

2016 ECR Plan Status Update Report Quarterly Report – Update #28 July 31, 2023

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 2023.

The overall 2016 ECR Plan safety performance through the second quarter of 2023 remains excellent with a year-to-date OSHA Recordable Incident Rate of 0.00 and an inception-to-date OSHA Recordable Incident Rate of 0.42, compared to the industry average of 3.2.

The total 2016 ECR Plan projected cost increased from \$996.7 million(net)¹ to \$1.0102 billion (net), compared to the filed total of \$996.4 million as provided in Case Nos. 2016-00026, 2016-00027, and 2017-00483. The projected cost increase this quarter is driven by the potential settlement associated with the EW Brown Aux Pond work (termination of Thalle initially reported last quarter and noted below), as well as recent and pending change orders which address issues encountered during the work; including wet weather, borrow source allocations, and delays associated with TC BAP dewatering. Total spend to date increased from \$936.7 million (net) last quarter to \$940.4 million (net) through June 30, 2023.

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 0.00 and an inception-to-date Recordable Incident Rate of 0.47, 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 \$966.5 million (net) to \$980.0 million (net). Total spend to date through June 30, 2023 increased from \$906.5 million (net) last quarter to \$910.2 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 EPA 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, *Vistra*² and *USWAG*³ have prepared a legal challenge to the EPA'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.

On May 18, 2023, EPA issued a proposed Legacy CCR Surface Impoundment Rule. The proposed rule would expand the scope of the CCR Rule to include inactive CCR surface impoundments at inactive generating facilities.

The proposed rule could potentially subject CCR management units that have previously completed closure under state programs and certain beneficial use projects to additional remediation action and other requirements under the federal CCR Rule. If finalized, EPA's rule will likely require CCR Rule compliance efforts for between 10 and 20 more management units at the five company sites currently regulated under the CCR Rule and three former generating sites where closures were completed under state programs. Additionally, the Companies will be required to investigate beneficial use sites and units previously closed. Finally, the proposed rule may require the Companies to reassess certain in-place closures of large former CCR surface impoundments.

The Agency has stated its intent to finalize the Legacy CCR Surface Impoundment Rule by May 2024.

Legal challenges to EPA's determinations, as noted previously, are ongoing. Unless further developments justify changes in our current compliance plans, the Companies will continue to complete the three remaining in-place closures that are already underway.

EPA has also noted plans to issue a final version of the federal CCR permitting program regulation by mid-2024.

LG&E and KU continue to track CCR Rule-related developments that have the potential to impact ongoing Companies' strategies and compliance efforts.

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.

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 and protective cover soil 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 – Thalle Construction’s (“Thalle”) contract was terminated on February 17, 2023 for cause due to failure to meet contract requirements associated with dewatering of the impoundment. Thalle demobilized the onsite interstitial water treatment facility as well as all other tools and equipment. The Auxiliary Pond dewatering well system remains in place as well as associated surface piping. The Companies contracted WSP (formerly Wood Environmental & Infrastructure Solutions, Inc.) to monitor the interstitial water elevations within the wells monthly. Project Engineering continues to work closely with WSP to review the well data and to determine next steps to fully complete the project. Additional site restoration and pond closure activities are scheduled to be completed beginning third quarter of 2023 and finishing in 2024.
- Mill Creek –Project was completed in 2022. No further work is required.
- Trimble County – TT continues hauling CCR material to the Bottom Ash Pond (“BAP”) for beneficial use and dewatering the BAP. TT continues mass excavation of gypsum out of the GSP and hauling it to the BAP to be used as beneficial use fill material. Due to slower than anticipated BAP dewatering rate (including treatment of the water), the project construction sequence and completion dates have been revised.
- 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.

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.

- Mill Creek – Project has been placed into Commercial Operation.
- Ghent – Project has been placed into Commercial Operation.
- 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 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 ⁷
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	December 2025
Trimble County Gypsum Storage Pond	KU Project 41, LG&E Project 30	Awarded August 13, 2021	December 2025
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.

⁷ Project was placed into service during the 4Q 2022. Charges will continue to accrue into 2024 because of the ongoing negotiations with Thalle and completion of project close out activities.

PWS Projects

<u>Project</u>	<u>Project #</u>	<u>EPC Status</u> ⁸	<u>Planned/ Actual In-Service Date</u> ^{9,6}
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

⁸ Engineering, Procurement, and Construction (“EPC”) Status – the red font signifies actuals.

⁹ 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. 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 completed shaping and stabilizing the bottom of the east sediment pond and began installing the synthetic liner system in the pond. TT set the outlet riser structure and discharge pipe in the east sediment pond and installed a temporary plug that will remain in place until the pond is completely lined and placed in service. TT began laying out the route of the new 36” ATB #2 discharge pipe along the west haul road and performed initial underground utility locations in preparation for installation in the third quarter of 2023. TT continues to progress the Ghent projects very well with no compliance issues forecasted.

TT recommenced screening operations for protective cover soil to be used in the ATB #2 cap. Material that was satisfactory for use as protective cover soil was stockpiled and other material was hauled and placed in ATB #2 as structural fill.



Phase III Ghent ATB #2 – April 2023



Phase III Ghent ATB #2 – June 2023

KU Project 41 and LG&E Project 30¹⁰ – 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; grading activities within the BAP; removal of stormwater runoff from the Gypsum Storage Pond (“GSP”); continued dewatering the BAP; continued constructing access roads and rim ditches in the GSP; continued mass excavation of gypsum within the GSP and transporting it to the BAP to be used as beneficial use fill material. Due to slower than anticipated BAP dewatering rate (including treatment of the water), the project construction sequence and completion dates have been revised.

¹⁰ KU and LG&E’s net costs are split 48% and 52%, respectively.



Trimble BAP – Looking North – April 2023



Trimble BAP – Looking North – June 2023



Trimble GSP – Looking South – April 2023



Trimble GSP – Looking South – June 2023

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

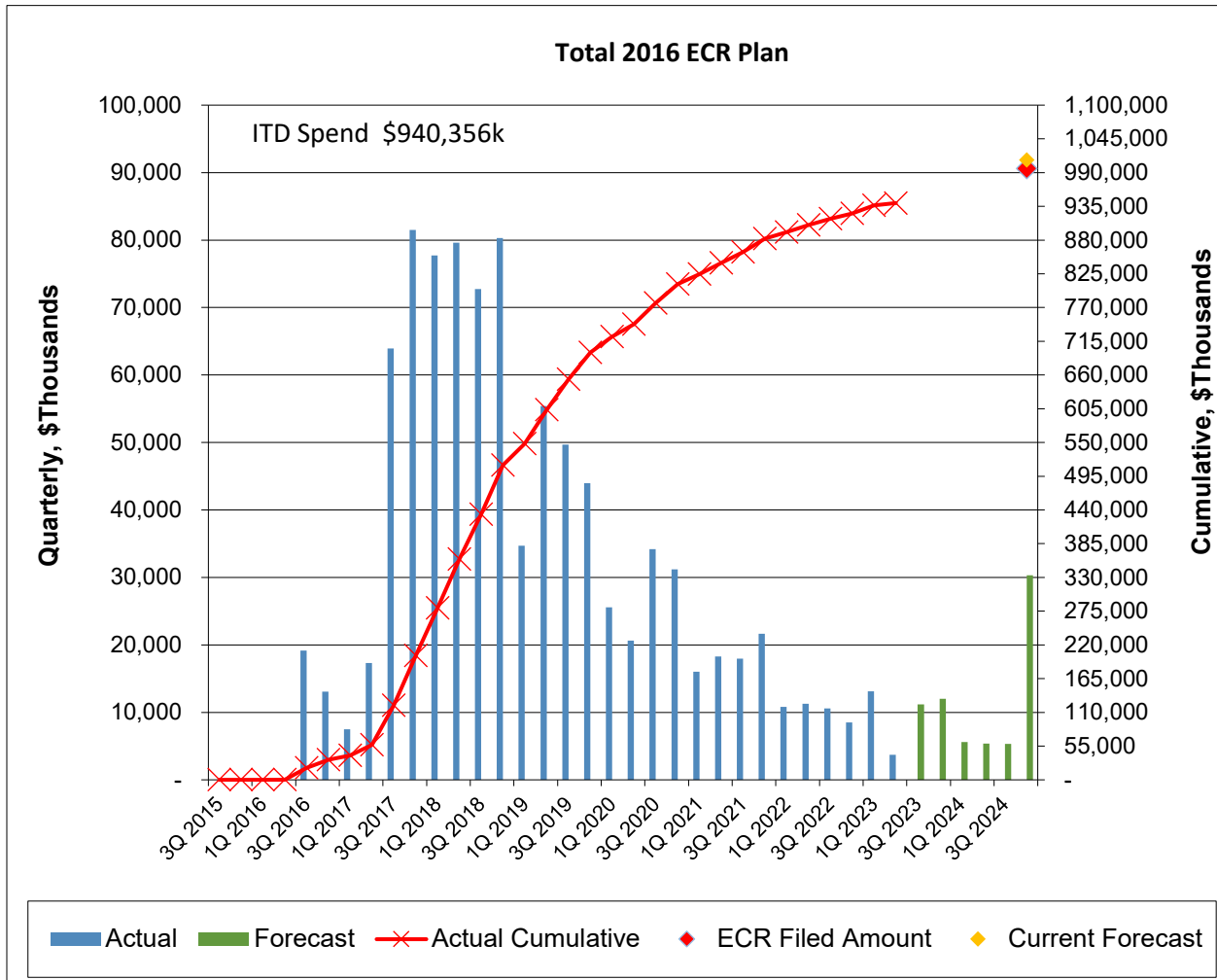
- E.W. Brown – Thalle Construction’s (“Thalle”) contract was terminated on February 17, 2023 for cause due to failure to meet contract requirements associated with dewatering of the impoundment. Thalle demobilized the onsite interstitial water treatment facility as well as all other tools and equipment. The Auxiliary Pond dewatering well system remains in place as well as associated surface piping. The Companies contracted WSP to monitor the interstitial water elevations within the wells monthly. Project Engineering continues to work closely with WSP to review the well data and determine next steps to fully complete the project. Additional site restoration and pond closure activities are scheduled to be completed beginning third quarter of 2023 and finishing in 2024.

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

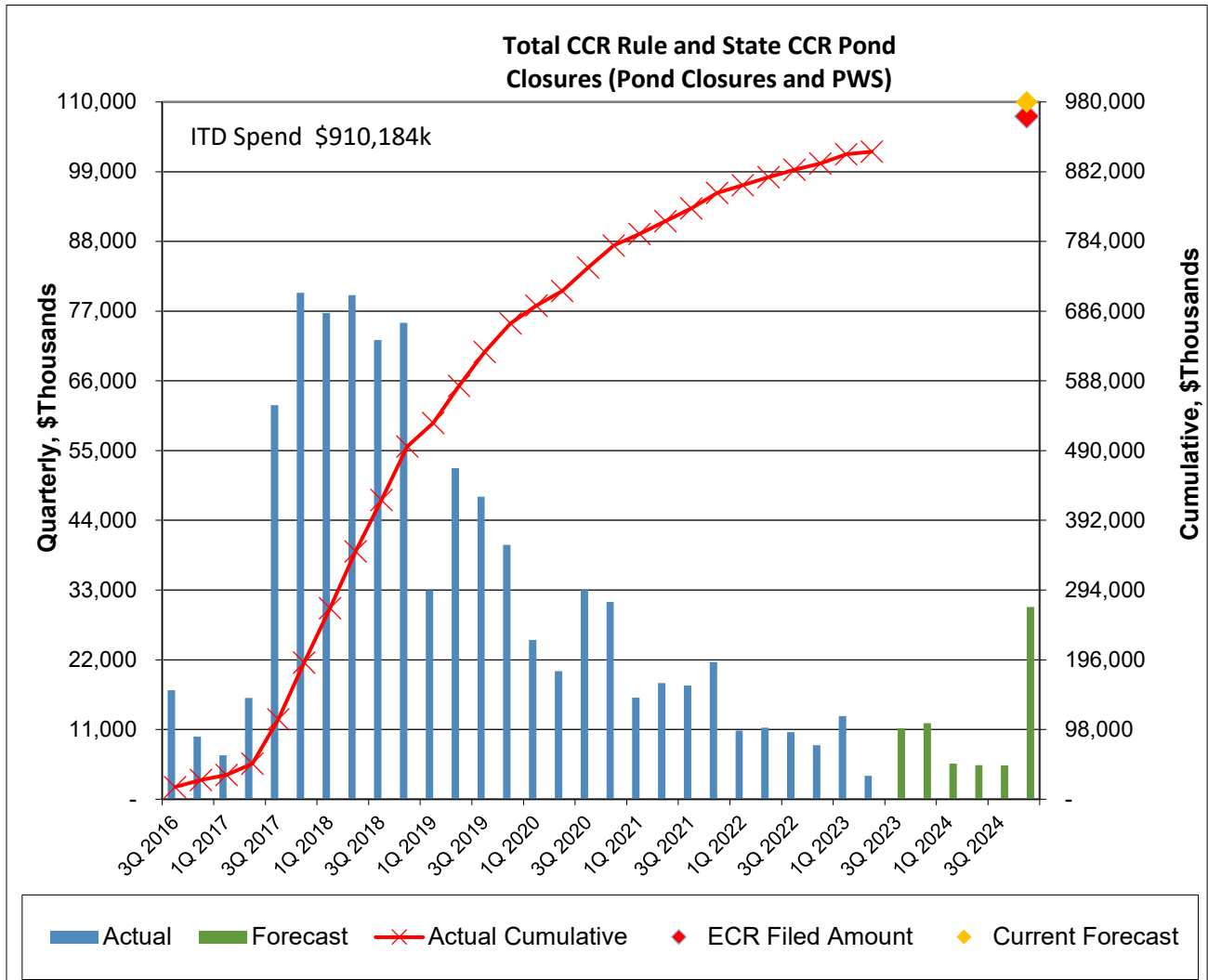
No further work is required.

Financials:

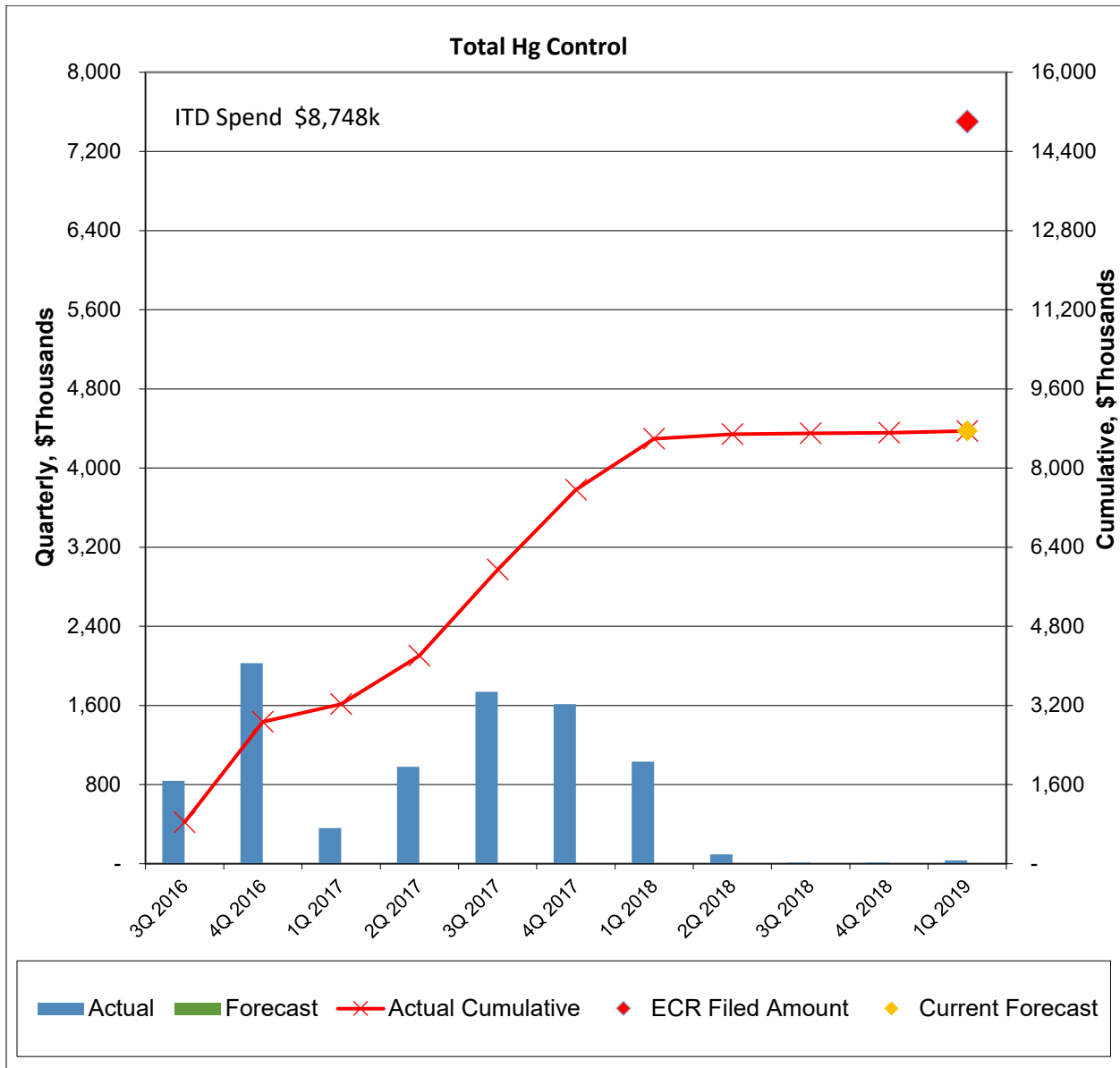
The total 2016 ECR Plan projected cost increased from \$996.7 million(net) to \$1,010.2 million (net), compared to the filed total of \$996.4 million. Total spend through June 30, 2023 has increased from \$936.7 million (net) last quarter to \$940.4 million (net). The graph below includes 1) a symbol (◆) to show the current forecast to completion and (2) inception-to-date (“ITD”) Spend in the upper left of the chart.



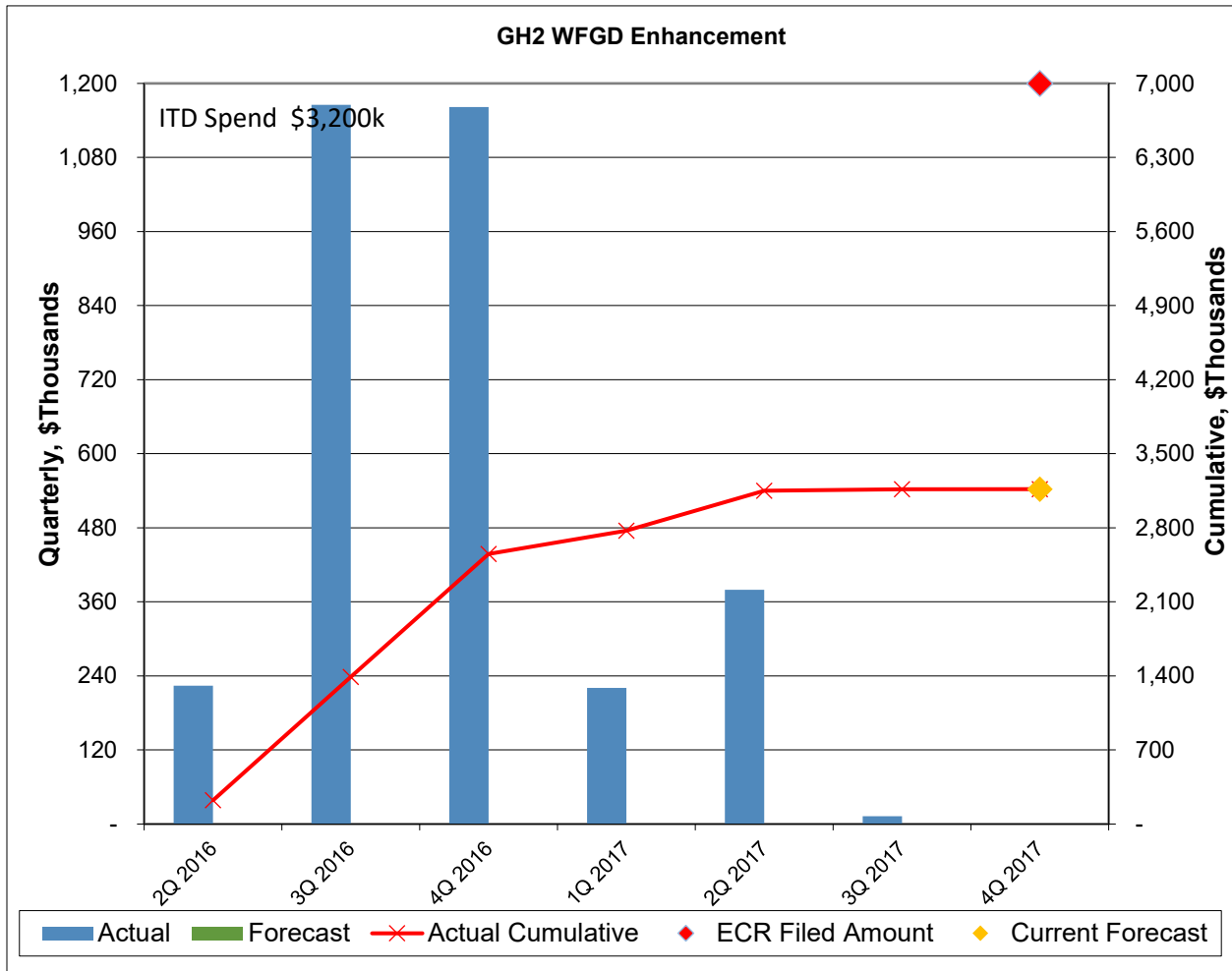
The CCR Impoundment Closure total forecasted cost increased from \$966.5 million (net) to \$980.0 million (net). Total spend through June 30, 2023 has increased from \$906.5 million (net) last quarter to \$910.2 million (net). The graph below includes 1) a symbol (\blacklozenge) to show the current forecast to completion and (2) ITD Spend in the upper left of the chart.



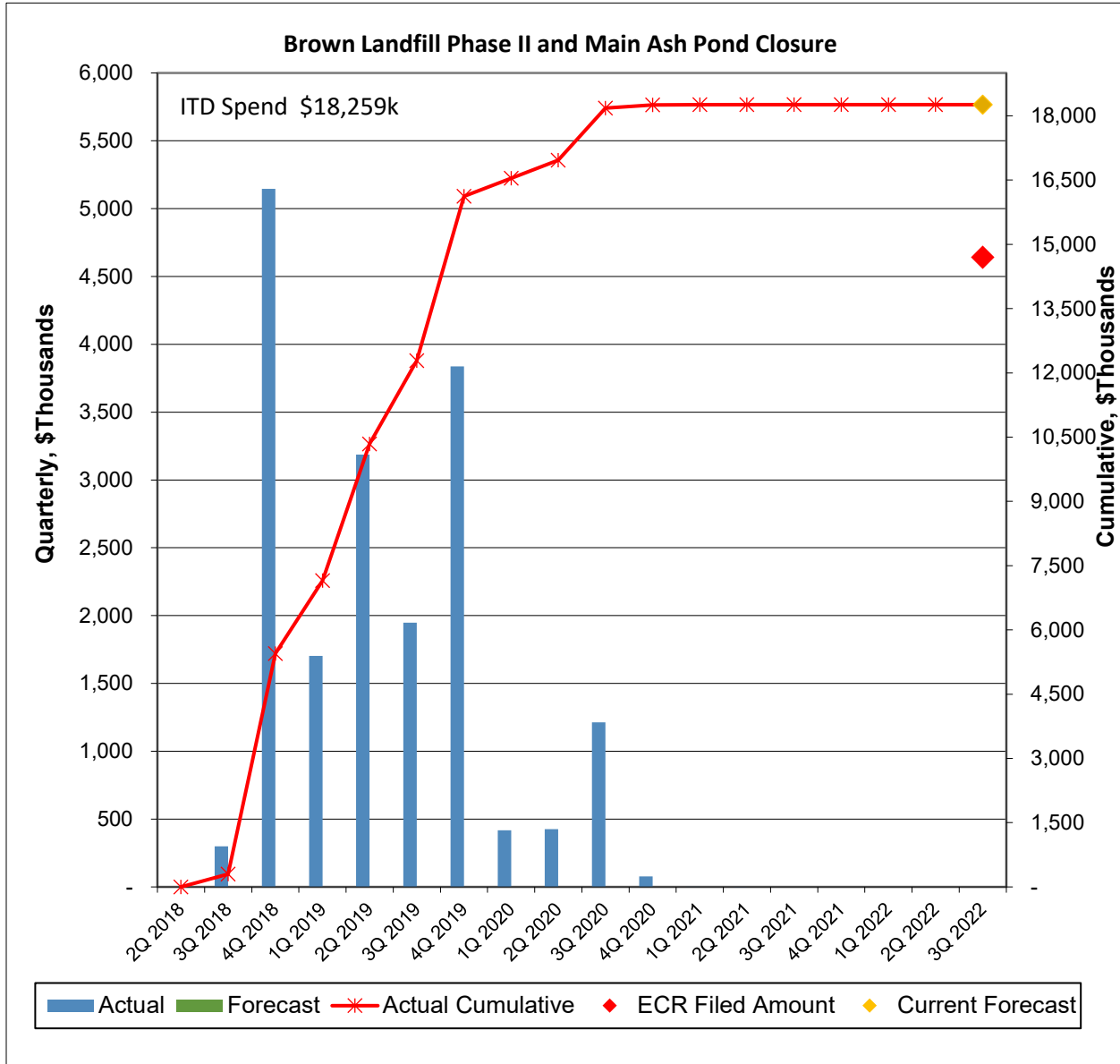
The Mercury Injection projects have been completed and commissioned. The project’s total spend was \$8.7 million compared to the filed estimate of \$15.0 million.



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 take and analyze dewatering well elevation readings as well as evaluate alternatives to complete the closure of the auxiliary CCR impoundment. 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 close out all outstanding 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).