly Report – Update #19 April 30, 2021

Executive Summary:

General

This report covers LG&E and KU's ("Companies") progress on the 2016 Environmental Cost Recovery ("ECR") Plan through the first quarter of 2021.

The overall 2016 ECR Plan safety performance through the first quarter of 2021 remains excellent with a year-to-date OSHA Recordable Incident Rate of 0.0 and an inception-to-date OSHA Recordable Incident Rate of 0.44, compared to the industry average of 3.2.

The total 2016 ECR Plan projected costs remain unchanged from last quarter's \$949.6 million (net)¹, compared to the filed total of \$996.4 million as provided in Case Nos. 2016-00026, 2016-00027, and 2017-00483. Total spend to date has increased from \$808.4 million (net) last quarter to \$822.7 million (net) through March 31, 2021.

The Companies continue to monitor the COVID-19 pandemic situation as well as work with all contractors to minimize the impact to the projects. To date, there have been no impacts to the work.

CCR Compliance (CCR Rule and State CCR Pond Closures)

Safety performance through the first quarter is excellent with a year-to-date OSHA Recordable Incident Rate of 0.0 and an inception-to-date Recordable Incident Rate of 0.44, compared to an industry average Recordable Incident Rate of 3.2.

The total projected costs for the Coal Combustion Residual ("CCR") Closure Program remain unchanged from the last quarter's \$919.5 million (net) forecast. Total spend to date through March 31, 2021 has increased from \$778.3 million (net) last quarter to \$792.5 million (net).

The remaining engineering activities primarily consist of corrections for "as-built" field changes during construction on the projects completed or under construction. Remaining procurement activities are associated with contract maintenance of all awarded contracts through completion of the work and warranty periods, and the finalization of the Request for Quotation ("RFQ") documents for the closure scopes for the Trimble County Bottom Ash Pond ("BAP") and Gypsum Storage Pond ("GSP").

¹ 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 shares are not included in the costs provided in this report.

In compliance with EPA’s final closure deadline of April 11, 2021, the Companies have initiated closure of all unlined CCR surface impoundments. While the large scale of the various closure processes will take time to complete, all of LG&E and KU’s former CCR surface impoundments have ceased receiving CCRs for disposal and other process streams have been successfully re-routed, diverted, or otherwise modified so that the closed units no longer receive any other materials.

The change in the Presidential administration has resulted in changes to management levels across the Executive Branch, including U.S. EPA. These processes have significantly slowed both efforts to execute modifications to the CCR Rule and the review process for documents submitted by utilities under Parts A and B of the Rule. LG&E and KU did not choose to pursue the alternatives offered by Parts A and B of the Rule, so the Companies’ timelines remain unaffected and we continue to comply fully with the Rule’s provisions.

While changes have been commonplace with the CCR Rule, most of the changes contemplated and executed, have occurred within the framework of the existing Rule. Until EPA’s new leadership is fully in place, additional CCR Rule changes, like those associated with “legacy” CCR impoundments, continue in a holding pattern. However, the change of the majority party in Washington has potential to result in larger scale policy changes relating to CCR. Some potential policies being reviewed include: RCRA Subtitle C/D status for CCR; additional restrictions on beneficial use of CCR; and financial assurance/bonding for utilities that own or operate CCR disposal facilities and/or produce CCRs.

As has been noted in previous updates, the Companies will continue to closely follow regulatory developments within the CCR Rule and Congressional actions related to CCR policies. In the interim, the Companies are moving forward with completion of closure of all CCR impoundments and to comply with other provisions of the CCR Rule.

CCR Impoundment Closures

- Ghent – Tetra Tech’s (“TT”) Phase II and III scope (construction of the South Cooling Pond, closure of Ash Treatment Basin [“ATB”] #1, and closure of ATB #2) is currently in closure as of January 9, 2020. Work includes, but is not limited to, installation of a geo-synthetic liner cap, and the soil cover. Hauling of CCR material and installation of the synthetic liner system for ATB #1 has been completed. TT is currently hauling and placing soil cover over top of the synthetic liner system. Excavation of gypsum and soil overburden from the South Gypsum Stack is ongoing to attain the subgrade elevations for construction of the South Cooling Pond. Overall, TT continues to progress the Ghent projects very well with no compliance issues forecasted. Work to date on ATB #2 is progressing to plan with the installation of dewatering wells, regrading of the in-place CCR material, hauling of CCR material from the Gypsum Stack and Coal Combustion Residual Treatment area, as well as filter cake from the Process Water System (“PWS”).
- E.W. Brown – Thalle Construction (“Thalle”) impoundment closure activities during the first quarter of 2021 were adversely impacted by wet and cold weather, with the installation of fabric-formed concrete and topsoil having been impacted the most. Dewatering of the remaining interstitial water, which is required to be removed per the design, continued through the use of deep

dewatering wells. Four additional deep wells were installed during the first quarter of 2021 to assist with the dewatering, which is expected to continue through the second quarter of 2021. Once complete, the wells will be decommissioned along with the chemical dewatering treatment system. At the completed northeast stormwater outlet pipe, Thalle continues with installation of downstream piping and manholes. Thalle continued with the installation of additional stormwater controls with the installation of fabric-formed stormwater ditches and channel lining stone. From an offsite source, Thalle began to haul and place topsoil as the final piece of the impoundment liner system. Over half of the impoundment has received topsoil with the remaining amount to be hauled and placed in the second quarter of 2021. Lastly, the construction of a walking trail and the installation of pollinators and native grasses will occur at the Dempsey Farm borrow area during the second and third quarters of 2021. A bid event during the first quarter of 2021 resulted in the selection of the contractor to install the walking trail with work commencing in the second quarter of 2021 and ending in the third quarter of 2021.

- Green River – Project completed in the second quarter of 2020.
- Mill Creek – TT is nearing substantial completion of the Main Ash Pond closure. The synthetic liner system installation, in tandem with hauling and placement of the cover soil and topsoil, were completed during the first quarter of 2021. Seed and straw will be placed to provide a vegetative cover for the cap system. Cover soil and topsoil were harvested from the old Frost Middle School property where restoration activities will continue into the second quarter of 2021. The new process water pond was completed at the beginning of the first quarter of 2021 and put into service. Asphalt hardscaping, drainage trenches, piping, and manholes to manage stormwater runoff were installed during the first quarter of 2021 and will be completed during the second quarter of 2021. New fencing has been installed around the west and north perimeters of the Main Ash Pond.
- Pineville – Project completed in the second quarter of 2020.

Trimble County – While outside of this reporting period, the Companies received the agreed order from the Kentucky Division of Water (“KDOW”) in April 2021.

- Tyrone – Project completed in the second quarter of 2020.

The CCR Impoundment Closure Program is on schedule to be completed on or before the CCR Rule regulatory deadlines.² To ensure the Companies’ CCR Compliance projects comply with the regulations and to share best practices and lessons learned, the Companies continue to hold program-wide meetings with internal project management teams and affected stations to provide opportunities for all parties to deliver updates and to ensure the contractors are providing similar deliverables across the projects.

² EPA has committed to revising various portions of the CCR Rule. While they have proposed many changes to the CCR Rule, EPA has indicated that there are still other additional proposals under development. The scope of these changes, the interest they have generated, and COVID-19 re-prioritization of government resources have substantially extended EPA’s anticipated timeline for revisions beyond their original “end-of-2019” window. However, the Companies’ strategies have so far been resilient and CCR Rule changes anticipated will not force any major re-evaluations of our plans. LG&E and KU remain well positioned to comply with the evolving CCR Rule. The Companies will continue to closely monitor revisions to the CCR Rule and to ongoing litigation and will update the Commission relative to issues that may affect construction schedules and activities.

Process Water System Projects

- Trimble County – Project has been placed into Commercial Operation.
- Mill Creek – Project has been placed into Commercial Operation. Warranty work and modifications of the new dry bottom ash transport piping on all four units is complete.
- Ghent – Project has been placed into Commercial Operation.
- E.W. Brown – Project has been placed into Commercial Operation. Bowen Engineering achieved Final Completion during the first quarter of 2021.

Schedules

CCR Rule and State CCR Impoundment Closures

<u>Project</u>	<u>Project #</u>	<u>EPC Status³</u>	<u>Planned In-Service Date⁴</u>
E.W. Brown Aux Pond	KU Project 42	Awarded July 9, 2018	May 2021
E.W. Brown Main Ash Pond (Deleted Phase III of Landfill)	KU Project 36	Awarded July 9, 2018	Closure Completed
Ghent ATB #1	KU Project 40	Awarded September 7, 2018	December 2021
Ghent ATB #2	KU Project 40	Awarded May 22, 2020	December 2024
Ghent Gypsum Stack	KU Project 40	Amended Sept. 7, 2018	December 2021
Green River Main Pond	KU Project 39	Completed	Cap and Closure Completed
Green River ATB #2	KU Project 39	Completed	Cap and Closure Completed
Green River SO2 Pond	KU Project 39	Completed	Clean Closure Completed
Mill Creek Ash Pond	LG&E Project 29	Awarded April 4, 2019	December 2021
Mill Creek Clearwell Pond	LG&E Project 29	Completed	Clean Closure Completed & New Pond in Service
Mill Creek Construction Runoff Pond	LG&E Project 29	Completed	Clean Closure Completed and New Pond in Service
Mill Creek Emergency Pond	LG&E Project 29	Completed	Clean Closure Completed and area structurally backfilled.
Mill Creek Dead Storage Pond	LG&E Project 29	Completed	Clean Closure Completed and area structurally backfilled
Pineville Ash Pond	KU Project 39	Completed	Cap and Closure Completed
Trimble County Bottom Ash Pond	KU Project 41, LG&E Project 30	Issue RFQ upon receipt of Agreed Order	October 2024
Trimble County Gypsum Storage Pond	KU Project 41, LG&E Project 30	Issue RFQ upon receipt of Agreed Order	October 2023
Tyrone Ash Pond	KU Project 39	Completed	Cap and Closure Completed

PWS Projects

<u>Project</u>	<u>Project #</u>	<u>EPC Status³</u>	<u>Planned In-Service Date⁴</u>
E.W. Brown PWS	KU Project 42	Awarded June 14, 2018	Placed in Service May 2020
Ghent PWS	KU Project 40	Awarded August 1, 2017	Placed in Service April 2020
Mill Creek PWS	LG&E Project 29	Final Completion Granted 1Q 2020	Placed in Service October 2019
Trimble County PWS	KU Project 41, LG&E Project 30	Final Completion Granted 1Q 2020	Placed in Service October 2019

³ Engineering, Procurement, and Construction (“EPC”) Status – the red font signifies actuals.

⁴ The Planned In-Service Dates reflect the executed EPCs – the red font signifies actuals. Ghent ATB #2 and Trimble County BAP was changed to 2024 to reflect a mid-point between the original rule and the proposed rule changes being litigated. Trimble County GSP completion date reflects completion of the work; however, the removal of CCR is planned to be completed in 2022.

E.W. Brown Landfill Phase II

The landfill Phase II was completed and made available for service; however, CCR cannot be placed into the Phase II area until the Construction Progress Report (“CPR”) is submitted and approved by the Kentucky Division of Waste Management (“KDWM”). The CPR draft is currently under internal review and will be submitted to the KDWM in April 2021.

Quarterly Status Update:

Federal CCR Rule Closure Projects:

KU Project 40 – Ghent (GH) Station CCR Rule Compliance Construction and New PWS

KU continues to hold weekly and monthly project update meetings. TT’s Phase II scope construction of the South Cooling Pond and closure of ATB #1 is currently in closure as of January 9, 2020. Work includes, but is not limited to, installation of the soil cover. Hauling of CCR material and installation of the synthetic liner system for ATB #1 has been completed. TT is currently hauling and placing soil cover over top of the synthetic liner system. Excavation of gypsum and soil overburden from the South Gypsum Stack is ongoing to attain the subgrade elevations for construction of the South Cooling Pond. Overall, TT continues to progress the Ghent projects very well with no compliance issues forecasted. The Phase III closure of ATB #2 was awarded to TT during the second quarter of 2020. Work to date on the Phase III scope has been limited to purchase of geo-synthetic materials, regrading of CCR material within the footprint of ATB #2, installation of dewatering wells, and hauling of CCR material from the Gypsum Stack and Coal Combustion Residual Treatment area and filter cake from the Process Water System (“PWS”).

With regards to the PWS, Final Completion was issued to Burns & McDonnell (“B&McD”) on November 19, 2020.



Ghent Gypsum Stack – Looking North – January 2021



Ghent ATB #1 – Looking West – March 2021



Ghent ATB #1 and Cooling Channel – Looking East – December 2020



Ghent ATB #1 and Cooling Channel – Looking East – March 2021

KU Project 41 and LG&E Project 30⁵ – Trimble County (TC) Station CCR Rule Compliance Construction and New PWS

While outside of this reporting period, the Companies received the agreed order from the Kentucky Division of Water (“KDOW”) in April 2021. On-site work has been limited to interviewing potential bidders for the clean closure of the GSP and the closure-in-place of the BAP. Project Engineering’s commercial group and project team have completed developing the majority of the project specifications and contract documents that will be issued for bid to the market in May 2021 now that the Companies have the Agreed Order.

The PWS project has been completed and the EPC contractor was granted Final Completion.

KU Project 42 – E.W. Brown (BR) Station CCR Rule Compliance Construction and New PWS

Thalle impoundment closure activities during the first quarter of 2021 were adversely impacted by wet and cold weather, with the installation of fabric-formed concrete and topsoil having been impacted the most. Dewatering of the remaining interstitial water, which is required to be removed per the design, continued through the use of deep dewatering wells. Four additional deep wells were installed during the first quarter of 2021 to assist with the dewatering, which is expected to continue through the second quarter of 2021. Once complete, the wells will be decommissioned along with the chemical dewatering treatment system. At the completed northeast stormwater outlet pipe, Thalle continues with installation of downstream piping and manholes. Thalle continued with the installation of additional stormwater controls with the installation of fabric-formed stormwater ditches and channel lining stone. From an offsite source, Thalle began to haul and place topsoil as the final piece of the impoundment liner system. Over half of the impoundment has received topsoil with the remaining amount to be hauled and placed in the second quarter of 2021. Lastly, the construction of a walking trail and installation of pollinators and native grasses will occur at the Dempsey Farm borrow area during the second quarter 2021. A bid event during the first quarter 2021 resulted in the selection of the contractor to install the walking trail with work commencing in the second quarter of 2021 and ending in the third quarter of 2021.

Bowen Engineering has achieved Final Completion on the PWS project.

⁵ KU and LG&E’s net costs are split 48% and 52%, respectively.



E.W. Brown Aux Pond – December 2020



E.W. Brown Aux Pond – April 2021



E.W. Brown Landfill Phase II and Closure – December 2020



E.W. Brown Landfill Phase II and Closure – April 2021

LG&E Project 29 – Mill Creek (MC) Station CCR Rule Compliance Construction and New PWS

Tetra Tech is nearing substantial completion of the Main Ash Pond closure. The synthetic liner system installation in tandem with hauling and placement of the cover soil and topsoil were completed during the first quarter of 2021. Seed and straw will be placed to provide a vegetative cover for the cap system. Cover soil and topsoil were harvested from the old Frost Middle School property where restoration activities will continue into the second quarter of 2021. The new process water pond was completed at the beginning of the first quarter and put into service. Asphalt hardscaping, drainage trenches, piping, and manholes to manage stormwater runoff were installed during the first quarter of 2021 and will be completed during the second quarter of 2021. New fencing has been installed around the west and north perimeters of the Main Ash Pond.



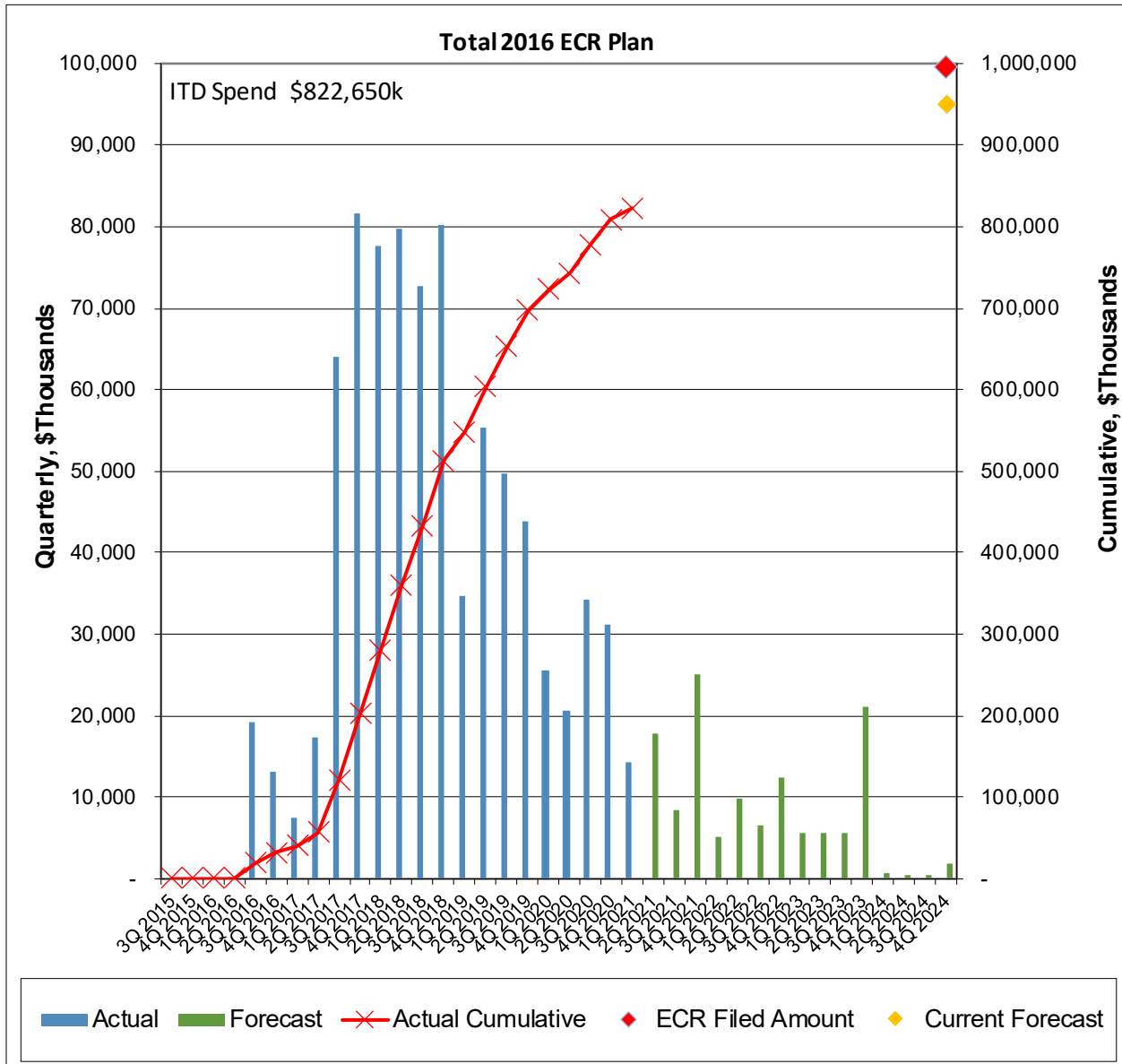
Mill Creek Main Ash Pond Closure – January 2021



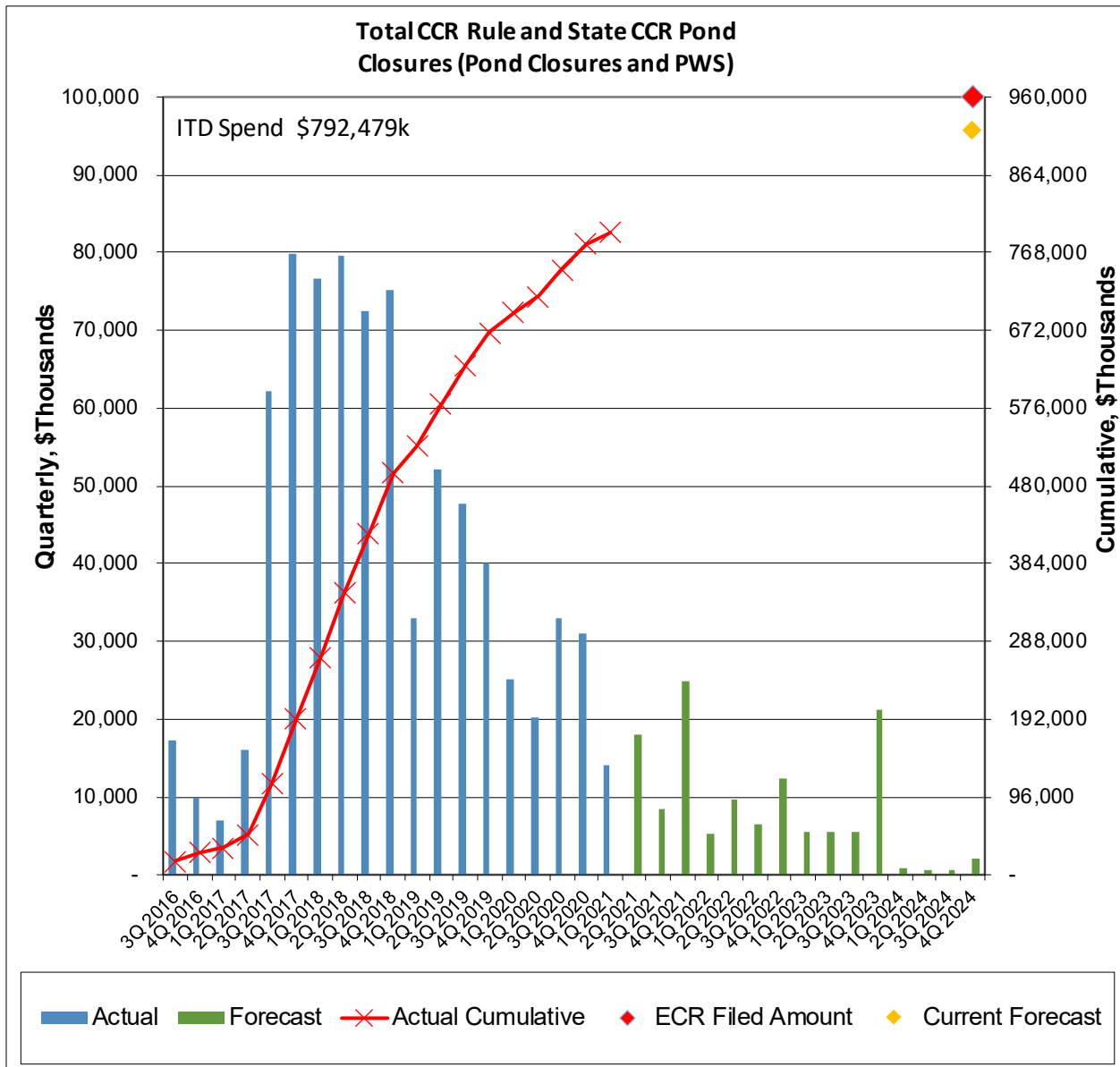
Mill Creek Main Ash Pond Closure – March 2021

Financials:

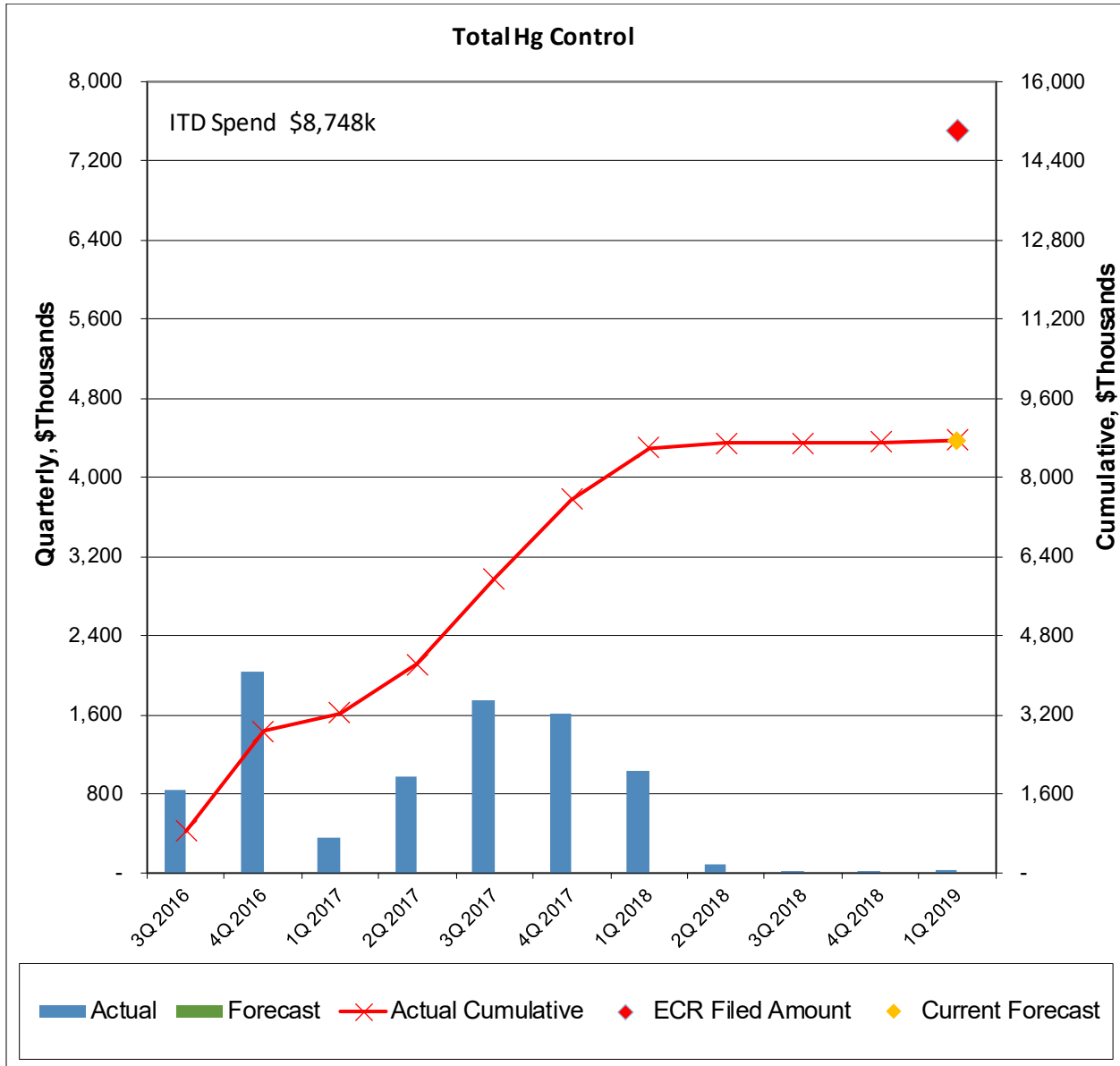
The total 2016 ECR Plan forecasted costs remain unchanged from the last quarter at \$949.6 million. Total spend through March 31, 2021 has increased from \$808.4 million (net) last quarter to \$822.7 million (net). The graph below includes 1) a symbol (◆) to show the current forecast to completion and (2) inception-to-date (“ITD”) Spend in the upper left of the chart.



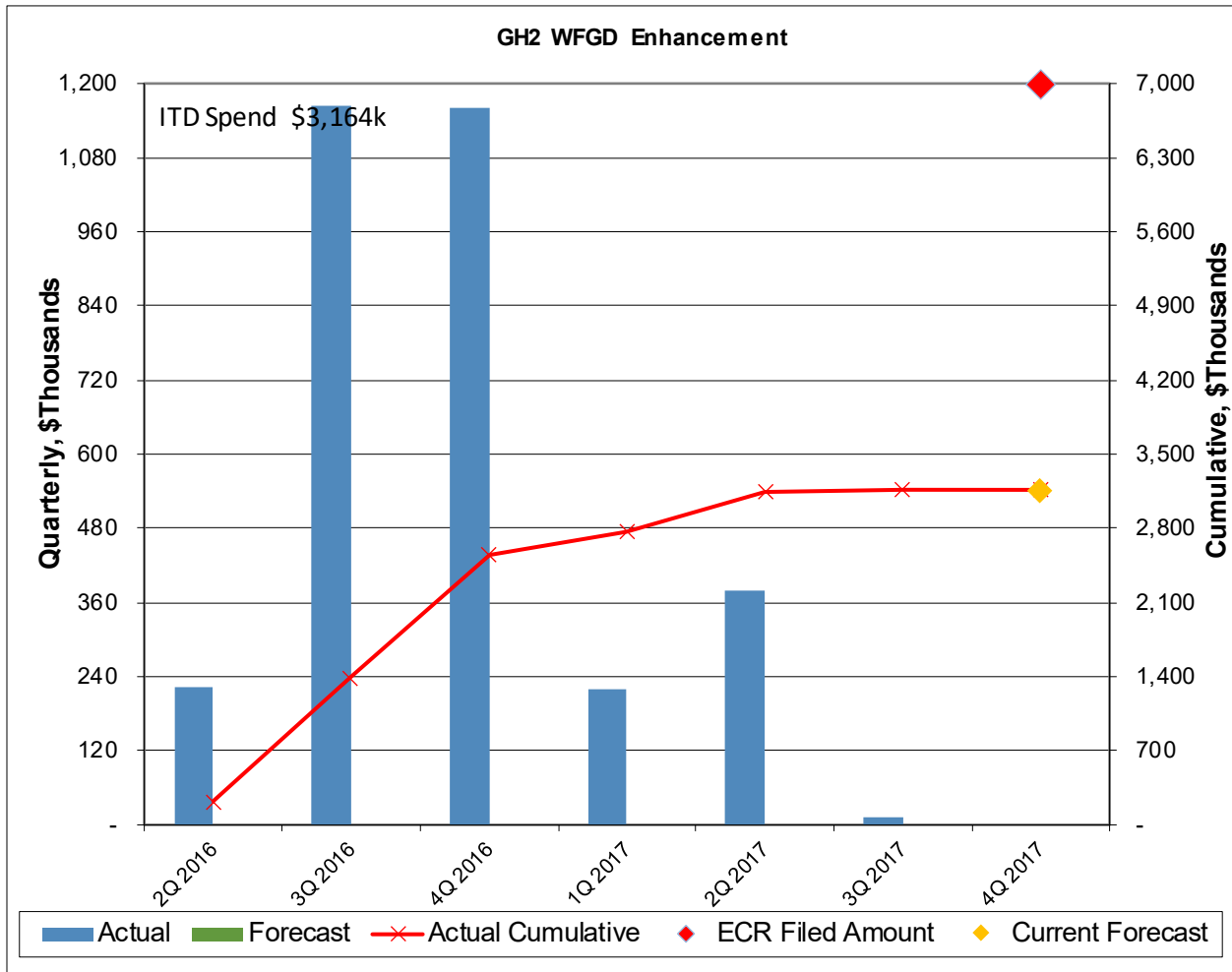
The CCR Impoundment Closure total forecasted costs remain flat from the last quarter at \$919.5 million (net) as explained above. Total spend through March 31, 2021 has increased from \$778.3 million (net) last quarter to \$792.5 million (net). The graph below includes 1) a symbol (◆) to show the current forecast to completion and (2) ITD Spend in the upper left of the chart.



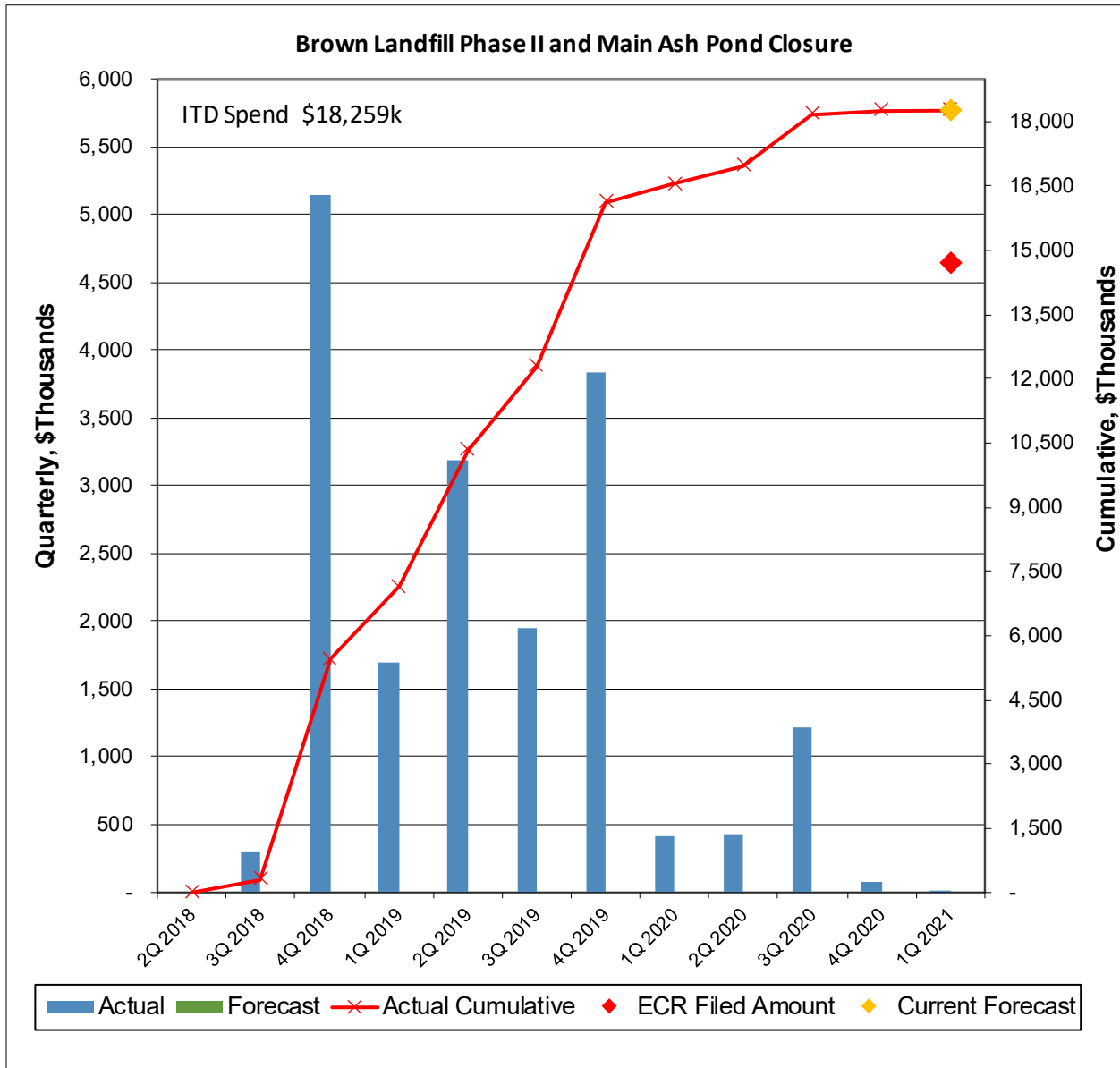
The Mercury Injection projects have been completed and commissioned. The project’s total spend was \$8.7 million compared to the filed estimate of \$15.0 million.



The Ghent Unit 2 WFGD Enhancement project has been completed. Total spend on the project was \$3.2 million compared to the filed estimate of \$7.0 million.



The E.W. Brown Landfill Phase II and Phase III Closure project forecasted costs remain at \$18.3 million. Total spend through March 31, 2021 remains \$18.3 million. The graph below includes 1) a symbol (◆) to show the current forecast to completion and 2) ITD Spend in the upper left of the chart.



Planned Activities for Next Quarter:

State Division of Waste Closure Projects

Status updates were removed from this report going forward due to these projects being completed. There are no further construction plans for these projects except for warranty maintenance issues should they arise.

Federal CCR Rule Closure Projects

CCR Closures:

TT will continue with Phase II & III closure activities at Ghent, as well as closure activities on the Mill Creek Main Ash Pond. Construction by Thalle will continue for the E.W. Brown Auxiliary Ash Pond closure scope focused on placement of topsoil on the closure liner system and installation of fabric-formed concrete. Regarding Trimble County, the Companies expect to reach agreement with the KDOW on an Agreed Order on the dewatering of Trimble County's BAP. The Trimble County BAP and GSP closure projects RFQ will be ready for issuance to the market but will not be issued until the Companies reach agreement with KDOW on the Agreed Order to allow for incorporation of any impacts to the plan which is currently based on the draft Agreed Order the Companies sent to the KDOW.

PWS Projects:

AMEC will continue working on warranty items on both the Mill Creek and Trimble County PWS projects. B&McD will continue to work on punch list and warranty items. Both AMEC and B&McD, along with the Companies and the Companies' OE, will continue reviewing warranty matters along with remaining final engineering designs, procurement activities, and the operation of Suez's PWS equipment and process at all three stations (Ghent, Mill Creek, and Trimble County).

E.W. Brown Landfill Phase II and Phase III Closure

The Landfill Phase II and Phase III Construction Progress Reports will be submitted to the Kentucky Division of Waste Management for approval.