

2016 ECR Plan Status Update Report Quarterly Report – Update #25 October 31, 2022

Executive Summary:

General

This report covers LG&E and KU’s (“Companies”) progress on the 2016 Environmental Cost Recovery (“ECR”) Plan through the third quarter of 2022.

The overall 2016 ECR Plan safety performance through the third quarter of 2022 remains excellent with a year-to-date OSHA Recordable Incident Rate of 0.00 and an inception-to-date OSHA Recordable Incident Rate of 0.44, compared to the industry average of 3.2.

As reported in the last quarter, the total 2016 ECR Plan projected cost remains \$979.0 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 increased from \$905.0 million (net) last quarter to \$915.0 million (net) through September 30, 2022.

CCR Compliance (CCR Rule and State CCR Pond Closures)

Safety performance through the third quarter is excellent with a year-to-date OSHA Recordable Incident Rate of 0.00 and an inception-to-date Recordable Incident Rate of 0.48, compared to an industry average Recordable Incident Rate of 3.2.

The total projected cost for the Coal Combustion Residual (“CCR”) Closure Program remains \$948.8 million (net). Total spend to date through September 30, 2022 increased from \$874.8 million (net) last quarter to \$884.8 million (net).

The remaining engineering activities primarily consist of supporting ongoing construction activities and updating design documents to reflect “as-built” conditions of the completed projects. Remaining activities are associated with awarded contracts through warranty periods.

In compliance with the U.S. Environmental Protection Agency’s (“EPA”) 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 takes years 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 solid or liquid materials. By persistently pursuing the closure processes, the Companies have completed the complex

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.

process of physical closure for 16 CCR Rule and State CCR Impoundment Closures. The Companies continue to progress towards completing closure of the three remaining CCR impoundments.

On January 11, 2022, EPA issued a press release and preliminary decision documents for nine of the fifty-seven Part A applications it received requesting an extension on the deadline for closure for CCR impoundments. Although the Companies did not submit any Part A applications or request extensions for any CCR impoundment closures, EPA's proposed determinations reflect interpretation of the CCR Rule which the Agency may consider applicable to all CCR-regulated facilities.

The Agency has also sent letters to various facilities raising concerns about improper groundwater monitoring, insufficient remedial progress, and regulation of inactive surface impoundments, which provide further insight into seemingly more aggressive interpretations of the Rule. The Companies have not received any direct correspondence from EPA related to CCR Rule compliance. Some of EPA's interpretations related to the Part A applications and identified in direct facility correspondence raise questions about whether it is permissible to implement closure in place for facilities in which CCR may be placed below the water table or utilize the beneficial use of CCR for closure purposes.

On March 18, 2022, the Companies received electronic correspondence from the Kentucky Division of Waste Management (forwarded from EPA) that three of its impoundments (one each at the Ghent, Trimble County, and Mill Creek Station) had been identified by EPA as potentially having waste below the water table. However, the correspondence did not identify any specific or required actions on the part of the Companies. Given the text of the Rule has not been proposed or changed by the Agency, the Companies will continue to progress in completing the three remaining in-place closures that are already underway.

On August 25, 2022, EPA was sued by several environmental organizations to force the Agency to revise the CCR Rule to regulate inactive CCR landfills that ceased receiving CCR prior to the Rule's October 2015 effective date.

As has been our practice, LG&E and KU continue to track CCR Rule-related developments. In the interim, the Companies are moving forward with on-going efforts to close all CCR impoundments in a manner that is consistent with the existing CCR regulations.

CCR Impoundment Closures

- Ghent – Tetra Tech's ("TT") Phase III scope (closure of ATB #2) is in closure as of January 9, 2020. Work to date on ATB #2 is progressing to plan with regrading of the in-place CCR material; hauling of CCR material from Coal Combustion Residual Treatment area, and 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. Tetra Tech's ("TT") Phase II scope (construction of the South Cooling Pond, closure of Ash Treatment Basin ["ATB"] #1) have been successfully completed. 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. Thalle has completed the installation of the closure system on the auxiliary CCR impoundment; however, dewatering of the remaining interstitial water (below the liner cap system) through the use of deep wells continues to experience reduced production due to fouling of wells and equipment issues prolonging the dewatering effort. As a result, Thalle installed an additional five (5) deep wells during the month of July 2022. The existing wells have been serviced to improve production or converted to observation wells to assist with the monitoring of the interstitial water level. The E.W. Brown Walking Trail is complete.
- Mill Creek – Final as-built drawings and the construction progress report will be completed by AECOM Technical Services, Inc. (“AECOM”) during the fourth quarter of 2022.
- Trimble County – TT continues hauling CCR material to the Bottom Ash Pond (“BAP”) for beneficial use, excavating and grading activities within the BAP, dewatering the BAP, and excavating and hauling of fill material from borrow sites to regrade the BAP surface to facilitate installation of the cap system. TT completed removal of free water from the Gypsum Storage Pond (“GSP”) and began constructing interior access roads and rim ditches.
- Tyrone – Project completed in the second quarter of 2020. During the second quarter 2022, the native grass and pollinator area underwent maintenance to remove invasive plants and to enhance the existing native grass and pollinator area. No further work is planned at Tyrone.

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. The program-wide meetings provide an opportunity for all parties to deliver updates and to ensure the contractors are providing similar deliverables across the projects.

Process Water System Projects

- Trimble County – Project has been placed into Commercial Operation. Remaining activities are associated with minor warranty claims.
- Mill Creek – Project has been placed into Commercial Operation. Remaining activities are associated with warranty claims, minor infrastructure improvements, and project closeout.
- Ghent – Project has been placed into Commercial Operation. Remaining activities are associated with warranty claims and project closeout.

² EPA has committed to revising various portions of the CCR Rule. While changes to the CCR Rule have been proposed, EPA has indicated that there are still other additional proposals under development. Many factors have substantially extended EPA’s anticipated timeline for revisions beyond their original schedule. However, the Companies’ strategies continue to be resilient and absent major regulatory developments, we do not expect that CCR Rule changes will require any major re-evaluations of our plans. LG&E and KU remain well positioned to comply with the evolving CCR Rule requirements. The Companies will continue to closely monitor revisions to the CCR Rule and to ongoing litigation and will continue to update the Commission as it relates to issues that may affect construction schedules and activities.

- E.W. Brown – Project has been placed into Commercial Operation. Remaining activities are associated with warranty claims and project closeout.

Schedules

CCR Rule and State CCR Impoundment Closures

<u>Project</u>	<u>Project #</u>	<u>EPC Status³</u>	<u>Planned / Actual In-Service Date⁴</u>
E.W. Brown Aux Pond	KU Project 42	Awarded July 9, 2018	4Q 2022
E.W. Brown Main Ash Pond (Deleted Phase III of Landfill)	KU Project 36	Completed	Closure Completed 4Q 2020
Ghent ATB #1	KU Project 40	Awarded September 7, 2018	Cap and Closure Completed 4Q 2021
Ghent ATB #2	KU Project 40	Awarded May 22, 2020	December 2024
Ghent Gypsum Stack	KU Project 40	Amended Sept. 7, 2018	Clean Closure Completed 3Q 2021
Green River Main Pond	KU Project 39	Completed	Cap and Closure Completed 2Q 2019
Green River ATB #2	KU Project 39	Completed	Cap and Closure Completed 3Q 2019
Green River SO2 Pond	KU Project 39	Completed	Clean Closure Completed 2Q 2019
Mill Creek Ash Pond	LG&E Project 29	Awarded April 4, 2019	Cap and Closure Completed 3Q 2021
Mill Creek Clearwell Pond	LG&E Project 29	Completed	Clean Closure Completed & New Pond in Service 4Q 2018
Mill Creek Construction Runoff Pond	LG&E Project 29	Completed	Clean Closure Completed 2Q 2018 and New Pond in Service 3Q 2018
Mill Creek Emergency Pond	LG&E Project 29	Completed	Clean Closure Completed and area structurally backfilled in 2017
Mill Creek Dead Storage Pond	LG&E Project 29	Completed	Clean Closure Completed and area structurally backfilled 3Q 2019
Pineville Ash Pond	KU Project 39	Completed	Cap and Closure Completed 3Q 2019
Trimble County Bottom Ash Pond	KU Project 41, LG&E Project 30	Awarded August 13, 2021	October 2024
Trimble County Gypsum Storage Pond	KU Project 41, LG&E Project 30	Awarded August 13, 2021	October 2023
Tyrone Ash Pond	KU Project 39	Completed	Cap and Closure Completed 3Q 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.

PWS Projects

<u>Project</u>	<u>Project #</u>	<u>EPC Status</u>	<u>Planned/ Actual In-Service Date⁴</u>
E.W. Brown PWS	KU Project 42	Completed	Placed in Service May 2020
Ghent PWS	KU Project 40	Completed	Placed in Service April 2020
Mill Creek PWS	LG&E Project 29	Completed	Placed in Service October 2019
Trimble County PWS	KU Project 41, LG&E Project 30	Completed	Placed in Service October 2019

E.W. Brown Landfill Phase II and Phase III

Work associated with this project has been completed, no further update will be provided.

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. Tetra Tech’s (“TT”) Phase III scope (closure of ATB #2) is in progress as of January 9, 2020. Work to date on ATB #2 is progressing to plan with regrading of the in-place CCR material; hauling of material from the Coal Combustion Residual Treatment area, as well as filter cake from the Process Water System (“PWS”); and installation of the synthetic liner system and protective cover soil over areas of ATB #2 that have achieved final grade. Tetra Tech’s (“TT”) Phase II scope (construction of the South Cooling Pond and closure of Ash Treatment Basin [“ATB”] #1) has been successfully completed. TT continues to progress the Ghent projects very well with no compliance issues forecasted. Given the completion of the Phase II scope, this will be the last report of pictures of the completed improvements.



Phase II Ghent ATB #1 – Looking West – July 2022



Phase II Ghent ATB #1 – Looking West – October 2022



Phase II Ghent ATB #1 and Cooling Channel – Looking East – July 2022



Phase II Ghent ATB #1 and Cooling Channel – Looking East – October 2022

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

LG&E and KU continues to hold weekly and monthly project update meetings. TT continues hauling CCR material to the Bottom Ash Pond (“BAP”) for beneficial use; excavating and grading activities within the BAP; completed removal of free water from the Gypsum Storage Pond (GSP); continues dewatering the BAP; excavating and hauling of fill material from borrow sites to regrade the BAP surface to facilitate installation of the cap system; and began constructing access roads and rim ditches in the GSP.

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



Trimble BAP – Looking North – July 2022



Trimble BAP – Looking North – October 2022



Trimble GSP – Looking South – October 2022

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

- E.W. Brown – Thalle Construction (“Thalle”) impoundment closure activities are nearly complete. Thalle has completed the installation of the closure system on the auxiliary CCR impoundment; however, dewatering of the remaining interstitial water (below the liner cap system) through the use of deep wells continues to experience reduced production due to fouling of wells and equipment issues prolonging the dewatering effort. As a result, Thalle installed an additional five (5) deep wells during the month of July 2022. The existing wells have been serviced to improve production or converted to observation wells to assist with the monitoring of the interstitial water level. The E.W. Brown Walking Trail is complete.



E.W. Brown Aux Pond – July 2022



E.W. Brown Aux Pond – October 2022



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

Final as-built drawings and the construction progress report will be completed by AECOM during the fourth quarter of 2022. Given the completion of the improvements, pictures of the closure will not be included in future reports.



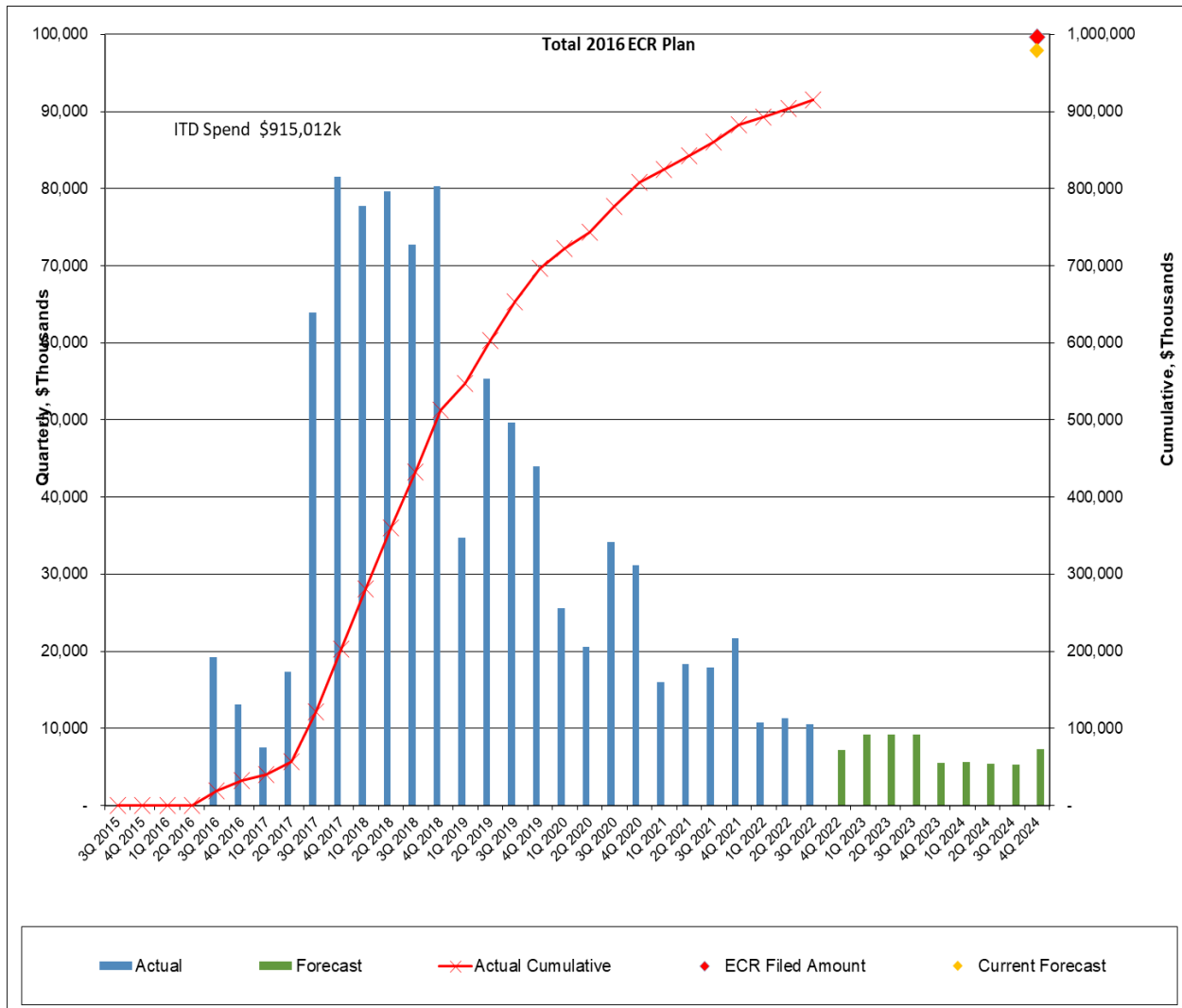
Mill Creek Main Ash Pond Closure – March 2022 – No Change July 2022



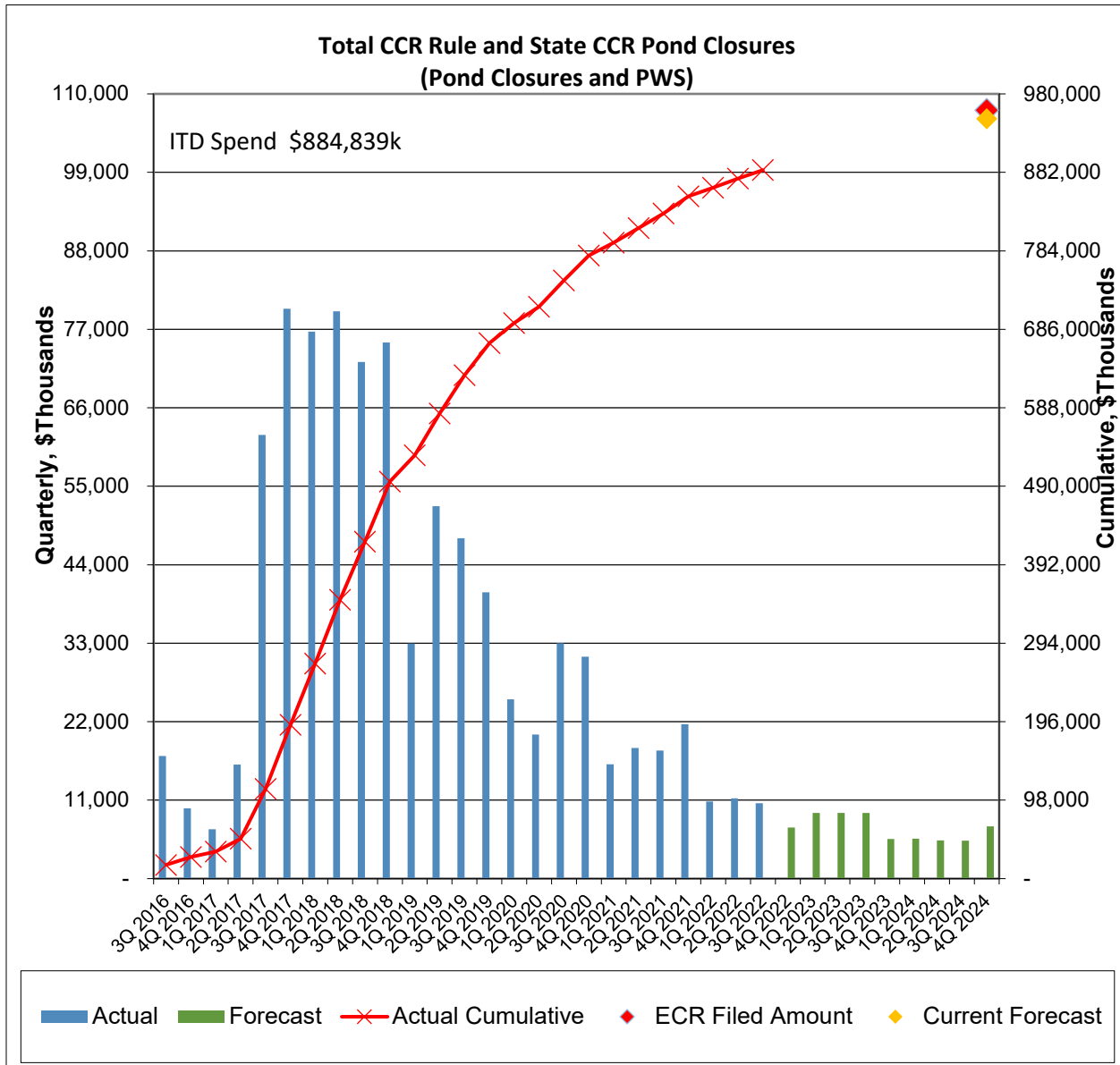
Mill Creek Main Ash Pond Closure – October 2022

Financials:

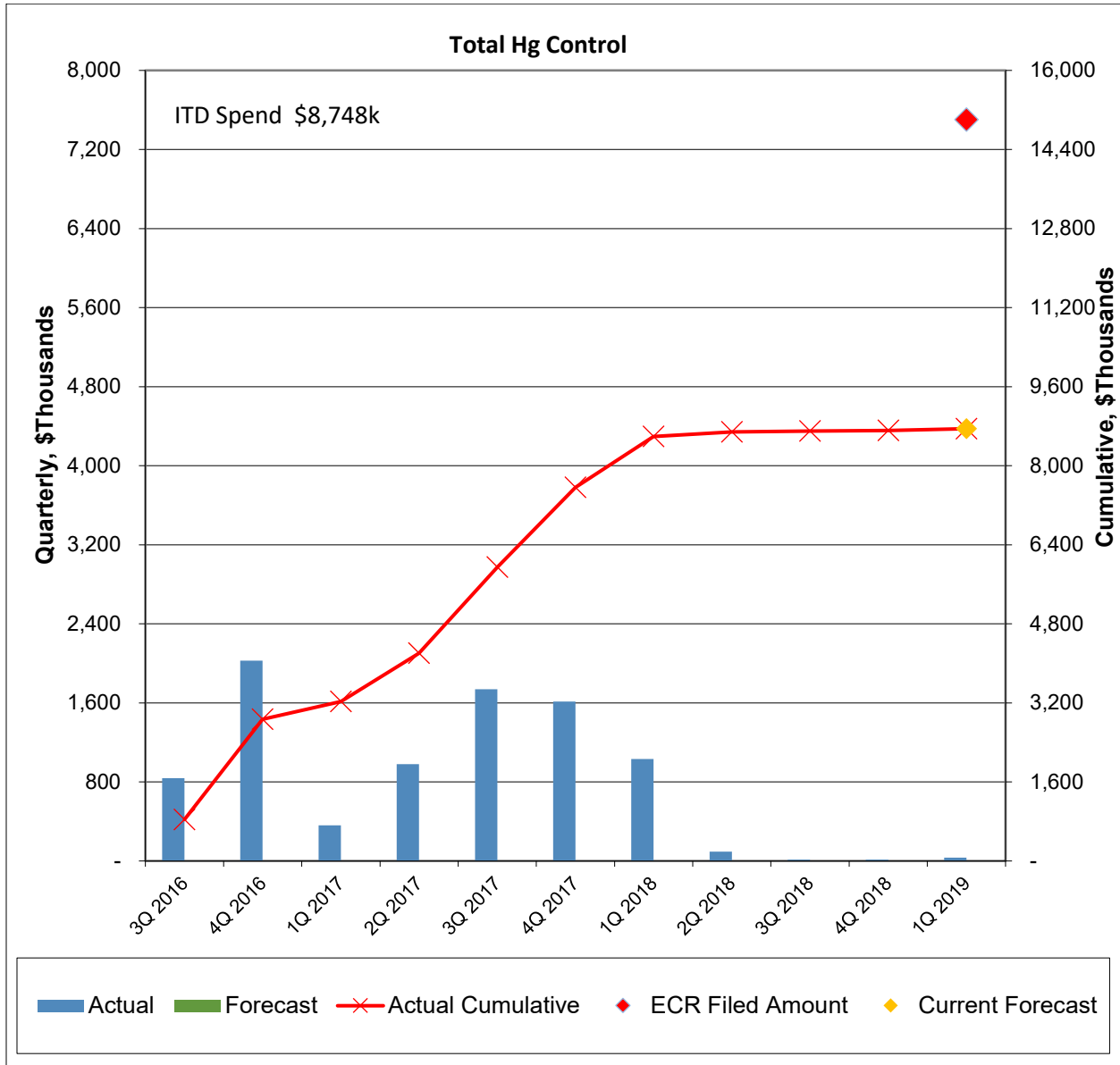
As reported in the last quarter, the total 2016 ECR Plan projected cost remains \$979.0 million (net), compared to the filed total of \$996.4 million. Total spend through September 30, 2022 has increased from \$905.0 million (net) last quarter to \$915.0 million (net). The graph below includes 1) a symbol (◆) to show the current forecast to completion and (2) inception-to-date (“ITD”) Spend in the upper left of the chart.



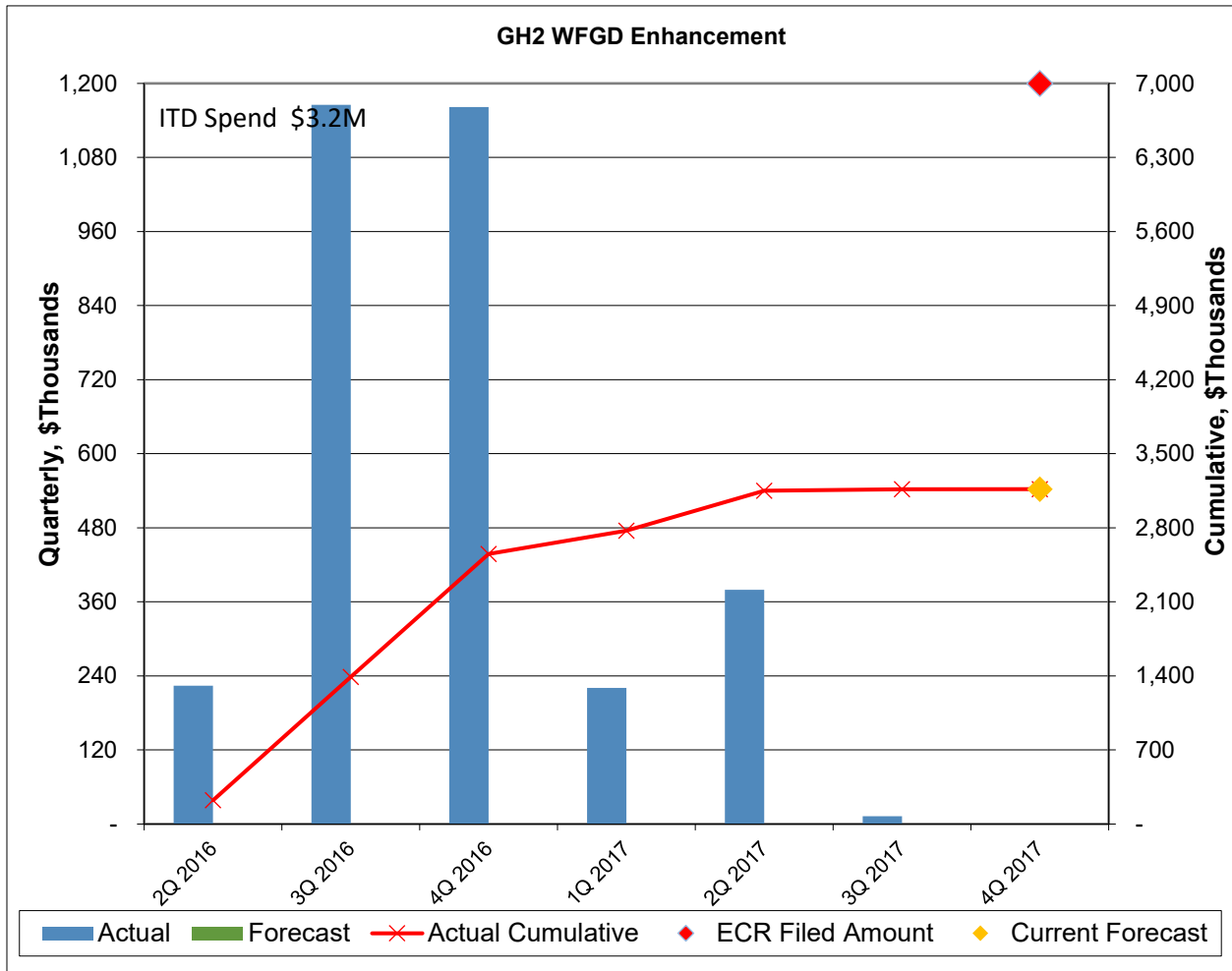
The CCR Impoundment Closure total forecasted cost remains \$948.8 million (net). Total spend through September 30, 2022 has increased from \$874.8 million (net) last quarter to \$884.8 million (net). The graph below includes 1) a symbol (◆) to show the current forecast to completion and (2) ITD Spend in the upper left of the chart.



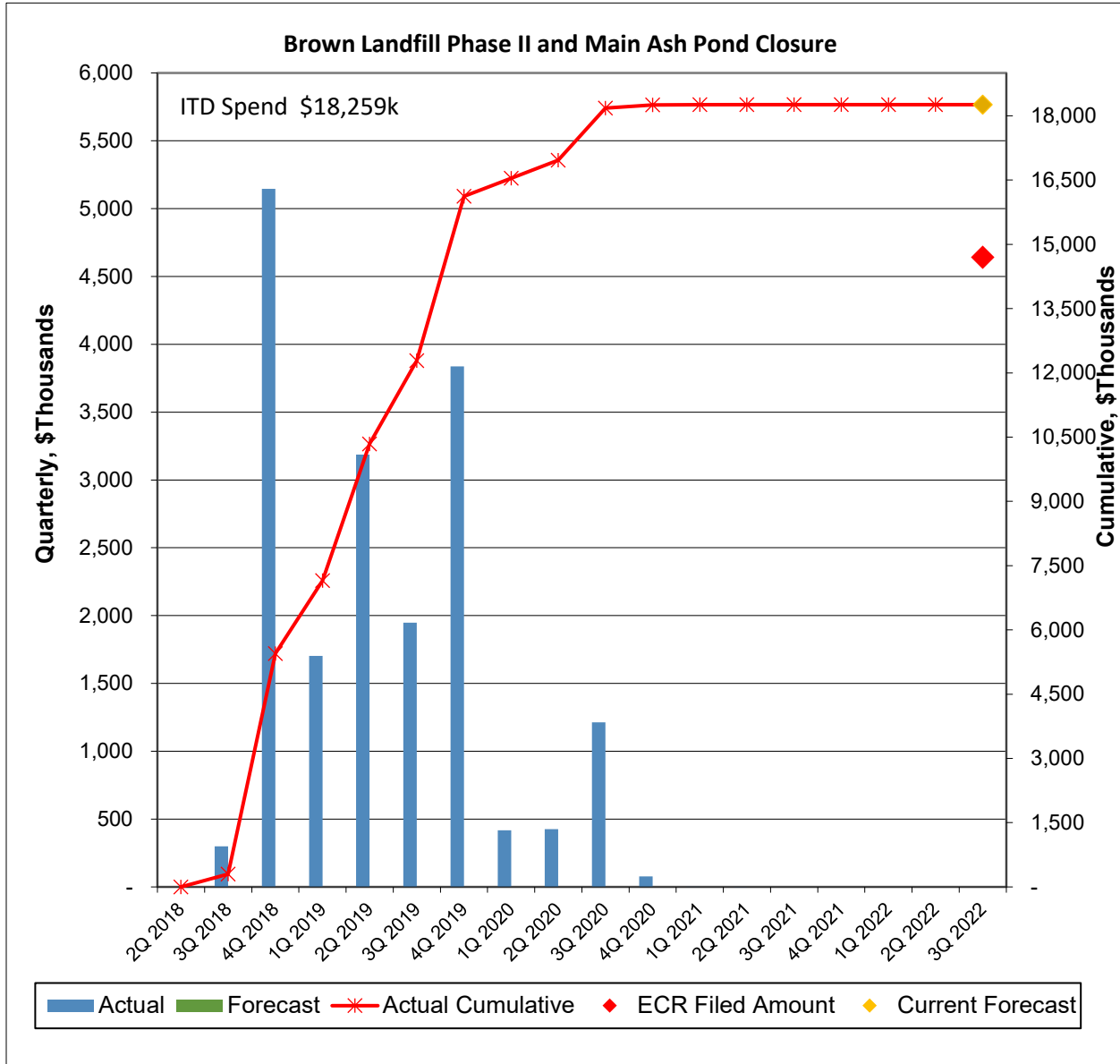
The Mercury Injection projects have been completed and commissioned. The project’s total spend was \$8.7 million compared to the filed estimate of \$15.0 million.



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 has been completed. Total spend on the project was \$18.3 million.



Planned Activities for Next Quarter:

Federal CCR Rule Closure Projects

CCR Closures:

TT will continue with Phase III closure activities at Ghent, as well as closure activities on the Trimble County Bottom Ash Pond and Gypsum Storage Pond. Thalle will continue dewatering the interstitial water from the E.W. Brown Auxiliary Ash Pond closure. The Companies will continue to monitor and work through warranty and maintenance issues, on all the projects, should they arise.

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 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).