UGI Utilities Inc.

MANAGEMENT EFFICIENCY INVESTIGATION A FOLLOW-UP REVIEW OF THE 2019 FOCUSED MANAGEMENT AND OPERATIONS AUDIT REPORT

Pennsylvania Public Utility Commission

Bureau of Audits

Issued April 2023

Docket No. D-2022-3032778

UGI UTILITIES, Inc.
MANAGEMENT EFFICIENCY INVESTIGATION

TABLE OF CONTENTS

UGI UTILITIES, Inc.
MANAGEMENT EFFICIENCY INVESTIGATION

LIST OF EXHIBITS

I. INTRODUCTION

A. Background

In 2019, the Pennsylvania Public Utility Commission (PUC or Commission) Bureau of Audits conducted a Management and Operations Audit (management audit) of UGI Utilities, Inc. (UGI Utilities). In October 2019, the Bureau of Audits issued its final report with 45 recommendations for improvement. UGI Utilities submitted their implementation plan on October 23, 2019, indicating that 42 recommendations were accepted, two were rejected and one was accepted in-part. On November 14, 2019, at D-2018-3002234, D-2018-3002235 and D-2018-3002236, the Commission made the audit report and Implementation Plan public and directed that the companies should:

- Proceed with the October 2019 Implementation Plan, and

- Submit progress reports on the implementation annually, by November 15th, for each of the next three years.

Since November 2020, UGI Utilities submitted two implementation plan updates as requested by the Commission to monitor UGI Utilities' progress in implementing the recommendations from the audit report. Based upon the review of these updates, the Management Audit staff of the Commission's Bureau of Audits (audit staff or auditors) conducted a Management Efficiency Investigation (MEI) of UGI Utilities' progress in implementing 23 of the original 45 recommendations. Specific items of management effectiveness and operational efficiency may be investigated pursuant to Title 66 Pa. C.S. § 516(b).

B. Objective and Scope

The objective of this MEI is to review and evaluate the effectiveness of UGI Utilities' efforts to implement the recommendations contained within the management audit report released in 2019. The scope of this evaluation is limited to UGI Utilities' efforts in implementing the prior report recommendations in the following functional areas:

- Executive Management
- Affiliated Interests and Cost Allocation
- Gas Operations
- Emergency Preparedness
- Materials Management
- Customer Service

In addition, the PUC's auditors deemed it prudent to review UGI Utilities' compliance with PUC regulations at 52 Pa. Code Chapter 101 regarding physical security, cybersecurity, emergency response, and business continuity plans.

C. Approach

The PUC's auditors began fieldwork on July 11, 2022, and continued through November 15, 2022. The fact gathering process included:

- Interviews with UGI Utilities' personnel;
- Analysis of records, documents, and reports of a financial and operational nature, primarily focused on the period 2019-2021, and the year 2022 as available; and,
- Visits to select company facilities.

II. SUMMARY OF MANAGEMENT EFFECTIVENESS AND OPERATING EFFICIENCY

The PUC auditors found that UGI Utilities effectively or substantially implemented 18 of the 23 prior management audit recommendations reviewed and has taken action on the remaining five recommendations. Among the more notable improvements are:

- UGI Utilities enhanced and updated its cost allocation manual and enhanced level of detail for intercompany invoicing.
- Reduced the number of third-party damages to company infrastructure.
- Outstanding Class A leaks decreased primarily due to increased spending on capital replacements.
- UGI Utilities built a state-of-the-art training and operations center.
- UGI Utilities created and revised many aspects of physical security, business continuity, emergency response, and cybersecurity plans.
- Contracted industry experts provided security assessment for physical buildings and cybersecurity.
- Improved inventory turnover rates by excluding emergency stock from calculations.

Although these accomplishments are commendable, the PUC auditors have identified further opportunities for improvement. Specifically, UGI Utilities should:

- Develop a process following NARUC guidelines for services and costs provided by affiliates.
- Prepare a new affiliated interest agreement that adequately describes transactions between affiliates and obtain Commission approval.
- Update the company's Cost Allocation Manual based on the current organization structure.
- Enhance the process for recording damages and related collection efforts.
- Improve, as appropriate, termination and collection processes including decreasing non-access accounts.
- Increase staffing levels and reduce turnover rates for Customer Care Representatives.
- Utilize annual market studies to assess compensation for Customer Care Representatives.

Exhibit II-1 summarizes the 23 prior recommendations and the auditor's follow-up findings, conclusions, and recommendations. Exhibit II-1 also includes five additional findings, conclusions, and recommendations that were identified by the PUC audit staff during fieldwork.

UGI UTILITIES, Inc.
MANAGEMENT EFFICIENCY INVESTIGATION
SUMMARY OF OCTOBER 2019 MANAGEMENT AUDIT RECOMMENDATIONS AND STAFF'S FOLLOW-UP FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Prior MA Recommendations	MEI Follow-up Findings and Conclusions	MEI Follow-up Recommendations
III. EXECUTIVE MANAGEMENT (page 10)		
Periodically review spans of control for UGI Utilities' management positions and document justifications for supervisory position ratios with narrow or wide spans of control and adjust reporting relationships as appropriate.	**III-1** – UGI Utilities performs a span of control review biennially and documents justifications where the spans are outside industry acceptable ranges.	None
	III-2 – UGI Utilities does not have a formal policy or procedure regarding a span of control analysis.	Develop a written policy or procedure detailing a formal span of control analysis.
IV. AFFILIATED INTERESTS AND COST ALLOCATIONS (page 13)		
Create a periodic, recurring process to compare the internal cost of services provided between UGI Utilities and its affiliates to market rates.	**IV-1** – Neither UGI Utilities nor UGI Corp. have implemented an appropriate routine process to determine both incurred cost and market value of shared services between affiliates.	Develop and implement routine processes following the NARUC Guidelines for Cost Allocations when applicable to determine HCOM for shared services provided to non-regulated affiliates and LCOM for shared services provided to the regulated utility.
	IV-2 – The administrative services affiliated interest agreement between UGI Corporation and UGI Utilities, Inc., executed and approved in May 1992, is no longer accurate and does not reflect UGI's structure nor business practices.	Prepare an AIA that adequately describes the affiliated transactions between UGI Corp. and its subsidiaries, including UGI Utilities, and then, submit it to the Commission for approval.

UGI UTILITIES, Inc.
MANAGEMENT EFFICIENCY INVESTIGATION
SUMMARY OF OCTOBER 2019 MANAGEMENT AUDIT RECOMMENDATIONS AND STAFF'S FOLLOW-UP FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Prior MA Recommendations	MEI Follow-up Findings and Conclusions	MEI Follow-up Recommendations
IV. AFFILIATED INTERESTS AND COST ALLOCATIONS (continued)		
	IV-3 – Significant organizational structure and cost allocation process changes will require updates to UGI Corporation's and UGI Utilities, Inc.'s cost allocation manuals.	Update UGI Corp.'s and UGI Utilities' CAMs to reflect the affiliate transactions and cost allocation methodologies used based on the updated organizational structure and updated AIAs.
Update UGI Corp.'s Cost Allocation Manual.	**IV-4** – UGI Corp. updated its CAM to include the requisite level of detail.	None
Work with UGI Corp. to improve the level of detail provided in intercompany invoices and reports.	**IV-5** – UGI Corp. enhanced the level of detail within intercompany invoices including supporting documentation.	None
Develop time entry training to address direct charging of labor for intercompany services.	**IV-6** – The Human Resources Department developed and implemented guidance resources and associated training for employees to direct charge labor associated with business activities for the benefit of affiliates.	None
V. GAS OPERATIONS (page 20)		
Continue to reduce the number of third-party damages and increase the damage collection rate at UGI North.	**V-1** – UGI third party damage rates have decreased.	None

UGI UTILITIES, Inc.
MANAGEMENT EFFICIENCY INVESTIGATION
SUMMARY OF OCTOBER 2019 MANAGEMENT AUDIT RECOMMENDATIONS AND STAFF'S FOLLOW-UP FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Prior MA Recommendations	MEI Follow-up Findings and Conclusions	MEI Follow-up Recommendations
V. GAS OPERATIONS (continued)		
	V-2 – UGI Utilities does not track damage collections in a way that can be used to determine the success of litigation programs.	Attribute damage collections to the year of the damage incident on periodic reporting**.**
Decrease the inventory of outstanding Class A leaks and continue to reduce the number of main leaks at UGI North.	**V-3** – UGI Utilities' leak totals for each leak class have decreased.	None
Maintain focus on safety with the objective of meeting or exceeding safety KPI goals.	**V-4** – UGI Utilities has improved safety related performance goals and results.	None
	V-5 – UGI Utilities has not been utilizing causal analyses to further improve its safety performance.	Modify safety reporting to utilize causal analyses for safety incidents.
Follow through on plans to develop a centralized training facility to aid in Operator Qualified training.	**V-6** – UGI Utilities has completed and placed a new training center into service.	None
VI. EMERGENCY PREPAREDNESS (page 32)		
Install sprinkler systems at regularly occupied facilities where feasible.	**VI-1** – The company has identified occupied buildings and evaluated the need for sprinkler system based on use and risk; the process is ongoing.	Install sprinkler systems in accordance with the prioritized inventory of company buildings to ensure safety for employees and company property.

UGI UTILITIES, Inc.
MANAGEMENT EFFICIENCY INVESTIGATION
SUMMARY OF OCTOBER 2019 MANAGEMENT AUDIT RECOMMENDATIONS AND STAFF'S FOLLOW-UP FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Prior MA Recommendations	MEI Follow-up Findings and Conclusions	MEI Follow-up Recommendations
VI. EMERGENCY PREPAREDNESS (continued)		
Establish physical security standards that apply at company facilities and devote resources to adequately maintain oversight.	**VI-2** – UGI Utilities have added a Physical Security Administrator to oversee physical security initiatives.	None
Update the PSP to include relevant physical security efforts and review, update, and test it annually.	**VI-3** – The company completed a revision of the Physical Security Plan to include recommended revisions.	None
Establish a clear chain of command for physical security by placing the Director of Physical Security in charge of all physical security at UGI Utilities.	**VI-4** – The Director of Security and Facilities is responsible for physical security at UGI Utilities Gas and Electric Divisions.	None
Perform penetration tests, risk analysis, and vulnerability assessments of physical security routinely, and periodically utilize external and independent resources.	**VI-5** – UGI Utilities has amended its PSP to include recommended policies and have contracted external consultants to perform the necessary physical security assessments.	None
Improve the CSP and relevant procedures, secure all PII, and consider formalizing policies at the UGI Corporation level.	**VI-6** – The company has taken the necessary actions to update its CSP to include all relevant policies and procedures.	None
Complete the gas SCADA communication upgrade.	**VI-7** – The SCADA system went through the recommended upgrades.	None

UGI UTILITIES, Inc.
MANAGEMENT EFFICIENCY INVESTIGATION
SUMMARY OF OCTOBER 2019 MANAGEMENT AUDIT RECOMMENDATIONS AND STAFF'S FOLLOW-UP FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Prior MA Recommendations	MEI Follow-up Findings and Conclusions	MEI Follow-up Recommendations
VI. EMERGENCY PREPAREDNESS (cont.)		
UGI Utilities' Business Continuity Planning needs to be improved.	**VI-8** – A Business Continuity Management Program was created to ensure consistent and uniform Business Continuity Plans for UGI Utilities Inc. departments.	None
Continue improvement of the ERP, and address deficiencies in associated training.	**VI-9** – The company has made the necessary improvements to the ERP and dedicated to emergency training for all employees.	None
Maintain up to date printed copies of SDS near where chemicals are stored or in a relevant control center.	**VI-10** – SDS sheets are available on an intranet site and readily available for viewing and printing as needed.	None
VII. MATERIALS MANAGEMENT (page 46)		
Improve company-wide inventory turnover and exclude emergency stock from inventory turnover calculations.	**VII-1** – UGI Utilities now excludes emergency stock from its inventory turnover rate calculations and improved inventory turnover company-wide for fiscal years 2020 – 2021 and 2021 – 2022.	None
VIII. CUSTOMER SERVICE (page 47)		
Reduce long-term accounts receivable balances.	**VIII-1** – UGI Utilities made minor improvements to their long-term accounts receivable balances before the pandemic; however, they have increased again due to the Emergency Order.	Enhance termination/collection efforts where appropriate and decrease non-access accounts.

UGI UTILITIES, Inc.
MANAGEMENT EFFICIENCY INVESTIGATION
SUMMARY OF OCTOBER 2019 MANAGEMENT AUDIT RECOMMENDATIONS AND STAFF'S FOLLOW-UP FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Prior MA Recommendations	MEI Follow-up Findings and Conclusions	MEI Follow-up Recommendations
VIII. CUSTOMER SERVICE (continued)		
Improve customer service performance metrics.	**VIII-2** – UGI Utilities' customer service performance metrics, percent of calls answered within 30 seconds and call abandonment rate, were much improved during 2019 and 2020, but deteriorated once the EOC was lifted.	Increase Customer Care Representative (CCR) staffing levels and reduce turnover to improve the ability to handle the increased call volume and call center performance.
Improve the retention of Customer Care Representatives within the Customer Information Center.	**VIII-3** – UGI Utilities' CCR turnover has increased substantially from 2019 through 2021**.**	Perform an annual market study to assess competitive compensation for CCRs and implement pay increases where appropriate to aid in retention.

III. EXECUTIVE MANAGEMENT AND ORGANIZATIONAL STRUCTURE

Background – UGI Utilities, Inc. (UGI Utilities or company) is a wholly-owned subsidiary of UGI Corporation and a Pennsylvania regulated utility providing both gas and electric services to approximately 740,000 customers in 45 counties. UGI Corporation subsidiaries operate primarily in the following business segments: UGI Utilities – natural gas and electric services in Pennsylvania and West Virginia, AmeriGas Propane – largest national propane distributor, UGI International – liquified petroleum gas distribution and energy marketing in 17 countries, and Midstream & Marketing – d/b/a UGI Energy Services providing domestic, retail energy marketing.

In this chapter, one prior recommendation and prior situation are reviewed and two follow-up findings, and one recommendation are presented. The findings relate to performing and providing guidance on span of control analyses.

Finding No. III-1

Prior Situation – Span of control refers to the number of subordinates reporting directly to a manager or supervisor in an organization. Overly narrow spans of control can result in micromanagement, a larger number of supervisors, and higher than necessary compensation costs. Spans of control that are too wide can result in inferior performance due to a lack of management oversight and control.

To maximize organizational efficiency and effectiveness, UGI Utilities sets acceptable spans of control in the ranges of 1:3 to 1:8 to minimize layers of management and maintain effective communication. As shown in Exhibit III-1, a span of control review conducted by UGI Utilities in July 2018 determined that approximately 46% of reporting relationships at UGI Utilities fell within the ideal range. Compared with analyses presented in prior UGI audits, the number of reporting relationships within the narrow range had increased. The company did not provide any written justifications for reporting relationships outside of the ideal range nor any specification of a target range for each span of control. Without the written justifications, no judgement could be made regarding the current reporting relationships.

Exhibit III-1
UGI Utilities, Inc.
Summary of Span of Control Review
As of July 24, 2018

Reporting Relationships	Number	Percentage
Narrow (1:1 to 1:3)	78	29.8%
Ideal (1:4 to 1:9)	121	46.2%
Wide (1:10 to 1:25)	63	24.0%
Total	262	100.0%

Source: Data Request EM-2 and auditor analysis

Human Resource (HR) management indicated that span of control reviews occurred once every 24 months, but there were no documented policies specifying the frequency or extent of the review. The PUC audit staff contended that the lack of documented justification for reporting relationships outside of the ideal range negates a major component of spans of control analysis (i.e., historical retention of structural justifications). More thorough analyses conducted every two or three years with written justifications of reporting relationships outside of the ideal range would be beneficial to validate results during subsequent reviews rather than the efforts being duplicated or forgotten.

Prior Recommendation – Periodically review spans of control for UGI Utilities' management positions and document justifications for supervisory position ratios with narrow or wide spans of control and adjust reporting relationships as appropriate.

Follow-up Finding and Conclusion – UGI Utilities more frequently performs a span of control review and documents justifications where the spans are outside industry acceptable ranges.

Current Review – UGI Utilities performed span of control analyses on September 30, 2019 and January 17, 2022. The company began to create exception reports for positions that have overly narrow or wide spans of control outside the ideal ranges as of September 2019. UGI Utilities provided the most recent span of control analysis from January 17, 2022, and justifications for positions outside the acceptable span of control. A summary of this span of control analysis is displayed in Exhibit III-2.

Exhibit III-2
UGI Utilities, Inc.
Summary of Span of Control Review
As of January 17, 2022

Reporting Relationships	Number	Percentage
Narrow (1:0 to 1:2)	58	20.2%
Ideal (1:3 to 1:8)	169	58.9%
Wide (1:9 to 1:19)	60	20.9%
Total	287	100.0%

Source: Data Request EM-3 and auditor analysis

The January 17, 2022 span of control analysis shows some positions have changed in terms of roles and responsibilities as well as reporting relationships stemming from periodic reorganizations. UGI Utilities has determined that the ideal range for reporting relationships is 3 to 8 direct reports per manager; 58.9% of the workforce fall within the acceptable range. Both narrow and wide ranges fell to about 20%; down from 29.8% and 24.0% respectively. The explanations for positions with relatively narrow or high spans of control were identified to justify current reporting relationships. The explanations provided were reviewed and appeared to be reasonable.

Follow-up Recommendation – None

Finding No. III-2

Additional Finding and Conclusion – UGI Utilities does not have a formal policy or procedure regarding a span of control analysis.

Current Review - UGI Utilities does not have written policies and procedures for the requirements of a span of control analysis to be performed at the company. It is a best practice to have a formal guiding document describing the components (e.g., frequency, analysis guidelines, exceptions, etc.) of a span of control analysis process. The process will ensure consistency and continuity over time.

Staff's Follow-up Recommendation – Develop a written policy or procedure detailing a formal span of control analysis.

IV. AFFILIATED INTERESTS AND COST ALLOCATIONS

Background – UGI Utilities, Inc. (UGI Utilities) receives shared services from UGI Corporation (UGI Corp.) governed by affiliated interest agreement(s) (AIA). Services provided include, but are not limited to, risk management, legal, executive management, human resources, internal auditing, cash management, financing, and corporate tax.

In this chapter, four prior situations and recommendations are reviewed. There are follow-up recommendations made for each of the four prior recommendations, and there are two new findings relative to the companies' handling of transactions between affiliates.

Finding No. IV-1

Prior Situation – UGI Utilities provided some support services (i.e., human resources support, information technology support, communications support, etc.) to its parent, UGI Corp., and to other non-regulated UGI Corp. subsidiaries. Likewise, UGI Corp. provided some administrative services to UGI Utilities. Collectively, the costs of these shared services provided and received by UGI Utilities totaled approximately $12 million, annually, throughout the audit period. Neither UGI Utilities nor UGI Corp. had performed any recent market studies to determine market value of shared services to ensure reasonability of charges between affiliates.

Prior Recommendation – Create a periodic, recurring process to compare the internal cost of services provided between UGI Utilities and its affiliates to market rates.

Follow-up Finding and Conclusion – Neither UGI Utilities nor UGI Corp. have implemented an appropriate routine process to determine both incurred cost and market value of shared services between affiliates.

Current Review – The companies' logic relevant to charges between affiliates for shared services is based on the belief that the significant cost of shared administrative services is the labor burden[1] of those employees performing tasks for the benefit of affiliates. The companies also cited approval granted them by the Pennsylvania Public Utility Commission (PUC or Commission), through an administrative services AIA executed in 1992[2] (1992 AIA), to charge incurred cost for shared services between all affiliates including the parent company's non-regulated subsidiaries. The companies further expounded that although they do not perform specific market studies for the purpose of determining reasonable charges for shared services between affiliates, the Human Resources Department performs routine compensation studies which in turn ensures that the labor burden, the contended basis of shared services cost, is set at market rates.

[1] The labor burden includes salary or hourly rate and the monetary value of an employee's benefits.
[2] Docket No. G-00920296

The Bureau of Audits does not agree with the companies' logic that the cost of shared services is solely the labor burden of those employees' performing tasks for the benefit of affiliates. Employees use company-provided equipment and supplies to perform work tasks. Also, employees are often working at company facilities when performing work tasks. To adequately determine the incurred cost of shared services, an allocation of the value of these items must be included in addition to the labor burden. Consequently, an appropriate market study to determine market value of shared services would consider the cost of attaining such services from a third-party which would include cost components other than the labor burden of the employees to whom the third-party would assign those tasks.

The Commission encourages all regulated utilities to follow the NARUC Guidelines for Cost Allocations which state that regulated utilities are to charge the higher of cost or market (HCOM) for shared services provided to non-regulated affiliates and that non-regulated affiliates are to charge the lower of cost or market (LCOM) for shared services provided to regulated utilities. This standard ensures that ratepayers are not cross-subsidizing costs of non-regulated affiliates. Although the companies cited approval through the 1992 AIA to charge incurred cost for shared services among all affiliates, UGI Utilities' cost allocations manual (CAM), updated as of September 2020, is more consistent with regulator intent by including HCOM language. The language in the CAM conflicts with the 1992 AIA. In addition, the companies have worked with the Commission on several more recent AIAs all which include language consistent with the NARUC Guidelines for Cost Allocations.

For convenience, UGI Corp. and UGI Utilities have oversimplified the process of determining the incurred cost and relevant market value of the various shared services. The companies cite the 1992 AIA as approval to charge incurred cost even though the company is aware of the Commission's endorsement to follow the NARUC Guidelines for Cost Allocations. The prior audit team made a recommendation within the 2019 Management and Operations Audit Report for the companies to update the 1992 AIA; however, the companies rejected the recommendation (see Finding and Conclusion No. IV – 2).

<u>Follow-up Recommendation</u> – Develop and implement routine processes following the NARUC Guidelines for Cost Allocations when applicable to determine HCOM for shared services provided to non-regulated affiliates and LCOM for shared services provided to the regulated utility.

Finding No. IV-2

<u>Additional Finding and Conclusion</u> – The administrative services affiliated interest agreement between UGI Corporation and UGI Utilities, Inc., executed and approved in May 1992, is no longer accurate and does not reflect UGI's structure nor business practices.

<u>Current Review</u> – Finding No. 5 of Chapter V – Affiliated Interests and Cost Allocations of the 2019 Management and Operations Audit Report described the condition that UGI Utilities affiliated interest agreements no longer met the minimum requirements required by the Commission. Specifically, the administrative services affiliated interest agreement between UGI Utilities and UGI Corp.; inclusive of UGI Corp's unnamed, non-regulated subsidiaries executed in 1992 (1992 AIA); does not adequately list all parties involved in affiliated activities, clearly define the affiliated activities, nor follow the NARUC Guidelines for Cost Allocations.

Not long after publication of the 2019 Management and Operations Audit Report, UGI Corp. initiated organizational changes that were ongoing at the end of fieldwork review. These organizational changes affected the company to which employees performing shared services activities report as well as some of the underlying affiliated interest and cost allocation processes. 66 C.S. § 2105 requires that modifications to a contract between a public utility and any affiliated interest be approved by the Commission to remain valid. These organizational and process changes further deteriorated the validity of the 1992 AIA and have rendered each UGI Corp.'s and UGI Utilities' CAMs in need of additional revisions (see Finding No. IV-3).

<u>Follow-up Recommendation</u> – Prepare an AIA that adequately describes the affiliated transactions between UGI Corp. and its subsidiaries, including UGI Utilities, and then, submit it to the Commission for approval.

Finding No. IV-3

Additional Finding and Conclusion – Significant organizational structure and cost allocation process changes will require updates to UGI Corporation's and UGI Utilities, Inc.'s cost allocation manuals.

Current Review – Since publication of the 2019 Management and Operations Audit Report, UGI Corp. has been reorganizing the reporting relationships among the business units which provide general administrative shared services. Many now report to UGI Corp. instead of to UGI Utilities with the intent to streamline shared services amongst UGI Corp.'s subsidiaries. Because of the significant organizational changes, both UGI Corp.'s and UGI Utilities' CAMs no longer adequately describe current cost allocation processes.

It is best business practice for companies to develop and maintain an accurate, up-to-date CAM, which meets the NARUC Guidelines for Cost Allocations, to guide the cost allocation activities of the company. In addition to routine review and update, a CAM requires update following any significant changes affecting the cost allocation processes including organizational structure changes involving those units that perform those processes.

Follow-up Recommendation – Update UGI Corp.'s and UGI Utilities' CAMs to reflect the affiliate transactions and cost allocation methodologies used based on the updated organizational structure and updated AIAs.

Finding No. IV-4

Prior Situation – UGI Corp's CAM was lacking key information, specifically:

- There was no documentation to explain why certain subsidiaries were excluded from the cost allocation process.
- There was not enough detail explaining the reduced rate at which international subsidiaries are charged for shared services.
- The subsidiaries and/or specific divisions of certain subsidiaries that use an alternative cost allocation methodology were not identified.

Prior Recommendation – Update UGI Corp.'s Cost Allocation Manual.

Follow-up Finding and Conclusion – UGI Corp. updated its CAM to include the requisite level of detail.

Current Review – The updated version of UGI Corp.'s CAM was issued in June 2020. All sections included expanded definitions and specific examples to demonstrate how specific allocation calculations are to be performed. Each of the three main deficient areas were expanded with reasonable level of detail. UGI Corp.'s efforts to improve the level of detail within its CAM has helped to ensure that appropriate cost allocation activities will be consistently performed.

As was addressed in Finding No. IV-3, UGI Corp. is absorbing many of the support service functions from UGI Utilities. These significant changes to the affiliate transactions have not yet been revised in UGI Corp.'s or UGI Utilities' CAMs.

Follow-up Recommendation – None

Finding No. IV-5

Prior Situation – The internal shared services invoices that UGI Corp. provided to UGI Utilities were found to be missing supporting details of intercompany costs. UGI Corp.'s monthly invoices to UGI Utilities presented total direct charges and total allocated charges but did not provide an itemization of costs nor supporting documentation of those costs. Because of these deficiencies, UGI Utilities was unable to perform an appropriate review of intercompany charges, nor could it accurately record the charges in appropriate accounts for sufficient accounting documentation nor historic cost review.

Prior Recommendation – Work with UGI Corp. to improve the level of detail provided in intercompany invoices and reports.

Follow-up Finding and Conclusion – UGI Corp. enhanced the level of detail within intercompany invoices including supporting documentation.

Current Review – As a result of collaboration between UGI Corp. Accounting and UGI Utilities' Accounting Department, the entities enhanced procedures for intercompany invoices. Updated procedures include UGI Corp. making shared services charge support available prior to month end close for review. The expedited review process allows for complete current period review to avoid excessive prior period adjustments. UGI Utilities' Accounting Department developed review processes to account for specific shared services charges more accurately which was also a concern of a recent FERC audit at UGI Utilities.

Enhanced review processes have been communicated internally and have begun to be used in practice. These processes will be included in the next revision of UGI Utilities' cost allocation manual which is planned for early 2023 once some other cost allocation process changes have been finalized.

Follow-up Recommendation – None

Finding No. IV-6

Prior Situation – Although UGI Utilities' CAM described the process for employees to direct charge when possible, there was no formalized guidance for employee reference on the process. The prior auditor noted that direct charging was used infrequently and only on main projects which were easily identifiable.

Prior Recommendation – Develop time entry training to address direct charging of labor for intercompany services.

Follow-up Finding and Conclusion – The Human Resources Department developed and implemented guidance resources and associated training for employees to direct charge labor associated with business activities for the benefit of affiliates.

Current Review – Direct charging is the most accurate process for capturing the labor component of shared services costs between affiliates, and it should be used as often as possible. Most utilities have procedures in place for employees to efficiently assign time between affiliates through the time entry system. Cost allocation methodologies should only be used when it is not feasible to direct charge due to the broad sweeping nature of those processes (such as general human resources administrative counsel or general information technology help desk processes offered on-demand to all affiliates).

The Human Resources Department (HR) included a slide in its main New Hire Orientation Presentation explaining the company's requirement to direct charge labor. After reviewing the efficacy of that process, in January 2022, HR pulled the payroll-related portion of the orientation presentation, including the information relating to the use of the direct charge methodology, and instead created a video presentation for employees. HR also included a step-by-step tutorial with applicable screen shots within a reference document and posted it to the company intranet portal.

Follow-up Recommendation – None

V. GAS OPERATIONS

Background – UGI Utilities–Gas Division is the result of merging UGI Utilities, Inc. (UGI Utilities), UGI Central Penn Gas, Inc. (CPG), and UGI Penn Natural Gas, Inc. (PNG) under UGI Utilities operating name. The gas division currently serves 677,000 customers in 45 counties across eastern and central Pennsylvania. The company maintains approximately 12,500 miles of gas distribution mains and 609,000 gas service lines. As part of its effort to replace aging pipeline, UGI Utilities has focused on replacing priority pipe (cast iron and bare steel) by retiring 391 miles for the five-year fiscal period (ending in September) of 2018 through 2022.

In this chapter, four prior recommendations and four prior situations are reviewed, and six follow-up findings and two follow-up recommendations are presented. The findings relate to damage prevention and collection efforts, leak survey and backlogs, reporting and tracking OSHA recordable injuries, and enhancing training facilities for operations' employees.

Finding No. V-1

Prior Situation – The previous three legacy companies; UGI Utilities, CPG, and PNG operated as three districts, UGI South, UGI Central, and UGI North, respectively. These districts used key performance indicators to measure damage prevention success across all districts. In 2018, the company established a damage prevention target of 1.8 damages / 1,000 tickets received (i.e., total number of tickets placed with Pennsylvania One Call). UGI South and UGI Central performed within the established targeted level. UGI North, although it was trending positively, did not meet this established level. There was no established goal for damages / 1,000 tickets marked[3]. The performance of each district regarding damages / 1,000 received and marked for this timeframe are displayed in Exhibit V-1.

[3] Tickets "marked" designates tickets remaining after the screening of all tickets placed with Pennsylvania One Call (i.e., tickets "received") has occurred. This process eliminates duplicate tickets, overlapping tickets, and tickets outside of company facility range.

Exhibit V-1
UGI Utilities, Inc.
Line Damage Performance
For the Fiscal Years 2016 through 2018

Damages / 1,000 Tickets Received by Fiscal Year (ending Sept 30)				
District	**2016**	**2017**	**2018**	*Avg (2016-2018)*
North	3.85	3.43	2.83	*3.37*
Central	1.53	1.07	1.11	*1.24*
South	1.43	1.10	1.19	*1.24*
Total UGI Rate	1.98	1.59	1.52	*1.70*

Damages / 1,000 tickets marked by Fiscal Year (ending Sept 30)				
District	**2016**	**2017**	**2018**	*Avg (2016-2018)*
North	7.33	6.29	5.17	*6.26*
Central	4.91	3.71	3.91	*4.18*
South	3.05	2.58	2.82	*2.82*
Total UGI Rate	4.91	3.71	3.91	*4.18*

Source: Management Audit Data Requests GO-15 and GO-46

Damage collection rates for UGI North had steadily declined and remained consistently lower than UGI South and UGI Central over the 2014 to 2018 period. The company indicated that more of UGI North's collection efforts enter litigation than the other districts. Therefore, it can take several years before damage amounts are collected from the responsible party. Furthermore, UGI North historically had lower capture rates of supporting documentation such as photos and videos making the collection efforts difficult. Company management indicated that this would change with Act 50 implementation where in-house and third-party locators are required to take detailed photos of the facility before and after damages. For the 2014 to 2017 period (2018 still had outstanding litigation and collection for damages at the time), UGI South and UGI Central collection rates averaged 79.6% and 80.6%, respectively, while UGI North averaged 65.2%. If UGI North had a similar collection rate over that period, the company would have been able to collect an additional $300,000 for that same period.

Prior Recommendation – Continue to reduce the number of third-party damages and increase the damage collection rate at UGI North.

Follow-up Finding and Conclusion – **UGI third party damage rates have decreased.**

Current Review – Third party damages have substantially decreased since the 2018 fiscal year. Exhibit V-2 displays the line damage performance by district and in total at the company from 2019 to 2022 (fiscal years ending in September 30).

Exhibit V-2
UGI Utilities, Inc.
Line Damage Performance
For the Fiscal Years 2019 through 2022

Damages / 1,000 Tickets Received by Fiscal Year (ending Sept 30)					
District	**2019**	**2020**	**2021**	**2022**	*Avg (2019-2022)*
North	2.86	3.42	2.60	2.75	*2.91*
Central	1.16	1.31	1.27	1.12	*1.22*
South	1.14	1.11	1.01	1.24	*1.13*
Total UGI Rate	1.50	1.60	1.40	1.52	*1.49*

Damages / 1,000 tickets marked by Fiscal Year (ending Sept 30)					
District	**2019**	**2020**	**2021**	**2022**	*Avg (2019-2022)*
North	5.36	6.55	4.88	4.63	*5.36*
Central	4.13	4.82	4.95	1.99	*3.97*
South	2.73	2.78	2.57	2.44	*2.63*
Total UGI Rate	3.70	4.10	3.60	2.94	*3.55*

Source: Data Requests GO-2, GO-27, GO-35, and GO-44

All three districts and the company overall have decreased hit ratios for both damage measures. The company has also met established goals for these measures, specifically:

- Damages / 1,000 Tickets Received - Annual damages declined for each district, and most notably for the northern district. The average annual reduction for third party hits from the management audit period to the MEI timeframe for the Northern, Central, and Southern districts and overall were 14%, 2%, 9%, and 12% respectively.

- Damages / 1,000 Tickets Marked - Annual damages declined for each district, and most notably for the northern district. The average annual reduction for third party hits from the management audit period to the MEI timeframe for the Northern, Central, and Southern districts and overall were 15%, 5%, 7%, and 15% respectively.

Even though the northern district continues to have higher ratios than the other districts, it has also had the most notable reduction in hit per ticket ratios. It should be noted that the legacy company which became the current northern district used to be a combined gas and water company. In most of the service territory, both gas and water lines are in close proximity. Therefore, it would be reasonable to expect that the northern district would have higher damage ratios than the other two districts.

To reduce line hits, the company has done the following:

- Additional training modules were created based on a gap analysis comparing the company's gas operations manual to the National Utility Contractor Association standards (Summer 2020).
- Additional programs with excavators and contractors were created to incentivize

reporting of potential cross bores (January 2021).

- Damage claims were moved from the Damage Prevention Team to the Claims Department with an additional position dedicated to this effort (March 2021).
- The company enhanced substructure damage investigation and reporting including weekly calls with stakeholders and cost center level metrics published monthly (August 2022).
- Additional technologies have been incorporated including the expansion of vacuum excavation, inserted line tracing equipment when applicable, and the use of sonic location (various dates up to November 2022).
- The company reverted to in-house locating as of March 2021 but began a pilot program for a contractor marking their own potential construction lines (June 2022).
- A new One-Call Ticket Management System has been implemented that assists the company by assigning risk scores to contractors who will be excavating. (The Northern and Central districts were transitioned by summer of 2021 and the Southern district is planning to transition to this platform by September 2023).

<u>Follow-up Recommendation</u> – None

Finding No. V-2

Additional Finding and Conclusion – **UGI Utilities does not track damage collections in a way that can be used to determine the success of litigation programs.**

Current Review – The auditor attempted to determine if the company increased collection success from third-party hits since the last audit. The company data for damage collections reflects collections in the year of collection as opposed to the year of billing (e.g., if the hit occurred in 2019 but was collected in 2021, it is attributed to 2021 instead of 2019). The auditor does not consider the current data or the previous data as an accurate reflection of collections success by year.[4]

The company stated that it would further explore the capabilities of its claims management system (*CMS*) to generate reports which associate damage collections to the year of damage. If *the CMS* is not capable of generating reports to track collections attributed to year of damage, the company should utilize additional software to supplement the CMS.

Follow-up Recommendation – **Attribute damage collections to the year of the damage incident on periodic reporting.**

[4] Because the data validity for collections from the management audit is in question, no calculated quantifications will be applied to this review

Finding No. V-3

Prior Situation – UGI Utilities maintained a consolidated Gas Operations Manual with appropriate actions related to the three different leak classifications at the company. Those leaks and actions are summarized in Exhibit V-3.

Exhibit V-3
UGI Utilities, Inc.
Leak Classification Definitions and Action Criteria

Class	Definition	Action Criteria
Class C (Grade 1)	Existing or probable hazard to persons or property	Requires prompt action to protect life and property and continuous action until the conditions are no longer hazardous justifies a scheduled repair
Class B (Grade 2)	Nonhazardous at the time of detection, but justifies a scheduled repair	Should be repaired or cleared within one calendar year but no later than 15 months from the date of the leak classification.
Class A (Grade 3)	Non-hazardous at the time of detection and can be reasonably expected to stay non-hazardous	Should be re-evaluated during the next scheduled survey, or within 15 months from the date of the leak classification, whichever occurs first, until the leak is regraded or no longer results in a reading.

Source: Management Audit Data Request GO-1

UGI North historically experienced a higher ratio of main leaks per main of mile than UGI South and UGI Central, although this situation had changed in 2018. The number of hazardous leaks or Class C leaks had also been significantly higher at UGI North with most leaks due to corrosion and material/weld issues. Beginning in 2017, UGI established a goal of reducing Class B leaks by 15% annually. As a result, the Class B leak backlog for all rate districts had decreased significantly for the company overall from 816 leaks in 2015 to 441 leaks by December 31, 2018. In contrast, the company's inventory of outstanding Class A leaks increased from 4,877 in 2015 to 5,238 in 2018 with a vast majority of the outstanding leaks occurring at UGI South and UGI North. Annual outstanding leaks for this period are summarized in Exhibit V-4.

Exhibit V-4
UGI Utilities, Inc.
Annual Leaks Outstanding
For the Years 2015 through 2018

	UGI South			UGI North			UGI Central			Total		
	A	B	C	A	B	C	A	B	C	A	B	C
2015	2,403	540	0	1,983	218	3	491	58	1	4,877	816	4
2016	2,481	300	1	2,038	229	2	411	27	0	4,930	556	3
2017	2,635	312	0	1,968	130	4	460	32	1	5,063	474	5
2018	2,808	263	2	1,988	156	2	442	22	1	5,238	441	5

Source: Management Audit Data Request GO-45 and GO-55

<u>Prior Recommendation</u> – Decrease the inventory of outstanding Class A leaks and continue to reduce the number of main leaks at UGI North.

<u>Follow-up Finding and Conclusion</u> – UGI Utilities' leak totals for each leak class have decreased.

<u>Current Review</u> – Exhibit V-5 shows the leak performance since the end of the management audit. Leaks have decreased considerably for all classes as of 2021 year-end. The September 2022 leak performance by class are trending to show even greater reductions anticipated by year end of 2022.

Exhibit V-5
UGI Utilities, Inc.
Annual Leaks Outstanding
For the Years 2019 through 2021 and January through September 2022

	UGI South			UGI North			UGI Central			Total		
	A	B	C	A	B	C	A	B	C	A	B	C
2019	2,684	76	1	1,844	57	3	452	10	0	4,980	143	4
2020	2,612	115	0	1,363	57	3	460	6	0	4,435	178	3
2021	2,341	200	0	1,060	52	1	468	5	1	3,869	257	2
Sep-22	2,188	164	1	893	27	3	287	1	1	3,368	192	5

Source: Data Requests GO-13 and GO-41

Because the number of outstanding leaks fluctuate during the year[5], the 2022 year-to-date (end of September) performance would not be a fair comparison to 2018

[5] Leak measurability, likelihood, and probable repair timeframes are dependent on temperature, freeze / thaw cycles, and the construction season. This creates a non-liner leak variability throughout the year that cannot be extrapolated.

year-end performance. A comparison of year end 2018 to year end 2021 leak totals show a 26% reduction in Class A leaks, a 42% reduction in Class B leaks, and a 60% reduction in Class C leaks (although Class C leaks would need to be repaired immediately and this reflects more of a timing issue).

The company has reduced the number of leaks of each class in the system due to the following:

- *Targeted replacements* – from 2018 to 2022, the company has replaced an annual amount of what the company deems "non-contemporary pipe" (typically bare steel or cast iron, etc.) of 65, 83, 58, 100, and 85 miles respectively.

- *Aggressive monitoring/repair* – the company increased Class B leak reduction goals to 25%/year instead of the previous 15%/year (October 2019).

- *Leak detection technologies* – specifically Advance Leak Detection (ALD) technology capturing a wider leak survey area and including ultrasensitive methane / ethane analyzers capable of recording measurements in units up to parts per billion. (2021 and ongoing).

Follow-up Recommendation – **None**

Finding No. V-4

Prior Situation – UGI Utilities set Key Performance Indicators (KPI) for its safety program based upon industry panels and internal goals. The KPI goals were set annually in the areas of Occupations Safety and Health Administration (OSHA) recordable injury rate and the preventable motor vehicle accident (MVA) rate; however, recordable MVA rates did not have a KPI goal set. Exhibit V-6 shows UGI's annual performance for 2014 to September 2018 compared to the KPI goal for 2018. In 2018, UGI Utilities achieved its 2018 KPI target for the OSHA recordable injury rate but did not achieve its target for preventable MVA rate. At the time of the audit, UGI had recently implemented a Vehicle Safety Program aimed at reducing preventable MVAs and initiated a comprehensive safety culture transformation program (June 2018).

Exhibit V-6
UGI Utilities, Inc.
OSHA Recordable Injury and MVA Rates
For the years 2014 through 2017 and January through September 2018

	UGI Utilities					KPI	
	2014	**2015**	**2016**	**2017**	**Sept. 2018**	**2018**	***Avg (2014-2018)***
OSHA Recordable Injury Rate	4.21	2.82	2.15	2.91	2.47	2.48	*2.91*
Preventable MVA rate	5.54	4.47	3.99	3.42	4.36	1.88	*4.36*
Recordable MVA rate	9.06	7.66	7.47	6.32	n/a	n/a	*7.63*

Source: Management Audit Data Request GO-29

Prior Recommendation – Maintain focus on safety with the objective of meeting or exceeding safety KPI goals.

Follow-up Finding and Conclusion – UGI has improved safety related performance goals and results.

Current Review – The company's safety statistics for the MEI period along with the 2022 KPI goals are displayed in Exhibit V-7. There is a notable improvement in the company's safety metrics from the management audit period (2014 to 2018[6]) compared to the MEI audit period (2019 – 2021, with 2022 missing year end data but trending suggests better than 2021). The average annual improvement for OSHA recordable injury rate, preventable MVA rate, and recordable MVA rate has improved by 31%, 32%, and 18% when comparing the management audit timeframe to the MEI timeframe.

[6] Note that year end 2018 numbers which were not available at the time of the audit concluded with an OSHA recordable injury rate of 2.58, a preventable MVA rate of 4.19, and a recordable motor vehicle rate of 7.13 which resulted in 2014 – 2018 average values of 2.93, 4.32, and 7.53 respectively.

Despite the improvement in some areas, there is a notable worsening in safety incident rates from 2019 to 2021. The company has speculated the more recent rise in incidents may be Covid-19 related. However, this is not possible to confirm or support the correlation because incidents are not actively tracked by cause (See Finding No V-5). For example, the company had to stop its Driver Training Program[7] for a period during the pandemic because only one person was allowed in a vehicle at a time. This could affect the MVA rate since starting in 2020. UGI noted that Recordable Injury and MVA rates could also be affected by external factors outside of UGI's control (i.e. third party at-fault MVA or injury to UGI employee).

Exhibit V-7
UGI Utilities, Inc.
OSHA Recordable Injury and MVA rates
For the Years 2019 through 2021 and January through September 2022

	UGI Utilities				**KPI**	
	2019	2020	2021	Sept. 2022	2022	*Avg (2019-2021)*
OSHA Recordable Injury Rate	1.83	1.90	2.29	1.96	1.90	*2.01*
Preventable MVA rate	2.34	2.68	3.84	2.60	2.79	*2.95*
Recordable MVA rate	5.41	5.86	7.49	5.81	n/a	*6.25*

Source: Data Requests GO-16 and GO-42.

Since the management audit, UGI Utilities implemented a comprehensive safety culture program. A safety consultant helped establish a baseline and foundation for UGI on which to expand. This included cultural improvements and techniques that were previously not in place at the company. Utilizing safety surveys and assessments, UGI and the safety consultant established the company's internal safety brand of "I'll Be There". As of September 2021, the company believes it is positioned to independently build upon the program and is no longer utilizing the consultant. Among the more significant of the dozens of initiatives produced from these efforts include:

- The establishment of a safety newsletter (February 2019)
- The establishment of various local and central safety committees (November 2020)
- Near Miss / Good Catch reporting and proactive approaches to avoid incidents (March 2021)
- New fleet telematics system installed fleetwide which monitors driver behaviors and provides ongoing data and real-time driver feedback (August 2021)
- The incorporation of the new training center into the safety program (September 2021) (See Finding and Conclusion No. 6).

<u>Follow-up Recommendation</u> – **None**

[7] The Driver Training Program is used to increase the safety and awareness of commercial drivers by employing a set of five key designated rules.

Finding No. V-5

<u>New Finding and Conclusion</u> – UGI Utilities has not been utilizing causal analyses to further improve its safety performance.

As discussed in Finding and Conclusion No. V-4, although the company has improved its average annual safety performance regarding the metrics, performance has been deteriorating since 2019. The company speculated that this may be Covid related. Although this is reasonable, UGI did not have suitable causal analyses for safety incidents that could support the company's assertion that Covid-19 may have affected safety performance.

UGI Utilities' Environmental, Heath, and Safety Department utilizes an incident reporting system to monitor and track the lifecycle of safety incidents. This system was launched within UGI Utilities on October 6, 2021. Since implementation, UGI Utilities began to attribute the following descriptions to incidents: Injury, Environmental, Abnormal operations, Motor vehicle, Near miss/good catch, and Equipment/property damage The majority of incidents were labeled "injury" or "motor vehicle" but this is not a "cause" but rather an effect. This information did not assist in determining cause of incidents.

UGI historically tracks and maintains reportable safety related incidents by incident type. However, while fulfilling all OHSA safety recordkeeping and reporting requirements UGI does not historically track reportable incidents by cause and stated that this is not required by OSHA. Causal analyses should be used to help determine reasons driving OSHA reportable incidents. With this information, education, training, ergonomic tools, or outside expert consultants could be used to target and reduce incident causes. Examples of incident by cause include animal related bites or stings, skin related injuries, clothing or PPE, improper tools or equipment, inadequate job briefings, unsafe positions, ice, uneven surfaces, tripping, etc.

<u>Follow-up Recommendation</u> – Modify safety reporting to utilize causal analyses for safety incidents.

Finding No. V-6

Prior Situation – UGI Utilities had six regional training centers because of the acquisitions of the PNG and CPG legacy companies. Although those training centers met certain needs (i.e., routine web-based training and some mock-leak investigation capabilities), the training centers did not provide access to live gas training and real-world equipment. The regional training centers were built decades ago, with some containing outdated equipment. Meanwhile, certain critical functions requiring specialized training or equipment were not offered at all facilities. Furthermore, most of the current training centers did not have the ability to train employees on larger projects/equipment, had limitations on the number of employees it could train, and used different training procedures. To address these shortcomings, the company planned on building a centralized training center to be completed by late 2020 or early 2021.

Prior Recommendation – Follow through on plans to develop a centralized training facility to aid in Operator Qualified training.

Follow-up Finding and Conclusion – UGI Utilities completed and placed a new training center into service in 2021.

Current Review – UGI Utilities consolidated from six regional centers to a single modern training center dubbed the “Learning Center.” The final design for the training center was completed in 2019; however, because of Covid-19 related issues there were delays in the construction of the center. On September 13, 2021, the center was opened. Among the numerous features of the Learning Center are, but not limited to, the following:

- Common area that can accommodate 120 people or be divided in two rooms of 60 people each with teleconference capabilities
- Smaller 12-person training rooms with computer terminals and a front terminal and screen which can also be used for proctored exams
- Gas line/pipe area (squeeze offs / excavations)
- Slip simulator (can simulate terrain, hills, etc.)
- Driver simulator (can simulate different vehicles and driving conditions such as weather, time of day, traffic, obstacles, etc.)
- Meter room with various models and vintages of meter sets for training
- Appliance room (with various models and ages of appliances)
- Welding area (which is also used for certifications)
- Leak area (with simulated leaks in various conditions such as grass, concrete, asphalt, etc. along with simulated leaks within dwellings)
- Excavation simulation, excavation, and fire training area
- Tapping and stopping area (with various sized and types of pipes)
- Metering and regulation station room (additionally can train odorization in this room

Follow-up Recommendation – None

VI. EMERGENCY PREPAREDNESS

<u>Background</u> – The 2019 Focused Management and Operations Audit of UGI Utilities Inc. (UGI Utilities or company) was conducted by the Pennsylvania Public Utility Commission Bureau of Audits and released in October 2019 at D-2018-3002234, D-2018-3002235 and D-2018-3002236. The audit contained ten recommendations for the Emergency Preparedness functional area. The Bureau rated this area as needing significant improvement. The PUC auditors incorporated several prior recommendations into this review and deemed it prudent to perform an updated review of the company's compliance with PUC regulations at 52 Pa. Code § 101 regarding physical security, cyber security, emergency response and business continuity plans. In addition to overall compliance, in this chapter, ten prior recommendations and situations are reviewed, and ten follow-up findings and one follow-up recommendation is presented.

To protect infrastructure within the Commonwealth of Pennsylvania and ensure safe, continuous, and reliable utility service, effective June 2005, PUC regulations at 52 Pa. Code § 101 (Chapter 101) require all jurisdictional utilities to develop and maintain written physical security, cyber security, emergency response, and business continuity plans. Furthermore, in accordance with 52 PA Code § 101.1, all jurisdictional utilities are to annually submit a Self-Certification Form to the Commission documenting compliance with Chapter 101. This form, available on the PUC website, includes 13 questions as shown in Exhibit VI-1.

Exhibit VI-1
Pennsylvania Public Utility Commission
Public Utility Security Planning and Readiness Self Certification Form

Item No.	Classification	Response (Yes–No–N/A)
1	Does your company have a physical security plan?	1.
2	Has your physical security plan been reviewed in the last year and updated as needed?	2.
3	Is your physical security plan tested annually?	3.
4	Does your company have a cyber security plan?	4.
5	Has your cyber security plan been reviewed in the last year and updated as needed?	5.
6	Is your cyber security plan tested annually?	6.
7	Does your company have an emergency response plan?	7.
8	Has your emergency response plan been reviewed in the last year and updated as needed?	8.
9	Is your emergency response plan tested annually?	9.
10	Does your company have a business continuity plan?	10.
11	Does your business continuity plan have a section or annex addressing pandemics?	11.
12	Has your business continuity plan been reviewed in the last year and updated as needed?	12.
13	Is your business continuity plan tested annually?	13.

Source: Public Utility Security Planning and Readiness Self-Certification Form, as available on the PUC website at http://www.puc.state.pa.us/general/onlineforms/pdf/Physical_Cyber_Security_Form.pdf.

The PUC auditors use a NIST (National Institute of Standards and Technology) Cybersecurity Framework-based audit plan, modified to address the needs and capabilities of the PUC and the Pennsylvania utility companies. Ultimately, due to the sensitive nature of the information reviewed, specific information is not revealed in the audit report; instead, the generalities of the information reviewed are discussed.

During fieldwork, the auditors reviewed the most recent (i.e., 2021) Self Certification Forms submitted by UGI Utilities to determine the status of their responses. Our examination of UGI Utilities' emergency preparedness included a review of physical security plans (PSP), cyber security plans (CSP), emergency response plans (ERP), business continuity plans (BCP), and associated security measures. In addition, the auditors performed inspections at a sample of the Company's facilities.

A review is completed to ensure each plan has been tested, results of testing have been evaluated, and the necessary corrective measures have been taken. Each individual plan is updated following the testing and/or review. Although many individuals are involved in the maintenance and testing of these plans, key personnel provide oversight and active management of the four emergency plans. The purpose and ownership of the plans are detailed in the following bullets:

- **Physical Security Plan (PSP)** – Director, Security and Facilities - establishes security requirements, practices, and asset protection principles for UGI facilities.

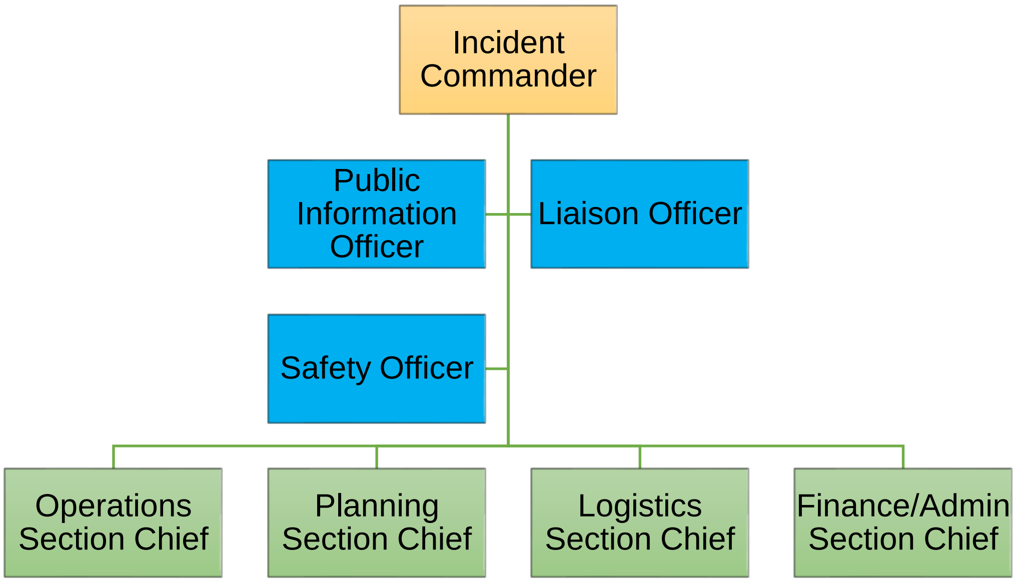
- **Cyber Security Plan (CSP)** – Director, Chief Information Security Officer – establishes an organized approach that ensures timely action in assembling a team to respond to and recover; primary goal to limit the impact of a cybersecurity incident to customers, partners, employees and the UGI Company.

- **Emergency Response Plan (ERP)** – Senior Manager, Standards and Materials – develops comprehensive guidelines for responding to various emergencies that might threaten the public, UGI employees, or UGI facilities.

- **Business Continuity Plan (BCP)** – Director, Security and Facilities – establishes a single framework for responding to, resuming, recovering, and permanently restoring business operations following a disruptive event.

UGI Utilities has established an incident command system (ICS) to provide an organized response and a defined structure of communication to unplanned levels of events that could disrupt normal business operations. An example of the reporting structure for ICS is provided in Exhibit VI–2.

Exhibit VI-2
UGI Utilities
ICS Command Structure



Source: Data Request EP-16

Finding No. VI-1

Prior Situation – There were no sprinklers at many of UGI Utilities' facilities. According to the Society of Fire Protection Engineers, wet pipe sprinkler systems reduce fatality rates in a fire by 85% and are effective in 98% of incidents where only one sprinkler is activated. It is therefore a best practice to have wet pipe sprinkler systems installed in all buildings regularly used by employees.

UGI Utilities had many older buildings that did not have sprinkler systems installed. Consequently, in the event of a fire at one of these facilities, the likelihood of a fatality is increased over facilities that do have wet pipe sprinkler systems, and the damage to property is likely to be much more significant. Not all the company's facilities were regularly occupied by employees or contractors, with some only being used when picking up materials. Therefore, it was recommended the company should prioritize all facilities without a sprinkler system and identify those that are occupied regularly. This standard should be documented and facilities without sprinklers should be reevaluated routinely.

Prior Recommendation – Install sprinkler systems at regularly occupied facilities where feasible.

Follow-up Finding and Conclusion – **The company has identified occupied buildings and evaluated the need for sprinkler systems based on use and risk; the process is ongoing.**

<u>Current Review</u> – UGI Utilities reviewed and compiled all company owned buildings, and prepared a spreadsheet referred to as "Building and Grounds." Within Building and Grounds, the company included, but not limited to, the following details – location, estimated size (if available), occupied status, water supply, type of water supply, and building construction date (if available). In short, UGI Utilities identified 102 buildings, 57 of which are occupied in some capacity, and 37 buildings that could benefit from sprinkler installation.

As of October 2022, UGI Utilities has plans to upgrade two facilities based on priority (occupied/size/risks) – with one office building having an estimated cost of over $290,000 and a start date in either the 3rd or 4th quarter of 2022. The company is examining the cost and risk of those buildings regularly occupied. Buildings that are not occupied (i.e., stock yards and other smaller facilities) and others that are aged would not be upgraded with sprinkler systems.

<u>Follow-Up Recommendation</u> – **Install sprinkler systems in accordance with the prioritized inventory of company buildings to ensure safety for employees and company property.**

Finding No. VI-2

Prior Situation – Insufficient resources were being devoted at UGI Utilities to ensure physical security at many of their facilities. The company did use operational employees to conduct periodic inspections of certain facilities; however, these employees were not typically trained or focused on security. As a result, historical differences led to variations in security quality and coverage from facility to facility. In addition, security deficiencies, mostly resulting from facility age, oversight, weather, or general wear and tear were observed during inspection of company facilities. These deficiencies varied in severity from minor to moderate. To reduce risks, it was recommended that UGI Utilities should correct the physical security deficiencies identified by the PUC auditors and perform ongoing physical security reviews of all facilities. To accomplish this, the company was to consider methods to expand its resources through advanced security training for existing staff, increase personnel dedicated to security, and/or utilize outside resources.

Prior Recommendation – Establish physical security standards that apply at company facilities and devote resources to adequately maintain oversight.

Follow-up Finding and Conclusion – **UGI Utilities added a Physical Security Administrator to oversee physical security initiatives.**

Current Review – UGI Utilities hired a Physical Security Administrator in January 2021 who reports directly to the Director of Security and Facilities. The Physical Security Administrator's primary focus is on physical security initiatives including creating site specific security procedures and job training programs.

The company created a formal policy titled "Site Security Procedures" or SSP which establishes the security requirements, practices, and asset protection principles for UGI Utilities facilities. The application of these procedures helps UGI Utilities meet the following objectives:

- Ensure UGI meets its duty of care to maintain a secure and safe work environment for employees, contractors and visitors;
- Manages a risk in a holistic and cost-effective manner; and
- Meets statutory, regulatory, and local ordinances.

The auditor reviewed a sample of individual security plans for content and completeness; the samples were deemed satisfactory.

Follow-Up Recommendation – None

Finding No. VI-3

Prior Situation – According to 52 Pa. Code (Section) 101.3(a), a jurisdictional utility shall develop and maintain written physical and cyber security, emergency response, and business continuity plans. Part of a successful physical security plan is devoting sufficient resources to ensure the plan is properly developed and followed.

The previous (PSP) referred to an out-of-date leadership structure and did not define tiers of security. The company had not yet identified which facilities are critical. The PSP identified several threats but did not mention protecting access to company information as a goal. There had been no specific policy on the physical security of cyber equipment in which the auditors identified multiple security deficiencies for UGI Utilities. The Electric Division had a separate Cyber Physical Security Plan, covering North American Electric Reliability Corporation requirements, but this plan was not administered by or the responsibility of the Director of Security and Facilities.

During the Management Audit, a draft PSP was a work in progress. The draft version that the auditors reviewed covered many deficiencies in the existing PSP, but certain parts were missing. For instance, the draft PSP specified physical security standards, including a layered approach, but did not define or mention tiers of security based on criticality. Tiers of security should be defined based on facility criticality, and the associated minimum-security specifications should be standardized. In addition, the draft PSP included protection of company information as a critical goal, but it did not specify physical protection of cyber equipment.

Prior Recommendation – Update the PSP to include relevant physical security efforts and review, update, and test it annually.

Follow-up Finding and Conclusion – The company completed a revision of the Physical Security Plan to include recommended revisions.

Current Review – The previously drafted PSP was completed by the company in May 2021 and revised in July 2022. The newly drafted PSP included updates to physical security policies that were recommended from the Management Audit. The update included a document hierarchy for asset protection: Level 1 – Policies, Level 2 – Procedures, and Level 3 – Work Practices and Training. The auditor reviewed a sample of the policies and procedures for completeness and deemed satisfactory.

The company has been testing the PSP in a variety of ways. UGI Utilities participates in NERC GridEx exercises. GridEx[8] is noted as the largest grid exercise in North America, where member organizations practice how to respond and recover from coordinated cyber and physical security threats. Additional PSP testing has been completed through external security audits and penetration testing (see Finding VI-5 for more information).

Follow-Up Recommendation – None

[8] GridEx (eisac.com)

Finding No. VI-4

Prior Situation – UGI Utilities had not clarified the chain of command and responsibility, especially with respect to the Electric Division, for physical security within its current PSP. It is a best practice to have one individual in charge of overall physical security, and a clearly defined chain of command and responsibility. In this case, it seemed prudent to require all physical security to be the responsibility of the Director of Security and Facilities.

Prior Recommendation – Establish a clear chain of command for physical security by placing the Director of Physical Security in charge of all physical security at UGI Utilities.

Follow-up Finding and Conclusion – **The Director of Security and Facilities is responsible for physical security at UGI Utilities Gas and Electric Divisions.**

Current Review – As determined in Finding VI-3, the company updated and revised its PSP in July of 2022. The revision included a responsibility matrix which clearly delineates accountability and responsibilities for physical security. The matrix defines roles and responsibilities for all of gas and electric physical security and established the chain of command for physical security with the Director of Security and Facilities at the top of the reporting structure.

Follow-Up Recommendation – None

Finding No. VI-5

Prior Situation – The previous PSP did not include requirements for vulnerability assessment (VA), risk analysis, or penetration testing. The drafted PSP discussed in the Management Audit specified that each facility must complete a Facility Security Assessment (FSA) at least every three years to identify potential threats and vulnerabilities. These FSAs must identify primary threats and the potential impact to the respective facility; define the potential critical assets and how disruptions may affect overall operations; identify, evaluate, and prioritize risks; determine effective security measures to mitigate threats and vulnerabilities; and recommend security enhancements. These combined the functionality of a vulnerability assessment and a risk analysis. However, The FSAs did not incorporate any kind of penetration testing. Although the BCP specified that all departments must perform risk analysis and business impact analysis of their processes, it did not address physical security penetration testing or risk analysis from a physical security perspective. Consequently, a company-wide physical security or emergency preparedness review had not been conducted.

Prior Recommendation – Perform penetration tests, risk analysis, and vulnerability assessments of physical security routinely, and periodically utilize external and independent resources.

Follow-up Finding and Conclusion – **UGI Utilities amended its PSP to include recommended policies and have contracted external consultants to perform the necessary physical security assessments.**

Current Review – In combination with an updated PSP, the company has created and documented policies and procedures within the PSP to verify compliance with regulatory requirements. "Security Risk Assessment Methodology" was completed in June 2020 to provide guidance and methodology for conducting risk assessments. As a result, UGI Utilities has contracted external consultants and conducted several security audits, including the following:

- Security Assessment at First Entry (SAFE) by Department of Homeland Security – Cybersecurity and Infrastructure Security Agency in 2022 – includes commendable efforts, vulnerabilities, and options to consider.
- Two physical security penetration testing assessments at utility offices by a third party; results were provided to company with no major findings.
- A cybersecurity penetration test by a third party where aspects of the test included physical security measures surrounding cyber and information technology assets; results were provided to company and recommendations are being implemented (see Finding VI-6 for more information).

Follow-Up Recommendation – None

Finding No. VI-6

Prior Situation – UGI Utilities' CSP clearly specified that its main goal was to limit the impact of an information security incident to customers, partners, employees, and the company. The plan also identified critical systems; roles and responsibilities relating to cybersecurity; and a response framework was defined, with detailed descriptions of the phases of an incident and what actions should be taken. Incident documentation requirements were also defined, based on security level. Overall, the plan was more akin to a cyber incident response document but lacked key features.

For instance, the CSP did not identify how long the company could operate without specific critical components. The business continuity plan (BCP) identified critical components, but only on a facility level, as opposed to IT systems or software, which should be identified in the CSP. Identification of critical functions requiring automated processing is required in a CSP, as is the critical time for each information system before the utility could no longer continue to operate. Other opportunities for improvement related to inter-connectiveness of plans. There were no backup or restoration plans listed in the CSP. These were identified within the BCP but should be listed or referenced within the CSP.

Prior Recommendation – Improve the CSP and relevant procedures, secure all Personally Identifiable Information (PII), and consider formalizing policies at the UGI Corporation level.

Follow-up Finding and Conclusion – **The company has taken the necessary actions to update its CSP to include all relevant policies and procedures.**

Current Review – UGI acknowledged that information expected to be contained in a Cyber Security Plan (CSP) should be available across several documents. UGI documented the status of implementation of the PII and risk management policies. In response UGI completed the following:

- revised the CSP referred to as the Cyber Security Incident Response Plan (CIRP) that consolidated by reference information contained in other documents
  - Updated in August 2022
  - Created and updated CSP policies and procedures
    - Patch Management
    - Physical Security of IT (NIST SP 800.53)
    - Vulnerability Assessment Policy
    - Data Classification Standard – 4 levels of access/restrictions
    - Data Handling Procedures – storage, access, transmission, disposal
- the company utilized a third-party to review the company's cybersecurity posture
  - provided findings which included enhancing IT and CS policies
  - UGI Utilities decided to retain the third party to ensure timely action in remedying any major findings presented

Follow-Up Recommendation – None

Finding No. VI-7

Prior Situation – It is a best practice to ensure that the communication of Supervisory Control and Data Acquisition (SCADA) systems are as secure as possible. However, the company was utilizing existing communication backbones that limited security and/or strategies. Fortunately, the SCADA system collects and reports data, but did not allow for direct automatic control of network equipment. The company has started to rectify the communications integration, and to upgrade the SCADA system's backup capabilities.

Prior Recommendation – Complete the gas SCADA communication upgrade.

Follow-up Finding and Conclusion – **The SCADA system went through the recommended upgrades.**

Current Review – UGI Utilities completed the recommended communication upgrades in October 2019. The company incorporated industry recommended practices to strengthen security around its SCADA system, including proper isolation techniques and upgrading hardware and software components[9].

Additionally, UGI Utilities examined requirements set forth in Transportation Security Administration security directives to further enhance the security and performance of its information and operational technology assets.

Follow-Up Recommendation – None

[9] Due to sensitive nature of this review, the auditor reviewed the actions of the company and were deemed satisfactory based on previous recommendation.

Finding No. VI-8

Prior Situation – The BCPs were split by department with each department maintaining their own. Some used a common template, and some did not. Therefore, the BCPs were not uniform, and may have been inaccurate due to age, with some dating from the 2011-2012 period. Many of the previous BCPs reflected the wrong processes and business activities due to the changing business organization with the merging of the three gas companies into one division.

Prior Recommendation – UGI Utilities' Business Continuity Planning needs to be improved.

Follow-up Finding and Conclusion – **A Business Continuity Management Program was created to ensure consistent and uniform Business Continuity Plans for UGI Utilities Inc. departments.**

Current Review – UGI Utilities hired a new position in January 2021, Senior Business Continuity Administrator, to manage the utility's business continuity management program, oversee standard business continuity activities including testing, develop program maturity, and consult on business continuity planning best practices.

The purpose of the UGI business continuity management program (BCMP) is to define the overall organizational accountability and responsibility for the management of business continuity. A key success factor for the BCMP Charter (revised in 3rd Quarter of 2021) is the integration and coordination of efforts between business continuity, disaster recovery, crisis management, and incident response, by working closely with all business functions. This model fosters commitment from UGI Utilities leadership and to continue to drive success. In addition to the BCMP Charter, the following actions were completed to enhance BCP planning:

- Establishment of a business continuity governance structure including an executive steering committee and working group consisting of 14 functional work groups
- Procurement of a centralized software system to manage business continuity planning, templates, testing, audits, and program reporting and monitoring. This system went 'live' in May 2022 and provides additional functionality and support in managing plans.

Follow-Up Recommendation – None

Finding No. VI-9

Prior Situation – Parts of the Emergency Response Plan (ERP) were periodically tested, largely within the operational groups. For instance, the company participated in the PEMA tabletop exercise annually and held Coordinated Response meetings with various parties (emergency management, excavators, local officials, etc.) that covered various topics including emergency response. In addition, UGI Utilities held four internal tabletop exercises between January 2015 and March 2019.

Nonetheless, auditors identified several ERP deficiencies:

- Onboarding emergency training was not required for all employees of UGI Utilities.
- Handicap or physically disabled employee’s evacuation procedures needed enhancing.
- Call Center checklists for emergency calls were not available in the call center software.
- ERP contained inconsistencies with contact information.

Prior Recommendation – Continue improvement of the ERP, and address deficiencies in associated training.

Follow-up Finding and Conclusion – **The company made the necessary improvements to the ERP and dedicated to emergency training for all employees.**

Current Review – In response to the noted deficiencies, UGI Utilities implemented or revised many aspects of the ERP and related procedures. Several enhancements to further strengthen its emergency response plans for UGI Utilities are summarized as follows:

- Opened its centralized training facility (the “Learning Center”). Refer to Finding V-6 for additional information.

- Documented requirements for training of employees who may respond to a gas emergency or have responsibility during a gas emergency.

- Implemented an emergency response training module, which provides emergency responders instructions and guidance in responding to natural gas and carbon monoxide emergencies, incident case studies, controlling ignition sources and gas valve operation.

- Activated an online, in-house developed, Incident Command System (ICS) training module, provided to all field employees and any individual with PA On-Call Duty responsibilities. Field employees are also required to complete Federal Emergency Management Agency 100 and 200 classes.

- Implemented the Everbridge mass notification system for use during emergencies to enhance response coordination.

- Introduced emergency response training during new employee orientation sessions conducted by safety personnel for all employees being onboarded; training introduces new employees to emergency response procedures and protocols; more detailed, field-related emergency response training occurs during a second phase within 12-15 months after an employee is hired.

- Hired an external resource to review 911 protocols to help identify specific emergency situations and keywords where immediate 911 notification would be required by company personnel. This review was then used to update UGI Call Center Procedures and the Emergency Contact Matrix.

- Integrated an emergency procedure “checklist” into its CIS requiring call center representatives to acknowledge that they communicated the proper precautions to any caller reporting an emergency; completed February 2021.

- Continued ongoing outreach to PUC and other government officials, in the event of an incident, following the guidelines and processes documented in the ERP’s Appendix A – Emergency Contact Matrix and Appendix B – Emergency Contact Information.

- Revised 40 site specific evacuation plans to ensure that the general meeting location is inside an exit stairwell or another safe location; requires those in the stairwell to wait for individuals with physical disabilities that would otherwise prevent them from exiting the building on their own.

- Incorporated the following emergency response practices into its procedures; Electric Curtailment, Atmospheric Gas, “On-Call” Personnel, Identification of Valves during Hazardous Leaks, and Safety Perimeter during Abnormal Conditions.

Follow-Up Recommendation – None

Finding No. VI-10

Prior Situation – UGI Utilities had no safety data sheets (SDS) at most of its locations. At the remaining locations, the only information was out-of-date MSDS sheets. Instead, the company relies upon an online SDS program. Although online SDS increases the general availability of SDS information and allows for easier updating, it may not be accessible during an emergency, for instance if internet or intranet access is unavailable. Consequently, the addition of physical copies of SDS information at locations with redundant communications, such as control centers, which is supported by OSHA regulations, would improve safety, and reduce the risk of mistreatment in the case of accidents.

Prior Recommendation – Maintain up to date printed copies of SDS near where chemicals are stored or in a relevant control center.

Follow-up Finding and Conclusion – **SDS sheets are available on an intranet site and readily available for viewing and printing as needed.**

Current Review – UGI Utilities distributed updates on their SDS catalogs during a November 2020 safety meeting. The company highlighted the following updates regarding SDS resources:

- UGI Utilities SDS catalog is available online via company intranet – the function includes Material Safety Data Sheets (MSDS)

- A “Safety Quick Guide” is posted at all service centers and materials yards with methods for accessing UGI Safety Data Sheets

    - Accessing from the Safety Department SharePoint Page within intranet
    - Navigating to the Safety Department SharePoint page within intranet and click on the Safety Data Sheets link.
    - The Safety Data Sheet page outlines the primary ways of accessing the UGI Safety Data Sheet Catalog through MSDS online.
    - Step-by-step guide on how to access SDS by PC, mobile (an app is available to download) and a mobile data terminal.

- The “Safety Quick Guide” also provides an emergency number to contact if internet access is unavailable

UGI Utilities employees always have access to SDS via physical printouts, intranet catalog, and when necessary, an emergency contact number if printouts or catalog are unavailable.

Follow-Up Recommendation – None

VII. MATERIALS MANAGEMENT

Background – In this chapter, one prior situation and recommendation is reviewed related to the monitoring of materials management performance.

Finding No. VII–1

Prior Situation – In June 2016, UGI Utilities, Inc. (UGI Utilities) started tracking monthly inventory turnover data on a company-wide, division, and warehouse basis. Although UGI Utilities had an actively maintained emergency stock list, it was not excluding these items from its inventory turnover calculations which negatively impacted the meaningfulness of the metric data. As of September 30, 2018, the true inventory turnover rate was determined to be 1.6 for that partial year.

Prior Recommendation – Improve company-wide inventory turnover and exclude emergency stock from inventory turnover calculations.

Follow-up Finding and Conclusion – UGI Utilities now excludes emergency stock from its inventory turnover rate calculations and improved inventory turnover company-wide for fiscal years 2020 – 2021 and 2021 – 2022.

Current Review – Companies must exclude emergency stock from inventory turnover rate calculations because the items maintained within the emergency stock list are, by definition, slow or non-moving critical and/or specialized items needed to maintain operational integrity in the event of a part failure. If included, these items negatively skew calculated inventory turnover rates which result in inaccurate performance data. The company has set up the appropriate parameters within *SAP* to exclude emergency stock from inventory turnover rate calculations.

Company-wide turnover reports available within *SAP* showed that the company has been experiencing improved inventory turnover rates. The average company-wide inventory turnover rate, for fiscal year ended June 30, 2021, was 1.7 and, for fiscal year ended June 30, 2022, was 2.0. UGI Utilities' Procurement and Materials Management teams indicated that although they are using the advanced tools now available to them through *SAP*, which they implemented in 2018, supply chain challenges resulting from the Covid-19 pandemic have continued to hinder performance levels. They maintain a goal to achieve a consistent inventory turnover rate of 2.5. The Bureau of Audits encourages utility companies to maintain a minimum inventory turnover rate of 2.0 – 4.0 as best business practice.

Follow-up Recommendation – None

VIII. CUSTOMER SERVICE

Background – UGI Utilities' customer service department handles the customer service functions. These functions include billing, customer contact, community relations, credit and collections, customer programs and other services. This department reports to the VP, Customer Relations, who in turn, reports to the President, UGI Utilities.

In this chapter, three prior recommendations and situations are reviewed, and three follow-up findings and recommendations are presented. The findings primarily relate to increasing collection efforts for past-due accounts receivable, improving performance metrics and reducing turnover within the customer contact department.

Finding No. VIII-1

Prior Situation – UGI Utilities' accounts receivable balances between calendar years 2014 through 2018 steadily declined; however, UGI Utilities' long-term residential accounts receivable balances increased between 2017 and 2018. In addition, the receivable balances greater than 90 days for residential accounts remained relatively stable but increased significantly between October 2017 and June 2018. The increase corresponded to the implementation of a new SAP-based customer information system (CIS) between September 2017 and April 2018 as part of UGI Utilities' efforts to replace legacy systems. In April 2018, at the close of the Pennsylvania winter moratorium period, UGI Utilities reestablished most automated collections processes under the new CIS. Beginning in June 2018, a precipitous reduction in accounts receivable balances greater than 90 days occurred over the ensuing three months. Nevertheless, long-term accounts receivables increased again from October 2018 to December 2018.

Prior Recommendation – Reduce long-term accounts receivable balances.

Follow-up Finding and Conclusion – UGI Utilities made minor improvements to their long-term accounts receivable balances before the pandemic; however, they have increased again due to the Emergency Order.

Current Review – The Emergency Order of the Commission (EOC), dated March 13, 2020, led to a moratorium on terminations for utilities in Pennsylvania and was later lifted on March 31, 2021. As a result, UGI Utilities continues to see the impact of the pandemic on long-term accounts receivable balances as well as the impact of higher gas costs on low-income households. The average debt per customer increased nearly 10% from May 2021 to May 2022. Despite this, the Company has continued to promote assistance programs like Customer Assistance Program (CAP), Low-Income Usage Reduction Program (LIURP), Low Income Home Energy Assistance Program (LIHEAP), Operation Share, Customer Assistance and Referral Evaluation Services (CARES), Emergency Rental Assistance Program (ERAP), and the Pennsylvania Homeowner Assistance Fund (PHAF) through bill messaging, postcards, email & direct mail campaigns, messaging in the UGI Connections Newsletter, and on-hold recordings.

Exhibit VIII-1 shows UGI Utilities' social assistance program enrollments, by year, from 2019 through September 2022. CARES program enrollments for 2021 include customers participating in UGI Utilities' ERAP (in effect from December 2020 through March 2021). As shown, participants and amounts in social assistance programs have increased substantially in 2021 and 2022.

Exhibit VIII-1
UGI Utilities
Social Assistance Program Enrollments and Amounts
For the Years 2019 - 2021 and January through September 2022

	2019		2020		2021		September 2022	
CAP	22,540	$8,052,464	27,061	$9,723,855	26,970	$12,429,889	23,113	$14,052,825
LIURP	455	$2,140,667	261	$1,788,743	414	$2,792,058	375	$2,509,660
LIHEAP	22,152	$6,507,008	23,290	$8,565,518	25,560	$20,996,759	1,237*	$497,064
Operation Share	1,390	$238,155	1,443	$318,768	4,586	$1,961,532	2,469	$793,243
CARES	446	$185,828	118	$146,300	2,411	NA	375	NA
ERAP	NA	NA	NA	NA	2,205	$1,457,331	2,223	$1,435,256
PHAF	NA	NA	NA	NA	NA	NA	31	$50,494

* - Enrollment through 10/18/22
Source: 2019 and 2020 PUC Reports on Universal Service and Collections Performance, and Data Requests CS-22 and CS-23

In addition, UGI Utilities alluded to recent issues with non-access accounts shown in Exhibit VIII-2. When customers do not allow access for company personnel, the termination process is brought to a halt. Most access issues arise with customers having inside meters or curb valves serving multiple customers. The Collections department is working with the Operations department to address these issues and minimize non-access accounts.

As shown in Exhibit VIII-3, over a year of no termination/collection activity and increased non-access accounts caused amounts in arrears over ninety days to increase from 59% in 2019 to 65% in 2021. Amounts in arrears for 2022 are higher than prior years due to an increase in purchased gas costs driving higher customer bills and ultimately resulting in increased amounts in the different aging columns. Enhanced collection efforts (termination enforcement and collection agencies) through the first three months of the collection season (after the winter moratorium ended March 31, 2022), yielded a reduction in active debt over ninety days which peaked at $66.8M in April 2022, to $60.2M as of end of June 2022.

Exhibit VIII-2
UGI Utilities
Total Non-Access Customer Accounts
For the Years 2019 - 2021 and January through August 2022

	2019	2020	2021	2022
January	45	43	62	33
February	63	46	56	57
March	44	32	71	80
April	1,213	0	144	615
May	1,124	0	759	877
June	210	0	1,295	813
July	554	0	1,033	929
August	419	0	1,058	1,308
September	164	0	1,047	
October	930	0	768	
November	445	3	572	
December	41	61	30	

Source: Data Request CS-17

Exhibit VIII-3
UGI Utilities
Amounts in Arrears by Age
For the Years 2019 - 2021 and January through October 2022

	Current	1-30 Days	31-60 Days	61-90 Days	91-120 Days	Over 120 Days	Total in Arrears	Percent over 90 days
2019	$35,537,395	$12,795,953	$5,700,483	$3,968,799	$3,133,986	$29,728,811	$55,328,032	59.4%
2020	$33,872,652	$11,444,967	$5,454,520	$4,121,343	$3,299,896	$33,873,994	$58,194,720	63.9%
2021	$36,923,875	$11,894,399	$5,332,752	$4,055,028	$3,336,734	$36,764,469	$61,383,382	65.3%
2022*	$54,495,717	$18,246,833	$6,679,990	$4,708,222	$3,642,749	$36,938,980	$124,712,492	32.5%

*October 2022
Source: Data Requests CS-29, and Auditor Analysis

Exhibit VIII-4 shows the percentages and dollar amounts for gross write-offs from 2019 through 2021. UGI Gas Division and UGI Penn Natural reported their gross write-offs separately in 2019. Previously, between 2014 and 2017, UGI Utilities residential gross write-off ratio ranged between 2.1% and 2.9%; however, that ratio increased to 3.2% in 2018.

Exhibit VIII-4
UGI Utilities
Gross Write-Off Percentages and Dollars
For the Years 2019 - 2021

	2019		**2020**		**2021**	
	%	**Dollars**	**%**	**Dollars**	**%**	**Dollars**
UGI-Gas Division	3.9%	$10,153,148	2.2%	$10,734,440*	3.1%	$16,204,625
UGI-Penn Natural	3.6%	$5,893,436				
TOTAL		$16,046,584		$10,734,440		$16,204,625

* - Due to the UGI Utilities merger, they began reporting combined data as of Jan. 1, 2020.
Source: 2019 and 2020 PUC Reports on Universal Service and Collections Performance

The longer a customer is in arrears, the more difficult it becomes to collect from these customers. In return this increases the number of customers and amount of dollars in debt. Effective usage of assistance programs for customers in need and effective collection practices of customers who do not pay on time can improve payment behaviors of customers and reduce arrearages.

<u>Follow-up Recommendation</u> – Enhance termination/collection efforts where appropriate and decrease non-access accounts.

Finding No. VIII-2

Prior Situation – As shown in Exhibit VIII-5, the implementation of a new CIS in 2018 had adversely affected contact center performance. The conversion process increased UGI Utilities' average call handling time and call abandonment rate as well as decreased their percentage of calls answered in 30 seconds. As of February 2019, UGI Utilities had successfully reduced its average call handle times to levels more commensurate with those experienced prior to the implementation of its CIS. In addition, as of December 2018, UGI Utilities' monthly performance rate for calls answered within 30 seconds appeared to have improved to historical performance levels. There was a strong correlation between the deployment of the new CIS and the degradation of contact center metrics; therefore, it was possible that it was temporary and would correct itself over time.

Exhibit VIII-5
UGI Utilities
Contact Center Performance Rates
For the Years 2014 - 2018

	2014	2015	2016	2017	2018
Percentage of Calls Answered Within 30 Seconds	80%	80%	83%	82%	76%
Call Abandonment Rate	3.9%	4.2%	3.2%	5.3%	7.9%

Source: Exhibit XII-4 from the Management Audit

Prior Recommendation – Improve customer service performance metrics.

Follow-up Finding and Conclusion – UGI Utilities' customer service performance metrics, percent of calls answered within 30 seconds and call abandonment rate, were much improved during 2019 and 2020, but deteriorated once the EOC was lifted.

Current Review – Performance for call abandonment rate and percent of calls answered within 30 seconds improved for the years 2019 and 2020 over previous levels; however, performance has declined in 2021 and 2022. Exhibit VIII-6 details improvements in performance for 2020 through March 2021, due largely in part to lower call volumes during the EOC. The withdrawal of the EOC led to increased calls and lower retention rates (see Finding No. VIII-3). As a result, call abandonment rates were higher, and a lower percent of calls were answered within 30 seconds.

Exhibit VIII-6
UGI Utilities
Contact Center Performance Rates
For the Years 2019 - 2021 and January through August 2022

	2019	**2020**	**2021**	**August 2022**
Percent of Calls Answered Within 30 Seconds	86%	95%	82%	74%
Call Abandonment Rate	4%	2%	5%	8%

Source: 2019 and 2020 PUC Customer Service Performance Reports, and Data Request CS-19

Exhibit VIII-7 shows the lower-than-normal call volumes during the EOC, and post EOC, where customer calls increased approximately 21%, from a low of about 117,000 to 141,000. As a result of the increase in calls post EOC, Average Hold Time (AHT) and Grade of Service performance diminished.

Exhibit VIII-7
UGI Utilities
Internal Contact Center Performance
For the Years 2019 - 2021 and January through May 2022

Year	Average Hold Time (AHT) (minutes)	Average Monthly Total Call Volume	Grade of Service
2019	7.67	143,155	86
2020	6.22	117,290	95
2021	7.83	130,354	82
May 2022	8.10	141,413	72*

* - Grade of Service performance is through June 2022
Source: Data Requests CS-2 and CS-8

<u>Follow-up Recommendation</u> – Increase Customer Care Representative (CCR) staffing levels and reduce turnover to improve the ability to handle the increased call volume and improve call center performance.

Finding No. VIII-3

Prior Situation – UGI Utilities' external turnover rates increased significantly between fiscal years 2014 and 2018. The largest increase occurred during the implementation of the new CIS despite efforts to add resources to mitigate the impact. UGI Utilities increased its permanent CCR staffing levels during the preparation for and implementation of CIS. After implementation, CCR staffing levels reduced to more traditional levels. Although a small percentage of external turnover can be accounted for by the staffing reduction, the overall number of external separations significantly increased in 2018 (from 22 to 33).

Prior Recommendation – Improve the retention of Customer Care Representatives within the Customer Information Center.

Follow-up Finding and Conclusion – UGI Utilities' CCR turnover has increased substantially from 2019 through 2021.

Current Review – The UGI Utilities' CCR staffing levels have dropped, and the turnover rate has significantly increased from 20.3% to 35.4%, for fiscal years 2019 and 2021, respectively.

Exhibit VIII-8
UGI Utilities
Customer Care Representative Turnover
For the Fiscal Years 2019 through 2022

	External Separations	End of Year Staffing Levels	Turnover Rate
2019	24	118	20.3%
2020	19	112	17.0%
2021	31	108	28.7%
2022	40	113	35.4%

Source: Data Request CS-27, and Auditor Analysis

During the EOC, turnover was at an acceptable level for UGI Utilities, due to a large drop in customer communications. After the EOC ended, terminations and collections began in earnest, which led to a large increase in call volume (shown in Exhibit VIII-7) and retention suffered as a result.

UGI Utilities contends they are continually supporting and coaching CCRs by gaining feedback on what would aid in retention. Preferences of CCRs are balanced based on their and the company's best interests and implemented where applicable. In addition, a consultant was engaged to analyze CCR engagement and to develop leadership skills for supervisors. UGI Utilities states that some candidates being hired and trained are just not a good fit for the CCR position. To counter this, recruiters should be filtering through applicants to find candidates with the skills and education commensurate with CCR duties and responsibilities. Also, UGI Utilities' Human Resources department reviews market data for CCR compensation every two years. This bi-annual review may lead to CCRs being paid less than competitive rates due to a lack of timely information.

All utilities need to pay market rates to attract and retain qualified candidates. During the audit staff's review, it was determined that UGI Utilities is paying CCRs below market rates. This could contribute to the high turnover, from which the company incurs excess costs related to recruiting, hiring, and training new CCRs which is material to UGI Utilities. Using the number of external separations from Exhibit VIII-8 above, annual costs from turnover of CCRs were $116,800 in 2018, $146,000 in 2019, and $270,100 in 2020, respectively.

<u>Follow-up Recommendation</u> – Perform an annual market study to assess competitive compensation for CCRs and implement pay increases where appropriate to aid in retention.

IX. ACKNOWLEDGEMENTS

We wish to express our appreciation to the officers and staff of UGI Utilities for their cooperation and assistance.

This audit was conducted by Eric McKeever, Timothy Kerestes, Melissa Lawrence Craig Bilecki, and Jennifer Lange of the Management Audit Division of the PUC Bureau of Audits.

PAPUC

Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17120
www.puc.pa.gov
1-800-692-7380