

2016 ECR Plan Status Update Report Quarterly Report – Update #29 October 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 third quarter of 2023.

The overall 2016 ECR Plan safety performance through the third 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 remained flat at \$1.0102 billion (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 \$940.4 million (net) last quarter to \$948.2 million (net) through September 30, 2023.

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 0.47, compared to an industry average Recordable Incident Rate of 3.2.

The total projected cost for the Coal Combustion Residual ("CCR") Closure Program remained flat at \$980.0 million (net). Total spend to date through September 30, 2023 increased from \$910.2 million (net) last quarter to \$918.0 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 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.

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.

As explained in previous reporting, EPA has taken a series of aggressive positions relating to interpretation of the CCR Rule since January 2022. Statements in press releases, the general rejection of numerous Part A applications submitted by various companies, and the recent denial of state delegation of CCR authority for Alabama have signaled the Agency's intent to re-interpret certain provisions of the Rule. Changes in EPA interpretations may force industry to re-evaluate strategies for implementing and/or completing impoundment closures. Given that many CCR facility owner/operators have initiated, implemented, and completed strategies for CCR Rule compliance, legal challenges to the Agency's potential expansion in scope of the CCR program have been initiated and are ongoing.

Recent EPA CCR Rule Initiatives

The Agency released its Legacy CCR Surface Impoundment proposal on May 18, 2022. The proposed regulation provides for a significant expansion of the scope of CCR regulatory authority to include not only CCR surface impoundments that existed prior to the 2015 Rule effective date, but also any locations at power plant sites where CCR was placed in direct contact with soil, without regard to whether that action was performed with state oversight and approval or the placement was executed as a beneficial use for structural fill or some other legitimate, state-approved purpose. For the Companies, the proposal, if enacted, would significantly increase the number of units that the Companies manage under the federal CCR program. More broadly, EPA's approach has the potential to result in additional uncertainty and confusion due to potential conflict with prior decisions of state environmental regulatory agencies that have enforced EPA's delegated authority for all environmental programs.

LG&E and KU CCR Rule Compliance Strategy and Updates

LG&E and KU will continue to closely track ongoing developments, as they have the potential to compel changes in the Companies' compliance efforts. To date, the EPA has made no determinations regarding any of the Companies' sites, closure activities, or compliance-related tasks, so LG&E and KU, at present, will continue to implement their current CCR Rule compliance strategies. Additional details regarding individual locations and projects follows.

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”); completed installation of the synthetic liner system; and installation of 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 – Following Thalle’s demobilization, 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 began in the third quarter of 2023 and are anticipated to be finished 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.
- 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 in accordance with currently applicable requirements.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.
- Mill Creek – Project has been placed into Commercial Operation.
- Ghent – Project has been placed into Commercial Operation.

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. 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.

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 | Closure Completed 4Q 2022 ⁵ |
| 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 |

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 and 2025, respectively, 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.

⁵ 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 Status⁶</u> | <u>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 |

⁶ Engineering, Procurement, and Construction (“EPC”) Status – the red font signifies actuals.

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; completed installation of the synthetic liner system; and installation of protective cover soil over areas of ATB #2 that have achieved final grade.

TT completed the synthetic liner system in the east sediment pond. TT also completed placing protective cover soil over the liner system in the east sediment pond and seeded the area to establish vegetation. The east sediment pond and its associated outfall was placed in service. TT continued laying out the route of the new 36” ATB #2 discharge pipe along the west haul road and began installation of the pipe and associated manholes. Installation of the section of the 36” discharge pipe that is routed through the existing ATB #2 dam was completed. TT completed installation of the remaining portion of the synthetic liner system over ATB #2, which completes the impermeable liner portion of the overall cap. TT continues to progress the Ghent projects very well with no compliance issues forecasted.

TT continued screening operations for protective cover soil to be used in the ATB #2 cap. Screened material was stockpiled for future use. TT recommended hauling and spreading of protective cover soil over lined areas of ATB #2.



Phase III Ghent ATB #2 – June 2023



Phase III Ghent ATB #2 – September 2023

KU Project 41 and LG&E Project 30⁷ – 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 of the BAP; continued construction of 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. Substantial progress for dewatering the BAP has been made over the past few months. Progress on dewatering the BAP is attributed to installation and operation of a new dewatering system as well as favorable construction weather (minimal precipitation).

⁷ KU and LG&E’s net costs are split 48% and 52%, respectively.



Trimble BAP – Looking North – July 2023



Trimble BAP – Looking Northeast – September 2023



Trimble GSP – Looking South – July 2023



Trimble GSP – Looking South – September 2023

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

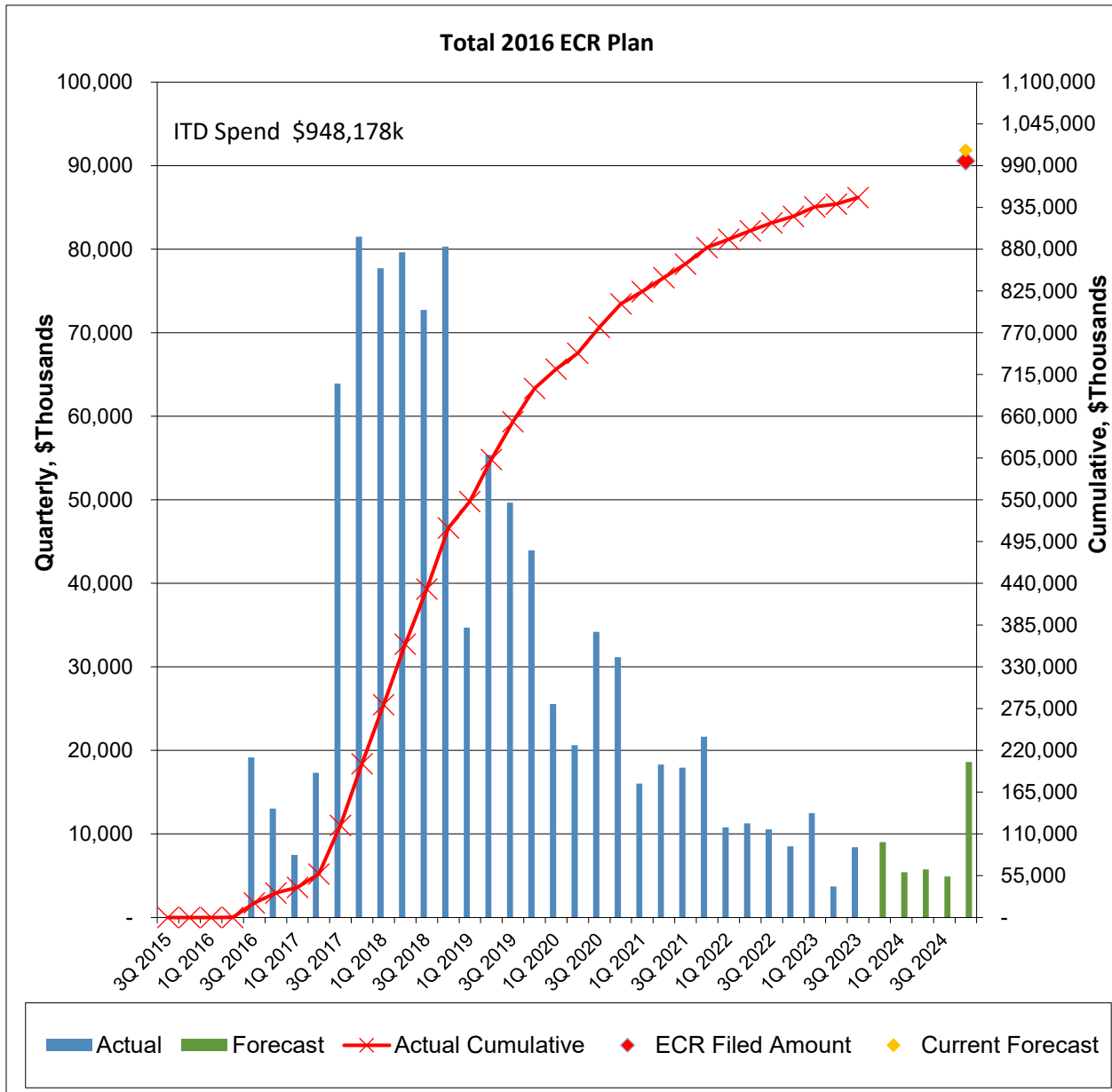
- E.W. Brown – Following Thalle’s demobilization, the Auxiliary Pond dewatering well system remains in place as well as associated surface piping. The Companies contracted WSP to monitor the interstitial water elevations within the wells monthly. Project Engineering continues to work closely with WSP to review the well data and determine next steps to fully complete the project. Additional site restoration and pond closure activities began in the third quarter of 2023 and are anticipated to be finished in 2024.

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

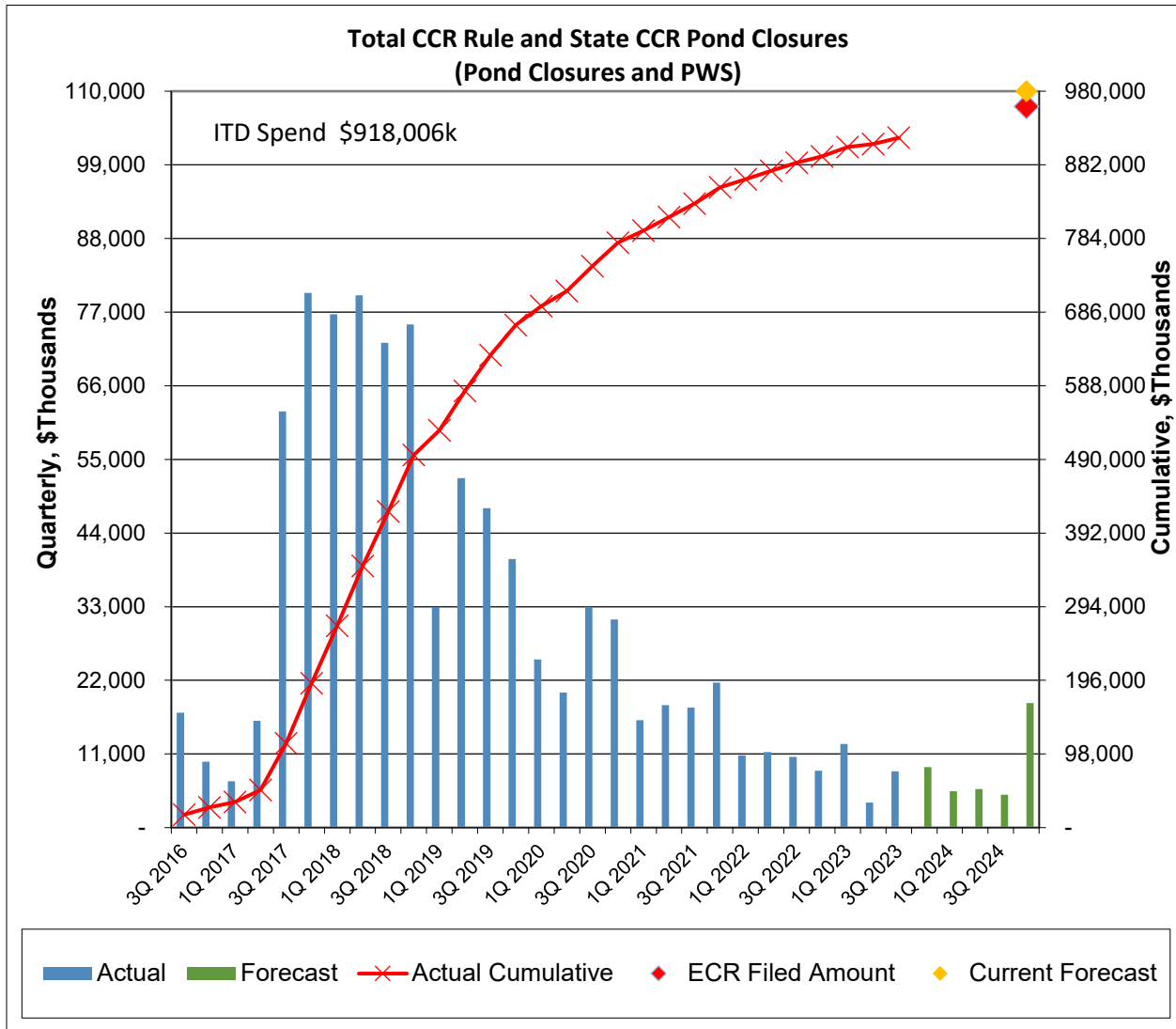
No further work is required.

Financials:

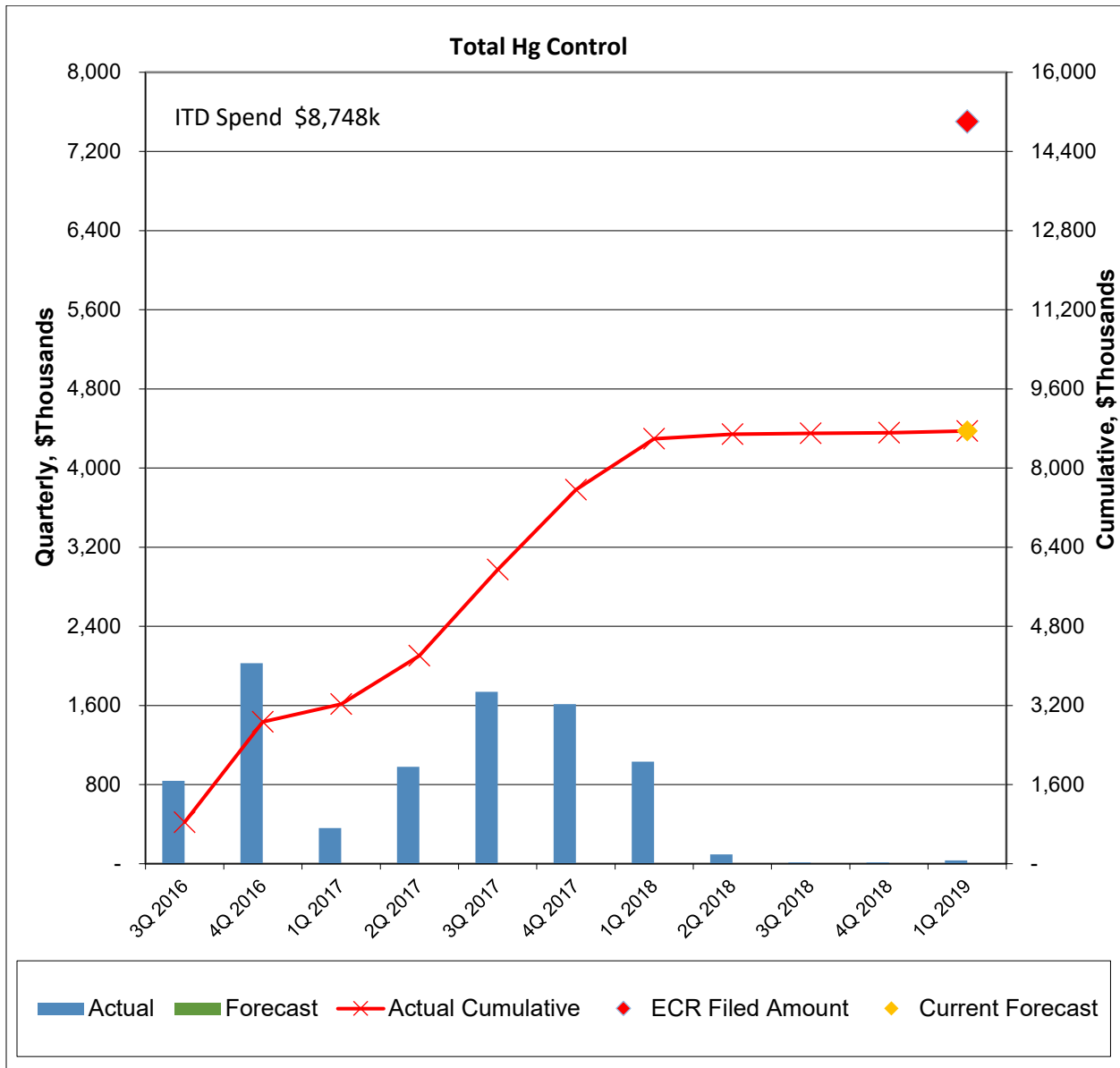
The total 2016 ECR Plan projected remained flat at \$1.0102 billion (net), compared to the filed total of \$996.4 million. Total spend through September 30, 2023 has increased from \$940.4 million (net) last quarter to \$948.2 million (net). The graph below includes 1) a symbol (◆) to show the current forecast to completion and (2) inception-to-date (“ITD”) Spend in the upper left of the chart.



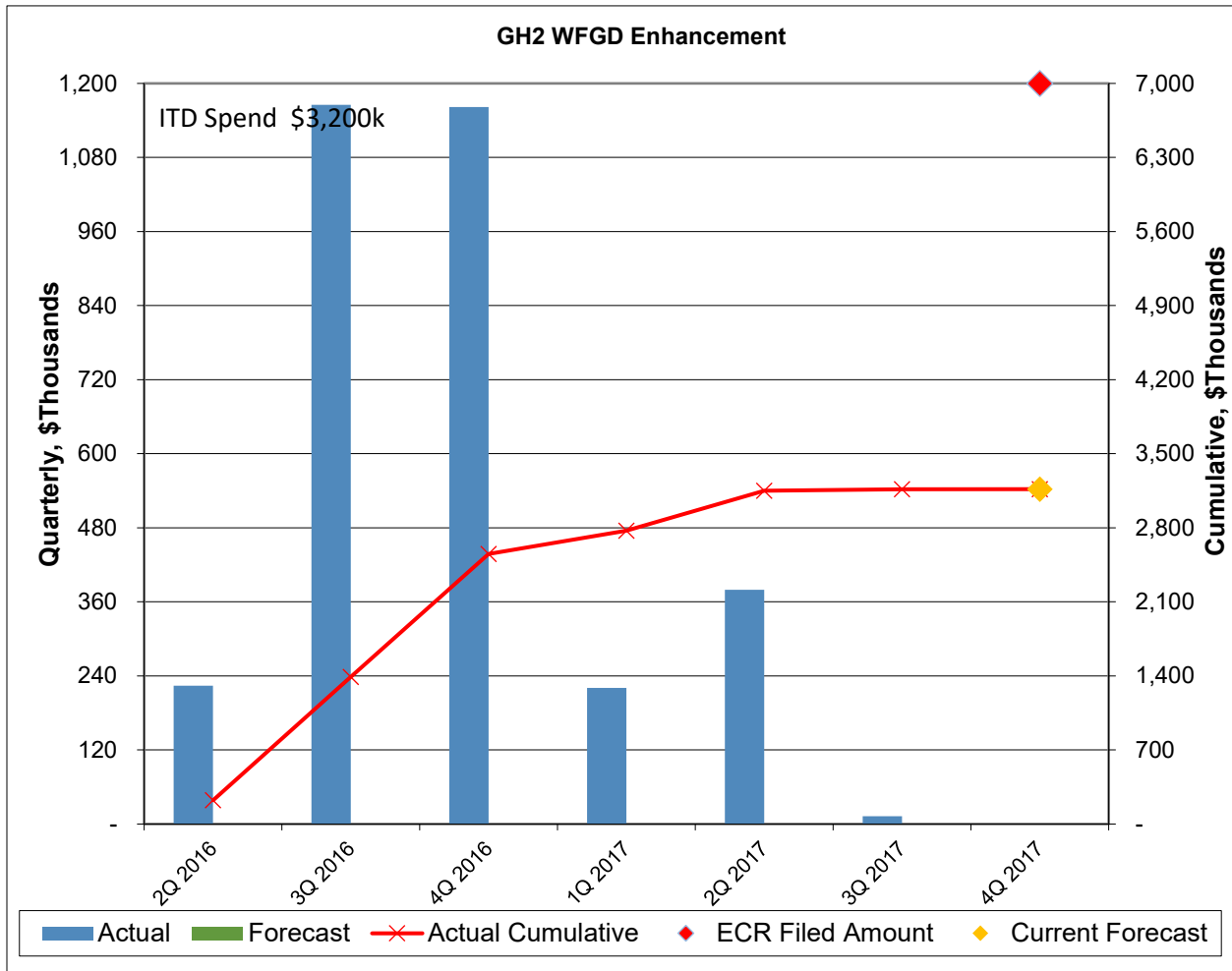
The CCR Impoundment Closure total forecasted cost remained flat at \$980.0 million (net). Total spend through September 30, 2023 has increased from \$910.2 million (net) last quarter to \$918.0 million (net). The graph below includes 1) a symbol (◆) to show the current forecast to completion and (2) ITD Spend in the upper left of the chart.



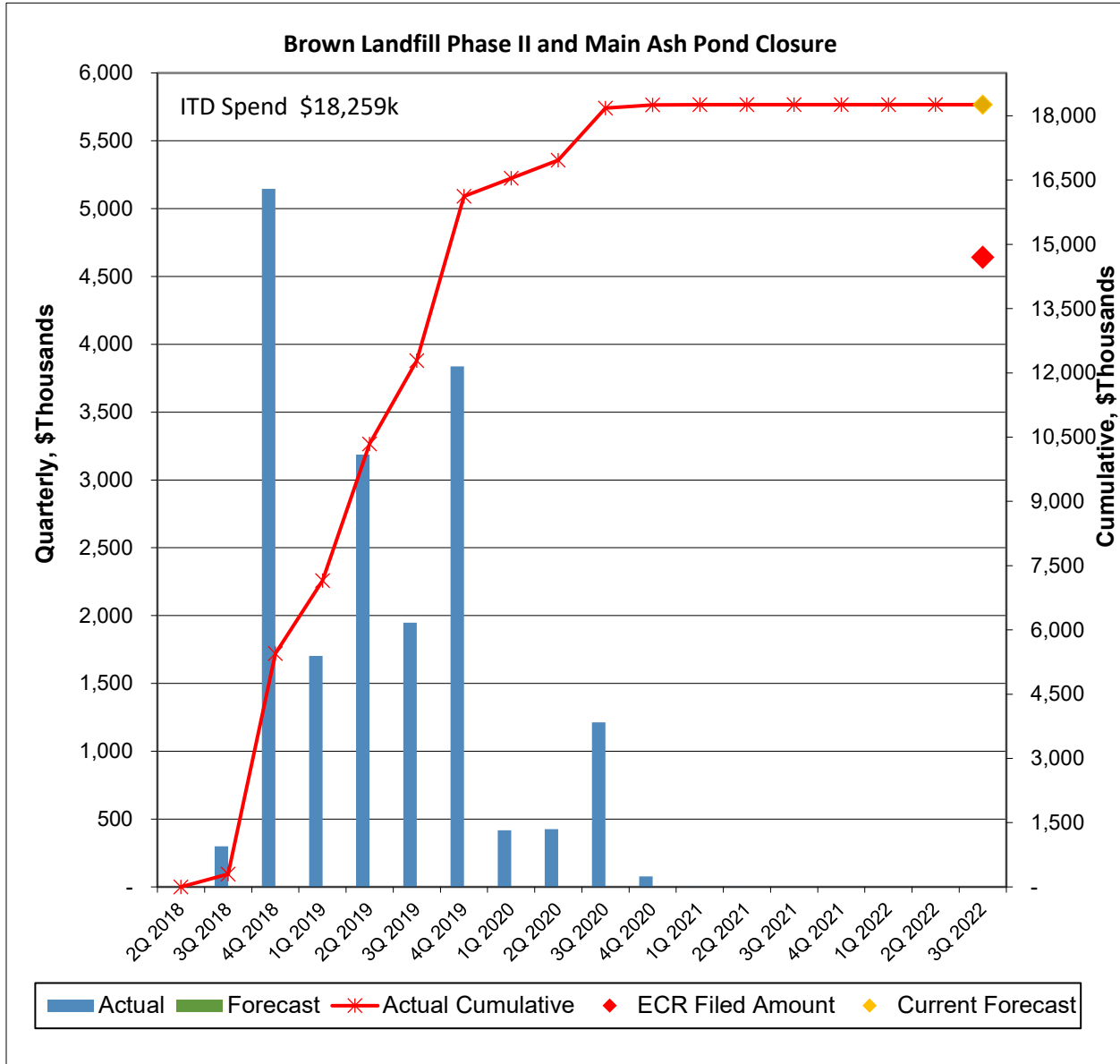
The Mercury Injection projects have been completed and commissioned. The project’s total spend was \$8.7 million compared to the filed estimate of \$15.0 million.



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 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:

No anticipated activities for the fourth quarter.