

2016 ECR Plan Status Update Report Quarterly Report – Update #20 July 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 second quarter of 2021.

The overall 2016 ECR Plan safety performance through the second 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 0.43, 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 \$822.7 million (net) last quarter to \$842.8 million (net) through June 30, 2021.

CCR Compliance (CCR Rule and State CCR Pond Closures)

Safety performance through the second 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 June 30, 2021 has increased from \$792.5 million (net) last quarter to \$812.6 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").

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

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.

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 EPA. These processes had 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.

Under the new administration, EPA had committed to review and reconsider some portions of the CCR Rule. Recently, the Agency has identified schedules for finalizing some of the CCR-related items on their regulatory agenda including: proposed rulemaking on legacy impoundments (to be issued November 2021) and finalization of a federal CCR permitting program (rule scheduled for issuance in January 2022). Unfortunately, EPA has not established a target schedule for other CCR-related items, like beneficial use, the management of CCR piles, and other, more general Rule clarifications and revisions relating to the Phases 1 & 2 proposals. While there is some uncertainty associated with each of these pending and longer-term actions, they have limited potential to change LG&E and KU's current planned path at any location where work has been or is being done.

As noted previously, Democratic control of the executive and legislative branches in Washington has potential to result in additional legislative action and policies that are less favorable to fossil fuels and byproducts, like CCRs. Some potential policies that have been identified for consideration and potential action 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. The Companies continue to actively follow these types of developments while moving forward to complete closure of all CCR impoundments and to comply with the CCR Rule provisions.

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 in closure as of January 9, 2020. Hauling of CCR material and installation of the synthetic liner system for ATB #1 has been completed. TT is hauling and placing soil cover over top of the synthetic liner system. Excavation of gypsum and soil overburden from the South Gypsum Stack has been completed and TT continues grading activities to attain the subgrade elevations for construction of the South Cooling Pond. Work to date on ATB #2 is progressing to plan with regrading of the in-place CCR material, hauling of CCR material from the Gypsum Stack, Coal Combustion Residual Treatment area, as well as filter cake from the Process Water System ("PWS"), and installation of the synthetic liner system over areas of ATB #2 that have achieved final grade. Overall, TT continues to progress the Ghent projects very well with no compliance issues forecasted.

- E.W. Brown – Thalle Construction (“Thalle”) impoundment closure activities are nearly complete as the second quarter of 2021 has passed. Closure activities such as the placement of topsoil and seed, fabric formed concrete ditch liner, stormwater piping, and perimeter gravel access roads are now complete. The final major item to be completed during the third quarter of 2021 is the dewatering of the remaining interstitial water (below the liner cap system) through the use of deep wells. Once complete, the wells will be decommissioned along with the chemical dewatering treatment system. Coupled with the dewatering is the completion of the punch list. Lastly, the construction of a walking trail and the installation of pollinators and native grasses in the soil borrow areas commenced during the second quarter of 2021 and will continue through the third quarter of 2021 at the Dempsey Farm borrow area.
- Green River – Project completed in the second quarter of 2020. Working on project close-out activities to address minor issues identified after the CCR facilities were capped in place.
- Mill Creek – TT achieved substantial completion of the Main Ash Pond closure during the second quarter of 2021. Final grading of topsoil and installation of seed and straw are now complete. In addition to the Main Ash Pond soil cap system; drainage trenches, piping, and asphalt paving hardscape were fully installed at the south end of the impoundment. Remaining work during the third quarter of 2021 involves the completion of the punch list.
- Pineville – Project completed in the second quarter of 2020. Working on project close-out activities to address minor issues identified after the CCR facilities were capped in place.
- Trimble County – The Companies received the agreed order from the Kentucky Division of Water (“KDOW”) in April 2021. A Request for Quotation (“RFQ”) was issued in May and proposals were received in June. The Companies are currently reviewing the technical and commercial proposals from the bidders.
- Tyrone – Project completed in the second quarter of 2020. Working on project close-out activities to address minor issues identified after the CCR facilities were capped in place.

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.
- Ghent – Project has been placed into Commercial Operation. Working on project close-out activities to address minor issues identified during execution of the PWS project.
- E.W. Brown – Project has been placed into Commercial Operation.

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	December 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	Issued RFQ	October 2024
Trimble County Gypsum Storage Pond	KU Project 41, LG&E Project 30	Issued RFQ	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 approved by the Kentucky Division of Waste Management (“KDWM”). The CPR is complete and will be submitted to KDWM in July 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 and III scope (construction of the South Cooling Pond, closure of Ash Treatment Basin (“ATB”) #1, and closure of ATB #2) is in closure as of January 9, 2020. Hauling of CCR material and installation of the synthetic liner system for ATB #1 has been completed. TT is hauling and placing soil cover over top of the synthetic liner system. Excavation of gypsum and soil overburden from the South Gypsum Stack has been completed and TT continues grading activities to attain the subgrade elevations for construction of the South Cooling Pond. Work to date on ATB #2 is progressing to plan with regrading of the in-place CCR material, hauling of CCR material from the Gypsum Stack, Coal Combustion Residual Treatment area, as well as filter cake from the Process Water System (“PWS”), and installation of the synthetic liner system over areas of ATB #2 that have achieved final grade. Overall, TT continues to progress the Ghent projects very well with no compliance issues forecasted.

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



Ghent ATB #1 – Looking West – March 2021



Ghent ATB #1 – Looking West – June 2021



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



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

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

The Companies received the Agreed Order from the Kentucky Division of Water (“KDOW”) in April 2021. A Request for Quotation (“RFQ”) was issued in May and proposals were received in June. The Companies are currently reviewing the technical and commercial proposals from the bidders.

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 Construction (“Thalle”) impoundment closure activities are nearly complete as the second quarter of 2021 has passed. Closure activities such as the placement of topsoil and seed, fabric formed concrete ditch liner, stormwater piping, and perimeter gravel access roads are now complete. The final major item to be completed during the third quarter of 2021 is the dewatering of the remaining interstitial water (below the liner cap system) through the use of deep wells. Once complete, the wells will be decommissioned along with the chemical dewatering treatment system. Coupled with the dewatering is the completion of the punch list. Lastly, the construction of a walking trail and the installation of pollinators and native grasses in the soil borrow areas commenced during the second quarter of 2021 and will continue through the third quarter of 2021 at the Dempsey Farm borrow area.

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 – April 2021



E.W. Brown Aux Pond – June 2021



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



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



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

Tetra Tech (“TT”) achieved substantial completion of the Main Ash Pond closure during the second quarter of 2021. Final grading of topsoil and installation of seed and straw are now complete. In addition to the Main Ash Pond soil cap system; drainage trenches, piping, and asphalt paving hardscape were fully installed at the south end of the impoundment. Remaining work during the third quarter of 2021 involves the completion of the punch list.



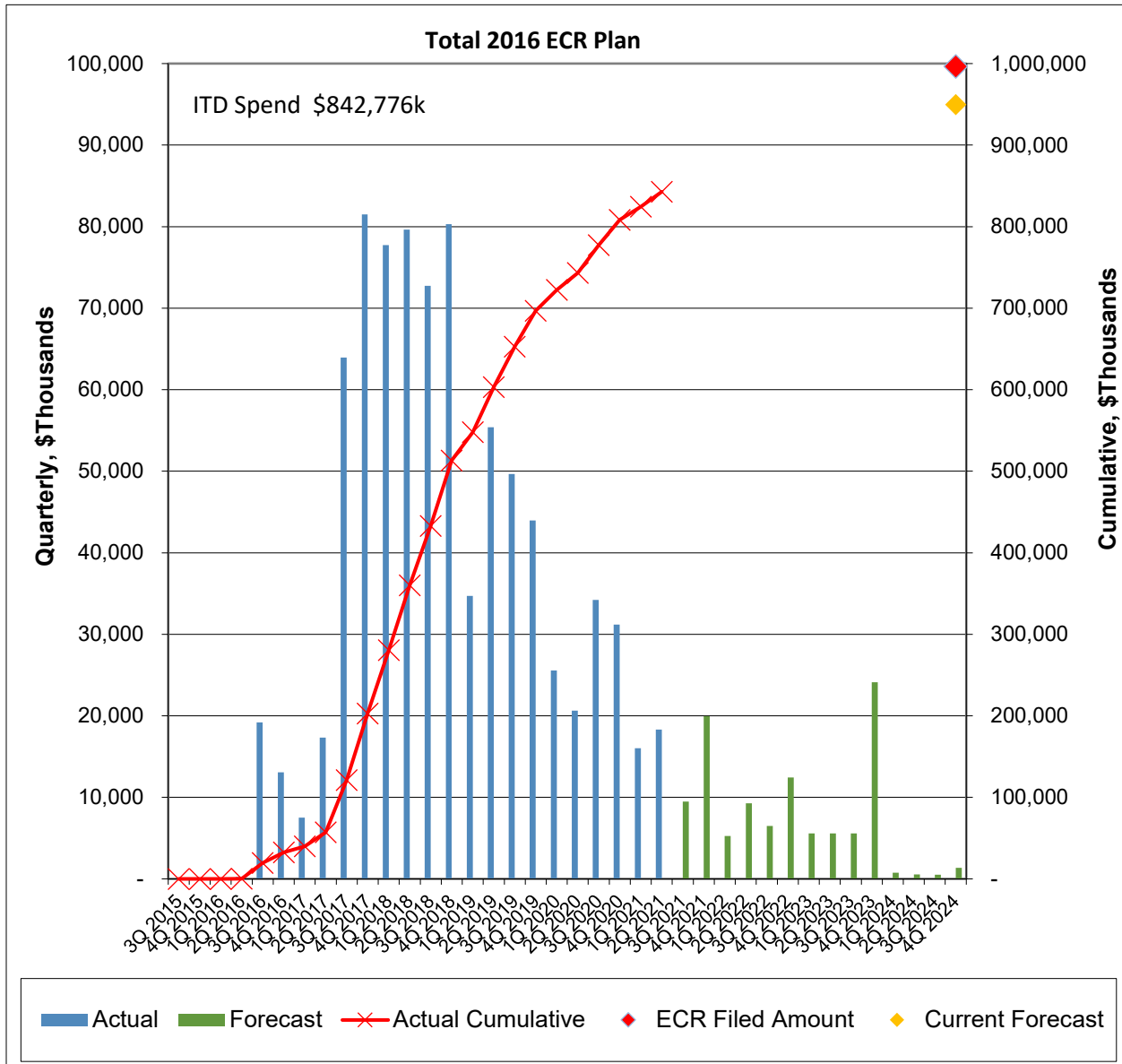
Mill Creek Main Ash Pond Closure – March 2021



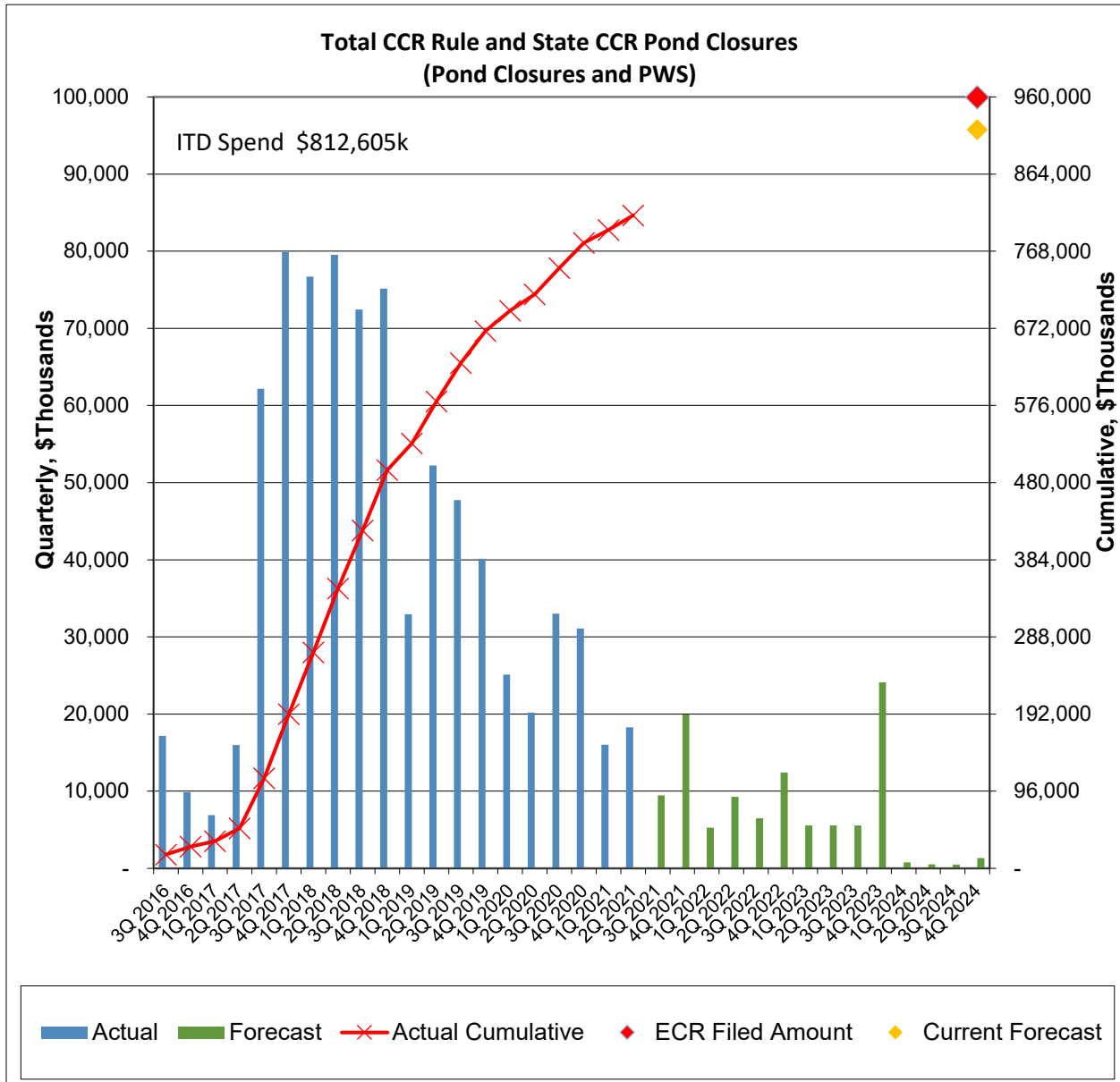
Mill Creek Main Ash Pond Closure – July 2021

Financials:

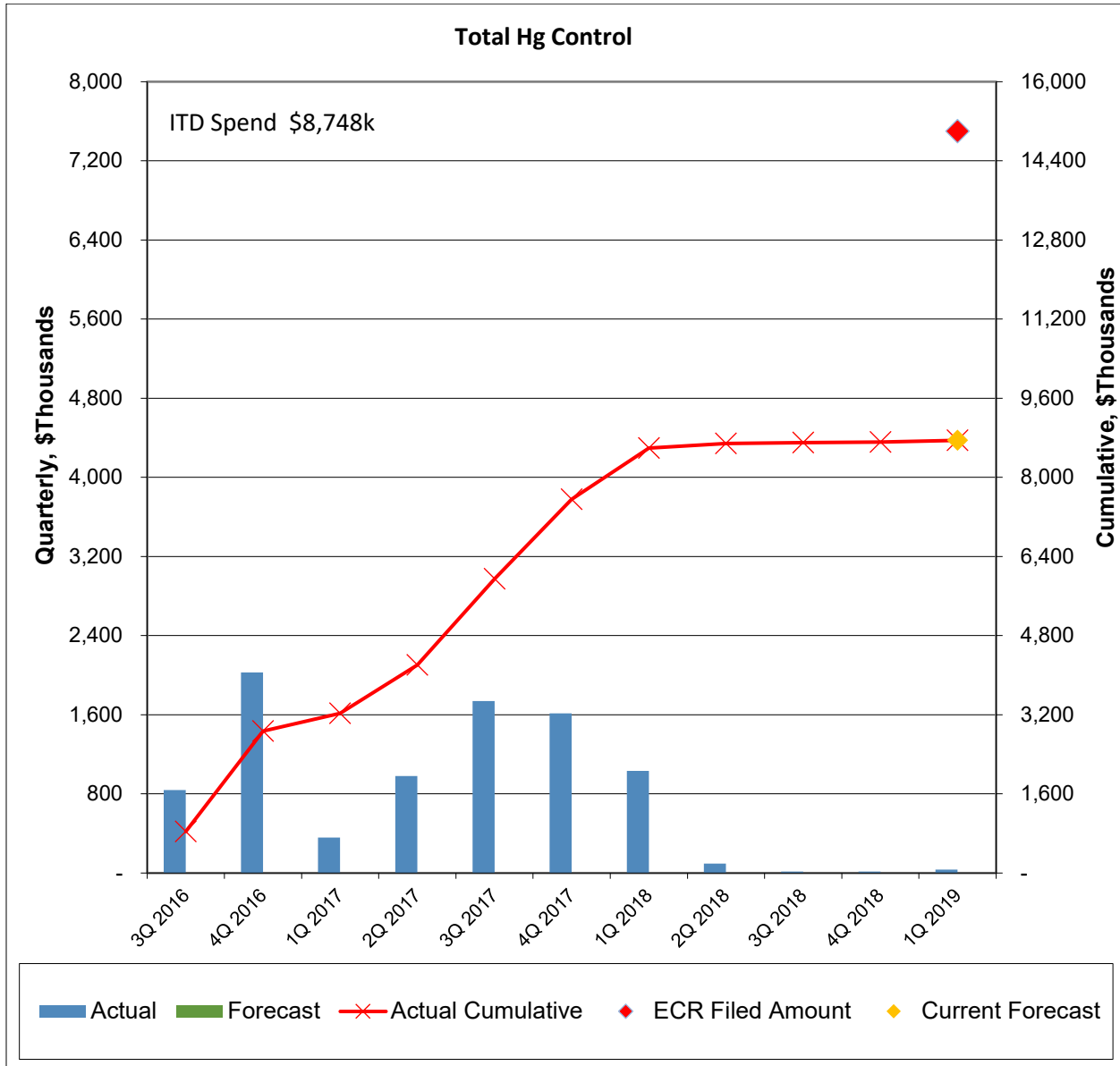
The total 2016 ECR Plan forecasted costs remain unchanged from the last quarter at \$949.6 million. Total spend through June 30, 2021 has increased from \$822.7 million (net) last quarter to \$842.8 million (net). The graph below includes 1) a symbol (◆) to show the current forecast to completion and (2) inception-to-date (“ITD”) Spend in the upper left of the chart.



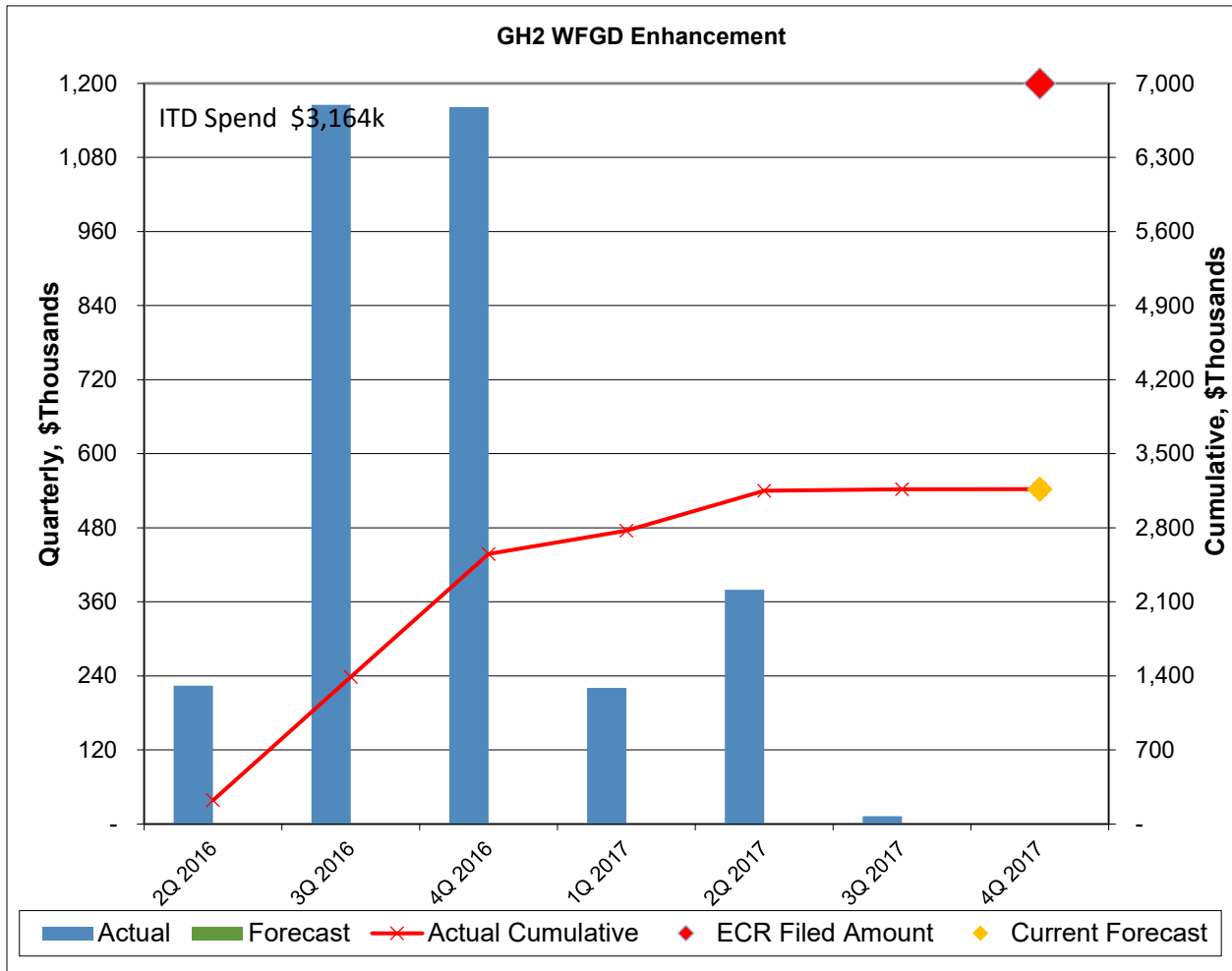
The CCR Impoundment Closure total forecasted costs remain flat from the last quarter at \$919.5 million (net) as explained above. Total spend through June 30, 2021 has increased from \$792.5 million (net) last quarter to \$812.6 million (net). The graph below includes 1) a symbol (◆) to show the current forecast to completion and (2) ITD Spend in the upper left of the chart.



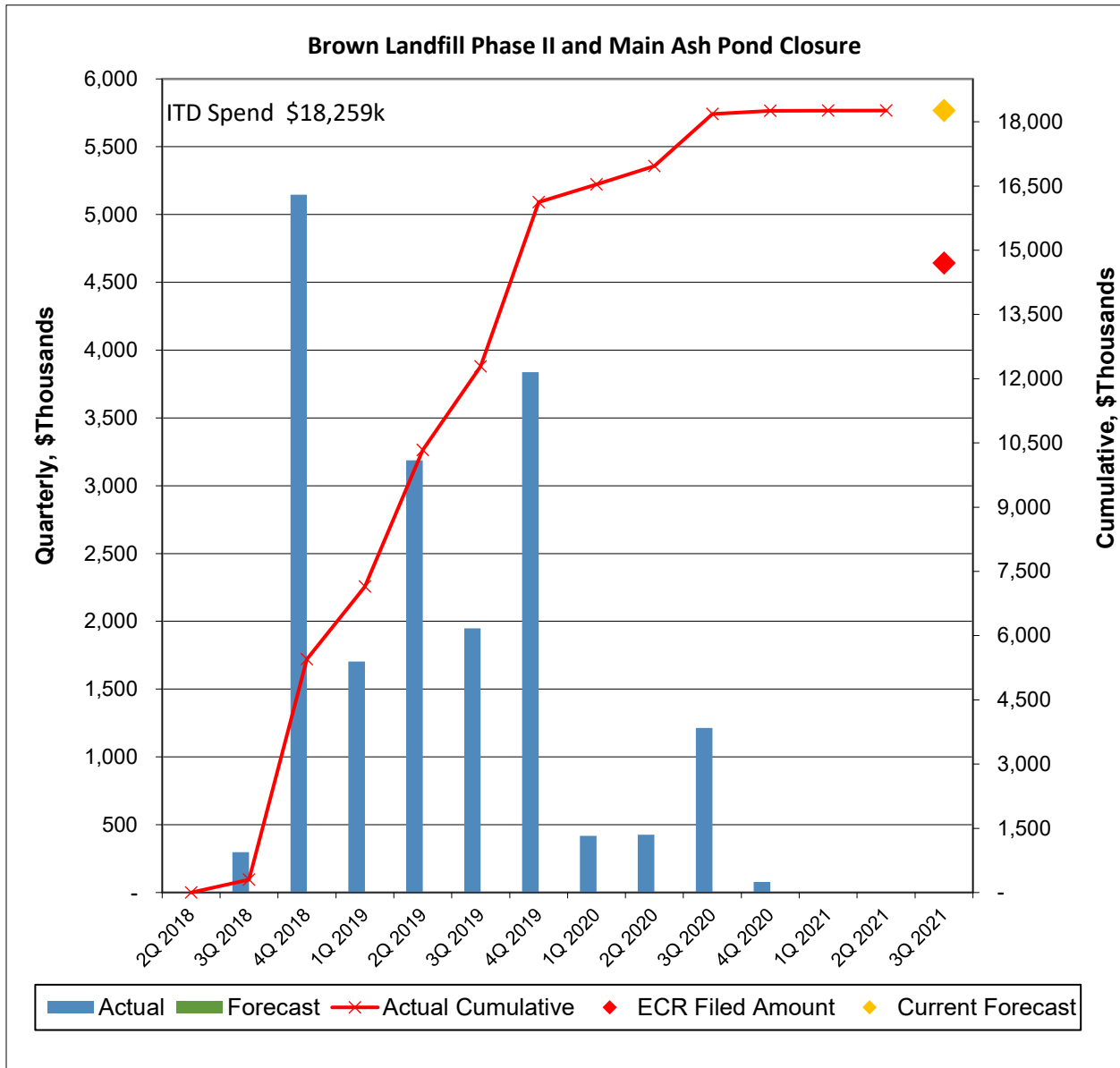
The Mercury Injection projects have been completed and commissioned. The project’s total spend was \$8.7 million compared to the filed estimate of \$15.0 million.



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 June 30, 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 focus on the final grading activities and dewatering for the E.W. Brown Auxiliary Ash Pond closure. The contract for the Trimble County BAP and GSP closure project will be negotiated and awarded.

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 at Ghent. 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 in July 2021.