

2016 ECR Plan Status Update Report Quarterly Report – Update #26 January 30, 2023

Executive Summary:

General

This report covers LG&E and KU's ("Companies") progress on the 2016 Environmental Cost Recovery ("ECR") Plan through the fourth quarter of 2022.

The overall 2016 ECR Plan safety performance through the fourth 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.

The total 2016 ECR Plan projected cost increased from \$979.0 million (net)¹ to \$996.7 million (net), 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 \$915.0 million (net) last quarter to \$923.5 million (net) through December 31, 2022.

CCR Compliance (CCR Rule and State CCR Pond Closures)

Safety performance through the fourth 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 increased from \$948.8 million (net) to \$966.5 million (net). The increased projected cost for the CCR Closure Program is related to resolution of excusable events on the Ghent and Trimble County projects, anticipated costs to resolve a contract dispute at the E.W. Brown projects and cost impacts related to project closeout. Total spend to date through December 31, 2022 increased from \$884.8 million (net) last quarter to \$893.4 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

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.

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 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. 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. EPA's position, outlined in the decision documents and letters, differed from the regulated community's understanding of the Rule. As a result, Vistra² and USWAG³ have prepared a legal challenge to the Agency's positions, suggesting that their interpretations amounted to regulatory changes that were not promulgated. The U.S. Chamber of Commerce and Texas have intervened in support of Vistra's position. The challenge process is likely to continue through 2023.

Given the text of the Rule has not been proposed or changed by the Agency and the Companies have not received any direct correspondence from EPA related to CCR Rule compliance, efforts will continue to complete the three remaining in-place closures that are already underway.

EPA has identified potential changes to the CCR Rule for mid-2023. With active litigation and pending revisions to the CCR Rule, LG&E and KU continue to track CCR Rule-related developments but will maintain their 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. TT continues to progress the Ghent projects very well with no compliance issues forecasted.
- E.W. Brown – With the auxiliary CCR impoundment closure system completed, Thalle Construction ("Thalle") continued with removal of interstitial water (below the liner cap system) utilizing a network of deep wells and pumps. The deep well system continued to experience low production due to fouling of wells and equipment issues prolonging the dewatering effort. The Companies and owner's engineer, WSP (formerly Wood E&I), continued to evaluate the dewatering effort and examined alternative solutions to address the removal of interstitial water given Thalle's dewatering performance.

² Vistra is a trade association responsible for addressing solid and hazardous waste issues on behalf of the utility industry.

³ USWAG is the Utility Solid Waste Activities Group.

- Mill Creek – Final as-built drawings and the construction progress report were completed by AECOM Technical Services, Inc. (“AECOM”) during the fourth quarter of 2022. No further work is required.
- Trimble County – TT continues hauling CCR material to the Bottom Ash Pond (“BAP”) for beneficial use, excavating and grading activities within the BAP, and dewatering the BAP. TT completed 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. TT started mass excavation of gypsum out of the GSP and hauling it to the BAP to be used as beneficial use fill material.
- Tyrone – Project completed in the second quarter of 2020. 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.⁴ 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.
- Mill Creek – Project has been placed into Commercial Operation. A number of activities associated with warranty claims, minor infrastructure improvements, and project closeout were completed during the fourth quarter of 2022. No further work is planned.
- Ghent – Project has been placed into Commercial Operation.
- E.W. Brown – Project has been placed into Commercial Operation.

⁴ 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.

Schedules

CCR Rule and State CCR Impoundment Closures

<u>Project</u>	<u>Project #</u>	<u>EPC Status⁵</u>	<u>Planned / Actual In-Service Date⁶</u>
E.W. Brown Aux Pond	KU Project 42	Awarded July 9, 2018	Closure Completed 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

⁵ Engineering, Procurement, and Construction (“EPC”) Status – the red font signifies actuals.

⁶ 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 2023.

PWS Projects

<u>Project</u>	<u>Project #</u>	<u>EPC Status</u> ⁷	<u>Planned/ Actual In-Service Date</u> ^{8,6}
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

⁷ Engineering, Procurement, and Construction (“EPC”) Status – the red font signifies actuals.

⁸ 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 2023.

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. 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 PWS; and installation of the synthetic liner system and protective cover soil over areas of ATB #2 that have achieved final grade. TT constructed the new outfall sampling structures that will receive stormwater from ATB #2's final cover system. Stormwater discharge will be tied into the outfall sampling structures once the synthetic liner system and protective cover soil has been installed over the entire surface of ATB #2. TT continues to progress the Ghent projects very well with no compliance issues forecasted.



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



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



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



Phase II Ghent ATB #1 and Cooling Channel – Looking East – January 2023

KU Project 41 and LG&E Project 30⁹ – 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”); continued dewatering the BAP; completed excavating and hauling of fill material from borrow sites to regrade the BAP surface; continued constructing access roads and rim ditches in the GSP; began mass excavation of gypsum within the GSP and transporting it to the BAP to be used as beneficial use fill material.

⁹ KU and LG&E’s net costs are split 48% and 52%, respectively.



Trimble BAP – Looking North – October 2022



Trimble BAP – Looking North – December 2022



Trimble GSP – Looking South – October 2022



Trimble GSP – Looking South – January 2023

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

- E.W. Brown – With the auxiliary CCR impoundment closure system completed, Thalle continued with removal of interstitial water (below the liner cap system) utilizing a network of deep wells and pumps. The deep well system continued to experience low production due to fouling of wells and equipment issues prolonging the dewatering effort. The Companies and owner’s engineer, WSP, continued to evaluate the dewatering effort and examined alternative solutions to address the removal of interstitial water given Thalle’s dewatering performance.



E.W. Brown Aux Pond – October 2022 – No Change



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

Final as-built drawings and the construction progress report were completed by AECOM Technical Services, Inc. (“AECOM”) during the fourth quarter of 2022. No further work is required.

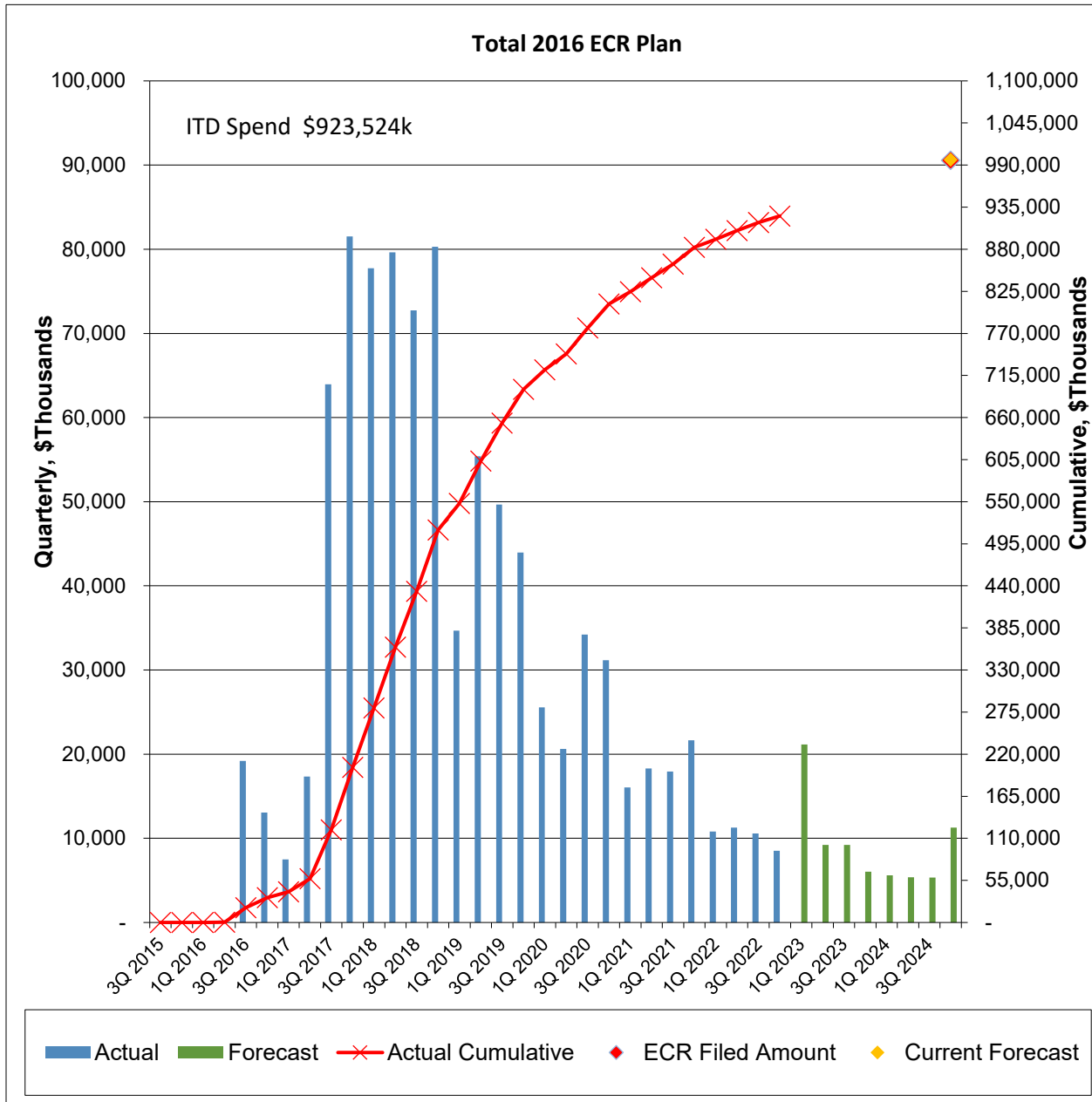
A number of PWS activities associated with warranty claims, minor infrastructure improvements, and project closeout were completed during the fourth quarter of 2022. No further work is planned.



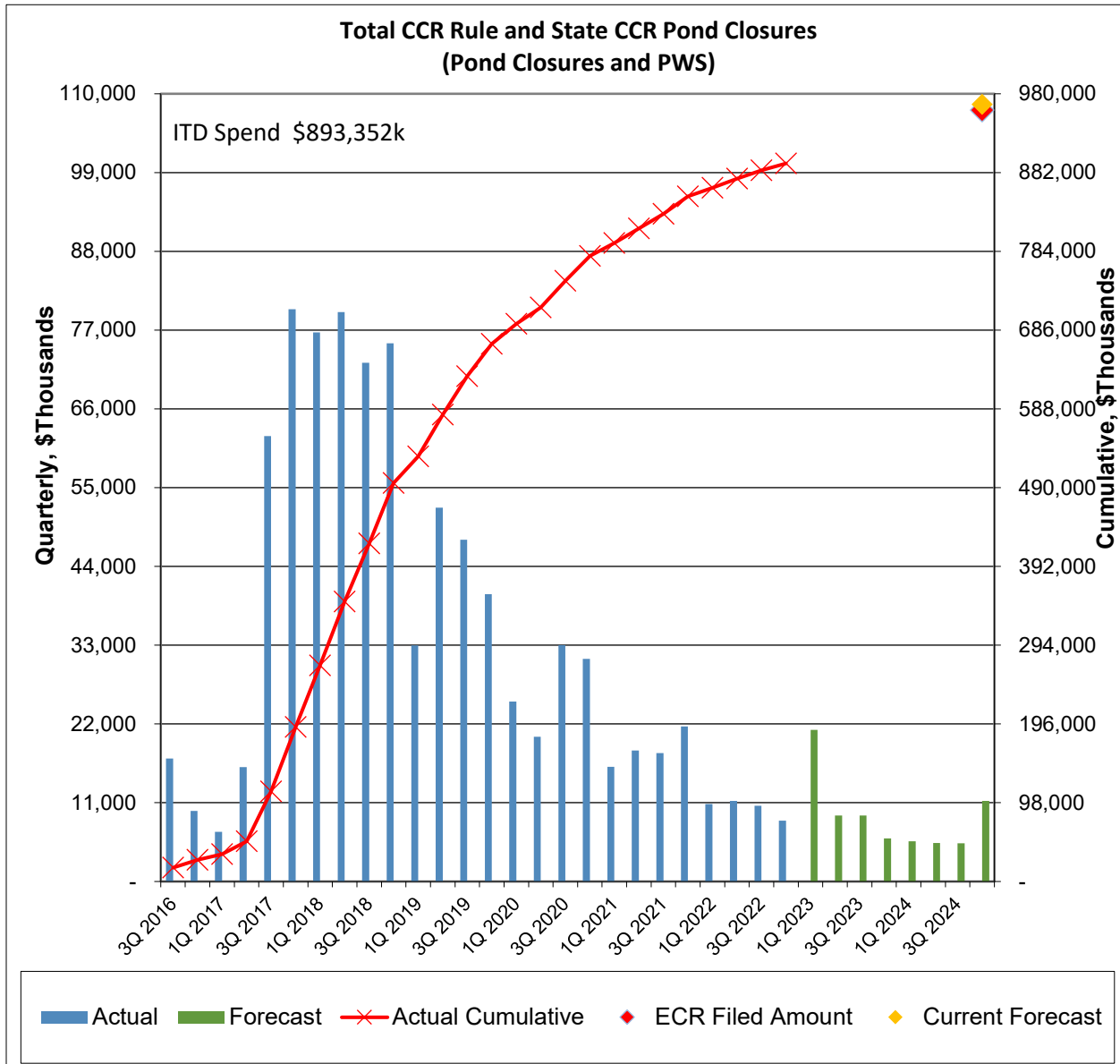
Mill Creek Main Ash Pond Closure – October 2022 – No Change

Financials:

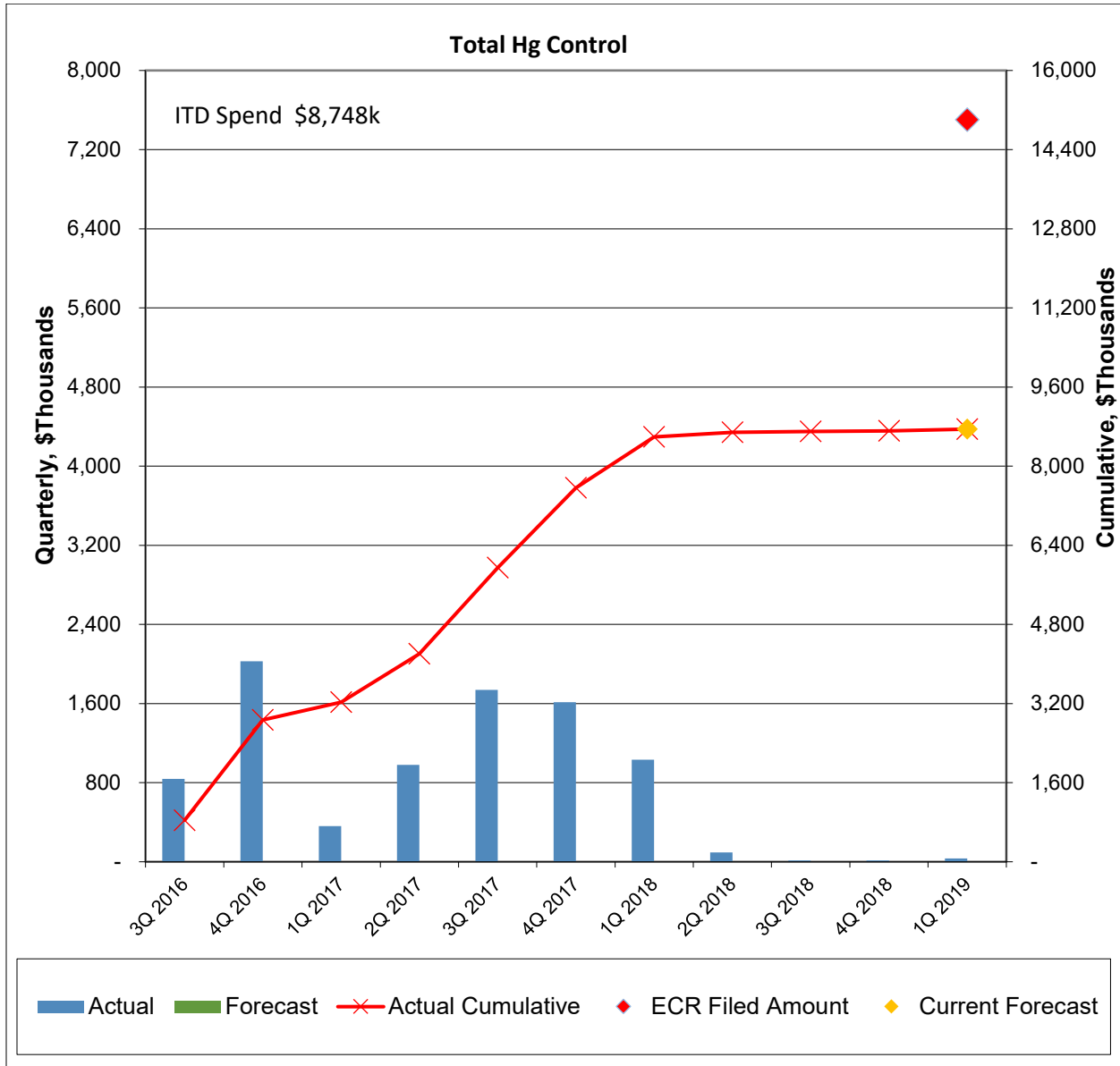
The total 2016 ECR Plan projected cost increased from \$979.0 million (net) to \$996.7 million (net), compared to the filed total of \$996.4 million. Total spend through December 31, 2022 has increased from \$915.0 million (net) last quarter to \$923.5 million (net). The graph below includes 1) a symbol (◆) to show the current forecast to completion and (2) inception-to-date (“ITD”) Spend in the upper left of the chart.



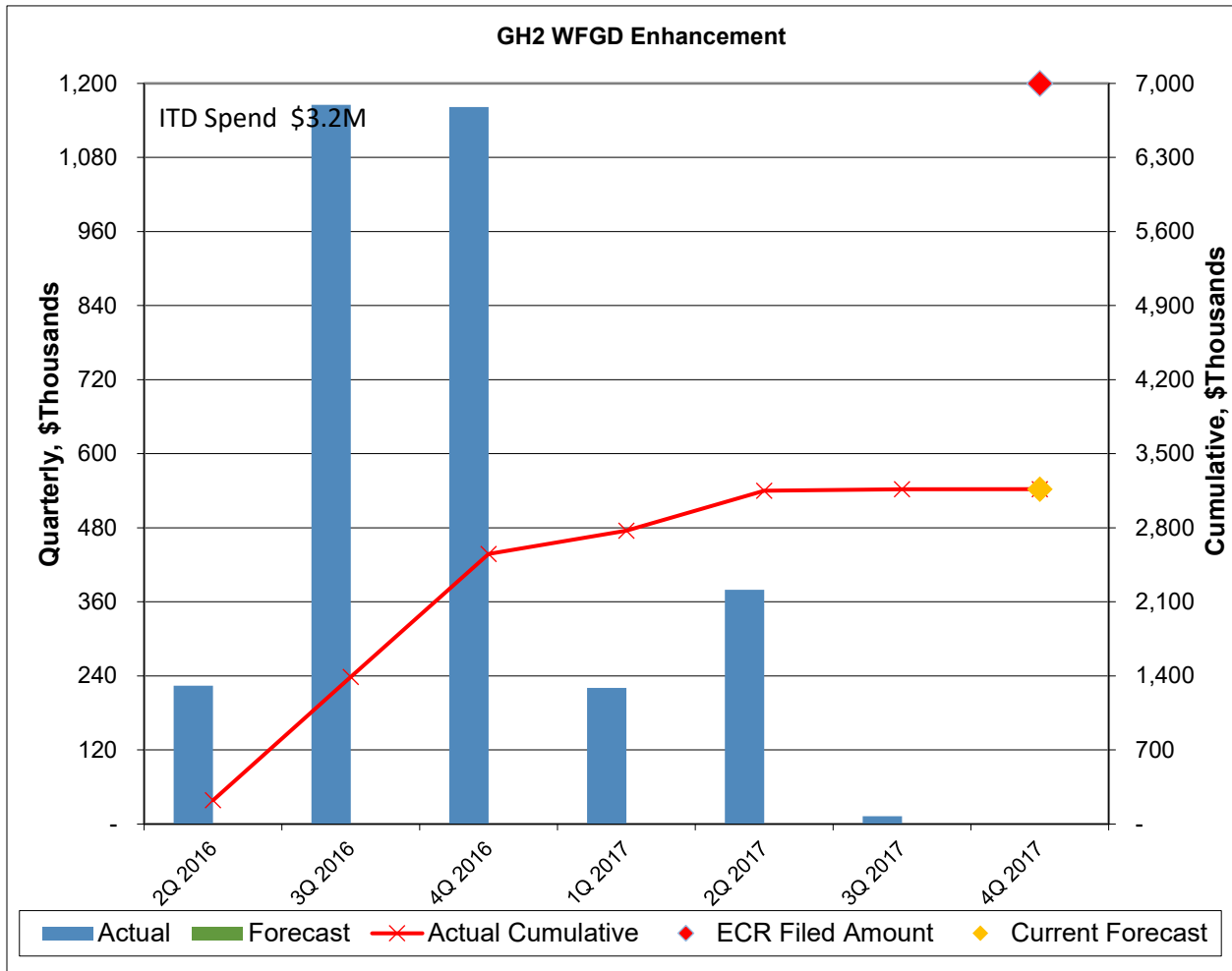
The CCR Impoundment Closure total forecasted cost increased from \$948.8 million (net) to \$966.5 million (net). The projected cost increase for the CCR Closure Program is related to resolution of excusable events on the Ghent and Trimble County projects, anticipated costs to resolve a contract dispute at the E.W. Brown projects and cost impacts related to project closeout. Total spend through December 31, 2022 has increased from \$884.8 million (net) last quarter to \$893.4 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.



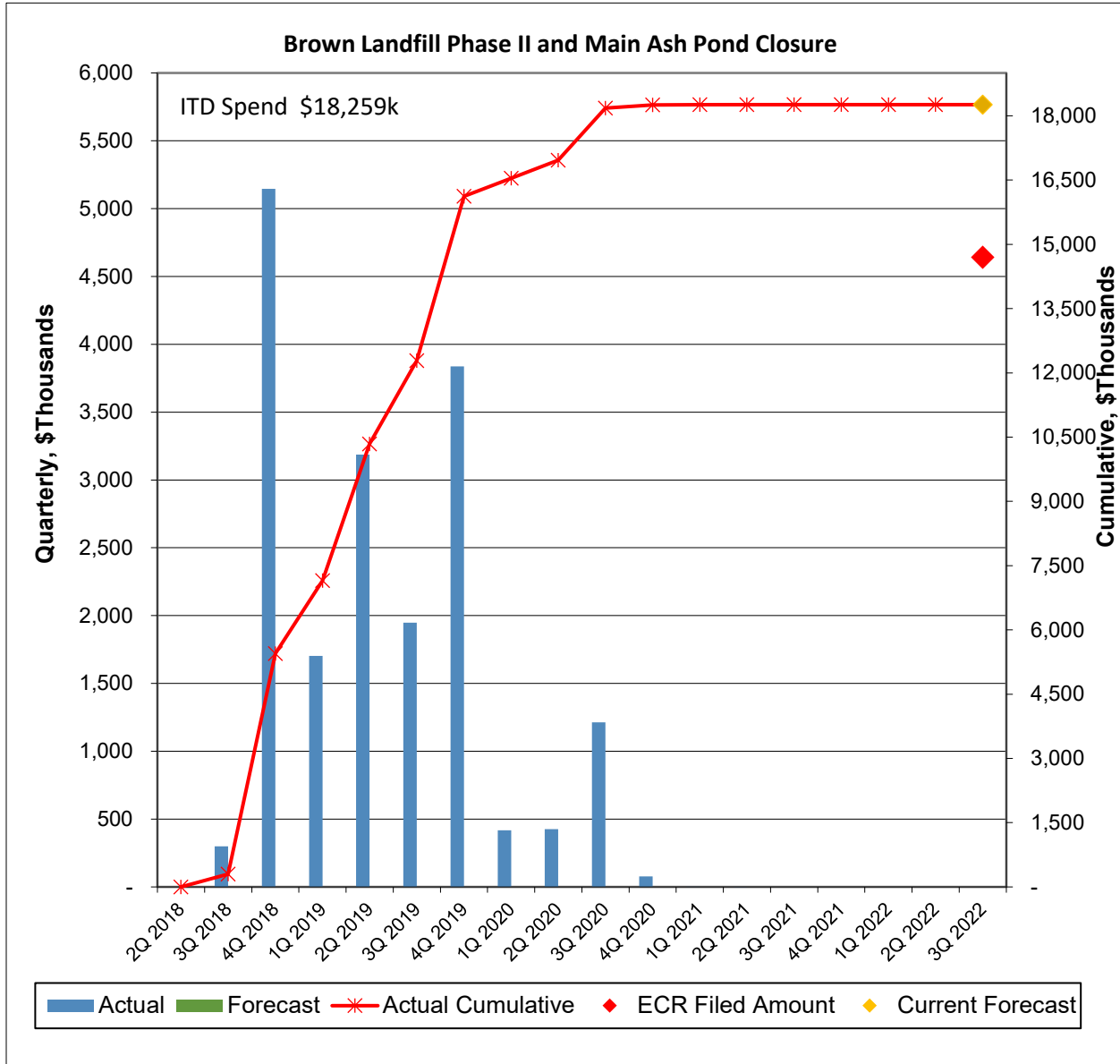
The Mercury Injection projects have been completed and commissioned. The project’s total spend was \$8.7 million compared to the filed estimate of \$15.0 million.



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. At E.W. Brown, the Companies and WSP will continue to evaluate identified alternatives to address the dewatering of the auxiliary CCR impoundment. The deep well dewatering system will remain in place with Thalle beginning to remove and demobilize other equipment as required. 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).