Southwest Gas Corporation

R.15-01-008 Annual Report
Natural Gas Leakage Abatement

SUPPLEMENTAL QUESTIONNAIRE

In partial fulfillment of:

Rulemaking (R.) 15-01-008 to Adopt Rules and Procedures Governing Commission Regulated Natural Gas Pipelines and Facilities to Reduce Natural Gas Leaks Consistent with Senate Bill 1371, Leno.

And in response to:

Data Request
Southwest Gas R.15-01-008, 2025 Annual Report

By:
Southwest Gas Corporation

Reporting Period:
January 1, 2024 through December 31, 2024

Date**:**
June 13, 2025

Southwest Gas Corporation
Response to
Safety Policy Division Data Request
Southwest Gas R.15-01-008 2025 Annual Report

EXECUTIVE SUMMARY

Southwest Gas Corporation (Southwest Gas) is a multi-jurisdictional natural gas local distribution company, engaged in the retail transmission, distribution, transportation, and sale of natural gas for domestic, commercial, agricultural, and industrial uses. Southwest Gas serves approximately 200,000 California customers.

Southwest Gas was a named respondent in Rulemaking 15-01-008 (Rulemaking), opened in January 2015 by the California Public Utilities Commission (Commission) pursuant to Senate Bill (SB) 1371[1], which requires, "…the adoption of rules and procedures to minimize natural gas leakage from Commission-regulated natural gas pipeline facilities consistent with Public Utilities Code Section 961(d), §192.703(c) of Subpart M of Title 49 of the Code of Federal Regulation, the Commission's General Order 112-E, and the state's goal of reducing greenhouse gas emissions."[2,3]

On June 15, 2017, the Commission approved Decision (D.) 17-06-015, which adopted ongoing annual reporting and timelines in accordance with SB 1371. Ordering Paragraph (OP) 1 in D.17-06-015 states in pertinent part:

> The Natural Gas Leak Abatement Program Annual Reporting Framework contained in Section 5.2 and Appendix A (Definitions) of this decision is adopted consistent with the process detailed below:
>
> The Commission's Safety and Enforcement Division (SED), in consultation with the Air Resources Board (ARB), shall direct the annual report process as follows:
>
> …
>
> b) SED shall submit annual data requests to Respondents consistent with Public Utilities Code Section 975 (c) and SED advice by March 31 that covers the previous calendar year;
> c) Respondents shall submit to SED and ARB Staff a response to the data request with populated excel spreadsheet templates via DVD by June 15;
> d) Respondents shall submit responses through the "Supporting Documents" Feature on the Commission's Electronic Filing System by June 15 of each year;
> e) Respondents shall submit responses consistent with the Commission's confidentiality rules and guidance in this decision;
> f) Respondents shall post public versions of these reports on Respondents' websites and shall include all templates and associated data that are not confidential according to this decision;…

[1] SB 1371 became effective January 1, 2015, and added Article 3, §§975, 977 and 978 to the Public Utilities Code. All code references herein pertain to the Public Utilities Code.
[2] Order Instituting Rulemaking (OIR), at p.1.
[3] General Order (GO) 112-F, adopted in Decision 15-06-044, on June 25, 2015, supersedes GO 112-E.

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On March 27, 2025, the Commission's Safety Policy Division (SPD) issued by email the 2024=5 annual data request, including revised annual reporting templates for the 2024 reporting year as presented at the February 12, 2025 Winter Workshop. Southwest Gas submits its 2025 Natural Gas Leakage Abatement Report (Annual Report) responding to the two questions in the "Supplemental Questionnaire R.15-01-008 2025 Annual Report", and utilizing the reporting templates, including emission factors, definitions and instructions issued in the SPD data request.

Pursuant to OP 1(f) in D.17-06-015, Southwest Gas' 2025 Annual Report has been made available on its website at the following link: https://www.swgas.com/en/california-rates-and-regulation.

Southwest Gas Corporation
Response to
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INTRODUCTION

The following data have been prepared to comply with Senate Bill 1371 (Leno, 2014), Section 2, Article 3, Order Instituting Rulemaking (OIR) 15-01-008, and to provide responses to Data Request R.15-01-008, 2025 Annual Report.

1. Please provide the following for the period from January 1, 2023 to December 31, 2023:

   a. Describe any current projects or studies related to SB 1371.

      Southwest Gas Response: Southwest Gas is currently involved in several Research and Development (R&D) Projects related to emissions reduction. Southwest Gas RD&D Emissions SB 1371 Participation Projects 06132025 are included at **ATTACHMENT 1** to this Supplemental Questionnaire.

   b. Describe the activity changes between the previous year's reporting and the current year's reporting that affected the change in the total emissions. For example, changes in maintenance activities may have changed blowdown emissions from previous years and resulted in changes to total emissions.

      Southwest Gas Response: Southwest Gas continues to review it procedures and process to help reduce emissions. Southwest Gas implemented the following new procedures or processes in 2024:

      - Implemented a new Companywide procedure for the Heath Discover advanced mobile leak detection (AMLD) equipment for mobile leak survey.

   c. Describe advances in abatement efforts, similar to the executive summary in the best practices reporting.

      Southwest Gas Response: Southwest Gas continues to seek additional opportunities to reduce emissions, which is demonstrated in its list of R&D projects, referenced above, that the Company has been or is currently a participating entity. As mentioned in Southwest Gas' 2024-2025 Emissions Abatement Compliance Plan, the Company funds these efforts through its general Commission-approved R&D budgets and not as part of the SB 1371 efforts. These projects include evaluation and/or development of new laser methane detectors, advance unmanned aerial system (UAS or drone) mounted reporting sensing technologies, methane quantification methods, advanced tools for methane rate estimation, hydrogen blending methods and technical projects, and Company-specific emission factor evaluation for commercial/industrial meters. The results of these projects could provide additional emissions abatement opportunities in the future.

Southwest Gas has also proposed annual mobile leak survey utilizing the Picarro AMLD equipment in its current Test Year 2026 General Rate Case (Application 24-09-001). If approved, this program would enhance Southwest Gas' leak survey program and could provide additional emission abatement through quicker leak detection.

d. Describe improvements in reporting that are not discernable by reviewing the reporting data. For example, report the installation of a new data management or leak tracking system.

   Southwest Gas Response: Southwest Gas continues to review its internal processes for opportunities to enhance its leak data; however, no enhancements were implemented during the 2024 reporting period.

e. For smaller utilities, confirm if there were no leaks in distribution mains and services pipelines.

   Southwest Gas Response: During the 2024 reporting period, Southwest Gas discovered 40 distribution main leaks and 72 leaks on service pipelines. The leaks are included in Southwest Gas' reporting appendices.

f. Identify any additional tables to be included in the Joint Report. Staff will place these tables in an appendix.

   Southwest Gas Response: Southwest Gas does not suggest any new tables to be included in the Joint Report at this time.

2. Does the utility propose a 2015 baseline adjustment or emission factor change? If so, please describe. Can the utility adhere to the following timeline?

   a. Deadline for requests for baseline adjustments, methodology changes, including new emission factors: April 30, 2025.
   b. Agency Review Meetings: April 30 through July 31, 2025.
   c. Final Decision: August 29, 2025.

   Southwest Gas Response: Southwest Gas is not proposing a 2015 baseline adjustment or emission factor change during this reporting period.

ATTACHMENT 1
SOUTHWEST GAS CORPORATION
SB 1371 METHANE EMISSIONS ABATEMENT
R&D PARTICIPATION PROJECTS

Item	Net-zero Topic	Project #	Project Name	Research Org.	Project Description	Status
1	Emissions	5.17.m.2	Modify Pipeline Purging Program for Calculations of Methane Emissions Savings, Including Hydrogen Blends	GTI	Update the current GASPurge software program to more easily calculate methane savings from using various types of alternative purging and clearing processes and equipment. The updated software will support calculations for emissions savings reporting to state and federal governments or corporate, environmental, social, and governance.	Project kicked off August 2023. Final report was issued March 2025.
2	Emissions	5.22.e	Tracking/Reporting Aggregated Methane Emission Reductions	GTI	The objective of this project is to quantify and report methane emission reductions that can be accounted for through infrastructure improvements, standard operating procedure updates, and renewable gas or Hydrogen injection. Currently there is no official tracking system of what and how emission reductions are recorded, and this project will create and address these needs for OTD members.	Project completed March 2024. Final report was issued April 2024.
3	Emissions	5.23.c	Best Purging Practices for Minimizing Methane Emissions - PHMSA Cost Share	GTI	To establish best purging practices for the elimination or avoidance of methane emissions during pipeline construction, commissioning, and maintenance.	The project kicked off on December 1, 2022. The project's final report was completed in January 2024.
4	Emissions	6.16.a	Center for Methane Research	GTI	The Center for Methane Research (CMR) was established to provide a centralized, industry-wide technical and policy support resource focused on the presence, measurement and potential impacts of methane in the atmosphere. The strategic approach to achieving this goal includes adopting a “good science / common sense” philosophy that addresses the end-to-end process of natural gas exploration, production, processing, transportation and ultimately end-use. Development of this “wellhead-to-burner-tip” industry resource provides a common platform of technical understanding that can be used in the decision-making process in support of balanced policy decisions that impact the environment, industry, and ultimately the consumer. https://www.gti.energy/cmr	This is an ongoing program.
5	Emissions	5.23.t	Updating Lost and Unaccounted-For (LAUF) Estimates in the Distribution System	GTI	To identify the factors contributing to the Lost and Unaccounted-For (LUAF) gas volume in distribution system. Apply to a case study with participating utilities based on their estimates of fugitive and vented emissions, meters readings and characteristics, and other contributing factors.	Project kicked off in July 2023. It experienced a delays in 2024 due to coordination with project sponsors. A final report is expected to be issued in August 2025.
6	Emissions	7.16.a.3	Leak Repair Prioritization - Ph 3	GTI	The objective of the Phase 3 project is to further explore the development of the leak rate estimation algorithms developed in Phase 1 and 2 which were originally focused solely on leak repair prioritization. Phase 3 will focus on taking these estimation algorithms a step further by combining the collected data with advanced modeling and a detailed estimation equation developed by the University of Texas-Arlington (UT-Arlington). This phase of work will also examine current leak detection thresholds for multiple sponsor companies to determine if the minimum detection threshold results in leaks that are too small to quantify with existing protocols. This phase of work will again focus on non-hazardous leaks (e.g., Grade 2 or 3) that pose minimal safety hazards.	The project was started in February 2022. The final report was issued in May 2024.
7	Emissions	7.20.f	Characterizing Methane Emissions from Purging Activities	GTI	The objective of this project is to review commercially available technologies and develop a feasible approach to measure volumetric quantities of natural gas emitted during a purge. This is to develop a better understanding of pipeline purges to evaluate the impact of this emission source.	The project commenced in April 2020. It is scheduled for completion in July 2024. Construction and commissioning of purging test setup is nearly complete. Additional work was needed to verify automated sample collection process and data collection streaming from flow meters and pressure monitoring systems. Next steps will include readying field apparatus (pipeline and gas connections) and verifying the purge setup on a live pipeline. A final report was issued in October 2024.

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SOUTHWEST GAS CORPORATION
SB 1371 METHANE EMISSIONS ABATEMENT
R&D PARTICIPATION PROJECTS

Item	Net-zero Topic	Project #	Project Name	Research Org.	Project Description	Status
8	Emissions	7.22.h	Veritas Gas Measurement and Verification Initiative	GTI	The Veritas protocols are the building blocks to provide global confidence in the climate credentials of natural gas. The protocols provide companies with guidance on how to measure their methane emissions and reconcile current emission-factors with actual measurements. This will allow companies to reduce their methane emissions, participate in certification schemes, and meet import or procurement requirements that are tied to methane intensity more effectively.	This is an ongoing program.
9	Emissions	7.24.e	Technology Roadmap for Compressor Station Methane Emissions and Mitigation Scenarios	GTI	The purpose of this project is to develop a technology roadmap for compressor station methane emissions and mitigation scenarios.	Project kicked off in Q1 2024 and is slated to be complete in October 2025. Technology roadmap diagram, user guide, and spreadsheet model of important information and data have been completed and uploaded to the GTI/OTD SharePoint site and PHMSA.
10	Emissions	7.24.h	Service Regulator Relief Venting and Emissions Behavior Investigation	GTI	The purpose of this project is to partner with Duke Energy and other gas utilities to review and analyze their smart meter data and perform laboratory testing to better understand and determine the possible causes of unusual or irregular service regulator venting behavior. GTI Energy will attempt to replicate the conditions in the laboratory, generate conclusions and provide remedial solutions.	Project kicked of 2024 and is slated to be completed in October 2025.
11	Emissions	8.23.i	DOE Innovative Methane Measurement, Monitoring, and Mitigation Technologies (iM4) Area of Interest 4 (AOI4) Cost Share	GTI	GTI Energy will gather requirements for an Integrated Methane Monitoring Platform (IMMP) to provide industry wide, accurate quantification of methane emissions and create an Engineering, Design, Deployment, and Operating Plan (EDDOP) to build the IMMP.	Project kicked off in September 2023. The final report was issued in December 2024.
12	Emissions	M2019-002	Standardization of Surface Expression Equipment and Protocol to Implement Emissions Validation Process	NYSEARCH	The project objective is to optimize the application of the surface expression technique, including improvements to hardware, software and field procedures. Also, once optimized and statistically confirmed, a goal would be to approach a national standards organization to create standardized procedures for the gas industry.	The Phase II effort was completed with successful 3rd field test campaign in early 2023. Phase III was approved and GHD kicked off project in fall 2023. Project Completed July 2024.
13	Emissions	T786 Phase I-II	Classification of Methane Emissions at Regulator Stations	NYSEARCH	The objective of the project is to develop a framework and quantitative methodology for classifying emissions at regulator stations that are used in distribution and transmission applications. This framework is intended to reduce variability in emissions estimates from different types of regulator stations and enable each project participant to use the results to customize the methane emission estimate based on the conditions and type of regulator station.	Project kicked off in 3/23. T786 PhII was completed in Q4 2024.
14	Emissions	T-798	Phase Ia Carbon Calculator Feasibility Tool	NYSEARCH	This project is a feasibility study to develop the roadmap in addressings the current tool's limitations in Excel and enhance its capabilities in PowerBI to meet the evolving needs of the industry. The modernized Carbon Calculator will provide accurate, accessible, and adaptable carbon accounting, enabling informed decision-making for emissions reduction strategies.	Phase 1a - feasiblity study kicked off in 2024 and feasibility results were presented in March 2025. The next phase of the project is a separate study that Southwest Gas has chosen not to participate in due to limited RD&D funding resources in 2025.
15	Emissions	1.14.g.8	Residential Methane Detectors/Natural Gas Detectors (RMD/NGD) Consumer Behavior Study Update	GTI	The objective of this project is to create a comprehensive program for achieving full customer adoption of cost effective, reliable, accurate and readily available residential methane detectors. The program will include technology development and evaluation, codes and standards development, stakeholder engagement and economic and market analysis.	Phase 8 final report of this project was released in March 2024.
16	Emissions	5.24.x	Acoustic Leak Detection Sensors	GTI	This project will be an initial investigation and analysis of Acoustic Array handheld instruments for the purpose of leak detection on aboveground gas distribution system elements. An initial review and assessment, which includes lab testing, will be conducted for the purpose of developing a recommendation on their use and further study.	This project kicked off in November 2024.

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Item	Net-zero Topic	Project #	Project Name	Research Org.	Project Description	Status
17	Emissions	7.21.i.2	PSI Laser QGI: Field testing Phase 2	GTI	This project will evaluate advanced prototypes of the Remote Methane Leak Detector - Quantitative Gas Imager (RMLD-QGI) developed by Physical Sciences Inc. (PSI). Collaborating with Heath Consultants Inc. (Heath), GTI Energy (GTI), and OTD members, this project will support demonstration to and operation by end users conducting real-world municipal leak surveys.	This project kicked off in 2023. The final report was issued in October 2024.
18	Emissions	7.22.j	Evaluation of Current Advanced Mobile Leak Detection Systems	GTI	The primary objective of this project will be to evaluate the leak detection performance of advanced mobile leak detection systems. The work will be focused on conducting a single/double-blind study of current commercially available systems. A smaller secondary focus will be on a preliminary evaluation of the leak rate quantification abilities of the systems.	Project kicked off in January 2023 and the final report was issued in September 2024.
19	Emissions	7.22.k	Optical Gas Imaging (OGI) and handheld laser methane detectors for large leak identification	GTI	The purpose of this study is to evaluate the potential use case for Optical Gas Imaging (OGI) cameras and handheld laser methane detectors to expedite identification of statistically large leaks in the distribution system. Testing will be developed to simulate city gates, high pressure mains, industrial meters, or other higher-pressure assets.	Project kicked off in Spring 2022. The final report was issued in January 2025.
20	Emissions	T-788	Advancing Leak Detection through Analysis of Historic Weather Data	NYSEARCH	To advance leak detection through analyzing historic weather data.	Project slated to commence in 2024. Status Pending.
21	Emissions	7.23.a	Gas Service Regulator Vent Field Study	GTI	To quantify natural gas volumes emitted from the vent of residential, commercial, and industrial gas regulators. To track and characterize emission events for different gas demand cases, such as high population density buildings and commercial/industrial utilization. The proposal is a Phase 1 effort that will focus on the development of an instrument that can be deployed to quantify vented emissions.	Project kicked off in Q3 2023. The final report was issued in April 2025.
22	Emissions	7.23.b	Advanced/Outside Natural Gas Leak Detector	GTI	The development of an Advanced/Outside Natural Gas Leak Detector (ONGD) that can discover a leak before being found through traditional means, such as by an odor call or scheduled leak survey will reduce risk and improve safety. This project will work with industry subject matter experts and manufacturers on the development of an Advanced ONGD prototype that can be attached to the Meter Set Assembly (MSA) piping. The prototype device will be installed at the GTI Des Plaines pipe farm and be tested during various weather conditions and various concentrations of natural gas.	Project kicked off in 2023. The final report was issued in February 2025.
23	Emissions	7.23.g	Investigate Feasibility of Pipeline Thermographic Internal Inspection for Leak Detection	GTI	The objective of this project is to evaluate the feasibility of a novel approach to leak detection by using infrared thermography within the pipeline.	Project kicked off in 2023. The final report was issued in September 2024.
24	Emissions	7.23.h	GeoTeknica Optical Laser Gas Imager Monitor	GTI	The objective of this project is to evaluate and assist in technical guidance in the development of GeoTeknica's gas imaging technology. GeoTeknica is in the early stage of technology development of a novel low-cost, high sensitivity gas imager for use in continuous monitoring applications.	Project kicked off in 2023. The final report was issued in April 2025.
25	Emissions	7.23.m	Technology for Advanced Natural Gas Detectors	GTI	The objective of this project is to investigate technology for the next generation of "Advanced" Natural Gas Detector (NGD) devices. Sensors capable of detecting multiple species of gas or specific gases at lower concentrations will be investigated. This work supports the development and acceptance of advanced indoor NGD technology along with the development of new industry standards (such as NFPA 715) and provides an opportunity for the development of products that will improve safety for the natural gas industry.	Project kicked off in 2023. The project testing is underway. Some delays have occurred due to a broken sensor in the field. The sensor has been replaced. The project is expected to conclude in Q3 2025.
26	Emissions	7.23.n	Satellite Methane Detection for Distribution Applications	GTI	The objective of this project is to iInvestigate the state of satellite technology and advanced analytics, with a specific focus on applicability to distribution and transmission use cases. Extensive literature reviews, discussions with academics, and field testing will provide foundational knowledge for addressing questions about satellite leak detection for LDCs.	Project kicked off in 2023. The project is slated to be completed in 2025.

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Item	Net-zero Topic	Project #	Project Name	Research Org.	Project Description	Status
27	Emissions	7.23.o	Methane Detection Technology – Regulation Equivalence Testing	GTI	To develop a protocol to evaluate leak detection technologies on a common benchmark, highlighting functional differences and comparing effectiveness. Equivalence testing of various technologies will provide an understanding of detection effectiveness and of performance comparisons, despite equipment variations. The protocol will aim to be agnostic across various detection technologies.	Project kicked of in 2023. The final report was issued in December 2024.
28	Emissions	7.24.b	NPRM ALDP Performance Rule 5ppm at 5 feet Evaluation	GTI	GTI Energy will look analyze areas of planned residential growth to predict natural gas reduction usage based on state-mandated regulations. Current gas usage will be compared to model-simulated declines over time in relation to defined areas of growth and new development. Results from these calculations will be supplied to participating sponsors.	Project kicked off in 2024. Field test data collection planning completed. The project has two LDCs participating with field data. The final report is slated to be issued in April 2026.
29	Emissions	7.24.c	Near Field Fixed Monitoring	GTI	To evaluate the use of fixed methane monitors for leak detection to be located near potential high flow locations on above ground equipment.	Project kicked off in February 2024. The final report was issued in June 2024.
30	Emissions	7.24.d	Advanced Leak Detection Program (ALDP) Tiered Survey Framework	GTI	Define an initial framework of tiered layers of leak survey methods and their capability. Identify gaps in knowledge required to formulate and structure the framework. This project will be a series of projects over time to fill knowledge gaps and to establish a computational model to study leak survey performance tradeoffs.	Project kicked off in Q1 2024 and is slated to be completed in Q3 2026. It is presently in the literature review stage.
31	Emissions	8.23.f	Developing Routing Solution for Leak Survey	GTI	The objective of this project is to evaluate current technology or the development of a new solution for conducting repeat existing leak surveys or the assignment and routing to previously identified natural gas leaks. The logic needed for leak survey assignment and routing will be derived based on a utility's existing methods and systems for routing their walking or driving leak surveys with the focus on enhancement and efficiency. Leak classification levels, expiration dates on previous leak surveys, and spatial proximity of leak investigation crews to these lines and leaks will also be factored in for efficient routing purposes.	Project kicked off in 2023. The final report was issued in September 2024.

Appendix 1
Transmission Pipelines

SOUTHWEST GAS CORPORATION, JUNE 13, 2025

Rulemaking (R.) 15-01-008 to Adopt Rules and Procedures Governing Commission Regulated Natural Gas Pipelines and Facilities to Reduce Natural Gas Leaks Consistent with Senate Bill 1371, Leno. In Response to Data Request, R15-01-008 - 2025 June Report.

Appendix 1; Rev. 03/27/2025

Notes:
Emissions included in the Report are based on miles of transmission pipeline. Therefore provide the miles of transmission pipeline in your system here.
The following data on transmission pipeline leaks is **for information purposes** and will not be used to report transmission pipeline leak emissions this year.
Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.
At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange.

Transmission Pipeline Leaks:

ID	Geographic Location	Pipe Material	Pipe Size (nominal)	Pipe Age (months)	Pressure (psi)	Leak Grade	Above Ground or Below Ground	Discovery Date (MM/DD/YY)	Repair Date (MM/DD/YY)	Scheduled Repair Date (MM/DD/YY)	Reason for Not Scheduling a Repair	Number of Days Leaking	Emission Factor (Mscf/Day)	Annual Emissions (Mscf)	Explanatory Notes / Comments
Southwest Gas did not have any Transmission Pipeline Leaks in 2024.															

Total	0

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Appendix 1; Rev. 03/27/2025

Notes:

Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.

At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange

Transmission Pipeline Damage (3rd party dig-ins, natural disasters, etc.):

ID	Geographic Location	Damage Type	Pipe Material	Pipe Size (nominal)	Pipe Age (months)	Pressure (psi)	Leak Grade	Above Ground or Below Ground	Discovery Date (MM/DD/YY)	Repair Date (MM/DD/YY)	Number of Days Leaking	Emission Factor (Mscf/Day)	Annual Emissions (Mscf)	Explanatory Notes / Comments

Southwest Gas did not have any damages on Transmission Pipelines in 2024.

Total	0

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Appendix 1; Rev. 03/27/2025

Notes:
Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.
At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange.
The emissions reported under the column Methane Abatement (Mscf) are for information purposes only, and should be seperated from the emissions reported under the column for Annual Emissions (Mscf).

Transmission Pipeline Blowdowns:

ID	Geographic Location	Number of Blowdown Events	Reason	Emission Reduction Strategy	Annual Emissions (Mscf)	Explanatory Notes / Comments	Methane Abatement (Mscf)
Southwest Gas did not have any blowdowns on Transmission pipelines in 2024.							
					Total	**0**	

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Appendix 1; Rev. 03/27/2025

Notes:
Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.
At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange
The emissions captured on this tab represent the emissions associated with the operational design and function of the component. Any intential release of natural gas for safety or maintenance purposes should be included in the Blowdowns worksheet.

Transmission Pipeline Component Vented Emissions:

Total Number of Devices	Device Type	Bleed Rate	Manufacturer	Emission Factor (Mscf/day)	Annual Emission (Mscf)	Explanatory Notes / Comments

Southwest Gas did not have any Transmission pipeline component vented emissions in 2024.

Total	0

SOUTHWEST GAS CORPORATION, JUNE 13, 2025

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Appendix 1; Rev. 03/27/2025

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Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.
At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange
The emissions captured on this tab represent the emissions associated unintentional leaks that if repaired would not leaking. If the component is releasing gas or "bleeding" as a result of its design or function then it is not to be captured in this tab.

Transmission Pipeline Component Fugitive Leaks:

ID	Geographic Location	Device Type	Bleed Rate	Manufacturer	Discovery Date (MM/DD/YY)	Repair Date (MM/DD/YY)	Number of Days Leaking	Emission Factor (Mscf/day)	Annual Emission (Mscf)	Explanatory Notes / Comments
Southwest Gas did not have any Transmission pipeline component fugitive emissions in 2024.										
								Total	0	

SOUTHWEST GAS CORPORATION, JUNE 13, 2025

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Notes:
Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.
At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange.

Transmission Pipeline Odorizers:

ID	Geographic Location	Number of Units	Emission Factor (Mscf/yr)	Annual Emission (Mscf)	Explanatory Notes / Comments
Southwest Gas did not have any Odorizer Emissions to report for 2024.					
			Total	**0**	

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Appendix 2
Transmission M&R Stations

SOUTHWEST GAS CORPORATION, JUNE 13, 2025

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Appendix 2; Rev. 03/27/2025

Notes:
Utilities that are submitting leaker-based emissions have the option of not filling out this worksheet.
Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.
At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange.
Facilities emissions that are based on a population count times an emission factor (See Appendix 9 for guidance).

Transmission M&R Station Total Leaks and Emissions:

Number of Stations	Station Classification	Emission Factor (Mscf/yr)	Annual Emission (Mscf)	Explanatory Notes / Comments
7	T	1554.800	10883.60	Appendix 9 Emission Factor

Total **10883.60**

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In Response to Data Request, R15-01-008 - 2025 June Report.

Appendix 2; Rev. 03/27/2025

Note:

Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.

At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange.

Transmission M&R Station Blowdowns:

ID	Geographic Location	Number of Blowdown Events	Annual Emissions (Mscf)	Explanatory Notes / Comments
12TR15007210	92347	3	1.613	2 Inspections & 1 Maintenance
12TS10023140	92392	3	1.613	2 Inspection & 1 Maintenance
12TS15007090	92392	1	0.538	1 Inspection
12TS15007091	92392	1	0.538	1 Inspection
12TS15007094	92307	3	1.613	2 Inspection & 1 Maintenance
12TS15010691	92356	3	1.613	2 Inspection & 1 Maintenance
12TS15010692	92301	1	0.538	1 Inspections
		Total	**8.066**	

SOUTHWEST GAS CORPORATION, JUNE 13, 2025

Rulemaking (R.) 15-01-008 to Adopt Rules and Procedures Governing Commission Regulated Natural Gas Pipelines and Facilities to Reduce Natural Gas Leaks Consistent with Senate Bill 1371, Leno. In Response to Data Request, R15-01-008 - 2025 June Report.
Appendix 2; Rev. 03/27/2025

Notes:

The data collected on this sheet is for informational purposes and may not be included in the emissions inventory for 2023. The worksheet is designed to track actual emissions for future reference and to determine if an actual leak based emission accounting is feasible for M&R stations.

Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.

At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange.

The emissions captured on this tab represent the emissions associated with the operational design and function of the component. Any intentional release of natural gas for safety or maintenance purposes should be included on the Blowdowns worksheet.

Transmission M&R Station Component Vented Emissions:

ID	Geographic Location	Station Classification	Device Type	Bleed Rate	Manufacturer	Number of Days Emitting	Annual Emissions (Mscf)	Explanatory Notes / Comments
12TS10023140	92395	A3	O	L	SpectraSensor	365	17.52	Manufacturer's based Estimate of Emissions (1-2 cubic Feet per hour: 2 ft^3/hr * 24hrs/day * 365 days = 17,520 ft^3)
12TR15007210	92311	A3	O	L	SpectraSensor	365	17.52	Manufacturer's based Estimate of Emissions (1-2 cubic Feet per hour: 2 ft^3/hr * 24hrs/day * 365 days = 17,520 ft^3)
						Total	**35.04**	

SOUTHWEST GAS CORPORATION, JUNE 13, 2025

Rulemaking (R.) 15-01-008 to Adopt Rules and Procedures Governing Commission Regulated Natural Gas Pipelines and Facilities to Reduce Natural Gas Leaks Consistent with Senate Bill 1371, Leno. In Response to Data Request, R15-01-008 - 2025 June Report.
Appendix 2; Rev. 03/27/2025

Notes:

The data collected on this sheet is for informational purposes and may not be included in the emissions inventory for 2023. The worksheet is designed to track actual leaks for future reference and to determine if an actual leak based emission accounting is feasible for M&R stations.

Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.
At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange.

The emissions captured on this tab represent the emissions associated with unintentional leaks that if repaired would not be leaking. If the component is releasing gas or "bleeding" as a result of its design or function, then it is not to be captured in this tab.

Transmission M&R Station Component Fugitive Leaks:

ID	Geographic Location	Station Classification	Device Type	Bleed Rate	Manufacturer	Discovery Date (MM/DD/YY)	Repair Date (MM/DD/YY)	Number of Days Leaking	Emission Factor (Mscf/day/dev)	Annual Emissions (Mscf)	Explanatory Notes / Comments
Southwest Gas did not have any Transmission M&R station component fugitive leaks in 2024.											
									Total	0	

Appendix 3
Transmission Compressor Stations

SOUTHWEST GAS CORPORATION, JUNE 14, 2025
Rulemaking (R.) 15-01-008 to Adopt Rules and Procedures Governing Commission Regulated Natural Gas Pipelines and Facilities to Reduce Natural Gas Leaks Consistent with Senate Bill 1371, Leno. In Response to Data Request, R15-01-008 - 2025 June Report.
Appendix 3; Rev. 03/27/2025

Notes:
Enter either the initials of the facility to be included in the "ID" column or the name be provided along with the zip code in the "Geographic Location."
Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.
At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange.
The emissions captured on this tab represent the emissions associated with the operational design and function of the compressor. Any intentional release of natural gas for safety or maintenance purposes should be included on the Blowdowns worksheet.

Use these EF columns as well as the columns for the Compressor Measurements noted in Columns R thru AB when they are applicable. If the data is not captured by the operator, then add a note explaining why the applicable measurement data was not recorded or available in the Explanatory Notes / Comments column.

If no measurements are taken in 2024, then enter N/A

The Columns P through AB were added to the template and should be used for the indicated measured compressor emissions, which include Centrifugal compressors in accordance with OGR and your operating practice.

For the 2024 data reporting of compressor vented emissions:
Where more than one measurement was taken during the year (e.g. after a maintenance cycle*, monthly, or quarterly), use the measured EF multiplied by the activity hours that occurred during the corresponding period. For example, if the compressor measurement was taken quarterly, then the measured EF should be multiplied by the activity hours that occurred in the respective quarter, and the same for more frequent measurments (e.g. monthly, weekly etc.). For each compressor devote one row per measurement period (see example provided). In the case of a single annual measurement EF, then that EF would apply to the activity hours for each respective mode for the entire year (which is consistent with prior year reporting practice).

*** If a measurement is taken after a maintenance cycle and no other measurements were taken during the remainder of the year, then use this measured EF for the activity hours occurring after the measurement date thru 12/31/xx. The activity hours prior to the maintenance of the compressor from the beginning of the year should use the previously measured EF, even if the EF was measured in the prior year.**

Transmission Compressor Vented Emissions:

ID	Geographic Location	Compressor Type	Prime Mover	Number of Cylinders	Number of Seals	Seal Type	Measurement Frequency	Emission Factor: Measurement Date - Pressurized Operations	Operating Mode: Pressurized Operating (hours)	Operating Mode: Pressurized Idle (hours)	Operating Mode: Depressurized Idle (hours)	Operating Mode: Offline (Hours)	Emission Factor: Pressurized Operating(scf/hr)	Emission Factor: Pressurized Idle (scf/hr)	Emission Factor: Depressurized Idle (scf/hr)	Emission Factor: Offline (scf/hr)	Emission Factor: Pressurized Operating - Rod Packing (scf/hr)	Emission Factor: Pressurized Operating - Blowdown Valve (scf/hr)	Emission Factor: Pressurized Operating - Wet Seal Oil Degassing Vent (scf/hr)	Emission Factor: Pressurized Operating - Wet Seal (scf/hr)	Emission Factor: Pressurized Operating - Dry Seal (scf/hr)	Emission Factor: Pressurized Idle - Rod Packing (scf/hr)	Emission Factor: Pressurized Idle - Blowdown Valve (scf/hr)	Emission Factor: Pressurized Idle - Wet Seal Oil Degassing Vent (scf/hr)	Emission Factor: Pressurized Idle - Wet Seal (scf/hr)	Emission Factor: Pressurized Idle - Dry Seal (scf/hr)	Emission Factor: Pressurized Idle Isolation Valve (scf/hr)	Annual Emissions (Mscf)	Explanatory Notes / Comments
Southwest Gas does not have any Transmission Compressor Stations in its California services territories.																													

Total -

SOUTHWEST GAS CORPORATION, JUNE 14, 2025

Rulemaking (R.) 15-01-008 to Adopt Rules and Procedures Governing Commission Regulated Natural Gas Pipelines and Facilities to Reduce Natural Gas Leaks Consistent with Senate Bill 1371, Leno.

In Response to Data Request, R15-01-008 - 2025 June Report.

Appendix 3; Rev. 03/27/2025

Notes:

Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.

At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange.

Transmission Compressor Station Blowdowns:

ID	Geographic Location	Number of Blowdown Events	Annual Emissions (Mscf)	Explanatory Notes / Comments

Southwest Gas does not have any Transmission Compressor Stations in its California services territories.

Total **0**

SOUTHWEST GAS CORPORATION, JUNE 14, 2025

Rulemaking (R.) 15-01-008 to Adopt Rules and Procedures Governing Commission Regulated Natural Gas Pipelines and Facilities to Reduce Natural Gas Leaks Consistent with Senate Bill 1371, Leno.

In Response to Data Request, R15-01-008 - 2025 June Report.

Appendix 3; Rev. 03/27/2025

Notes:

Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.

At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange.

The emissions captured on this tab represent the emissions associated with the operational design and function of the component. Any intentional release of natural gas for safety or maintenance purposes should be included on the Blowdowns worksheet.

Transmission Compressor Station Component Vented Emissions:

Quantity	Geographic Location	Device Type	Bleed Rate	Manufacturer	Engineering or Manufacturer's based Estimate of Emissions	Annual Emissions (Mscf)	Explanatory Notes / Comments

Southwest Gas does not have any Transmission Compressor Stations in its California services territories.

Total	**-**

SOUTHWEST GAS CORPORATION, JUNE 14, 2025

Rulemaking (R.) 15-01-008 to Adopt Rules and Procedures Governing Commission Regulated Natural Gas Pipelines and Facilities to Reduce Natural Gas Leaks Consistent with Senate Bill 1371, Leno.In Response to Data Request, R15-01-008 - 2025 June Report.
Appendix 3; Rev. 03/27/2025

Notes:
The number of days leaking may be more than 365 days due to including the estimation function of the leak occurring at half the number of days between the prior survey date and the discovery date.
Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.
At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange.
The emissions captured on this tab represent the emissions associated unintentional leaks that if repaired would not leaking. If the component is releasing gas or "bleeding" as a result of its design or function then it is not
Please include emissions from leaks found with concentrations below 10,000ppm, and add them in the total emissions column. Please use the associated emission factors provided in Appendix 9, Emission Factors.

Transmission Compressor Station: Compressor and Component Fug 12/31/24 01/01/24

ID	Geographic Location	Facility/Device Type	Emission Factor: Mscf/day/dev	Manufacturer	Discovery Date (MM/DD/YY)	Repair Date (MM/DD/YY)	Prior Survey Date (MM/DD/YY)	Number of Days Leaking	Annual Emissions (Mscf)	Explanatory Notes / Comments
Southwest Gas does not have any Transmission Compressor Stations in its California services territories.										

Total -

SOUTHWEST GAS CORPORATION, JUNE 14, 2025

Rulemaking (R.) 15-01-008 to Adopt Rules and Procedures Governing Commission Regulated Natural Gas Pipelines and Facilities to Reduce Natural Gas Leaks Consistent with Senate Bill 1371, Leno.

In Response to Data Request, R15-01-008 - 2025 June Report.

Appendix 3; Rev. 03/27/2025

Notes:

Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.

At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange.

Transmission Compressor Station Storage Tank Emissions:

Total Number	Discovery Date (DD/MM/YY)	Repair Date (DD/MM/YY)	Number of Days Emitting	Emission Factor (Mscf/yr)	Annual Emissions (Mscf)

Southwest Gas does not have any Transmission Compressor Stations in its California service territories.

Total	-

Appendix 4
Distribution Mains and Services

SOUTHWEST GAS CORPORATION, JUNE 13, 2025
Rulemaking (R.) 15-01-008 to Adopt Rules and Procedures Governing Commission Regulated Natural Gas Pipelines and Facilities to Reduce Natural Gas Leaks Consistent with Senate Bill 1371, Leno. In Response to Data Request, R15-01-008, 2025 June Report.
Appendix 4; Rev. 03/27/2025

Notes:
Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.
At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange.
If all the mains and services are not surveyed annually, use the tab "Unsurveyed Pipeline Leaks" to estimate emissions.
Do not record above ground MSA leaks on this tab. Use Appendix 6 instead. Do continue to list above ground leaks associated with the Distribution Main & Services pipeline system.
After completing the tab on "Pipeline Leaks" and "Unsurveyed Pipeline Leaks," fill in the table for "Pipeline Leak Summary."

Distribution Main & Service Pipeline Leaks:

Note: No change to O&M leak duration for this reporting year.

ID	Geographic Location	Pipe Classification	Pipe Material	Pipe Size (nominal)	Pipe Age (months)	Pressure (psi)	Leak Grade	Upgraded Leak Grade or Downgraded Leak Grade	Above Ground or Below Ground	Leak Discovery Method	Discovery Date (MM/DD/YY)	Re-Grade Date (MM/DD/YY)	Repair Date (MM/DD/YY)	Scheduled Repair Date (MM/DD/YY)	Reason for Not Scheduling a Repair	Number of Days Leaking	Number of Days to Repair	Emission Factor (Mscf/Day)	Annual Emissions (Mscf)	Explanatory Notes / Comments
4777878	92395	DB	P	1/2"	438	60	2	N/A	B	S	12/18/2023	N/A	1/12/2024	N/A	N/A	12	26	0.0089	0.1068	
4773380	92345	MB	P	2"	36	60	3	N/A	B	S	12/4/2023	N/A	4/10/2024	N/A	N/A	101	129	0.2988	30.1788	
																	Subtotal Emissions from leaks carried over from before 2024		**30.29**	
4925508	96150	MB	PC	6"	113	35	3	N/A	B	S	7/10/2024	N/A	8/13/2024	N/A	N/A	226	35	0.0612	13.83	
4893837	96145	DB	P	1"	125	43	3	N/A	B	s	6/18/2024	N/A	6/18/2024	N/A	N/A	170	1	0.0089	1.51	
4812765	92345	DB	P	1"	573	40	1	N/A	B	S	2/23/2024	N/A	2/23/2024	N/A	N/A	54	1	0.0089	0.4806	
4865694	92315	MB	P	2"	313	40	2	N/A	B	S	5/21/2024	N/A	5/28/2024	N/A	N/A	149	8	0.2988	44.5212	
4932395	92307	MB	P	2"	493	60	2	N/A	B	S	10/7/2024	N/A	10/7/2024	N/A	N/A	281	1	0.2988	83.9628	
4970303	92308	MB	P	2"	542	40	3	N/A	B	S	12/27/2024	N/A	12/27/2024	N/A	N/A	362	1	0.2988	108.1656	
																	Subtotal Emissions from leaks discovered in 2024		**252.47**	
4858708	96150	DB	PC	3/4"	UNK	35	1	N/A	B	M	5/7/2024	N/A	5/7/2024	N/A	N/A	128	1	0.0276	3.53	
4875326	96150	DB	P	1"	52	35	2	N/A	B	M	5/9/2024	N/A	5/9/2024	N/A	N/A	130	1	0.0089	1.16	
4875247	96145	MB	P	1/2"	576	43	1	N/A	B	M	6/3/2024	N/A	6/3/2024	N/A	N/A	155	1	0.2998	46.47	
4878008	96145	DB	P	1/2"	369	43	1	N/A	B	M	6/4/2024	N/A	6/4/2024	N/A	N/A	156	1	0.0089	1.39	
4877928	96161	DB	P	1/2"	356	60	1	N/A	B	M	6/11/2024	N/A	6/11/2024	N/A	N/A	163	1	0.0089	1.45	
4881646	96145	MB	PC	2"	722	225	3	N/A	B	M	1/1/2024	N/A	6/20/2024	N/A	N/A	172	172	0.0612	10.53	
4857864	96161	MB	P	6"	186	60	3	N/A	B	M	5/6/2024	N/A	6/27/2024	N/A	N/A	179	53	0.2998	53.66	
4912912	96145	DB	P	1/2"	369	43	1	N/A	B	M	8/30/2024	N/A	8/30/2024	N/A	N/A	243	1	0.0089	2.16	
4821946	92394	DB	P	1/2"	537	40	1	N/A	B	M	1/2/2024	N/A	1/2/2024	N/A	N/A	1	1	0.0089	0.0089	
4786938	92345	DB	P	1/2"	395	40	1	N/A	B	M	1/2/2024	N/A	1/2/2024	N/A	N/A	1	1	0.0089	0.0089	
4802068	92395	DB	P	1/2"	359	40	1	N/A	B	M	1/9/2024	N/A	1/9/2024	N/A	N/A	1	1	0.0089	0.0089	
4791044	92345	DB	P	1/2"	390	60	1	N/A	B	M	1/11/2024	N/A	1/11/2024	N/A	N/A	1	1	0.0089	0.0089	
4791181	92308	DB	P	1/2"	434	35	1	N/A	B	M	1/14/2024	N/A	1/14/2024	N/A	N/A	1	1	0.0089	0.0089	
4792878	92311	DB	P	1/2"	560	40	1	N/A	B	M	1/17/2024	N/A	1/17/2024	N/A	N/A	1	1	0.0089	0.0089	
4795760	92311	MB	PC	3/4"	742	40	1	N/A	B	M	1/19/2024	N/A	1/19/2024	N/A	N/A	1	1	0.0612	0.0612	
4794673	92395	DB	P	1/2"	512	40	1	N/A	B	M	1/20/2024	N/A	1/20/2024	N/A	N/A	1	1	0.0089	0.0089	
4801520	92345	DB	P	1"	19	60	1	N/A	B	M	1/30/2024	N/A	1/30/2024	N/A	N/A	1	1	0.0089	0.0089	
4807933	92307	DB	P	1"	76	40	1	N/A	B	M	2/15/2024	N/A	2/15/2024	N/A	N/A	1	1	0.0089	0.0089	
4819629	92345	DB	P	1/2"	428	40	1	N/A	B	M	2/29/2024	N/A	2/29/2024	N/A	N/A	1	1	0.0089	0.0089	
4823171	92392	MB	P	2"	314	60	1	N/A	B	M	3/11/2024	N/A	3/11/2024	N/A	N/A	1	1	0.2988	0.2988	
4824042	92308	MB	P	2"	215	40	3	N/A	B	M	3/12/2024	N/A	3/12/2024	N/A	N/A	1	1	0.2988	0.2988	
4859690	92345	DB	P	1/2"	546	40	3	N/A	B	M	1/24/2024	N/A	3/25/2024	N/A	N/A	62	62	0.0089	0.5518	
4830312	92395	MB	P	1"	520	40	2	N/A	B	M	3/28/2024	N/A	3/28/2024	N/A	N/A	1	1	0.2988	0.2988	
4837828	92301	DB	P	1"	365	60	1	N/A	B	M	4/8/2024	N/A	4/8/2024	N/A	N/A	1	1	0.0089	0.0089	
4837940	92395	DB	P	1/2"	395	40	1	N/A	B	M	4/9/2024	N/A	4/9/2024	N/A	N/A	1	1	0.0089	0.0089	
4847650	92395	MB	P	4"	400	60	1	N/A	B	M	4/22/2024	N/A	4/22/2024	N/A	N/A	1	1	0.2988	0.2988	
4847634	92307	DB	P	1/2"	364	40	1	N/A	B	M	4/23/2024	N/A	4/23/2024	N/A	N/A	1	1	0.0089	0.0089	
4848275	92308	MB	P	2"	265	35	1	N/A	B	M	4/24/2024	N/A	4/24/2024	N/A	N/A	1	1	0.2988	0.2988	
4861718	92307	MB	P	2"	268	40	3	N/A	B	M	4/3/2024	N/A	4/25/2024	N/A	N/A	23	23	0.2988	6.8724	
4829295	92307	DB	P	1/2"	545	40	3	N/A	B	M	3/26/2024	N/A	4/25/2024	N/A	N/A	31	31	0.0089	0.2759	
4857218	92307	MB	P	2"	399	40	3	N/A	B	M	4/30/2024	N/A	4/30/2024	N/A	N/A	1	1	0.2988	0.2988	
4850511	92315	DB	P	1/2"	259	40	1	N/A	B	M	4/30/2024	N/A	4/30/2024	N/A	N/A	1	1	0.0089	0.0089	
4896640	92395	MB	P	2"	429	40	3	N/A	B	M	5/1/2024	N/A	5/1/2024	N/A	N/A	1	1	0.2988	0.2988	
4858362	92392	DB	P	1/2"	415	40	1	N/A	B	M	5/7/2024	N/A	5/7/2024	N/A	N/A	1	1	0.0089	0.0089	
4845270	92395	MB	P	2"	500	40	2	N/A	B	M	4/16/2024	N/A	5/9/2024	N/A	N/A	24	24	0.2988	7.1712	
4861267	92308	DB	P	1/2"	551	40	1	N/A	B	M	5/9/2024	N/A	5/9/2024	N/A	N/A	1	1	0.0089	0.0089	
4882706	92314	DB	P	1"	223	40	1	N/A	B	M	5/14/2024	N/A	5/14/2024	N/A	N/A	1	1	0.0089	0.0089	
4863003	92307	MB	PC	4"	817	40	3	N/A	B	M	5/15/2024	N/A	5/15/2024	N/A	N/A	1	1	0.0612	0.0612	
4858829	92307	MB	P	2"	562	40	3	N/A	B	M	5/8/2024	N/A	5/22/2024	N/A	N/A	15	15	0.2988	4.482	
4867910	92307	MB	P	2"	562	40	3	N/A	B	M	5/15/2024	N/A	5/22/2024	N/A	N/A	8	8	0.2988	2.3904	
4867250	92307	DB	P	1/2"	226	40	1	N/A	B	M	5/23/2024	N/A	5/23/2024	N/A	N/A	1	1	0.0089	0.0089	
4868216	92345	DB	P	1/2"	223	60	1	N/A	B	M	5/28/2024	N/A	5/28/2024	N/A	N/A	1	1	0.0089	0.0089	
4876463	92345	DB	P	1/2"	452	40	1	N/A	B	M	6/6/2024	N/A	6/6/2024	N/A	N/A	1	1	0.0089	0.0089	
4876248	92314	DB	P	1/2"	260	40	1	N/A	B	M	6/6/2024	N/A	6/6/2024	N/A	N/A	1	1	0.0089	0.0089	
4882937	92311	DB	P	1/2"	325	40	1	N/A	B	M	6/10/2024	N/A	6/10/2024	N/A	N/A	1	1	0.0089	0.0089	
4878395	92308	DB	P	1/2"	274	40	1	N/A	B	M	6/13/2024	N/A	6/13/2024	N/A	N/A	1	1	0.0089	0.0089	
4879553	92315	DB	P	1/2"	385	40	1	N/A	B	M	6/17/2024	N/A	6/17/2024	N/A	N/A	1	1	0.0089	0.0089	
4883608	92345	MB	P	2"	2	40	1	N/A	B	M	6/25/2024	N/A	6/25/2024	N/A	N/A	1	1	0.2988	0.2988	
4884424	92392	MB	P	2"	380	60	1	N/A	B	M	6/27/2024	N/A	6/27/2024	N/A	N/A	1	1	0.2988	0.2988	
4884384	92301	MB	P	2"	370	60	1	N/A	B	M	6/27/2024	N/A	6/27/2024	N/A	N/A	1	1	0.2988	0.2988	
4975553	92314	DB	P	1/2"	276	40	1	N/A	B	M	6/30/2024	N/A	6/30/2024	N/A	N/A	1	1	0.0089	0.0089	
4888604	92307	MB	P	2"	538	40	1	N/A	B	M	7/1/2024	N/A	7/1/2024	N/A	N/A	1	1	0.2988	0.2988	
4888827	92307	MB	P	2"	267	40	3	N/A	B	M	7/2/2024	N/A	7/2/2024	N/A	N/A	1	1	0.2988	0.2988	
4889215	92311	DB	P	1"	44	40	1	N/A	B	M	7/3/2024	N/A	7/3/2024	N/A	N/A	1	1	0.0089	0.0089	
4889935	92311	DB	P	1/2"	483	40	1	N/A	B	M	7/7/2024	N/A	7/7/2024	N/A	N/A	1	1	0.0089	0.0089	
4891537	92314	MB	P	2"	537	40	1	N/A	B	M	7/11/2024	N/A	7/11/2024	N/A	N/A	1	1	0.2988	0.2988	
4892137	92301	DB	P	1/2"	268	60	1	N/A	B	M	7/14/2024	N/A	7/14/2024	N/A	N/A	1	1	0.0089	0.0089	
4935068	92315	DB	P	1/2"	351	40	1	N/A	B	M	7/17/2024	N/A	7/17/2024	N/A	N/A	1	1	0.0089	0.0089	

Distribution Main & Service Pipeline Leaks:

Note: No change to O&M leak duration for this reporting year.

ID	Geographic Location	Pipe Classification	Pipe Material	Pipe Size (nominal)	Pipe Age (months)	Pressure (psi)	Leak Grade	Upgraded Leak Grade or Downgraded Leak Grade	Above Ground or Below Ground	Leak Discovery Method	Discovery Date (MM/DD/YY)	Re-Grade Date (MM/DD/YY)	Repair Date (MM/DD/YY)	Scheduled Repair Date (MM/DD/YY)	Reason for Not Scheduling a Repair	Number of Days Leaking	Number of Days to Repair	Emission Factor (Mscf/Day)	Annual Emissions (Mscf)	Explanatory Notes / Comments
4894322	92301	DB	P	1/2"	390	60	1	N/A	B	M	7/18/2024	N/A	7/18/2024	N/A	N/A	1	1	0.0089	0.0089	
4889740	92395	DB	P	1"	470	40	2	N/A	B	M	7/4/2024	N/A	7/19/2024	N/A	N/A	16	16	0.0089	0.1424	
4897719	92307	DB	P	1/2"	509	60	1	N/A	B	M	7/30/2024	N/A	7/30/2024	N/A	N/A	1	1	0.0089	0.0089	
4902739	92308	DB	P	1/2"	381	40	1	N/A	B	M	8/5/2024	N/A	8/5/2024	N/A	N/A	1	1	0.0089	0.0089	
4912272	92395	MB	P	2"	52	40	3	N/A	B	M	7/19/2024	N/A	8/7/2024	N/A	N/A	20	20	0.2988	5.976	
4904095	92386	DB	P	1"	513	40	1	N/A	B	M	8/8/2024	N/A	8/8/2024	N/A	N/A	1	1	0.0089	0.0089	
4904287	92308	DB	P	1"	205	40	1	N/A	B	M	8/9/2024	N/A	8/9/2024	N/A	N/A	1	1	0.0089	0.0089	
4906975	92395	DB	P	1/2"	243	40	1	N/A	B	M	8/17/2024	N/A	8/17/2024	N/A	N/A	1	1	0.0089	0.0089	
4910270	92395	MB	P	2"	218	60	1	N/A	B	M	8/23/2024	N/A	8/23/2024	N/A	N/A	1	1	0.2988	0.2988	
4910898	92307	DB	P	1/2"	459	40	1	N/A	B	M	8/26/2024	N/A	8/26/2024	N/A	N/A	1	1	0.0089	0.0089	
4918777	92345	DB	P	1"	486	40	1	N/A	B	M	9/3/2024	N/A	9/4/2024	N/A	N/A	2	2	0.0089	0.0178	
4922454	92308	DB	P	1/2"	304	40	1	N/A	B	M	9/15/2024	N/A	9/15/2024	N/A	N/A	1	1	0.0089	0.0089	
4922511	92308	DB	P	1/2"	226	40	1	N/A	B	M	9/15/2024	N/A	9/15/2024	N/A	N/A	1	1	0.0089	0.0089	
4923238	92392	DB	P	1"	517	40	3	N/A	B	M	9/17/2024	N/A	9/17/2024	N/A	N/A	1	1	0.0089	0.0089	
4924486	92315	DB	P	1/2"	268	40	1	N/A	B	M	9/19/2024	N/A	9/19/2024	N/A	N/A	1	1	0.0089	0.0089	
4926249	92315	DB	P	1/2"	539	40	1	N/A	B	M	9/23/2024	N/A	9/23/2024	N/A	N/A	1	1	0.0089	0.0089	
4926615	92301	MB	P	2"	474	60	3	N/A	B	M	9/24/2024	N/A	9/24/2024	N/A	N/A	1	1	0.2988	0.2988	
4926376	92301	DB	P	1/2"	474	60	1	N/A	B	M	9/24/2024	N/A	9/24/2024	N/A	N/A	1	1	0.0089	0.0089	
4927162	92395	MB	P	1"	532	40	1	N/A	B	M	9/25/2024	N/A	9/25/2024	N/A	N/A	1	1	0.2988	0.2988	
4927792	92314	DB	P	1/2"	456	40	1	N/A	B	M	9/27/2024	N/A	9/27/2024	N/A	N/A	1	1	0.0089	0.0089	
4928455	92315	DB	P	1/2"	460	40	1	N/A	B	M	9/28/2024	N/A	9/28/2024	N/A	N/A	1	1	0.0089	0.0089	
4930823	92392	DB	P	1/2"	452	60	1	N/A	B	M	10/1/2024	N/A	10/1/2024	N/A	N/A	1	1	0.0089	0.0089	
4930864	92345	DB	P	1/2"	458	40	1	N/A	B	M	10/2/2024	N/A	10/2/2024	N/A	N/A	1	1	0.0089	0.0089	
4928405	92395	DB	P	1"	538	40	2	N/A	B	M	9/30/2024	N/A	10/3/2024	N/A	N/A	4	4	0.0089	0.0356	
4933215	92345	DB	P	1/2"	339	40	1	N/A	B	M	10/5/2024	N/A	10/5/2024	N/A	N/A	1	1	0.0089	0.0089	
4932241	92395	DB	P	1"	203	40	1	N/A	B	M	10/7/2024	N/A	10/7/2024	N/A	N/A	1	1	0.0089	0.0089	
4933042	92314	DB	P	1/2"	277	40	1	N/A	B	M	10/8/2024	N/A	10/8/2024	N/A	N/A	1	1	0.0089	0.0089	
4933621	92308	DB	P	1"	2	40	1	N/A	B	M	10/9/2024	N/A	10/9/2024	N/A	N/A	1	1	0.0089	0.0089	
4963447	92308	DB	P	1/2"	326	40	2	N/A	B	M	9/30/2024	N/A	10/16/2024	N/A	N/A	17	17	0.0089	0.1513	
4937128	92315	DB	P	1"	442	40	1	N/A	B	M	10/16/2024	N/A	10/16/2024	N/A	N/A	1	1	0.0089	0.0089	
4938520	92311	DB	P	1/2"	296	40	1	N/A	B	M	10/18/2024	N/A	10/18/2024	N/A	N/A	1	1	0.0089	0.0089	
4938184	92311	DB	P	1/2"	273	40	1	N/A	B	M	10/21/2024	N/A	10/21/2024	N/A	N/A	1	1	0.0089	0.0089	
4938592	92308	DB	P	1/2"	241	35	1	N/A	B	M	10/21/2024	N/A	10/21/2024	N/A	N/A	1	1	0.0089	0.0089	
4939664	92398	MB	P	2"	157	40	1	N/A	B	M	10/24/2024	N/A	10/24/2024	N/A	N/A	1	1	0.2988	0.2988	
4940217	92395	DB	P	1"	204	40	1	N/A	B	M	10/28/2024	N/A	10/28/2024	N/A	N/A	1	1	0.0089	0.0089	
4944414	92395	MB	P	2"	379	60	3	N/A	B	M	11/5/2024	N/A	11/5/2024	N/A	N/A	1	1	0.2988	0.2988	
4945562	92395	DB	P	1/2"	489	40	1	N/A	B	M	11/10/2024	N/A	11/10/2024	N/A	N/A	1	1	0.0089	0.0089	
4952515	92308	MB	P	2"	528	40	3	N/A	B	M	11/5/2024	N/A	11/14/2024	N/A	N/A	10	10	0.2988	2.988	
4951959	92301	DB	P	1/2"	397	60	1	N/A	B	M	11/15/2024	N/A	11/15/2024	N/A	N/A	1	1	0.0089	0.0089	
4964981	92392	MB	P	2"	409	60	3	N/A	B	M	12/4/2024	N/A	12/5/2024	N/A	N/A	2	2	0.2988	0.5976	
4963464	92392	MB	P	2"	418	60	3	N/A	B	M	12/9/2024	N/A	12/10/2024	N/A	N/A	2	2	0.2988	0.5976	
4976457	92308	MB	P	2"	255	40	3	N/A	B	M	12/11/2024	N/A	12/11/2024	N/A	N/A	1	1	0.2988	0.2988	
4912208	92311	MB	PC	2"	823	40	3	N/A	B	M	8/29/2024	N/A	12/12/2024	N/A	N/A	106	106	0.0612	6.4872	
4939787	92308	MB	P	2"	542	40	3	N/A	B	M	10/25/2024	N/A	12/13/2024	N/A	N/A	50	50	0.2988	14.94	
4969386	92392	DB	P	1/2"	216	40	1	N/A	B	M	12/21/2024	N/A	12/21/2024	N/A	N/A	1	1	0.0089	0.0089	
4970606	92308	DB	P	1/2"	470	40	1	N/A	B	M	12/27/2024	N/A	12/27/2024	N/A	N/A	1	1	0.0089	0.0089	
4970265	92392	MB	P	2"	425	60	1	N/A	B	M	12/27/2024	N/A	12/27/2024	N/A	N/A	1	1	0.2988	0.2988	
4968066	92392	MB	P	2"	508	40	3	N/A	B	M	12/18/2024	N/A	12/31/2024	N/A	N/A	14	14	0.2988	4.1832	

Subtotal Emissions from O&M Leaks discovered in 2024 **184.84**

Grand Total of all 2024 emissions from leaks 467.60

SOUTHWEST GAS CORPORATION, JUNE 13, 2025

Rulemaking (R.) 15-01-008 to Adopt Rules and Procedures Governing Commission Regulated Natural Gas Pipelines and Facilities to Reduce Natural Gas Leaks Consistent with Senate Bill 1371, Leno. In Response to Data Request, R15-01-008, 2025 June Report.

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Notes:

Please show the calculation for determining the total emissions. If additional worksheets are necessary, please include those to show intermediate calculations, such as the formula for the Risk-Based Survey Method.
Definitions in Data Request R15-01-008, 2025 June Report
If highlighted cells are filled in, the other cells will auto-populate
The number of miles surveyed (Column C) should be the number of unique miles surveyed, and should not include any repeated miles surveyed multiple times per year.
To clarify the the definition of O&M Leaks (Column O), the following criteria for O&M Leaks should be met: (1) occur stochastically across the whole territory, (2) are reported by customers, (3) found quickly after occurring, (4) found independently of survey activities but would have been found later by surveyors, and (5) considered a small number of leaks.
To clarify the the definition of Survey Leaks (Column G), the following criteria for Survey Leaks should be met: (1) found from company employees or contractors actively searching for leaks (2) including, but not limited to, compliance survey leaks and non-compliance survey leaks (e.g. Super Emitter Programs, Aerial Methane Mapping, Corrosion Surveying.)

Summary of Data by Pipeline Facility/Material and Results for Annual System Leak Rate and Resulting Number of Unknown Leaks for Each Pipeline Facility/Material

Facility/Material	Total System Miles per material type	Miles on Annual Survey [$M_{X,A}$]	Miles on Multi-Year Survey Cycles [M_X^{Tot}]	Survey Interval (yrs) [I]	Miles Surveyed Annually from Multi-Year Survey Cycles [$M_{X,I}$]	Total # of Leaks Detected from Survey [$N_{X,L}$]	If using a 3-year trailing leak rate average then include - 2022 Annual Leak Rate [$R_{X,1}$]	If using a 3-year trailing leak rate average then include - 2023 Annual Leak Rate	2024 Annual Leak Rate [$R_{X,3}$] $R_{X,3} = \frac{N_{X,L}}{M_{X,A} + (I \times M_{X,I})}$	If applicable, then calculate the 3-year Average Leak Rate [Leaks / Mile / Yr] $\overline{R_X} = \frac{1}{3}\sum_{i=1}^{3} R_{X,i}$	# of Unknown Leaks $N_{X,unk} = \overline{R_X} \times (M_X^{Tot} - M_{X,I}) \times \frac{I}{2}$	Total # of Leaks Detected from O&M* [$N_{X,O}$]
Main/Vintage* Plastic	0.017	0.017	0.000	1	0.00	0	0.0000	0.0000	-	-	-	
Main/Plastic	2,751.393	211.879	2,539.514	3	858.40	4	0.003	0.002	0.00144	0.00209	5.28	32
Main/Plastic				4			0.000	0.000	-	-	-	
Main/Plastic				5			0.000	0.000	-	-	-	
Main/Unprotected Steel				3			0.000	0.000	-	-	-	
Main/Unprotected Steel				4			0.000	0.000	-	-	-	
Main/Unprotected Steel				5			0.000	0.000	-	-	-	
Main/Vintage* Protected Steel	158.614	154.814	3.800	1	1.50	0	0.000	0.000	-	-	-	1
Main/Protected Steel	346.897	124.466	222.431	3	163.92	1	0.003	0.009	0.00162	0.00448	0.39	3
Main/Protected Steel				4			0.000	0.000	-	-	-	
Main/Protected Steel				5			0.000	0.000	-	-	-	
Service/Vintage* Plastic				1			0.000	0.000	-	-	-	
Service/Plastic	2,433.919	128.586	2,305.333	3	844.61	2	0.004	0.0005	0.00075	0.00170	3.72	69
Service/Plastic				4			0.000	0.000	-	-	-	
Service/Plastic				5			0.000	0.000	-	-	-	
Service/Unprotected Steel				3			0.000	0.000	-	-	-	
Service/Unprotected Steel				4			0.000	0.000	-	-	-	
Service/Unprotected Steel				5			0.000	0.000	-	-	-	
Service/Vintage* Protected Steel				1			0.000	0.000	-	-	-	
Service/Protected Steel	114.190	9.626	104.564	3	18.20	1	0.023	0.024	0.01557	0.02099	2.72	1
Service/Protected Steel				4			0.000	0.000	-	-	-	
Service/Protected Steel				5			0.000	0.000	-	-	-	
Service/Copper				3			0.000	0.000	-	-	-	
Service/Copper				4			0.000	0.000	-	-	-	
Service/Copper				5			0.000	0.000	-	-	-	
Total	**5,805.030**	**629.388**	**5,175.642**	**N/A**	**1,886.63**	**8**	N/A	N/A		**N/A**	**12**	**106**

***Definitions for "vintage" materials:**

Vintage Plastic	For SWG this is PVP and AA Pipe
Vintage Protected Steel	For SWG this is Pre-70's High Pressure Steel

Estimated Emissions by Pipeline Facility/Material for Each Leakage Category

Leakage Category / Facility/Material	Emission Factor (Mscf/day/leak)	2024 Emissions from Leaks detected Prior to 2024 (Mscf)	2024 Emissions from Leaks Detected from 2024 Survey (Mscf)	2024 Emissions from O&M* Leaks Detected in 2024 (Mscf)	2024 Estimated Emissions from Unknown Leaks (Mscf)	Total Estimated 2024 Emissions from Distribution Pipelines (Mscf)	Show calculations
Main/Vintage* Plastic	0.2988				0.00	0.00	
Main/Plastic	0.2988	30.18	236.65	156.31	575.48	998.62	{Sum of leaks per facility and material type [(# of days leaking) x (emission factor/day)] } + [# of UNK leaks* 365 days*emissions factor]
Main/Plastic	0.2988				0.00	0.00	
Main/Plastic	0.2988				0.00	0.00	
Main/Unprotected Steel	0.1548				0.00	0.00	
Main/Unprotected Steel	0.1548				0.00	0.00	
Main/Unprotected Steel	0.1548				0.00	0.00	
Main/Vintage* Protected Steel	0.0612				0.00	0.00	
Main/Protected Steel	0.0612	0.00	13.84	17.14	8.79	39.76	{Sum of leaks per facility and material type [(# of days leaking) x (emission factor/day)] } + [# of UNK leaks* 365 days*emissions factor]
Main/Protected Steel	0.0612				0.00	0.00	
Main/Protected Steel	0.0612				0.00	0.00	
Service/Vintage* Plastic	0.0089				0.00	0.00	

Estimated Emissions by Pipeline Facility/Material for Each Leakage Category

Leakage Category / Facility/Material	Emission Factor (Mscf/day/leak)	2024 Emissions from Leaks detected Prior to 2024 (Mscf)	2024 Emissions from Leaks Detected from 2024 Survey (Mscf)	2024 Emissions from O&M* Leaks Detected in 2024 (Mscf)	2024 Estimated Emissions from Unknown Leaks (Mscf)	Total Estimated 2024 Emissions from Distribution Pipelines (Mscf)	Show calculations
Service/Plastic	0.0089	0.11	1.99	7.86	12.08	22.04	{Sum of leaks per facility and material type [(# of days leaking) x (emission factor/day)] } + [# of UNK leaks* 365 days*emissions factor]
Service/Plastic	0.0089				0.00	0.00	
Service/Plastic	0.0089				0.00	0.00	
Service/Unprotected Steel	0.0600				0.00	0.00	
Service/Unprotected Steel	0.0600				0.00	0.00	
Service/Unprotected Steel	0.0600				0.00	0.00	
Service/Vintage* Protected Steel	0.0276				0.00	0.00	
Service/Protected Steel	0.0276	0.00	0.00	3.53	27.39	30.93	{Sum of leaks per facility and material type [(# of days leaking) x (emission factor/day)] } + [# of UNK leaks* 365 days*emissions factor]
Service/Protected Steel	0.0276				0.00	0.00	
Service/Protected Steel	0.0276				0.00	0.00	
Service/Copper	0.0226				0.00	0.00	
Service/Copper	0.0226				0.00	0.00	
Service/Copper	0.0226				0.00	0.00	
Total	**N/A**	**30.29**	**252.48**	**184.84**	**623.75**	**1,091.35**	

O&M leaks include any other pipeline leaks that are discovered during the year from operations and maintenance activity, third party and gas odor reports, etc. that are not accounted for in other categories of this worksheet.

The cells below should be used for calculating emissions when a risk based leak detection and repair practice is used by the Utility. This table is intended to help categorize emissions associated with large leaks (Super Emitters (SEs)), and non-large leaks (non-SEs).

Southwest Gas does not utilize a risk based leak detection and repair practice.

	2024 Emissions from Leaks detected Prior to 2024	2024 Emissions from Leaks Detected from 2024	2024 Emissions from O&M* Leaks Detected in	2024 Estimated Emissions from Unknown Leaks (Mscf)	Total Estimated 2024 Emissions from
	0.00	**0.00**	**0.00**	**0.00**	**0.00**

Large Leak Emitter Program						
Compliance Leak Survey - Non-LL					-	**Southwest Gas does not have a Large Leak Emitter Program.**
Compliance Leak Survey - LL					-	
Large Leak Emitter Program Outside Compliance Area - Non-LL					-	
Large Leak Emitter Program Outside Compliance Area - LL					-	
O&M - Non-LL					-	
O&M - LL					-	
TOTAL	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	

Please Provide the following:	Total Count
The portion of the survey mileage that includes mileage that is surveyed multiple times per year. Repeated mileage will not be accounted for in the unknown leak calculation.	0

SOUTHWEST GAS CORPORATION, JUNE 13, 2025

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The designated fields highlighted yellow are optional.
This summary purposefully should exclude damages, blowdowns, component emissions and component leaks.

	Count of Leaks Carried over from Prior Year	Count of Leaks Discovered in the Year of Interest	Count of Leaks Repaired in the Year of Interest	Average Days to Repair Leaks	Count of Estimated Unsurveyed Leaks in the Year of Interest	Count of Remaining Leaks at final day of the Year of Interest (12/31/24)	Emissions from Leaks Carried over from Prior Year.	Emissions from Leaks Discovered in the Year of Interest.	Emissions from Estimated Unsurveyed Leaks in the Year of Interest	Total Emissions in the Year of Interest [Mscf of Natural Gas]
Grade 1	-	78	78	1	8	0.00	0.00	59.68	432.15	491.82
Grade 2	1	8	9	11	1	0.00	0.11	137.45	47.90	185.45
Grade 3	1	26	27	28	3	0.00	30.18	240.20	143.70	414.07
Graded Leak Total	2	112	114		12	0.00	30.29	437.32	623.75	1091.35
Above Ground Hazardous	0	0	0	0	0	0	0	0	0	0
Above Ground Non-Hazardous	0	0	0	0	0	0	0	0	0	0
Above Ground Non-Hazardous Minor	0	0	0	0	0	0	0	0	0	0
AG Total	0	0	0	0	0	0	0	0	0	0
Total of All Leaks	**2**	**112**	**114**		**12**	**0**	**30.29**	**437.32**	**623.75**	**1,091.35**
Main/Plastic	1	35	36	10.58	3	0	30.18	392.96	193.36	616.50
Main/Unprotected Steel	0	0	0	0.00	0	0	0.00	0.00	0.00	0.00
Main/Protected Steel	0	5	5	63.00	1	0	0.00	30.97	31.19	62.16
Service/Plastic	1	71	72	3.10	7	0	0.11	9.85	393.95	403.91
Service/Unprotected Steel	0	0	0	0.00	0	0	0.00	0.00	0.00	0.00
Service/Protected Steel	0	1	1	1.00	1	0	0.00	3.54	5.24	8.78
Service/Copper	0	0	0	0	0	0	0.00	0.00	0.00	0.00
Total	2	112	114		12	0	30.29	437.32	623.74	1091.35

Large Leak or Super Emitter Program Categorization										
Compliance Leak Survey - Non-LL										
Compliance Leak Survey - LL										
Large Leak/Super Emitter Program Outside Compliance Area - Non-LL										
Large Leak/Super Emitter Program Outside Compliance Area - LL										
O&M - Non-LL										
O&M - LL										
TOTAL										
Change Due to LL/SE Program on 2024:										
% Change Due to LL/SE Program on 2024:										

Southest Gas does not have a Large Leak/Super Emitter Program.

SOUTHWEST GAS CORPORATION, JUNE 13, 2025

Rulemaking (R.) 15-01-008 to Adopt Rules and Procedures Governing Commission Regulated Natural Gas Pipelines and Facilities to Reduce Natural Gas Leaks Consistent with Senate Bill 1371, Leno. In Response to Data Request, R15-01-008, 2025 June Report.

Appendix 4; Rev. 03/27/2025

Notes:
Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.
At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange.

Distribution Main & Service Pipeline Damage (3rd party dig-ins, natural disasters, etc.):

ID	Geographic Location	Damage Type	Pipe Classification	Pipe Material	Pipe Size (nominal)	Pipe Age (months)	Pressure (psi)	Leak Grade	Above Ground or Below Ground	Discovery Date (MM/DD/YY)	Repair Date (MM/DD/YY)	Number of Days Leaking	Emission Factor or Engineering Estimate (Mscf/Day)	Annual Emissions (Mscf)	Explanatory Notes / Comments
4953772	96143	E	DB	P	1/2"	539	43	1	B	11/21/2024	11/21/2024	1	0.24	0.24	Engineering Estimate
4945483	96143	E	DB	P	1/2"	296	43	1	B	11/11/2024	11/11/2024	1	0.03	0.03	Engineering Estimate
4934261	96150	E	DB	P	1/2"	381	60	1	B	10/11/2024	10/11/2024	1	0.00	0.00	Engineering Estimate
4933534	96150	E	DB	P	1/2"	UNK	35	1	B	10/9/2024	10/9/2024	1	1.85	1.85	Engineering Estimate
4977028	96150	E	DB	P	3/4"	308	35	1	B	9/23/2024	9/23/2024	1	1.62	1.62	Engineering Estimate
4928232	96143	E	MB	PC	4"	734	43	1	B	9/23/2024	9/23/2024	1	74.55	74.55	Engineering Estimate
4922770	96150	E	DB	P	1/2"	478	35	1	B	9/16/2024	9/16/2024	1	1.10	1.10	Engineering Estimate
4910438	96161	E	DB	P	1"	174	60	1	B	8/23/2024	8/23/2024	1	1.02	1.02	Engineering Estimate
4906059	96161	E	DB	P	1/2"	588	60	1	B	8/15/2024	8/15/2024	1	0.07	0.07	Engineering Estimate
4904932	96150	E	DB	P	1"	308	60	1	B	8/13/2024	8/13/2024	1	2.29	2.29	Engineering Estimate
4904995	96148	E	DB	P	1"	430	43	1	B	8/13/2024	8/13/2024	1	9.10	9.10	Engineering Estimate
4902194	96150	E	DB	P	1/2"	186	60	1	B	8/2/2024	8/2/2024	1	0.01	0.01	Engineering Estimate
4896706	96161	E	DB	P	1/2"	308	60	1	B	7/25/2024	7/25/2024	1	0.15	0.15	Engineering Estimate
4895787	96140	E	DB	P	1/2"	381	43	1	B	7/23/2024	7/23/2024	1	0.15	0.15	Engineering Estimate
4891497	96145	E	DB	P	1/2"	588	43	1	B	7/11/2024	7/11/2024	1	0.39	0.39	Engineering Estimate
4890939	96143	E	DB	P	1/2"	174	43	1	B	7/9/2024	7/9/2024	1	0.01	0.01	Engineering Estimate
4879409	96140	E	DB	P	1/2"	406	43	1	B	6/17/2024	6/17/2024	1	0.77	0.77	Engineering Estimate
4877477	96160	E	DB	P	1"	320	35	1	B	6/11/2024	6/11/2024	1	1.24	1.24	Engineering Estimate
4868540	96145	E	DB	P	2"	357	43	1	B	5/28/2024	5/28/2024	1	0.64	0.64	Engineering Estimate
4863737	96145	E	DB	P	1/2"	576	43	1	B	5/16/2024	5/16/2024	1	0.01	0.01	Engineering Estimate
4863202	96161	E	DB	P	1/2"	321	60	1	B	5/15/2024	5/15/2024	1	0.04	0.04	Engineering Estimate
4862590	96161	E	DB	P	1/2"	357	60	1	B	5/3/2024	5/3/2024	1	1.07	1.07	Engineering Estimate
4848828	96143	E	DB	P	1/2"	588	43	1	B	4/25/2024	4/25/2024	1	0.23	0.23	Engineering Estimate
4912912	96142	O	DB	P	1/2"	369	43	1	B	8/30/2024	8/30/2024	1	2.79	2.79	Engineering Estimate
4786563	92394	E	DB	P	0.5	537	36	1	B	1/2/2024	1/2/2024	0.032	0.07	0.07	Engineering Estimate
4786938	92345	E	DB	P	0.5	395	37	1	B	1/2/2024	1/2/2024	0.022	0.95	0.95	Engineering Estimate
4802068	92395	E	DB	P	0.5	359	38	1	B	1/9/2024	1/9/2024	0.068	0.17	0.17	Engineering Estimate
4791181	92308	E	DB	P	0.5	434	31	1	B	1/14/2024	1/14/2024	0.033	1.36	1.36	Engineering Estimate
4794673	92395	E	DB	P	0.5	512	35	1	B	1/20/2024	1/20/2024	0.028	1.61	1.61	Engineering Estimate
4801520	92344	E	DB	P	1	19	36	1	B	1/30/2024	1/30/2024	0.032	1.84	1.84	Engineering Estimate
4792878	92311	E	DB	P	0.5	560	36	1	B	1/17/2024	1/17/2024	0.033	1.38	1.38	Engineering Estimate
4807933	92307	E	DB	P	1	76	38	1	B	2/15/2024	2/15/2024	0.030	10.34	10.34	Engineering Estimate
4819629	92345	E	DB	P	0.5	428	36	1	B	2/29/2024	2/29/2024	0.023	1.06	1.06	Engineering Estimate
4823171	92395	E	MB	P	2	314	55	1	B	3/11/2024	3/11/2024	0.052	4.17	4.17	Engineering Estimate
4837940	92395	E	DB	P	0.5	395	40	1	B	4/9/2024	4/9/2024	0.030	0.08	0.08	Engineering Estimate
4847634	92308	E	DB	P	0.5	557	34	1	B	4/23/2024	4/23/2024	0.028	1.25	1.25	Engineering Estimate
4847650	92392	E	MB	P	4	400	52	1	B	4/22/2024	4/22/2024	0.089	112.01	112.01	Engineering Estimate
4848275	92308	E	MB	P	2	265	30	1	B	4/24/2024	4/24/2024	0.025	5.10	5.10	Engineering Estimate
4850511	92315	E	DB	P	0.5	259	38	1	B	4/30/2024	4/30/2024	0.018	0.79	0.79	Engineering Estimate
4838411	92311	E	DB	P	1	41	40	1	B	4/8/2024	4/8/2024	0.011	0.00	0.00	Engineering Estimate
4858362	92392	E	DB	P	0.5	415	40	1	B	5/7/2024	5/7/2024	0.038	0.10	0.10	Engineering Estimate
4863145	92314	E	DB	P	1	223	34	1	B	5/14/2024	5/14/2024	0.019	7.65	7.65	Engineering Estimate
4867250	92307	E	DB	P	0.5	226	40	1	B	5/23/2024	5/23/2024	0.035	5.08	5.08	Engineering Estimate
4868216	92345	E	DB	P	0.5	223	40	1	B	5/28/2024	5/28/2024	0.019	1.12	1.12	Engineering Estimate
4876248	92314	E	DB	P	0.5	260	40	1	B	6/6/2024	6/6/2024	0.003	0.00	0.00	Engineering Estimate
4876463	92345	E	DB	P	0.5	452	40	1	B	6/6/2024	6/6/2024	0.033	0.50	0.50	Engineering Estimate
4877167	92311	E	DB	P	0.5	325	36	1	B	6/10/2024	6/10/2024	0.002	0.10	0.10	Engineering Estimate
4879553	92315	E	DB	P	0.5	385	40	1	B	6/17/2024	6/17/2024	0.015	0.78	0.78	Engineering Estimate
4878395	92308	E	DB	P	0.5	274	32	1	B	6/13/2024	6/13/2024	0.027	0.36	0.36	Engineering Estimate
4883608	92345	E	MB	P	2	2	38	1	B	6/25/2024	6/25/2024	0.044	62.40	62.40	Engineering Estimate
4884860	92314	E	DB	P	0.5	276	38	1	B	6/30/2024	6/30/2024	0.028	0.00	0.00	Engineering Estimate
4884424	92392	E	MB	P	2	380	55	1	B	6/27/2024	6/27/2024	0.034	10.83	10.83	Engineering Estimate
4884384	92301	E	MB	P	2	370	60	1	B	6/27/2024	6/27/2024	0.021	7.35	7.35	Engineering Estimate
4889935	92311	E	DB	P	0.5	483	40	1	B	7/7/2024	7/7/2024	0.052	3.43	3.43	Engineering Estimate
4888604	92307	E	MB	P	2	91	34	1	B	7/1/2024	7/1/2024	0.023	0.84	0.84	Engineering Estimate
4889215	92311	E	DB	P	0.75	44	36	1	B	7/3/2024	7/3/2024	0.033	1.99	1.99	Engineering Estimate
4891537	92314	E	MB	P	2	537	38	1	B	7/11/2024	7/11/2024	0.019	16.45	16.45	Engineering Estimate
4892137	92301	E	DB	P	0.5	268	56	1	B	7/14/2024	7/14/2024	0.044	2.79	2.79	Engineering Estimate
4897719	92307	E	DB	P	0.5	509	58	1	B	7/30/2024	7/30/2024	0.026	2.30	2.30	Engineering Estimate

Distribution Main & Service Pipeline Damage (3rd party dig-ins, natural disasters, etc.):

ID	Geographic Location	Damage Type	Pipe Classification	Pipe Material	Pipe Size (nominal)	Pipe Age (months)	Pressure (psi)	Leak Grade	Above Ground or Below Ground	Discovery Date (MM/DD/YY)	Repair Date (MM/DD/YY)	Number of Days Leaking	Emission Factor or Engineering Estimate (Mscf/Day)	Annual Emissions (Mscf)	Explanatory Notes / Comments
4895246	92314	E	DB	P	0.5	351	38	1	B	7/17/2024	7/17/2024	0.007	0.55	0.55	Engineering Estimate
4894322	92301	E	DB	P	0.5	355	52	1	B	7/18/2024	7/18/2024	0.028	1.42	1.42	Engineering Estimate
4902739	92308	E	DB	P	0.5	347	36	1	B	8/5/2024	8/5/2024	0.016	0.23	0.23	Engineering Estimate
4902499	92345	E	DB	PB	0.75	237	40	1	B	8/4/2024	8/4/2024	0.033	5.51	5.51	Engineering Estimate
4904095	92386	E	DB	P	1	516	40	1	B	8/8/2024	8/8/2024	0.014	5.91	5.91	Engineering Estimate
4904287	92307	E	DB	P	1	277	35	1	B	8/9/2024	8/9/2024	0.035	0.32	0.32	Engineering Estimate
4906975	92395	E	DB	P	0.5	243	38	1	B	8/17/2024	8/17/2024	0.042	3.20	3.20	Engineering Estimate
4910270	92392	E	MB	P	2	218	52	1	B	8/23/2024	8/23/2024	0.029	52.03	52.03	Engineering Estimate
4910898	92308	E	DB	P	0.5	459	40	1	B	8/26/2024	8/26/2024	0.028	1.06	1.06	Engineering Estimate
4922511	92307	E	DB	P	0.5	226	38	1	B	9/15/2024	9/15/2024	0.027	1.27	1.27	Engineering Estimate
4924486	92315	E	DB	P	0.5	268	40	1	B	9/19/2024	9/19/2024	0.010	0.00	0.00	Engineering Estimate
4922454	92308	E	DB	P	0.5	304	34	1	B	9/15/2024	9/15/2024	0.035	3.25	3.25	Engineering Estimate
4918777	92345	E	DB	P	1	486	34	1	B	9/4/2024	9/4/2024	0.042	0.38	0.38	Engineering Estimate
4926249	92315	E	DB	P	0.5	473	36	1	B	9/23/2024	9/23/2024	0.003	0.01	0.01	Engineering Estimate
4926376	92301	E	DB	P	0.5	472	60	1	B	9/24/2024	9/24/2024	0.035	6.76	6.76	Engineering Estimate
4927792	92314	E	DB	P	0.5	456	36	1	B	9/27/2024	9/27/2024	0.015	0.04	0.04	Engineering Estimate
4928455	92315	E	DB	P	0.5	444	38	1	B	9/28/2024	9/28/2024	0.026	1.33	1.33	Engineering Estimate
4930864	92345	E	DB	P	0.5	458	38	1	B	10/2/2024	10/2/2024	0.019	0.05	0.05	Engineering Estimate
4930823	92392	E	DB	P	0.5	453	38	1	B	10/1/2024	10/1/2024	0.036	2.16	2.16	Engineering Estimate
4932241	92395	E	DB	P	1	203	36	1	B	10/7/2024	10/7/2024	0.015	8.14	8.14	Engineering Estimate
4933215	92345	E	DB	P	0.5	339	34	1	B	10/5/2024	10/5/2024	0.031	1.41	1.41	Engineering Estimate
4933042	92314	E	DB	P	0.5	277	38	1	B	10/8/2024	10/8/2024	0.013	0.19	0.19	Engineering Estimate
4933621	92308	E	DB	P	1	2	40	1	B	10/9/2024	10/9/2024	0.020	0.00	0.00	Engineering Estimate
4937128	92315	E	DB	P	1	388	38	1	B	10/16/2024	10/16/2024	0.008	3.49	3.49	Engineering Estimate
4938592	92308	E	DB	P	0.5	241	35	1	B	10/21/2024	10/21/2024	0.022	0.86	0.86	Engineering Estimate
4938520	92311	E	DB	P	0.5	284	40	1	B	10/18/2024	10/18/2024	0.019	0.60	0.60	Engineering Estimate
4939664	92398	E	MB	P	2	157	40	1	B	10/24/2024	10/24/2024	0.032	20.46	20.46	Engineering Estimate
4940217	92395	E	DB	P	1	204	36	1	B	10/28/2024	10/28/2024	0.026	14.76	14.76	Engineering Estimate
4938184	92311	E	DB	P	0.5	273	40	1	B	10/21/2024	10/21/2024	0.084	0.22	0.22	Engineering Estimate
4945562	92394	E	DB	P	0.5	489	37	1	B	11/10/2024	11/10/2024	0.110	0.27	0.27	Engineering Estimate
N/A	92301	E	DB	PB	0.75	260	60	1	B	11/10/2024	11/10/2024	0.019	0.15	0.15	Engineering Estimate
4951959	92301	E	DB	P	0.5	371	52	1	B	11/15/2024	11/15/2024	0.035	0.00	0.00	Engineering Estimate
4961738	92301	E	DB	P	0.75	368	58	1	B	12/2/2024	12/2/2024	0.032	0.25	0.25	Engineering Estimate
4969386	92394	E	DB	P	0.5	216	40	1	B	12/21/2024	12/21/2024	0.020	18.77	18.77	Engineering Estimate
4970606	92308	E	DB	P	0.5	470	38	1	B	12/27/2024	12/27/2024	0.056	0.83	0.83	Engineering Estimate
4970265	92392	E	MB	P	2	425	54	1	B	12/27/2024	12/27/2024	0.085	4.39	4.39	Engineering Estimate
													Total	**525.87**	

SOUTHWEST GAS CORPORATION, JUNE 13, 2025

Rulemaking (R.) 15-01-008 to Adopt Rules and Procedures Governing Commission Regulated Natural Gas Pipelines and Facilities to Reduce Natural Gas Leaks Consistent with Senate Bill 1371, Leno. In Response to Data Request, R15-01-008 2025 June Report.

Appendix 4; Rev. 03/27/2025

Notes:

Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.

At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange.

Distribution Main & Service Pipeline Blowdowns:

ID	Geographic Location	Number of Blowdown Events	Pipe Size (nominal)	Length of Pipe	Pressure (psi)	Annual Emissions (Mscf)	Explanatory Notes / Comments	
	92363		1"	616	55	0.0136	GHG Report	New pipe installation - 10 Blowdown events were estimated
			2"	4	55	0.0004		
	92363		1"	8	55	0.0007	GHG Report	Riser purges - 8 estimated blowdown events
	92363		2"	4	55	0.0004	GHG Report	Main blowdowns - 2 blowdown events
	96145, 96161, 96150		1"	1717	52	0.0362	GHG Report	New riser purges - 673 Blowdown events were estimated
			1"	8835	52	0.1863		
			1"	3518	52	0.0742		
			2"	641	52	0.0599		
			2"	2004	52	0.1872		
			2"	1109	52	0.1036		
			4"	87	52	0.0292		
	96145, 96161, 96150		1"	3733	52	0.0783	GHG Report	Service Blowdowns - 435 Blowdown events were estimated for service, Post Leak + Reg Station Maintenance blowdowns
			2"	3	52	0.0003		
			3/4"	853	52	0.0143		
			1"	2491	52	0.0523		
			2"	3	52	0.0003		
			3/4"	11	52	0.0002		
			1"	4138	52	0.0868		
			2"	21	52	0.0020		
			3/4"	3732	52	0.0627		
	96145, 96161, 96150		3/4"	2	52	0.0000	GHG Report	Main Blowdowns - 11 pipeline blowdown events estimated for mains
			1"	2	52	0.0000		
			2"	4706	52	0.4808		
			4"	6	52	0.0024		
			6"	4	52	0.0030		
			1"	2	52	0.0000		
			2"	1	52	0.0001		
			4"	11	52	0.0044		
			6"	5	52	0.0037		
			3/4"	584	52	0.0098		
			2"	9512	52	0.9718		
			4"	898	52	0.3583		
			6"	24	52	0.0180		
			8"	344	52	0.5423		
			12"	42	52	0.1497		
	92395		1/2" PE	416	40	0.0017	GHG Report	New Pipe Purges - 1,097 Blowdown events were estimated
			1" PE	166333	40	2.8761		
			1.25" PE	0	40	0.0000		
			2" PE	128521	40	9.8480		
			4" PE	29108	40	8.0096		
			6" PE	18180	40	10.8438		
			3/4"STL	123	240	0.0079		
			1" STL	0	240	0.0000		
			2" STL	152	240	0.0540		
			4" STL	23	240	0.0352		
			6" STL	7058	217	22.3208		
			8" STL	1022	240	6.1523		
			1/2" PE	11	40	0.0000		Service Blowdowns - 2,172 Blowdown events were
			1" PE	136408	40	2.3587		

Distribution Main & Service Pipeline Blowdowns:

ID	Geographic Location	Number of Blowdown Events	Pipe Size (nominal)	Length of Pipe	Pressure (psi)	Annual Emissions (Mscf)	Explanatory Notes / Comments	
	92395		2" PE	4503	40	0.3450	GHG Report	Service Blowdowns - 2,172 Blowdown events were estimated
			1" STL	2916	240	0.3033		
			2" STL	513	240	0.2071		
	92395		1/2" PE	0	40	0.0000	GHG Report	Main Blowdowns - 95 Blowdown events were estimated
			1" PE	4395	40	0.0760		
			2" PE	74258	40	5.6901		
			4" PE	7178	40	1.9751		
			1" STL	206	81	0.0080		
			2" STL	18752	56	2.1018		
			4" STL	13935	66	7.0967		
			8" STL	412	240	2.6495		
					Total	**86.494**		

SOUTHWEST GAS CORPORATION, JUNE 13, 2025

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Appendix 4; Rev. 03/27/2025

Notes:

Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.

At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange.

The emissions captured on this tab represent the emissions associated with the operational design and function of the component. Any intentional release of natural gas for safety or maintenance purposes should be included on the Blowdowns worksheet.

Distribution Main & Service Pipeline Component Vented Emissions (see note above):

Total Number of Devices	Device Type	Bleed Rate	Manufacturer	Engineering or Manufacturer's based Estimate of Emissions	Annual Emissions (Mscf)	Explanatory Notes / Comments

Southwest Gas did not have any Distribution Main & Service Pipeline Component vented emissions in 2024.

Total	**0.00**

SOUTHWEST GAS CORPORATION, JUNE 13, 2025

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Notes:

Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.

At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange.

The emissions captured on this tab represent the emissions associated unintentional leaks that if repaired would not leaking. If the component is releasing gas or "bleeding" as a result of its design or function then it is not to be

Distribution Main & Service Pipeline Component Fugitive Leaks (see note above):

Total Number of Devices	Device Type	Bleed Rate	Manufacturer	Discovery Date (MM/DD/YY)	Repair Date (MM/DD/YY)	Number of Days Leaking	Emission Factor (Mscf/day)	Annual Emission (Mscf)	Explanatory Notes / Comments
Southwest Gas did not have any Distribution Main & Service Pipeline Component fugitive leaks in 2024.									
							Total	**0.00**	

Appendix 5
Distribution M&R Stations

SOUTHWEST GAS CORPORATION, JUNE 13, 2025

Rulemaking (R.) 15-01-008 to Adopt Rules and Procedures Governing Commission Regulated Natural Gas Pipelines and Facilities to Reduce Natural Gas Leaks Consistent with Senate Bill 1371, Leno. In Response to Data Request, R15-01-008 2025 June Report.

Appendix 5; Rev. 03/27/2025

Notes:

Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.

At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange.

Distribution M&R Station Leaks and Emissions

Number of Stations	Station Classification	Emission Factor (Mscf/yr)	Annual Emissions (Mscf)	Explanatory Notes / Comments
44	A1	40.6	1786.40	Decreased number of stations from 49 in 2023 to 44 in 2024 due to abandonment of five stations
124	A2	896.5	111166.00	Increased number of stations from 122 in 2023 to 124 in 2024 as two new stations were installed.
34	A3	1684.5	57273.00	Decreased number of stations from 38 in 2023 to 24 in 2024 due to retirement of four stations
1	B1	0.964	0.96	No change year over year
13	B2	1.84	23.92	No change year over year
2	B3	12.176	24.35	No change year over year
		Total	**170274.64**	

SOUTHWEST GAS CORPORATION, JUNE 13, 2025
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Appendix 5; Rev. 03/27/2025

Notes:
Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.
At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange.
After completing the tab on "Leak Based - Station Emissions" and "Station - Unknown Leaks" fill in the table for "Leak Based - Emissions Summary."

Distribution M&R Station Leaks:

ID	Geographic Location	M&R Station or Farm Tap Classification	Component Type	Incoming Pressure (psi)	Leak Grade	Upgraded Leak Grade or Downgraded Leak Grade	Leak Discovery Method	Discovery Date (MM/DD/YY)	Re-Grade Date (MM/DD/YY)	Repair Date (MM/DD/YY)	Scheduled Repair Date (MM/DD/YY)	Reason for Not Scheduling a Repair	Number of Days Leaking	Number of Days to Repair	Emission Factor (Mscf/Day)	Annual Emissions (Mscf)	Explanatory Notes / Comments
Southwest Gas did not have any Distribution M&R Stations leaks carried over from prior to 2024.																	
														Subtotal Emissions from leaks carried over from before 2024		0.00	Provided as an example.
Southwest Gas did not discover any leaks during survey of Distribution M&R Stations in 2024.																	
														Subtotal Emissions from leaks discovered in 2024		0.00	Provided as an example.
Southwest Gas did not discover any O&M leaks on Distribution M&R Stations in 202																	
4906030	96150	B2	PC	119	3	N/A	O&M	8/13/2024	N/A	8/13/2024	N/A	N/A	1	1	2.46	2.46	Appendix 9 emissions factor used for above ground (100-300 psi)
														Subtotal Emissions from O&M Leaks discovered in 2024		2.46	Provided as an example.
														Grand Total of all 2024 emissions from leaks		2.46	Provided as an example.

SOUTHWEST GAS CORPORATION, JUNE 13, 2025

Rulemaking (R.) 15-01-008 to Adopt Rules and Procedures Governing Commission Regulated Natural Gas Pipelines and Facilities to Reduce Natural Gas Leaks Consistent with Senate Bill 1371, Leno. In Response to Data Request, R15-01-008 2025 June Report.

Appendix 5; Rev. 03/27/2025

Notes:
If highlighted cells are filled in, the other cells will auto-populate

Summary of Data by Distribution M&R Station Results for Annual System Leak Rate and Resulting Number of Unknown Leaks calculated for M&R Station

M&R Station Classification; Leak Grade or Bubble Size Category if available.	Total System M&R Station per survey Cycle	M&R Station on Annual Survey [MX,A]	M&R Station on Multi-Year Survey Cycles [MXTot]	Survey Interval (yrs) [*I*]	M&R Station Surveyed Annually from Multi-Year Survey Cycles [MX,I]	Total # of Leaks Detected from Survey [$N_{X,L}$]	Annual Leak Rate [Leaks / Meter] $R_X = \frac{N_{X,L}}{M_{X,A} + (I \times M_{X,I})}$	# of Unknown Leaks $N_{X,unk} = \overline{R_X} \times (M_X^{Tot} - M_{X,I}) \times \frac{I}{2}$	Total # of Leaks Detected from O&M* [$N_{X,O}$]	Southwest Gas inspects its Distribution M&R Stations Annually
Class 1 (Hazardous Leak)	218	218	0	1	0	0	-	-	0	
				3			-	-		
				5			-	-		
Class 3 (Non-Hazardous Leak)	218	218	0	1	0	0	-	-	1	
				3			-	-		
				5			-	-		
				1			-	-		
				3			-	-		
				5			-	-		
				1			-	-		
				3			-	-		
				5			-	-		
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				3			-	-		
				5			-	-		
				1			-	-		
				3			-	-		
				5			-	-		
				1			-	-		
				3			-	-		
				5			-	-		
Total	**218**	**218**	**0**	**N/A**	**0**	**0**		**0**	**1**	

Estimated Emissions by Leak Code

Leakage Category / Facility/Material	Emission Factor (Mscf/day/leak)	Emissions from Leaks Detected from Survey (Mscf)	Emissions from O&M* Leaks Detected (Mscf)	Estimated Emissions from Unknown Leaks (Mscf)	Total Estimated Emissions from Leaks (Mscf)
M&R Station Class 1 (Hazardous Leak)	0.0000	0	0	0	0.00
M&R Station Class 3 (Non-Hazardous Leak)	2.46	0	2.46	0	2.46
Total	**N/A**	**0.00**	**2.46**	**0.00**	**2.46**

SOUTHWEST GAS CORPORATION, JUNE 13, 2025

Rulemaking (R.) 15-01-008 to Adopt Rules and Procedures Governing Commission Regulated Natural Gas M&R Stations and Facilities to Reduce Natural Gas Leaks Consistent with Senate Bill 1371, Leno. In Response to Data Request, R15-01-008 2025 June Report. Appendix 5; Rev. 03/27/2025

This summary purposefully should exclude damages, blowdowns, component emissions and component leaks.

Grade if Applicable	Count of Leaks Carried over from Prior Year	Count of Leaks Discovered in the Year of Interest	Count of Leaks Repaired in the Year of Interest	Average Days to Repair Leaks	Count of Estimated Unsurveyed Leaks in the Year of Interest	Count of Remaining Leaks at final day of the Year of Interest (12/31/24)	Emissions from Leaks Carried over from Prior Year.	Emissions from Leaks Discovered in the Year of Interest.	Emissions from Estimated Unsurveyed Leaks in the Year of Interest	Total Emissions in the Year of Interest [Mscf of Natural Gas]
Grade A	0	0	0	0	0	0	0.00	0.00	0.00	0.00
Grade B	0	0	0	0	0	0	0.00	0.00	0.00	0.00
Grade C	0	0	0	0	0	0	0.00		0.00	0.00
Grade D	0	0	0	0	0	0	0.00	0.00	0.00	0.00
Above Ground Hazardous	0	0	0	0	0	0	0.00	0.00	0.00	0.00
Above Ground Non-Hazardous	0	1	1	1	0	0		2.46	0.00	2.46
Above Ground Non-Hazardous Minor	0	0	0	0		0	0.00	0.00	0.00	0.00
Graded Leak Total	0	1	1	1	0	0	0.00	2.46	0.00	2.46

SOUTHWEST GAS CORPORATION, JUNE 13, 2025

Rulemaking (R.) 15-01-008 to Adopt Rules and Procedures Governing Commission Regulated Natural Gas Pipelines and Facilities to Reduce Natural Gas Leaks Consistent with Senate Bill 1371, Leno. In Response to Data Request, R15-01-008 2025 June Report.

Appendix 5; Rev. 03/27/2025

Notes:
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At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange

Distribution M&R Station Damage (3rd party dig-ins, natural disasters, etc.):

ID	Geographic Location	Damage Type	Pipe Material	Pipe Size (nominal)	Pipe Age (months)	Pressure (psi)	Leak Grade	Above Ground or Below Ground	Discovery Date (MM/DD/YY)	Repair Date (MM/DD/YY)	Number of Days Leaking	Emission Factor (Mscf/Day)	Annual Emissions (Mscf)	Explanatory Notes / Comments

Southwest Gas did not have any damages to Distribution M&R Stations in 2024.

Total	0

SOUTHWEST GAS CORPORATION, JUNE 13, 2025

Rulemaking (R.) 15-01-008 to Adopt Rules and Procedures Governing Commission Regulated Natural Gas Pipelines and Facilities to Reduce Natural Gas Leaks Consistent with Senate Bill 1371, Leno. In Response to Data Request, R15-01-008 2025 June Report.

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Notes:

Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.

At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange

Distribution M&R Station Blowdowns:

ID	Geographic Location	Number of Blowdown Events	Annual Emissions (Mscf)	Explanatory Notes / Comments
19DS10027320	92363	1	0.131	Gas lost to flow and lock-up of Reg. Station during Inspection
19DS10028960	92363	1	0.131	Gas lost to flow and lock-up of Reg. Station during Inspection
19DS10029821	92363	1	0.131	Gas lost to flow and lock-up of Reg. Station during Inspection
19DS10029841	92363	1	0.131	Gas lost to flow and lock-up of Reg. Station during Inspection
19DS10030820	92363	1	0.131	Gas lost to flow and lock-up of Reg. Station during Inspection
19DSR5008310	92363	1	0.131	Pressure Relief Valve checked as apart of regulator maintenance - Average Pressure x Average Volume x # of inspections & Maintenance Activities
14DR10001561	96145	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
14DR10001567	96145	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
14DR10001569	96145	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
14DR15000502	96145	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
14DR15005488	96145	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
14DR15006870	96145	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
14DS10018882	96145	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
14DS10031220	96145	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
15DR10001574	96161	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
15DR10001575	96161	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
15DR10001577	96161	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
15DR10001572	96161	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
15DR10001573	96161	3	0.490	Gas loss to flow and lock-up of Reg. Station during Inspection+ two extra Inspections
15DR10001576	96161	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
15DS10026480	96161	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
15DS10026920	96161	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
16DM12230001	96150	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
16DM12230003	96150	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
16DM12230004	96150	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
16DM12230005	96150	1	0.614	Pressure Relief Valve checked as apart of regulator maintenance - Average Pressure x Average Volume x # of inspections & Maintenance Activities
16DS10009858	96150	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
16DS10009859	96150	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
16DS10009860	96150	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
14DS10020461	96145	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
16DS10009861	96150	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
16DS10009863	96150	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
16DS10009864	96150	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
16DS10026140	96150	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
16DS10026141	96150	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
16DS10008098	96150	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
16DR15000321	96150	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
16DR15003444	96150	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
16DS10027120	96150	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
11DM10000066	92311	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
11DM10000077	92347	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
11DM10000079	92327	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
11DM10000081	92311	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
11DM10000085	92311	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
11DM10000095	92311	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
11DM10000096	92311	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
11DM10000102	92311	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
11DM10000126	92311	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
11DR10000153	92327	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
11DR10000154	92311	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
11DR10000156	92311	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
11DR10000157	92311	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
11DR10000159	92327	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection

Gas lost to blowdowns from regulator maintenance

Q1 = D2P*0.372

Q = Cubic feet of gas per 1,000 feet of pipeline

D = Inside diameter of pipeline

P = Gauge pressure of gas expressed in lb/square inch

0.372 = Empirical constant

Gas lost to flow and lock-up of Reg. Station

Q2 = D2P1T/60

Q = volume of gas in Mcf/hr at a pressure of 14.9 psi, 60oF and a specific gravity of 0.60

D = diameter of the nipple or orifice in inches.

P = absolute pressure in lb/inches2 at some nearby point upstream from the opening.

T = length of blow off in minutes.

Overall gas released from M & R Station maintenance

Qoverall = Q1 + Q2

Engineering factor estimate for Appendix 5: Distribution M&R Station Blowdowns

Eng. Factor = Qoverall / Number of Reg. Stations

Distribution M&R Station Blowdowns:

ID	Geographic Location	Number of Blowdown Events	Annual Emissions (Mscf)	Explanatory Notes / Comments
11DR10000160	92327	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
11DR10000161	92327	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
11DR10000162	92327	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
11DR10000165	92311	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
11DR10000166	92311	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
11DR10000167	92311	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
11DR10000168	92311	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
11DR10000169	92311	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
11DR10000170	92347	2	0.326	1 Gas lost to flow and lock-up of Reg. Station during Inspection & 1 Maintenance
11DR10000172	92311	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
11DR10000174	92347	3	0.489	1 Gas lost to flow and lock-up of Reg. Station during Inspection & 2 Maintenance
11DR10000175	92311	2	0.326	1 Gas lost to flow and lock-up of Reg. Station during Inspection & 1 Maintenance
11DR10000257	92311	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
11DR10000259	92311	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
11DS10026421	92311	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
11DS10026442	92311	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
11DS10027340	92327	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
11DS10028860	92311	2	0.326	Gas lost to flow and lock-up of Reg. Station during Inspection
11DS10029800	92327	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
11DS10029940	92327	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
11DS15015370	92311	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DM10000064	92345	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DM10000069	92394	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DM10000087	92308	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DM10000089	92308	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DM10000091	92356	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DM10000092	92345	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DM10000093	92308	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DM10000100	92345	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DM10000140	92395	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DM10000141	92395	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DM10000143	92395	2	0.326	1 Gas lost to flow and lock-up of Reg. Station during Inspection & 1 Maintenance
12DM10000144	92395	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DM10000146	92395	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DM10000233	92395	3	0.489	1 Gas lost to flow and lock-up of Reg. Station during Inspection & 2 Maintenance
12DM10000261	92345	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DM10000263	92395	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DM15006750	92392	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000003	92038	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000004	92308	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000005	92038	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000006	92308	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000007	92308	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000009	92356	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000010	92356	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000011	92356	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000012	92356	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000019	92308	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000020	92308	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000023	92308	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000024	92308	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000025	92308	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000027	92345	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000028	92345	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000031	92345	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000033	92345	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000034	92345	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000035	92345	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000036	92395	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000038	92356	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000042	92395	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000044	92308	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000046	92356	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000048	92356	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000050	92395	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection

Distribution M&R Station Blowdowns:

ID	Geographic Location	Number of Blowdown Events	Annual Emissions (Mscf)	Explanatory Notes / Comments
12DR10000053	92308	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000055	92371	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000057	92344	2	0.326	1 Gas lost to flow and lock-up of Reg. Station during Inspection & 1 Maintenance
12DR10000103	92342	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000104	92342	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000107	92394	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000108	92368	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000110	92394	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000111	92342	2	0.326	1 Gas lost to flow and lock-up of Reg. Station during Inspection & 1 Maintenance
12DR10000114	92368	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000115	92395	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000119	92395	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000121	92394	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000197	92308	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000206	92368	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000208	92301	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000210	92345	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000212	92301	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000215	92308	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000220	92342	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000221	92307	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000222	92307	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000223	92307	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000224	92307	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000225	92307	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000235	92308	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000236	92308	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000237	92307	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000239	92307	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10000249	92307	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10032340	92308	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10032540	92392	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10033440	92301	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR10033720	92307	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR15004243	92394	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR15004383	92344	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR15005570	92392	4	0.652	1 Gas lost to flow and lock-up of Reg. Station during Inspection & 3 Maintenance
12DR15006091	92392	3	0.489	1 Gas lost to flow and lock-up of Reg. Station during Inspection & 2 Maintenance
12DR15007096	92394	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR15009310	92301	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR15009691	92394	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR15010750	92395	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR15011350	92345	7	1.141	1 Gas lost to flow and lock-up of Reg. Station during Inspection & 6 Maintenance
12DR15011530	92308	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR15011990	92394	8	1.304	1 Gas lost to flow and lock-up of Reg. Station during Inspection & 7 Maintenance
12DR15012190	92394	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR15014791	92394	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR15015450	92356	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR15015910	92345	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR15016010	92392	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DR15017890	92356	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DS10005384	92345	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DS10005486	92394	2	0.326	1 Gas lost to flow and lock-up of Reg. Station during Inspection & 1 Maintenance
12DS10005489	92392	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DS10005863	92394	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DS10005864	92395	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DS10005867	92395	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DS10005868	92345	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DS10005869	92345	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DS10011919	92395	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DS10020980	92394	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DS10022142	92392	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DS10022180	92345	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DS10023000	92345	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DS10023142	92394	2	0.326	1 Gas lost to flow and lock-up of Reg. Station during Inspection & 1 Maintenance

Distribution M&R Station Blowdowns:

ID	Geographic Location	Number of Blowdown Events	Annual Emissions (Mscf)	Explanatory Notes / Comments
12DS10023780	92395	3	0.489	1 Gas lost to flow and lock-up of Reg. Station during Inspection & 2 Maintenance
12DS10023900	92037	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DS10024000	92342	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DS10024600	92392	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DS10024641	92394	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DS10025460	92345	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DS10025760	92308	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DS10025980	92392	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DS10026424	92394	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DS10026460	92368	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DS10027640	92308	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DS10027721	92394	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DS10027900	92392	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DS10028900	92345	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DS10034280	92356	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
12DS15015350	92368	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
13DM10000071	92315	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
13DM10000097	92315	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
13DR10000014	92315	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
13DR10000041	92314	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
13DR10000060	92315	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
13DR10000250	92314	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
13DR10000251	92314	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
13DR10000252	92333	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
13DR10000253	92314	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
13DR10000254	92314	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
13DR10032701	92356	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
13DR15007110	92314	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
13DR15007271	92314	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
13DR15007290	92333	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
13DR15007511	92314	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
13DR15007571	92315	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
13DR15007670	92314	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection
13DS10004442	92315	1	0.163	Gas lost to flow and lock-up of Reg. Station during Inspection

Total	**41.183**

SOUTHWEST GAS CORPORATION, JUNE 13, 2025

Rulemaking (R.) 15-01-008 to Adopt Rules and Procedures Governing Commission Regulated Natural Gas Pipelines and Facilities to Reduce Natural Gas Leaks Consistent with Senate Bill 1371, Leno. In Response to Data Request, R15-01-008 2025 June Report.
Appendix 5; Rev. 03/27/2025

Notes:
The data collected on this sheet is for informational purposes and may not be included in the emissions inventory for 2024. The worksheet is designed to track actual emissions for future reference and to determine if an actual leak based emission accounting is feasible for M&R stations.
If you record data using this table and you only leak survey part of your system, you must extrapolate emissions from leaks up to account for emissions from your entire system for the year.
Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.
At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange
The emissions captured on this tab represent the emissions associated with the operational design and function of the component. Any intentional release of natural gas for safety or maintenance purposes should be included on the Blowdowns worksheet.

Distribution M&R Station Component Vented Emissions:

ID	Geographic Location	Station Classification	Device Type	Bleed Rate	Manufacturer	Number of Days Emitting	Engineering or Manufacturer's based Estimate of Emissions	Annual Emissions (Mscf)	Explanatory Notes / Comments
12DR10000049	92308	A3	O	L	SpectraSensor	365	0.048	17.52	Manufacturer's based Estimate of Emissions (1-2 cubic Feet per hour: 2 ft^3/hr * 24hrs/day * 365 days = 17,520 ft^3)
12DR15011990	92394	A3	O	L	ABB	365	0.024	8.76	Engineering estimate based on continuous sampling . X ft^3/hr * 24hrs/day * 365 days
12DR15011990	92394	A3	O	L	SpectraSensor	365	0.054	19.71	Engineering estimate based on continuous sampling . X ft^3/hr * 24hrs/day * 365 days
12DR15011990	92394	A3	O	L	Applied Analytics	365	0.144	52.56	Engineering estimate based on continuous sampling . X ft^3/hr * 24hrs/day * 365 days
12DR15011990	92394	A3	O	L	SpectraSensor	365	0.054	19.71	Engineering estimate based on continuous sampling . X ft^3/hr * 24hrs/day * 365 days
							Total	**118.26**	

SOUTHWEST GAS CORPORATION, JUNE 13, 2025
Rulemaking (R.) 15-01-008 to Adopt Rules and Procedures Governing Commission Regulated Natural Gas Pipelines and Facilities to Reduce Natural Gas Leaks Consistent with Senate Bill 1371, Leno. In Response to Data Request, R15-01-008 2025 June Report.
Appendix 5; Rev. 03/27/2025

Notes:

The data collected on this sheet is for informational purposes and will not be included in the emissions inventory for 2024. The worksheet is designed to track actual leaks for future reference and to determine if an actual leak based emission accounting is feasible for M&R stations.

If you record data using this table and you only leak survey part of your system, you must extrapolate emissions from leaks up to account for emissions from your entire system for the year.

Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.

At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange

The emissions captured on this tab represent the emissions associated unintentional leaks that if repaired would not leaking. If the component is releasing gas or "bleeding" as a result of its design or function then it is not to be captured in this tab.

Distribution M&R Station Component Fugitive Leaks:

ID	Geographic Location	Station Classification	Device Type	Bleed Rate	Manufacturer	Pressure (psi)	Discovery Date (MM/DD/YY)	Repair Date (MM/DD/YY)	Number of Days Leaking	Emission Factor (Mscf/day)	Annual Emissions (Mscf)	Explanatory Notes / Comments
Southwest Gas did not have any Distribution M&R Station component fugitive leaks in 2024.												
										Total	0	

Appendix 6
MSA Systems

SOUTHWEST GAS CORPORATION, JUNE 13, 2025

Rulemaking (R.) 15-01-008 to Adopt Rules and Procedures Governing Commission Regulated Natural Gas Pipelines and Facilities to Reduce Natural Gas Leaks Consistent with Senate Bill 1371, Leno.
In Response to Data Request, R15-01-008 2025 June Report.
Appendix 6; Rev. 03/27/2025

Notes:
Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.
At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange.

Response:

Customer Meter Total Leaks and Emissions:

Number of Meters	Meter Type	Emission Factor (Mscf/yr)	Annual Emissions (Mscf)
198,098	R	0.148	29,318.50
9,768	CI	0.051	498.17
		Total	**29,816.67**

SOUTHWEST GAS CORPORATION, JUNE 13, 2025

Rulemaking (R.) 15-01-008 to Adopt Rules and Procedures Governing Commission Regulated Natural Gas Pipelines and Facilities to Reduce Natural Gas Leaks Consistent with Senate Bill 1371, Leno. In Response to Data Request, R15-01-008 2025 June Report.
Appendix 6; Rev. 03/27/2025

Notes:

The intent of this worksheet is to capture event data that represent the fugitive leaks on MSA assets that if repaired would cease leaking. If the equipment or component is releasing gas or "bleeding" as a result of its design or function, then it is not to be captured in this tab and should be entered into the Component Emissions tab.

No emissions estimates from this worksheet should be included in Appendix 8, as this is being collected for informational purposes at this time.

Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.
At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange.
Response:
(Please add any clarifying explanations here above the table.)

Customer Meter Fugitive Leaks:

ID	Geographic Location	Meter Classification (Commercial/Industrial or Residential)	Leak Classification (Grade)	Leak Discovery Method	Discovery Date (DD/MM/YY)	Leak Repair Date (MM/DD/YY)	If not repaired by 12/31/24 List the Scheduled Date of Repair (DD/MM/YY)	Repair Type	Number of Days Leaking	Number of Days to Repair	Bubble Size Classification	MSA Identification Number	Comments or Additional Information (If you are able to quantify the leak rate by bubble pattern or other methods please include this volumetric data, and state what method was used to determine the flow/leak rate in these columns.)
1002668657	96150	CI	AN	S	1/25/2024	1/25/2024	N/A	TLA	1	1	FUZZ	000000000007562042	
1002926684	96150	R	AN	M	1/1/2024	1/1/2024	N/A	TLA	1	1	BUBBLES	000000000054841131	
1002941251	96150	R	AN	M	1/5/2024	1/5/2024	N/A	TLA	1	1	FUZZ	000000000007872467	
1002952833	96161	R	AN	M	1/11/2024	1/11/2024	N/A	TLA	1	1	BUBBLES	000000000054936156	
1002953290	96161	R	AH	M	1/11/2024	1/11/2024	N/A	CR	1	1	BUBBLES BLOWN OFF	000000000054946082	
1002970837	96161	R	AN	M	1/24/2024	1/24/2024	N/A	CR	1	1	BUBBLES	000000000054965401	
1002989703	96161	R	AN	M	1/25/2024	1/25/2024	N/A	TLA	1	1	BUBBLES	000000000054965382	
1002990611	96161	R	AN	M	1/25/2024	1/25/2024	N/A	TLA	1	1	BUBBLES	000000000054965385	
1003034708	96150	R	AN	M	2/10/2024	2/10/2024	N/A	TLA	1	1	BUBBLES	000000000055086336	
1003035535	96150	R	AN	M	2/12/2024	2/12/2024	N/A	TLA	1	1	BUBBLES	000000000054947275	
1003043308	96161	CI	AN	M	2/9/2024	2/9/2024	N/A	TLA	1	1	BUBBLES	000000000003741801	
1003051008	96161	R	AN	M	2/16/2024	2/16/2024	N/A	CR	1	1	FUZZ	000000000054946067	
1003015451	96150	R	AN	S	3/15/2024	3/15/2024	N/A	TLA	1	1	FUZZ	000000000054850164	
1003088723	96161	R	AN	M	3/5/2024	3/5/2024	N/A	TLA	1	1	BUBBLES	000000000007440427	
1003090345	96145	R	AN	M	3/3/2024	3/3/2024	N/A	TLA	1	1	BUBBLES	000000000000651111	
1003090347	96161	R	AH	M	3/3/2024	3/3/2024	N/A	CR	1	1	BUBBLES	000000000054946067	
1003094386	96150	R	AN	M	3/4/2024	3/4/2024	N/A	TLA	1	1	BUBBLES	000000000054849775	
1003097470	96150	R	AN	M	3/5/2024	3/5/2024	N/A	TLA	1	1	BUBBLES	000000000054947504	
1003108955	96145	R	AN	M	3/11/2024	3/11/2024	N/A	TLA	1	1	FUZZ	000000000003596276	
1003114410	96150	R	AN	M	3/12/2024	3/12/2024	N/A	TLA	1	1	BUBBLES	000000000054923926	
1003124314	96150	R	AN	M	3/15/2024	3/15/2024	N/A	TLA	1	1	BUBBLES	000000000054879828	
1003134829	96150	R	AN	M	3/20/2024	3/20/2024	N/A	TLA	1	1	FUZZ	000000000054945776	
1003134934	96150	R	AN	M	3/20/2024	3/20/2024	N/A	TLA	1	1	BUBBLES	000000000054905461	
1003149872	96161	R	AN	M	3/26/2024	3/26/2024	N/A	TLA	1	1	BUBBLES	000000000005837813	
1003163268	96150	R	AN	M	3/29/2024	3/29/2024	N/A	TLA	1	1	BUBBLES	000000000054909454	
1003308579	96150	R	AN	M	5/25/2024	5/25/2024	N/A	TLA	1	1	BUBBLES	000000000054909377	
1003305046	96161	R	AH	S	5/23/2024	5/31/2024	N/A	CR	9	1	N/A	000000000001545424	
1003211924	96150	CI	AN	M	4/17/2024	4/17/2024	N/A	TLA	1	1	N/A	000000000007882040	
1002990989	96161	R	AH	M	4/30/2024	5/1/2024	N/A	CR	2	1	N/A	000000000054967293	
1002646315	96161	R	AN	S	4/30/2024	5/1/2024	N/A	TLA	2	1	N/A	000000000055083605	
1002588384	96161	R	AN	S	4/29/2024	4/30/2024	N/A	TLA	2	1	N/A	000000000003285861	
1000897767	96145	R	AN	M	4/21/2024	4/22/2024	N/A	TLA	2	1	N/A	000000000004832299	
1000897060	96145	R	AN	M	4/18/2024	4/19/2024	N/A	TLA	2	1	N/A	000000000004831782	
1000897059	96145	R	AN	M	4/18/2024	4/19/2024	N/A	TLA	2	1	N/A	000000000004831750	
1003478980	96150	R	AN	M	6/28/2024	6/28/2024	N/A	TLA	1	1	BUBBLES	000000000056364642	
1003425066	96145	R	AN	S	6/25/2024	6/26/2024	N/A	TLA	2	1	FUZZ	000000000009401876	
1003425061	96145	R	AN	S	6/25/2024	6/26/2024	N/A	TLA	2	1	FUZZ	000000000012290627	
1003422501	96145	R	AN	S	6/25/2024	6/26/2024	N/A	TLA	2	1	FUZZ	000000000054926124	
1003422433	96145	R	AN	S	6/25/2024	6/26/2024	N/A	TLA	2	1	FUZZ	000000000012290419	
1003378744	96150	R	AN	M	6/22/2024	6/22/2024	N/A	TLA	1	1	BUBBLES	000000000054847339	
1003378717	96150	R	AN	M	6/22/2024	6/22/2024	N/A	TLA	1	1	BUBBLES	000000000054905679	
1003366782	96145	R	AN	S	6/18/2024	6/18/2024	N/A	TLA	1	1	BUBBLES	000000000004727592	
1003361451	96161	R	AN	S	6/14/2024	6/20/2024	N/A	TLA	7	1	N/A	000000000003144757	
1003357267	96145	R	AN	S	6/13/2024	6/13/2024	N/A	TLA	1	1	BUBBLES	000000000003751846	
1003350223	96161	R	AN	S	6/11/2024	6/11/2024	N/A	CR	1	1	BUBBLES	000000000002187718	
1003347844	96161	R	AN	S	6/10/2024	6/25/2024	N/A	TLA	16	1	N/A	000000000054821467	
1003342380	96161	R	AN	S	6/7/2024	6/25/2024	N/A	TLA	19	1	N/A	000000000054782194	
1003342144	96161	R	AN	S	6/7/2024	6/24/2024	N/A	TLA	18	1	BUBBLES	000000000003145211	
1003342118	96161	R	AN	S	6/7/2024	6/25/2024	N/A	TLA	19	1	N/A	000000000003145175	

Customer Meter Fugitive Leaks:

ID	Geographic Location	Meter Classification (Commercial/Industrial or Residential)	Leak Classification (Grade)	Leak Discovery Method	Discovery Date (DD/MM/YY)	Leak Repair Date (MM/DD/YY)	If not repaired by 12/31/24 List the Scheduled Date of Repair (DD/MM/YY)	Repair Type	Number of Days Leaking	Number of Days to Repair	Bubble Size Classification	MSA Identification Number	Comments or Additional Information (If you are able to quantify the leak rate by bubble pattern or other methods please include this volumetric data, and state what method was used to determine the flow/leak rate in these columns.)
1003341978	96145	R	AN	S	6/7/2024	6/26/2024	N/A	TLA	20	1	BUBBLES	000000000054926273	
1003336296	96161	R	AN	S	6/5/2024	6/7/2024	N/A	TLA	3	1	BUBBLES	000000000005716543	
1003336216	96145	R	AN	S	6/5/2024	6/21/2024	N/A	TLA	17	1	N/A	000000000012240779	
1003335324	96150	R	AN	M	6/5/2024	6/5/2024	N/A	TLA	1	1	FUZZ	000000000054933915	
1003317176	96161	R	AN	S	5/29/2024	6/7/2024	N/A	TLA	10	1	BUBBLES	000000000054926340	
1003317133	96161	R	AN	S	5/29/2024	6/3/2024	N/A	TLA	6	1	BUBBLES	000000000005826661	
1003317098	96161	R	AN	S	5/29/2024	6/26/2024	N/A	TLA	29	1	BUBBLES	000000000003573972	
1003306145	96161	R	AN	S	5/24/2024	6/26/2024	N/A	TLA	34	1	BUBBLES	000000000003741519	
1003306093	96161	R	AN	S	5/24/2024	6/20/2024	N/A	TLA	28	1	N/A	000000000054926151	
1003293776	96145	R	AN	S	5/20/2024	6/21/2024	N/A	TLA	33	1	N/A	000000000054965887	
1003293740	96145	R	AN	S	5/20/2024	6/25/2024	N/A	TLA	37	1	N/A	000000000002826256	
1003265209	96161	R	AN	S	5/8/2024	6/13/2024	N/A	TLA	37	1	BUBBLES	000000000001378150	
1003265208	96161	R	AN	S	5/8/2024	6/7/2024	N/A	TLA	31	1	BUBBLES	000000000054779494	
1003265127	96161	R	AN	S	5/8/2024	6/3/2024	N/A	TLA	27	1	BUBBLES	000000000054775743	
1003265057	96161	R	AN	S	5/8/2024	6/26/2024	N/A	TLA	50	1	N/A	000000000054775603	
1002522175	96145	R	AN	S	6/20/2024	6/21/2024	N/A	CR	2	1	N/A	000000000001381231	
1003699775	96145	R	AN	M	9/30/2024	9/30/2024	N/A	CR	1	1	N/A	000000000054880037	
1003696231	96150	CI	AN	M	9/29/2024	9/29/2024	N/A	TLA	1	1	FUZZ	000000000054935760	
1003695984	96161	R	AN	M	9/29/2024	9/29/2024	N/A	TLA	1	1	BUBBLES	000000000054965533	
1003695745	96161	R	AN	M	9/28/2024	9/28/2024	N/A	TLA	1	1	FUZZ	000000000007647769	
1003692416	96161	R	AH	M	9/27/2024	9/27/2024	N/A	CR	1	1	N/A	0B025932	
1003685682	96150	R	AN	M	9/25/2024	9/25/2024	N/A	TLA	1	1	FUZZ	000000000007872422	
1003677227	96150	R	AN	M	9/21/2024	9/22/2024	N/A	TLA	2	1	BUBBLES	000000000055085418	
1003675906	96145	R	AN	M	9/20/2024	9/20/2024	N/A	TLA	1	1	BUBBLES	000000000055088839	
1003666110	96161	R	AN	M	9/17/2024	9/17/2024	N/A	TLA	1	1	BUBBLES	000000000001461417	
1003661345	96150	R	AN	M	9/16/2024	9/16/2024	N/A	TLA	1	1	BUBBLES	000000000054847233	
1003592475	96150	R	AN	S	8/16/2024	9/19/2024	N/A	TLA	35	1	FUZZ	000000000007276021	
1003657521	96150	CI	AN	M	9/13/2024	9/13/2024	N/A	TLA	1	1	BUBBLES	000000000054933743	
1003648184	96150	R	AN	S	9/10/2024	9/17/2024	N/A	TLA	8	1	BUBBLES	000000000054924711	
1003643784	96161	R	AN	S	9/9/2024	9/9/2024	N/A	TLA	1	1	BUBBLES	000000000054769146	
1003648313	96150	R	AN	S	9/10/2024	9/16/2024	N/A	TLA	7	1	BUBBLES	000000000054909193	
1003632199	96150	R	AN	M	9/3/2024	9/3/2024	N/A	TLA	1	1	FUZZ	000000000054768738	
1003658106	96150	R	AH	M	9/13/2024	9/13/2024	N/A	CR	1	1	BUBBLES BLOWN OFF	000000000054906574	
1003621069	96150	R	AN	M	8/29/2024	8/29/2024	N/A	TLA	1	1	BUBBLES	000000000054822537	
1003612716	96150	R	AN	M	8/26/2024	8/26/2024	N/A	TLA	1	1	BUBBLES	000000000054946329	
1003610689	96150	R	AN	S	8/26/2024	8/26/2024	N/A	TLA	1	1	BUBBLES	000000000054911106	
1003609703	96150	R	AN	M	8/25/2024	8/25/2024	N/A	TLA	1	1	BUBBLES	000000000054911289	
1003607521	96161	R	AN	M	8/23/2024	8/23/2024	N/A	TLA	1	1	FUZZ	000000000005784905	
1003602680	96150	R	AN	M	8/21/2024	9/17/2024	N/A	TLA	28	1	BUBBLES	000000000054934363	
1003601251	96150	R	AN	M	8/21/2024	9/19/2024	N/A	TLA	30	1	BUBBLES	000000000055085884	
1003601130	96150	R	AN	M	8/21/2024	8/21/2024	N/A	CR	1	1	BUBBLES	000000000005838181	
1003599752	96150	R	AN	S	8/20/2024	9/18/2024	N/A	TLA	30	1	BUBBLES	000000000054947215	
1003592986	96150	CI	AN	S	8/16/2024	9/12/2024	N/A	TLA	28	1	BUBBLES	000000000054850679	
1003582394	96150	R	AN	M	8/13/2024	8/13/2024	N/A	TLA	1	1	BUBBLES	000000000054966133	
1003582269	96145	CI	AN	S	8/13/2024	8/19/2024	N/A	TLA	7	1	BUBBLES	000000000007882041	
1003582222	96145	R	AN	S	8/13/2024	8/19/2024	N/A	TLA	7	1	FUZZ	000000000007649537	
1003582201	96145	R	AN	S	8/13/2024	8/19/2024	N/A	TLA	7	1	FUZZ	000000000007649562	
1003582102	96150	R	AN	S	8/13/2024	8/23/2024	N/A	TLA	11	1	BUBBLES	000000000054779670	
1003582053	96150	R	AN	S	8/13/2024	8/23/2024	N/A	TLA	11	1	FUZZ	000000000056370420	
1003581881	96150	R	AN	S	8/13/2024	8/23/2024	N/A	TLA	11	1	BUBBLES	000000000054913055	
1003580576	96150	R	AN	S	8/12/2024	9/12/2024	N/A	TLA	32	1	BUBBLES	000000000054848660	
1003580554	96150	R	AN	S	8/12/2024	9/12/2024	N/A	TLA	32	1	BUBBLES	000000000054934318	
1003580529	96150	R	AN	S	8/12/2024	9/13/2024	N/A	TLA	33	1	BUBBLES	000000000007872491	
1003580458	96150	R	AN	S	8/12/2024	9/12/2024	N/A	TLA	32	1	BUBBLES	000000000054775341	
1003580449	96150	R	AN	S	8/12/2024	9/18/2024	N/A	TLA	38	1	FUZZ	000000000054821074	
1003580444	96150	R	AN	S	8/12/2024	9/11/2024	N/A	TLA	31	1	BUBBLES	000000000055088279	
1003580415	96150	R	AN	S	8/12/2024	9/11/2024	N/A	TLA	31	1	FUZZ	000000000055085784	
1003580410	96150	CI	AN	S	8/12/2024	9/19/2024	N/A	TLA	39	1	N/A	000000000003220456	
1003580337	96150	R	AN	S	8/12/2024	9/11/2024	N/A	TLA	31	1	BUBBLES	000000000054841194	
1003580316	96150	R	AN	S	8/12/2024	9/11/2024	N/A	TLA	31	1	BUBBLES	000000000054848610	
1003627148	96145	R	AN	M	8/31/2024	8/31/2024	N/A	CR	1	1	BUBBLES	000000000054908408	
1003580077	96150	R	AN	S	8/12/2024	9/16/2024	N/A	TLA	36	1	BUBBLES	000000000054850930	
1003580048	96150	R	AN	S	8/12/2024	9/19/2024	N/A	TLA	39	1	BUBBLES	000000000054932802	

Customer Meter Fugitive Leaks:

ID	Geographic Location	Meter Classification (Commercial/Industrial or Residential)	Leak Classification (Grade)	Leak Discovery Method	Discovery Date (DD/MM/YY)	Leak Repair Date (MM/DD/YY)	If not repaired by 12/31/24 List the Scheduled Date of Repair (DD/MM/YY)	Repair Type	Number of Days Leaking	Number of Days to Repair	Bubble Size Classification	MSA Identification Number	Comments or Additional Information (If you are able to quantify the leak rate by bubble pattern or other methods please include this volumetric data, and state what method was used to determine the flow/leak rate in these columns.)
1003579990	96150	R	AN	S	8/12/2024	9/12/2024	N/A	TLA	32	1	BUBBLES	000000000054911826	
1003579949	96150	R	AN	S	8/12/2024	9/12/2024	N/A	TLA	32	1	BUBBLES	000000000054946184	
1003579829	96150	R	AN	S	8/12/2024	8/26/2024	N/A	TLA	15	1	BUBBLES	000000000003740618	
1003579800	96150	R	AN	S	8/12/2024	8/23/2024	N/A	TLA	12	1	BUBBLES	000000000054822455	
1003579410	96150	R	AN	S	8/12/2024	8/23/2024	N/A	TLA	12	1	BUBBLES	000000000009401576	
1003579362	96150	R	AN	S	8/12/2024	8/26/2024	N/A	TLA	15	1	BUBBLES	000000000054850866	
1003577348	96145	R	AN	M	8/9/2024	8/9/2024	N/A	TLA	1	1	FUZZ	000000000054769333	
1003576964	96150	R	AN	S	8/9/2024	9/12/2024	N/A	TLA	35	1	BUBBLES	000000000054913232	
1003576938	96150	R	AN	S	8/9/2024	9/12/2024	N/A	TLA	35	1	BUBBLES	000000000054845801	
1003576909	96150	R	AN	S	8/9/2024	9/12/2024	N/A	TLA	35	1	BUBBLES	000000000054774150	
1003576908	96150	R	AN	S	8/9/2024	9/10/2024	N/A	TLA	33	1	BUBBLES	000000000054846763	
1003576874	96150	R	AN	S	8/9/2024	9/10/2024	N/A	TLA	33	1	BUBBLES	000000000054846792	
1003576867	96150	R	AN	S	8/9/2024	9/10/2024	N/A	TLA	33	1	BUBBLES	000000000001461382	
1003576860	96150	R	AN	S	8/9/2024	9/10/2024	N/A	TLA	33	1	BUBBLES	000000000054846769	
1003576849	96150	R	AN	S	8/9/2024	9/17/2024	N/A	TLA	40	1	BUBBLES	000000000054849877	
1003576771	96150	R	AN	S	8/9/2024	9/17/2024	N/A	TLA	40	1	FUZZ	000000000054849906	
1003576760	96150	R	AN	S	8/9/2024	9/13/2024	N/A	TLA	36	1	BUBBLES	000000000054913024	
1003576750	96150	R	AN	S	8/9/2024	9/13/2024	N/A	TLA	36	1	BUBBLES	000000000054781262	
1003575745	96150	R	AN	S	8/9/2024	9/13/2024	N/A	TLA	36	1	BUBBLES	000000000056375096	
1003575740	96150	R	AN	S	8/9/2024	9/13/2024	N/A	TLA	36	1	BUBBLES	000000000054880045	
1003575601	96150	R	AN	S	8/9/2024	9/19/2024	N/A	TLA	42	1	BUBBLES	000000000054846773	
1003575403	96150	R	AN	S	8/9/2024	9/19/2024	N/A	TLA	42	1	BUBBLES	000000000001545349	
1003575355	96150	R	AN	S	8/9/2024	9/16/2024	N/A	TLA	39	1	BUBBLES	000000000002873769	
1003575345	96150	R	AN	S	8/9/2024	9/19/2024	N/A	TLA	42	1	BUBBLES	000000000054848161	
1003575314	96150	R	AN	S	8/9/2024	8/16/2024	N/A	TLA	8	1	N/A	000000000001108396	
1003574164	96161	R	AN	S	8/8/2024	8/19/2024	N/A	TLA	12	1	BUBBLES	000000000003751673	
1003574158	96161	R	AN	S	8/8/2024	8/19/2024	N/A	TLA	12	1	BUBBLES	000000000003247352	
1003574152	96161	R	AN	S	8/8/2024	8/19/2024	N/A	TLA	12	1	BUBBLES	000000000005787463	
1003574123	96161	R	AN	S	8/8/2024	8/19/2024	N/A	TLA	12	1	BUBBLES	000000000001545416	
1003573928	96150	R	AN	S	8/8/2024	9/18/2024	N/A	TLA	42	1	BUBBLES	000000000054821124	
1003573904	96150	R	AN	S	8/8/2024	9/16/2024	N/A	TLA	40	1	BUBBLES	000000000054848048	
1003573833	96150	R	AN	S	8/8/2024	9/10/2024	N/A	TLA	34	1	BUBBLES	000000000054851873	
1003573782	96150	R	AN	S	8/8/2024	9/19/2024	N/A	TLA	43	1	BUBBLES	000000000054924081	
1003573710	96150	R	AH	S	8/8/2024	8/8/2024	N/A	CR	1	1	N/A	000000000054944759	
1003573619	96150	R	AN	S	8/8/2024	9/19/2024	N/A	TLA	43	1	BUBBLES	000000000054923958	
1003573465	96150	R	AN	S	8/8/2024	9/16/2024	N/A	TLA	40	1	BUBBLES	000000000054914391	
1003573390	96150	R	AN	S	8/8/2024	9/17/2024	N/A	TLA	41	1	BUBBLES	000000000054849918	
1003573380	96150	R	AN	S	8/8/2024	9/17/2024	N/A	TLA	41	1	BUBBLES	000000000005826480	
1003573377	96150	R	AN	S	8/8/2024	9/13/2024	N/A	TLA	37	1	BUBBLES	000000000054945631	
1003573335	96150	R	AN	S	8/8/2024	9/13/2024	N/A	TLA	37	1	BUBBLES	000000000054847154	
1003573161	96150	R	AN	S	8/8/2024	9/16/2024	N/A	TLA	40	1	BUBBLES	000000000054934364	
1003573122	96150	R	AN	S	8/8/2024	9/16/2024	N/A	TLA	40	1	BUBBLES	000000000054933790	
1003573116	96150	R	AN	S	8/8/2024	9/16/2024	N/A	TLA	40	1	FUZZ	000000000054910164	
1003572990	96150	R	AN	S	8/8/2024	9/16/2024	N/A	TLA	40	1	FUZZ	000000000054966426	
1003572519	96150	CI	AN	S	8/8/2024	8/23/2024	N/A	TLA	16	1	BUBBLES	000000000011880589	
1003571156	96150	R	AN	S	8/7/2024	8/23/2024	N/A	TLA	17	1	BUBBLES	000000000054850838	
1003570857	96161	R	AN	S	8/7/2024	8/19/2024	N/A	TLA	13	1	BUBBLES	000000000003751683	
1003570702	96161	R	AN	S	8/7/2024	8/16/2024	N/A	TLA	10	1	BUBBLES	000000000001545302	
1003570663	96161	R	AN	S	8/7/2024	8/16/2024	N/A	TLA	10	1	BUBBLES	000000000002187644	
1003568536	96161	R	AN	S	8/6/2024	8/16/2024	N/A	TLA	11	1	BUBBLES	000000000002956684	
1003568527	96150	R	AN	M	8/6/2024	8/6/2024	N/A	TLA	1	1	BUBBLES	000000000054946328	
1003567881	96161	CI	AN	S	8/6/2024	8/9/2024	N/A	TLA	4	1	BUBBLES	000000000003749916	
1003567760	96161	CI	AN	S	8/6/2024	8/9/2024	N/A	TLA	4	1	BUBBLES	000000000054779386	
1003567390	96145	R	AN	S	8/6/2024	8/9/2024	N/A	TLA	4	1	FUZZ	000000000001380742	
1003566954	96145	R	AN	S	8/6/2024	8/9/2024	N/A	TLA	4	1	FUZZ	000000000009856821	
1003566886	96145	R	AN	S	8/6/2024	8/9/2024	N/A	TLA	4	1	BUBBLES	000000000054820676	
1003566872	96145	R	AN	S	8/6/2024	8/9/2024	N/A	TLA	4	1	BUBBLES	000000000003327240	
1003566803	96161	CI	AN	S	8/6/2024	8/9/2024	N/A	TLA	4	1	BUBBLES	000000000003748068	
1003566184	96161	R	AN	S	8/6/2024	8/19/2024	N/A	TLA	14	1	BUBBLES	000000000005716460	
1003535582	96150	CI	AN	S	7/24/2024	7/29/2024	N/A	TLA	6	1	BUBBLES	000000000007881650	
1003552576	96150	R	AN	M	7/31/2024	7/31/2024	N/A	TLA	1	1	BUBBLES	000000000054922816	
1003541809	96150	R	AN	S	7/26/2024	9/17/2024	N/A	TLA	54	1	BUBBLES	000000000054924695	
1003541790	96150	R	AN	S	7/26/2024	9/19/2024	N/A	TLA	56	1	BUBBLES	000000000054933009	

Customer Meter Fugitive Leaks:

ID	Geographic Location	Meter Classification (Commercial/Industrial or Residential)	Leak Classification (Grade)	Leak Discovery Method	Discovery Date (DD/MM/YY)	Leak Repair Date (MM/DD/YY)	If not repaired by 12/31/24 List the Scheduled Date of Repair (DD/MM/YY)	Repair Type	Number of Days Leaking	Number of Days to Repair	Bubble Size Classification	MSA Identification Number	Comments or Additional Information (If you are able to quantify the leak rate by bubble pattern or other methods please include this volumetric data, and state what method was used to determine the flow/leak rate in these columns.)
1003541755	96150	R	AN	S	7/26/2024	9/16/2024	N/A	TLA	53	1	BUBBLES	000000000054923919	
1003541710	96150	R	AN	S	7/26/2024	9/16/2024	N/A	TLA	53	1	BUBBLES	000000000054926102	
1003541686	96150	R	AN	S	7/26/2024	9/10/2024	N/A	TLA	47	1	BUBBLES	000000000054832442	
1003541656	96150	R	AN	S	7/26/2024	9/16/2024	N/A	TLA	53	1	BUBBLES	000000000054847867	
1003541625	96150	CI	AN	S	7/26/2024	9/18/2024	N/A	TLA	55	1	BUBBLES	000000000054944471	
1003541601	96150	R	AN	S	7/26/2024	9/16/2024	N/A	TLA	53	1	BUBBLES	000000000054926063	
1003541559	96150	R	AN	S	7/26/2024	9/19/2024	N/A	TLA	56	1	BUBBLES	000000000054908921	
1003541371	96150	R	AN	S	7/26/2024	7/29/2024	N/A	TLA	4	1	BUBBLES	000000000054850830	
1003539134	96150	R	AN	S	7/25/2024	9/10/2024	N/A	TLA	48	1	BUBBLES	000000000054932784	
1003539112	96150	CI	AN	S	7/25/2024	9/13/2024	N/A	TLA	51	1	BUBBLES	000000000055530458	
1003539086	96150	R	AN	S	7/25/2024	9/17/2024	N/A	TLA	55	1	BUBBLES	000000000054839373	
1003539034	96150	R	AN	S	7/25/2024	9/10/2024	N/A	TLA	48	1	BUBBLES	000000000054911140	
1003537838	96150	R	AN	S	7/25/2024	9/9/2024	N/A	TLA	47	1	BUBBLES	000000000054846030	
1003537777	96150	R	AN	S	7/25/2024	9/16/2024	N/A	TLA	54	1	BUBBLES	000000000056389178	
1003537689	96150	R	AN	S	7/25/2024	9/16/2024	N/A	TLA	54	1	BUBBLES	000000000054774127	
1003536130	96150	R	AN	S	7/24/2024	9/10/2024	N/A	TLA	49	1	BUBBLES	000000000054851830	
1003536062	96150	R	AN	S	7/24/2024	9/12/2024	N/A	TLA	51	1	BUBBLES	000000000054905712	
1003536060	96150	R	AN	S	7/24/2024	9/18/2024	N/A	TLA	57	1	BUBBLES	000000000054947246	
1003535884	96150	R	AN	S	7/24/2024	9/11/2024	N/A	TLA	50	1	BUBBLES	000000000054832840	
1003535849	96150	R	AN	S	7/24/2024	9/16/2024	N/A	TLA	55	1	BUBBLES	000000000054933724	
1003535825	96150	R	AN	S	7/24/2024	9/9/2024	N/A	TLA	48	1	BUBBLES	000000000054839657	
1003535687	96150	R	AN	S	7/24/2024	9/9/2024	N/A	TLA	48	1	BUBBLES	000000000054933879	
1003535606	96150	R	AN	S	7/24/2024	7/29/2024	N/A	TLA	6	1	BUBBLES	000000000054936190	
1003535588	96150	R	AN	S	7/24/2024	9/9/2024	N/A	TLA	48	1	BUBBLES	000000000055087468	
1003535550	96150	R	AN	S	7/24/2024	7/29/2024	N/A	TLA	6	1	BUBBLES	000000000054947291	
1003535496	96150	R	AN	S	7/24/2024	7/29/2024	N/A	TLA	6	1	BUBBLES	000000000054946655	
1003535713	96150	R	AN	S	7/24/2024	8/23/2024	N/A	TLA	31	1	BUBBLES	000000000054914609	
1003530418	96150	R	AN	S	7/22/2024	7/26/2024	N/A	TLA	5	1	FUZZ	000000000054935293	
1003530406	96150	R	AN	S	7/22/2024	7/23/2024	N/A	TLA	2	1	BUBBLES	000000000054820538	
1003530351	96150	R	AN	S	7/22/2024	7/26/2024	N/A	TLA	5	1	BUBBLES	000000000054934987	
1003530148	96150	R	AN	S	7/22/2024	7/24/2024	N/A	TLA	3	1	BUBBLES	000000000008092655	
1003530113	96150	R	AN	S	7/22/2024	7/23/2024	N/A	TLA	2	1	BUBBLES	000000000007818631	
1003530079	96150	R	AN	S	7/22/2024	7/23/2024	N/A	TLA	2	1	BUBBLES	000000000005781634	
1003530056	96150	R	AN	S	7/22/2024	7/23/2024	N/A	TLA	2	1	BUBBLES	000000000054822533	
1003530043	96150	R	AN	S	7/22/2024	7/24/2024	N/A	TLA	3	1	BUBBLES	000000000054849082	
1003528848	96150	R	AN	S	7/22/2024	7/24/2024	N/A	TLA	3	1	BUBBLES	000000000005781593	
1003528833	96150	R	AN	S	7/22/2024	7/23/2024	N/A	TLA	2	1	BUBBLES	000000000054850443	
1003528768	96150	R	AN	M	7/22/2024	7/22/2024	N/A	TLA	1	1	BUBBLES	000000000054933045	
1003528651	96150	R	AN	S	7/22/2024	7/26/2024	N/A	TLA	5	1	BUBBLES	000000000054923128	
1003528641	96150	R	AN	S	7/22/2024	7/23/2024	N/A	TLA	2	1	BUBBLES	000000000054944486	
1003528529	96150	CI	AN	S	7/22/2024	7/23/2024	N/A	TLA	2	1	BUBBLES	000000000003752939	
1003528490	96150	R	AN	S	7/22/2024	7/26/2024	N/A	TLA	5	1	BUBBLES	000000000054922833	
1003662403	96150	R	AN	M	9/16/2024	9/16/2024	N/A	TLA	1	1	FUZZ	000000000054944439	
1003528332	96150	R	AN	S	7/22/2024	7/23/2024	N/A	TLA	2	1	BUBBLES	000000000054820898	
1003528324	96150	R	AN	S	7/22/2024	7/24/2024	N/A	TLA	3	1	BUBBLES	000000000054849875	
1003528239	96150	R	AN	S	7/22/2024	7/26/2024	N/A	TLA	5	1	BUBBLES	000000000054945652	
1003523068	96150	R	AN	M	7/18/2024	7/18/2024	N/A	TLA	1	1	FUZZ	000000000054879815	
1003496202	96150	R	AN	M	7/8/2024	7/8/2024	N/A	TLA	1	1	BUBBLES	000000000054851411	
1003488689	96150	R	AN	M	7/3/2024	7/3/2024	N/A	TLA	1	1	BUBBLES	000000000054821160	
1003482668	96150	R	AN	M	7/1/2024	7/1/2024	N/A	TLA	1	1	N/A	000000000054944799	
1003480349	96150	CI	AN	M	7/1/2024	7/1/2024	N/A	TLA	1	1	FUZZ	000000000054935774	
1003474813	96145	R	AN	S	6/28/2024	8/23/2024	N/A	TLA	57	1	N/A	000000000001385423	
1003613509	96150	R	AH	M	8/26/2024	8/26/2024	N/A	CR	1	1	BUBBLES BLOWN OFF	000000000054821006	
1003415826	96145	R	AN	S	6/25/2024	8/9/2024	N/A	TLA	46	1	N/A	000000000001063217	
1003413023	96145	R	AN	S	6/25/2024	9/11/2024	N/A	TLA	79	1	BUBBLES	0N293463	
1003409198	96145	R	AN	S	6/25/2024	8/23/2024	N/A	TLA	60	1	N/A	000000000054946882	
1003361365	96161	R	AN	S	6/14/2024	8/28/2024	N/A	TLA	76	1	N/A	000000000000860761	
1003361351	96161	R	AH	S	6/14/2024	9/9/2024	N/A	CR	88	1	BUBBLES	000000000005826461	
1003361305	96145	CI	AN	S	6/14/2024	7/5/2024	N/A	TLA	22	1	N/A	000000000005792141	
1003361117	96150	CI	AN	S	6/14/2024	7/23/2024	N/A	TLA	40	1	BUBBLES	000000000007650848	
1003361096	96145	R	AN	S	6/14/2024	8/9/2024	N/A	TLA	57	1	N/A	000000000054880043	
1003360950	96145	R	AN	S	6/14/2024	8/9/2024	N/A	TLA	57	1	N/A	000000000003574038	
1003342458	96145	R	AN	S	6/7/2024	8/9/2024	N/A	TLA	64	1	N/A	000000000054880058	

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1003342425	96145	R	AN	S	6/7/2024	7/5/2024	N/A	TLA	29	1	BUBBLES	000000000054965910	
1003342406	96145	R	AN	S	6/7/2024	8/9/2024	N/A	TLA	64	1	N/A	000000000009388581	
1003336505	96145	R	AN	S	6/5/2024	8/9/2024	N/A	TLA	66	1	N/A	000000000003596697	
1003334921	96145	R	AN	S	6/5/2024	7/5/2024	N/A	TLA	31	1	BUBBLES	000000000054966521	
1003334717	96145	R	AN	S	6/5/2024	7/5/2024	N/A	TLA	31	1	BUBBLES	000000000003327277	
1003306088	96145	R	AN	S	5/24/2024	7/5/2024	N/A	TLA	43	1	N/A	000000000054965922	
1003304725	96145	R	AN	S	5/23/2024	7/5/2024	N/A	TLA	44	1	N/A	000000000001380677	
1003293380	96145	R	AN	S	5/20/2024	7/5/2024	N/A	TLA	47	1	N/A	0R743997	
1003580306	96150	R	AN	S	8/12/2024	9/18/2024	N/A	TLA	38	1	BUBBLES	000000000054944412	
1003913147	96161	R	AN	M	12/29/2024	12/29/2024	N/A	TLA	1	1	FUZZ	000000000001461194	
1003754240	96145	R	AN	M	10/21/2024	10/22/2024	N/A	TLA	2	1	BUBBLES	000000000055088922	
1003901891	96150	R	AN	M	12/20/2024	12/20/2024	N/A	TLA	1	1	BUBBLES	000000000009926688	
1003894998	96145	R	AN	M	12/18/2024	12/18/2024	N/A	TLA	1	1	BUBBLES	000000000055090053	
1003871574	96150	R	AN	M	12/8/2024	12/8/2024	N/A	TLA	1	1	BUBBLES	000000000054946446	
1003866457	96145	R	AN	M	12/5/2024	12/5/2024	N/A	CR	1	1	N/A	000000000001273395	
1003861570	96145	R	AN	M	12/3/2024	12/3/2024	N/A	TLA	1	1	FUZZ	000000000000785435	
1003793631	96150	R	AN	M	11/4/2024	11/5/2024	N/A	TLA	2	1	BUBBLES	000000000054925913	
1003842073	96150	R	AN	M	11/24/2024	11/24/2024	N/A	CR	1	1	N/A	000000000054947397	
1003819164	96150	R	AN	M	11/14/2024	11/14/2024	N/A	TLA	1	1	BUBBLES	000000000054935059	
1003800775	96150	R	AN	M	11/6/2024	11/6/2024	N/A	CR	1	1	BUBBLES	000000000054924887	
1003798113	96145	R	AN	M	11/5/2024	11/5/2024	N/A	TLA	1	1	BUBBLES	000000000054910938	
1003901865	96145	R	AN	M	12/20/2024	12/20/2024	N/A	TLA	1	1	BUBBLES	000000000001063235	
1003792807	96161	R	AN	M	11/4/2024	11/13/2024	N/A	TLA	10	1	FUZZ	000000000009927357	
1003791153	96150	R	AN	M	11/3/2024	11/3/2024	N/A	TLA	1	1	FUZZ	000000000054914624	
1003782596	96145	CI	AN	M	10/30/2024	10/30/2024	N/A	CR	1	1	BUBBLES	000000000007872664	
1003772565	96150	R	AN	S	10/28/2024	12/6/2024	N/A	TLA	40	1	BUBBLES	000000000054781254	
1003769499	96150	R	AN	M	10/25/2024	10/25/2024	N/A	TLA	1	1	BUBBLES	000000000054847070	
1003766206	96150	R	AN	M	10/24/2024	10/24/2024	N/A	TLA	1	1	BUBBLES	000000000054909394	
1003808531	96150	R	AN	M	11/9/2024	11/9/2024	N/A	TLA	1	1	FUZZ	000000000054847051	
1003765881	96145	R	AN	M	10/24/2024	10/28/2024	N/A	TLA	5	1	BUBBLES	000000000054911535	
1003731658	96161	R	AN	M	10/11/2024	10/11/2024	N/A	TLA	1	1	FUZZ	000000000055083764	
1003729173	96150	R	AN	M	10/10/2024	10/10/2024	N/A	TLA	1	1	BUBBLES	000000000054911300	
1003726366	96150	R	AH	M	10/10/2024	10/10/2024	N/A	CR	1	1	N/A	000000000007872422	
1003714789	96150	R	AN	M	10/6/2024	10/6/2024	N/A	TLA	1	1	BUBBLES	000000000054839198	
1003708824	96150	R	AN	M	10/3/2024	10/3/2024	N/A	TLA	1	1	BUBBLES	000000000054845976	
1003705998	96150	R	AN	M	10/2/2024	10/2/2024	N/A	TLA	1	1	BUBBLES	000000000054923991	
1003539152	96150	CI	AN	S	7/25/2024	10/15/2024	N/A	TLA	83	1	BUBBLES	000000000054775767	
1003535928	96150	R	AN	S	7/24/2024	10/15/2024	N/A	CR	84	1	FUZZ	000000000054848532	
1003845493	96161	R	AN	M	11/25/2024	11/25/2024	N/A	TLA	1	1	FUZZ	000000000054936311	
4894906	92311	CI	AH	M	7/22/2024	7/22/2024	N/A	CR	1	1	Bubbles Blown Off	03741825	
4912902	92314	CI	AN	M	8/30/2024	8/30/2024	N/A	CR	1	1	Fuzz	54816630	
1002969921	92344	R	AH	M	1/18/2024	1/18/2024	N/A	CR	1	1	Bubbles Blown Off	03656979	
1003298961	92394	R	AN	M	5/22/2024	5/22/2024	N/A	TLA	1	1	BUBBLES	55145995	
1003132660	92307	R	AN	M	3/19/2024	3/29/2024	N/A	CR	11	11	Fuzz	55145777	
1003912459	92311	R	AN	M	12/28/2024	12/28/2024	N/A	TLA	1	1	Fuzz	55048754	
1003144165	92307	R	AN	M	3/23/2024	3/23/2024	N/A	CR	1	1	BUBBLES	55048588	
1003363966	92307	R	AN	M	6/17/2024	6/17/2024	N/A	TLA	1	1	BUBBLES	54917986	
1003906446	92345	R	AN	M	12/25/2024	12/25/2024	N/A	TLA	1	1	BUBBLES	02857937	
1003311025	92392	R	AN	M	5/28/2024	5/28/2024	N/A	TLA	1	1	BUBBLES	08559147	
1003794822	92392	R	AN	M	11/4/2024	11/4/2024	N/A	CR	1	1	Fuzz	01579397	
1003069116	92315	R	AN	M	2/24/2024	2/24/2024	N/A	CR	1	1	BUBBLES	08496440	
1003661601	92315	R	AH	M	9/16/2024	9/16/2024	N/A	TLA	1	1	Fuzz	0E206687	
1003743214	92392	R	AN	M	10/16/2024	10/30/2024	N/A	CR	15	15	Fuzz	05767078	
1003891579	92307	R	AN	M	12/17/2024	12/17/2024	N/A	TLA	1	1	BUBBLES	06794551	
1003233617	92311	R	AN	M	4/26/2024	4/26/2024	N/A	TLA	1	1	BUBBLES		54738836
1003033518	92311	R	AN	M	2/9/2024	3/8/2024	N/A	TLA	29	29	BUBBLES	01532129	
1003915560	92307	R	AN	M	12/30/2024	12/31/2024	N/A	CR	2	2	BUBBLES	12445533	
1003811364	92308	R	AN	M	11/12/2024	11/25/2024	N/A	CR	14	14	Fuzz	06759392	
1003243653	92307	R	AN	M	4/30/2024	4/30/2024	N/A	TLA	1	1	Fuzz	55146915	
1003240940	92311	R	AN	M	4/29/2024	4/29/2024	N/A	TLA	1	1	BUBBLES	08537215	
1003253998	92345	R	AN	M	5/3/2024	5/8/2024	N/A	CR	6	6	Fuzz	55146921	
1002972545	92344	R	AN	M	1/19/2024	1/19/2024	N/A	TLA	1	1	BUBBLES	55121427	
1003081749	92311	R	AN	M	2/28/2024	2/29/2024	N/A	CR	2	2	BUBBLES	12442901	

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1003356187	92307	R	AN	M	6/13/2024	6/19/2024	N/A	TLA	7	7	BUBBLES	55147871	
1003031835	92345	R	AN	S	2/9/2024	2/9/2024	N/A	TLA	40	1	Fuzz	09792845	
1002951928	92395	R	AN	M	1/10/2024	1/10/2024	N/A	CR	1	1	BUBBLES	55146826	
1003310759	92301	R	AN	M	5/28/2024	5/28/2024	N/A	CR	1	1	Fuzz	54916763	
1003193808	92345	R	AN	M	4/10/2024	4/10/2024	N/A	CR	1	1	BUBBLES	55343122	
1003036593	92345	R	AN	S	2/12/2024	2/27/2024	N/A	CR	58	16	BUBBLES	03577652	
1003701937	92301	R	AN	M	10/1/2024	10/1/2024	N/A	CR	1	1	BUBBLES	54917884	
1003035996	92394	R	AN	S	2/12/2024	2/28/2024	N/A	CR	59	17	BUBBLES	01584787	
1003880778	92394	R	AN	M	12/11/2024	12/11/2024	N/A	CR	1	1	BUBBLES	06759631	
1003729402	92308	R	AN	S	10/11/2024	10/11/2024	N/A	TLA	285	1	BUBBLES	04004013	
1003652578	92311	R	AN	M	9/11/2024	9/11/2024	N/A	TLA	1	1	Fuzz	55146504	
1003546726	92398	CI	AN	M	7/29/2024	7/29/2024	N/A	TLA	1	1	BUBBLES	05353794	
1003066309	92345	R	AN	M	2/23/2024	2/23/2024	N/A	CR	1	1	BUBBLES	55148260	
1003670274	92307	R	AN	M	9/18/2024	9/18/2024	N/A	CR	1	1	BUBBLES	01535879	
1003860572	92392	R	AN	M	12/3/2024	12/3/2024	N/A	CR	1	1	BUBBLES	08543467	
1003187741	92345	R	AN	S	4/9/2024	4/11/2024	N/A	CR	102	3	BUBBLES	0N316597	
1003072218	92345	R	AN	S	2/26/2024	4/5/2024	N/A	CR	96	40	BUBBLES	05763865	
1003837970	92345	R	AN	M	11/21/2024	11/21/2024	N/A	TLA	1	1	BUBBLES	05763865	
1003095274	92311	CI	AN	M	3/5/2024	3/8/2024	N/A	CR	4	4	BUBBLES	0R921365	
1003020447	92392	R	AN	M	2/5/2024	2/6/2024	N/A	CR	2	2	BUBBLES	55146158	
1003529885	92307	R	AN	M	7/22/2024	7/22/2024	N/A	CR	1	1	BUBBLES	55105691	
1003679346	92392	R	AN	M	9/23/2024	9/23/2024	N/A	CR	1	1	BUBBLES	06793110	
1003075175	92311	R	AN	S	2/27/2024	3/29/2024	N/A	CR	89	32	BUBBLES	00888010	
1003278271	92345	R	AN	M	5/14/2024	5/14/2024	N/A	TLA	1	1	BUBBLES	55147924	
1003259874	92311	R	AN	M	5/6/2024	5/6/2024	N/A	CR	1	1	Fuzz	02862093	
1002982421	92311	CI	AN	M	1/23/2024	1/23/2024	N/A	CR	1	1	BUBBLES	55105431	
1003218597	92307	R	AN	M	4/19/2024	4/19/2024	N/A	TLA	1	1	BUBBLES	55148043	
1003574630	92308	R	AN	M	8/8/2024	8/8/2024	N/A	TLA	1	1	BUBBLES	55146820	
1003316624	92344	R	AN	M	5/29/2024	5/29/2024	N/A	CR	1	1	Fuzz	0M927372	
1003690171	92311	R	AN	M	9/26/2024	9/26/2024	N/A	TLA	1	1	BUBBLES	55147275	
1003642949	92307	R	AN	M	9/7/2024	9/7/2024	N/A	TLA	1	1	Fuzz	55147862	
1003335201	92307	CI	AN	M	6/5/2024	6/5/2024	N/A	CR	1	1	BUBBLES	54888991	
1003883418	92392	R	AN	M	12/12/2024	12/12/2024	N/A	CR	1	1	BUBBLES	55148166	
1003624513	92394	R	AN	M	8/30/2024	8/30/2024	N/A	CR	1	1	BUBBLES	55050242	
1003240325	92301	R	AN	M	4/29/2024	4/29/2024	N/A	CR	1	1	BUBBLES	55049711	
1002985152	92345	R	AN	M	1/24/2024	1/24/2024	N/A	CR	1	1	BUBBLES	55121312	
1003117077	92392	R	AN	M	3/13/2024	3/13/2024	N/A	CR	1	1	BUBBLES	55049916	
1003900340	92345	R	AN	M	12/20/2024	12/20/2024	N/A	CR	1	1	BUBBLES	55145913	
1003278326	92392	R	AN	M	5/14/2024	5/14/2024	N/A	CR	1	1	BUBBLES	55145805	
1002992109	92345	R	AN	M	1/26/2024	1/26/2024	N/A	CR	1	1	BUBBLES	54949880	
1003677020	92307	R	AN	M	9/21/2024	9/21/2024	N/A	TLA	1	1	BUBBLES	55130076	
1003007873	92311	R	AN	M	1/31/2024	1/31/2024	N/A	CR	1	1	BUBBLES	54948220	
1003264677	92392	R	AN	M	5/8/2024	5/8/2024	N/A	TLA	1	1	BUBBLES	55145906	
1003893193	92392	R	AN	M	12/17/2024	12/17/2024	N/A	CR	1	1	BUBBLES	55122920	
1003805529	92392	R	AN	M	11/8/2024	11/8/2024	N/A	CR	1	1	BUBBLES	06794631	
1003830416	92392	R	AN	M	11/19/2024	11/19/2024	N/A	CR	1	1	BUBBLES	55146177	
1003805590	92392	R	AN	M	11/8/2024	11/8/2024	N/A	CR	1	1	BUBBLES	06759404	
1003124520	92345	R	AN	M	3/15/2024	3/15/2024	N/A	CR	1	1	BUBBLES	01626850	
1003602338	92308	R	AN	M	8/21/2024	8/21/2024	N/A	CR	1	1	BUBBLES	55148069	
1003066789	92392	R	AN	M	2/23/2024	2/23/2024	N/A	CR	1	1	BUBBLES	54917796	
1003265076	92345	R	AN	S	5/8/2024	5/13/2024	N/A	CR	134	6	BUBBLES	55082188	
1003034946	92344	R	AN	M	2/10/2024	2/10/2024	N/A	CR	1	1	Fuzz	55080464	
1002959607	92392	R	AN	M	1/15/2024	1/15/2024	N/A	TLA	1	1	BUBBLES	54949939	
1003732489	92392	R	AN	M	10/13/2024	10/13/2024	N/A	CR	1	1	BUBBLES	06793652	
1003837124	92392	R	AN	M	11/21/2024	11/21/2024	N/A	CR	1	1	BUBBLES	55049367	
1003614213	92392	R	AN	M	8/27/2024	8/27/2024	N/A	CR	1	1	Fuzz	55148159	
1003607132	92345	R	AN	M	8/23/2024	8/23/2024	N/A	CR	1	1	BUBBLES	55147850	
1003003778	92392	R	AN	M	1/30/2024	1/30/2024	N/A	CR	1	1	BUBBLES	54950797	
1003135051	92392	R	AN	M	3/20/2024	3/20/2024	N/A	CR	1	1	Fuzz	54949204	
1003810224	92345	R	AN	M	11/12/2024	11/12/2024	N/A	CR	1	1	BUBBLES	54949346	
1003847082	92344	R	AN	M	11/26/2024	11/26/2024	N/A	CR	1	1	BUBBLES	55148088	
1003483409	92301	R	AN	M	7/1/2024	7/1/2024	N/A	CR	1	1	BUBBLES	55049552	
1003879653	92311	R	AN	M	12/11/2024	12/11/2024	N/A	CR	1	1	BUBBLES	54948009	

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1003732082	92308	R	AN	M	10/11/2024	10/12/2024	N/A	CR	2	2	BUBBLES	0N186208	
1003752314	92301	R	AN	M	10/20/2024	10/20/2024	N/A	CR	1	1	BUBBLES	55049552	
1003878058	92301	R	AN	M	12/11/2024	12/11/2024	N/A	CR	1	1	BUBBLES	55049552	
1003099753	92345	CI	AN	M	3/6/2024	3/6/2024	N/A	CR	1	1	BUBBLES	04408078	
1003271999	92344	R	AN	M	5/10/2024	5/10/2024	N/A	CR	1	1	Fuzz	55049742	
1003900363	92344	R	AN	M	12/20/2024	12/20/2024	N/A	CR	1	1	BUBBLES	55049742	
1003079778	92311	R	AN	M	2/28/2024	2/28/2024	N/A	TLA	1	1	BUBBLES	55120411	
1003299084	92392	CI	AN	M	5/22/2024	5/22/2024	N/A	CR	1	1	BUBBLES	12370185	
1003185297	92392	R	AN	M	4/8/2024	4/8/2024	N/A	CR	1	1	BUBBLES	54857135	
1003036107	92394	R	AN	S	2/12/2024	2/27/2024	N/A	CR	58	16	BUBBLES	01579477	
1003036249	92394	R	AN	S	2/12/2024	3/19/2024	N/A	CR	79	37	Fuzz	09918532	
1003808315	92392	R	AN	M	11/9/2024	11/9/2024	N/A	CR	1	1	Fuzz	01528159	
1003109195	92356	R	AN	M	3/11/2024	3/11/2024	N/A	CR	1	1	BUBBLES	08560281	
1003566376	92344	R	AN	M	8/6/2024	8/6/2024	N/A	TLA	1	1	BUBBLES	08540793	
1003491502	92392	R	AN	M	7/3/2024	7/3/2024	N/A	CR	1	1	Fuzz	00969496	
1003171161	92395	R	AN	M	4/2/2024	4/2/2024	N/A	TLA	1	1	BUBBLES	12443368	
1003664571	92344	CI	AN	S	9/17/2024	10/17/2024	N/A	CR	291	31	BUBBLES	55345209	
1003804889	92301	R	AN	M	11/7/2024	11/7/2024	N/A	CR	1	1	Fuzz	09792280	
1003379060	92345	R	AN	M	6/23/2024	6/23/2024	N/A	CR	1	1	BUBBLES	55146414	
1003557442	92308	R	AN	S	8/1/2024	8/6/2024	N/A	CR	219	6	BUBBLES	55146639	
1003257746	92345	R	AN	M	5/6/2024	5/6/2024	N/A	CR	1	1	Fuzz	55147733	
1003187828	92345	R	AN	S	4/9/2024	4/18/2024	N/A	CR	109	10	Fuzz	55145994	
1003629302	92301	R	AN	M	9/3/2024	9/3/2024	N/A	CR	1	1	Fuzz	54948240	
1003739980	92394	R	AN	M	10/15/2024	10/15/2024	N/A	CR	1	1	BUBBLES	0L698879	
1003892526	92308	R	AN	M	12/17/2024	12/17/2024	N/A	TLA	1	1	BUBBLES	55121372	
1002969181	92308	R	AN	M	1/18/2024	1/18/2024	N/A	CR	1	1	BUBBLES	01626447	
1003871234	92307	R	AN	M	12/7/2024	12/7/2024	N/A	CR	1	1	BUBBLES	06763086	
1003116899	92307	R	AN	M	3/13/2024	3/13/2024	N/A	TLA	1	1	BUBBLES	55145902	
1003810571	92308	R	AN	M	11/12/2024	12/10/2024	N/A	CR	29	29	BUBBLES	55105679	
1003494268	92307	R	AN	M	7/5/2024	7/5/2024	N/A	CR	1	1	Fuzz	55147598	
1003187694	92345	R	AN	S	4/9/2024	4/23/2024	N/A	CR	114	15	BUBBLES	55148038	
1003771958	92307	R	AN	M	10/28/2024	10/28/2024	N/A	TLA	1	1	BUBBLES	55343933	
1003199799	92311	R	AN	S	4/12/2024	4/24/2024	N/A	CR	115	13	Fuzz	08538225	
1003193652	92345	CI	AN	M	4/10/2024	4/10/2024	N/A	CR	1	1	Fuzz	08489118	
1003831153	92394	R	AN	M	11/20/2024	11/20/2024	N/A	CR	1	1	BUBBLES	04328067	
1003033236	92345	CI	AN	S	2/9/2024	2/21/2024	N/A	CR	52	13	BUBBLES	03288418	
1003101654	92311	R	AN	M	3/6/2024	3/6/2024	N/A	CR	1	1	Fuzz	55145888	
1003040002	92327	R	AN	M	2/13/2024	3/8/2024	N/A	TLA	25	25	BUBBLES	55147326	
1003254233	92311	CI	AN	S	5/3/2024	5/10/2024	N/A	CR	131	8	BUBBLES	08542021	
1003074169	92311	CI	AN	M	2/27/2024	4/2/2024	N/A	CR	36	36	BUBBLES	55147251	
1003090172	92307	R	AN	M	3/2/2024	3/2/2024	N/A	CR	1	1	BUBBLES	03571776	
1003489163	92345	R	AN	M	7/3/2024	7/9/2024	N/A	TLA	7	7	Fuzz	55146370	
1003834848	92392	R	AN	M	11/21/2024	11/21/2024	N/A	CR	1	1	BUBBLES	0M813022	
1003052712	92345	R	AN	M	2/17/2024	2/17/2024	N/A	CR	1	1	BUBBLES	01584384	
1003171054	92392	R	AN	M	4/2/2024	4/2/2024	N/A	CR	1	1	Fuzz	01529089	
1003044488	92345	R	AN	M	2/14/2024	2/14/2024	N/A	CR	1	1	Fuzz	55535464	
1003200022	92345	R	AN	S	4/12/2024	4/23/2024	N/A	CR	114	12	Fuzz	03578912	
1003232163	92392	R	AN	M	4/25/2024	4/25/2024	N/A	TLA	1	1	Fuzz	08544004	
1003876897	92392	R	AN	M	12/10/2024	12/10/2024	N/A	TLA	1	1	BUBBLES	07568980	
1003801544	92392	R	AN	M	11/6/2024	11/6/2024	N/A	CR	1	1	Fuzz	09798572	
1003344497	92395	R	AN	M	6/8/2024	6/8/2024	N/A	CR	1	1	BUBBLES	08544557	
1003070603	92395	R	AN	M	2/26/2024	2/26/2024	N/A	TLA	1	1	BUBBLES	55130101	
1003627287	92301	R	AN	M	8/31/2024	8/31/2024	N/A	CR	1	1	BUBBLES	03654960	
1003521642	92345	CI	AN	M	7/17/2024	7/18/2024	N/A	TLA	2	2	BUBBLES	06064484	
1003833197	92307	R	AN	M	11/20/2024	11/20/2024	N/A	TLA	1	1	BUBBLES	06794685	
1003068874	92394	R	AN	M	2/23/2024	2/23/2024	N/A	TLA	1	1	BUBBLES	55105541	
1003527677	92307	R	AN	M	7/22/2024	7/22/2024	N/A	TLA	1	1	Fuzz	55147282	
1003836141	92395	R	AN	M	11/21/2024	11/21/2024	N/A	TLA	1	1	BUBBLES	06793088	
1003307464	92345	R	AN	M	5/24/2024	5/24/2024	N/A	CR	1	1	BUBBLES	0N208457	
1003732125	92345	R	AN	M	10/12/2024	10/12/2024	N/A	CR	1	1	Fuzz	02859144	
1003814908	92311	R	AN	M	11/13/2024	11/13/2024	N/A	CR	1	1	Fuzz	55081164	
1003807179	92392	R	AN	M	11/8/2024	11/8/2024	N/A	CR	1	1	BUBBLES	05845477	
1003245541	92392	R	AN	M	5/1/2024	5/1/2024	N/A	CR	1	1	BUBBLES	03654937	

Customer Meter Fugitive Leaks:

ID	Geographic Location	Meter Classification (Commercial/Industrial or Residential)	Leak Classification (Grade)	Leak Discovery Method	Discovery Date (DD/MM/YY)	Leak Repair Date (MM/DD/YY)	If not repaired by 12/31/24 List the Scheduled Date of Repair (DD/MM/YY)	Repair Type	Number of Days Leaking	Number of Days to Repair	Bubble Size Classification	MSA Identification Number	Comments or Additional Information (If you are able to quantify the leak rate by bubble pattern or other methods please include this volumetric data, and state what method was used to determine the flow/leak rate in these columns.)
1003833968	92395	R	AN	M	11/20/2024	11/20/2024	N/A	CR	1	1	Fuzz	08553612	
1003199946	92345	R	AN	S	4/12/2024	4/23/2024	N/A	CR	114	12	BUBBLES	03655032	
1002942245	92345	R	AN	M	1/7/2024	1/8/2024	N/A	CR	2	2	Fuzz	02859116	
1003910465	92345	R	AN	M	12/27/2024	12/27/2024	N/A	TLA	1	1	Fuzz	06759435	
1003191983	92345	R	AN	M	4/10/2024	4/10/2024	N/A	CR	1	1	Fuzz	55534685	
1003261852	92345	R	AN	M	5/7/2024	5/7/2024	N/A	CR	1	1	Fuzz	0N587882	
1003735591	92308	R	AN	S	10/14/2024	10/17/2024	N/A	CR	291	4	BUBBLES	03717866	
1003544025	92308	R	AN	M	7/29/2024	7/29/2024	N/A	CR	1	1	BUBBLES	55147504	
1003111770	92394	R	AN	M	3/11/2024	3/11/2024	N/A	CR	1	1	Fuzz	0E361408	
1003577674	92394	R	AN	M	8/10/2024	8/10/2024	N/A	CR	1	1	BUBBLES	0M764375	
1002973984	92308	R	AN	M	1/19/2024	1/19/2024	N/A	CR	1	1	BUBBLES	22284524	
1003527034	92394	R	AN	M	7/20/2024	7/20/2024	N/A	CR	1	1	Fuzz	54738201	
1003661546	92308	R	AN	M	9/16/2024	9/16/2024	N/A	CR	1	1	BUBBLES	03579105	
1003224893	92307	CI	AN	M	4/23/2024	4/23/2024	N/A	CR	1	1	BUBBLES	55147039	
1003224892	92307	R	AN	M	4/23/2024	4/23/2024	N/A	CR	1	1	BUBBLES	55050128	
1003224140	92307	CI	AN	M	4/23/2024	4/23/2024	N/A	CR	1	1	BUBBLES	03571794	
1003353227	92307	CI	AN	M	6/12/2024	6/12/2024	N/A	CR	1	1	BUBBLES	0F130010	
1003808841	92307	R	AN	M	11/10/2024	11/10/2024	N/A	CR	1	1	Fuzz	01526717	
1003677735	92345	R	AN	M	9/23/2024	9/23/2024	N/A	TLA	1	1	Fuzz	02858714	
1003844498	92345	R	AN	M	11/25/2024	11/25/2024	N/A	CR	1	1	BUBBLES	08556898	
1003660545	92345	R	AN	M	9/16/2024	9/16/2024	N/A	CR	1	1	BUBBLES	01534239	
1003042818	92345	R	AN	S	2/14/2024	2/28/2024	N/A	CR	59	15	BUBBLES	03627059	
1003837422	92311	R	AN	M	11/21/2024	11/21/2024	N/A	CR	1	1	Fuzz	06794053	
1003895519	92301	R	AN	M	12/18/2024	12/18/2024	N/A	CR	1	1	BUBBLES	08543995	
1003496874	92395	CI	AN	M	7/8/2024	8/6/2024	N/A	CR	30	30	Fuzz	08540517	
1003361078	92301	R	AN	M	6/14/2024	6/14/2024	N/A	CR	1	1	BUBBLES	01580947	
1003563925	92307	R	AN	M	8/5/2024	8/5/2024	N/A	CR	1	1	BUBBLES	03654949	
1003183051	92392	R	AN	M	4/6/2024	4/6/2024	N/A	CR	1	1	BUBBLES	01584318	
1003789687	92344	R	AN	M	11/1/2024	11/1/2024	N/A	CR	1	1	Fuzz	05846171	
1003214227	92345	CI	AN	S	4/18/2024	4/23/2024	N/A	CR	114	6	BUBBLES	08545688	
1003187638	92345	R	AN	S	4/9/2024	4/24/2024	N/A	CR	115	16	Fuzz	03580347	
1003033492	92394	R	AN	M	2/9/2024	2/27/2024	N/A	TLA	19	19	Fuzz	55147512	
1003033531	92394	R	AN	S	2/9/2024	4/4/2024	N/A	CR	95	56	BUBBLES	55147983	
1003609355	92345	R	AN	M	8/24/2024	8/24/2024	N/A	CR	1	1	BUBBLES	05845523	
1003079012	92395	CI	AN	M	2/28/2024	2/28/2024	N/A	CR	1	1	BUBBLES	08556004	
1003752504	92345	R	AN	M	10/20/2024	10/20/2024	N/A	TLA	1	1	BUBBLES	06794715	
1003325718	92394	R	AN	M	5/31/2024	5/31/2024	N/A	CR	1	1	BUBBLES	01584072	
1002942020	92301	R	AN	M	1/7/2024	1/7/2024	N/A	CR	1	1	Fuzz	01626784	
1003318502	92392	R	AN	M	5/30/2024	5/30/2024	N/A	TLA	1	1	Fuzz	55148108	
1003291353	92345	R	AN	M	5/20/2024	5/29/2024	N/A	CR	10	10	BUBBLES	55146733	
1003556991	92345	CI	AN	S	8/1/2024	8/12/2024	N/A	CR	225	12	Fuzz	55344757	
1003126737	92395	R	AN	M	3/18/2024	3/18/2024	N/A	TLA	1	1	BUBBLES	55145941	
1003307967	92394	R	AN	M	5/24/2024	5/24/2024	N/A	TLA	1	1	BUBBLES	05739167	
1003561244	92345	R	AN	M	8/2/2024	8/2/2024	N/A	CR	1	1	BUBBLES	05764254	
1003252857	92345	R	AN	M	5/3/2024	5/3/2024	N/A	CR	1	1	BUBBLES	03654483	
1003882932	92345	R	AN	M	12/12/2024	12/12/2024	N/A	CR	1	1	BUBBLES	02857812	
1003780513	92344	R	AN	M	10/30/2024	10/30/2024	N/A	TLA	1	1	BUBBLES	06794590	
1003256558	92345	R	AN	M	5/6/2024	5/6/2024	N/A	TLA	1	1	Fuzz	01583119	
1003187811	92345	R	AN	S	4/9/2024	4/18/2024	N/A	CR	109	10	BUBBLES	05762781	
1003214195	92345	CI	AN	S	4/18/2024	4/23/2024	N/A	CR	114	6	BUBBLES	03571343	
1003055280	92392	R	AN	M	2/20/2024	2/20/2024	N/A	CR	1	1	BUBBLES	07568528	
1002969216	92392	R	AN	M	1/18/2024	1/18/2024	N/A	CR	1	1	BUBBLES	54738720	
1002959587	92392	R	AN	M	1/15/2024	1/15/2024	N/A	CR	1	1	Fuzz	55122882	
1003052332	92392	R	AN	M	2/16/2024	2/17/2024	N/A	CR	2	2	BUBBLES	55344674	
1003909403	92395	R	AN	M	12/26/2024	12/26/2024	N/A	TLA	1	1	BUBBLES	0C057292	
1003308660	92395	CI	AN	M	5/25/2024	5/25/2024	N/A	CR	1	1	BUBBLES	08488807	
1003154178	92395	CI	AN	M	3/27/2024	3/27/2024	N/A	TLA	1	1	BUBBLES	55105557	
1003609972	92301	R	AN	M	8/25/2024	8/25/2024	N/A	TLA	1	1	BUBBLES	08544700	
1003797203	92395	R	AN	M	11/5/2024	11/5/2024	N/A	TLA	1	1	Fuzz	06759416	
1003561693	92308	R	AN	M	8/3/2024	8/3/2024	N/A	CR	1	1	BUBBLES	55147583	
1003264870	92308	CI	AN	S	5/8/2024	5/10/2024	N/A	CR	131	3	Fuzz	00882752	
1003034898	92307	R	AN	M	2/10/2024	2/10/2024	N/A	CR	1	1	BUBBLES	02390011	
1003614212	92308	R	AN	M	8/27/2024	8/27/2024	N/A	CR	1	1	BUBBLES	01530197	

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1003735684	92308	R	AN	S	10/14/2024	10/15/2024	N/A	CR	289	2	Fuzz	05763151	
1003735662	92308	R	AN	S	10/14/2024	10/17/2024	N/A	CR	291	4	BUBBLES	54869010	
1003173784	92394	R	AN	M	4/3/2024	4/3/2024	N/A	CR	1	1	BUBBLES	0R235915	
1003575857	92394	R	AN	M	8/9/2024	8/9/2024	N/A	CR	1	1	BUBBLES	01052928	
1003203094	92394	R	AN	M	4/15/2024	4/15/2024	N/A	CR	1	1	Fuzz	0N273545	
1003224579	92394	R	AN	M	4/23/2024	4/23/2024	N/A	CR	1	1	Fuzz	54915568	
1003109161	92307	R	AH	M	3/11/2024	3/11/2024	N/A	CR	1	1	Bubbles Blown Off	55147315	
1003844981	92307	R	AN	M	11/25/2024	11/25/2024	N/A	CR	1	1	BUBBLES	06793069	
1003873432	92307	R	AN	M	12/9/2024	12/9/2024	N/A	CR	1	1	Fuzz	06759463	
1003111257	92307	R	AN	M	3/11/2024	3/11/2024	N/A	TLA	1	1	BUBBLES	55147695	
1003676739	92307	R	AN	M	9/20/2024	9/20/2024	N/A	CR	1	1	BUBBLES	03655834	
1003770567	92307	R	AN	M	10/25/2024	10/25/2024	N/A	CR	1	1	BUBBLES	06794635	
1003108400	92345	R	AN	M	3/9/2024	3/9/2024	N/A	CR	1	1	BUBBLES	0N252993	
1003034559	92311	R	AN	M	2/10/2024	2/10/2024	N/A	TLA	1	1	Fuzz	01626765	
1003841408	92311	R	AN	M	11/23/2024	11/23/2024	N/A	TLA	1	1	BUBBLES	06759369	
1002947315	92345	R	AN	M	1/9/2024	1/9/2024	N/A	CR	1	1	Fuzz	03654126	
1003647396	92345	CI	AN	M	9/10/2024	9/10/2024	N/A	CR	1	1	BUBBLES	08624542	
1003187650	92345	R	AN	S	4/9/2024	4/10/2024	N/A	CR	101	2	BUBBLES	0N273610	
1003187703	92345	R	AN	S	4/9/2024	4/23/2024	N/A	CR	114	15	BUBBLES	55147067	
1003254091	92311	CI	AN	M	5/3/2024	5/14/2024	N/A	CR	12	12	BUBBLES	55530463	
1003664733	92311	CI	AN	M	9/17/2024	9/17/2024	N/A	CR	1	1	BUBBLES	54889019	
1003071789	92307	R	AN	M	2/26/2024	2/26/2024	N/A	CR	1	1	BUBBLES	55129853	
1003035824	92344	CI	AN	S	2/12/2024	2/21/2024	N/A	CR	52	10	BUBBLES	54916838	
1003557579	92307	CI	AN	S	8/1/2024	8/8/2024	N/A	CR	221	8	Fuzz	06164393	
1003806917	92392	R	AN	M	11/8/2024	11/8/2024	N/A	TLA	1	1	Fuzz	06794593	
1003853036	92394	R	AN	M	11/30/2024	11/30/2024	N/A	CR	1	1	Fuzz	06759349	
1003790143	92342	R	AN	M	11/1/2024	11/1/2024	N/A	TLA	1	1	BUBBLES	54855854	
1003186900	92308	R	AN	M	4/8/2024	4/8/2024	N/A	TLA	1	1	BUBBLES	55145962	
1003261409	92392	R	AN	M	5/7/2024	5/7/2024	N/A	CR	1	1	BUBBLES	08559185	
1003172469	92301	R	AN	M	4/2/2024	4/2/2024	N/A	CR	1	1	Fuzz	01583336	
1002956201	92301	R	AN	M	1/12/2024	1/12/2024	N/A	CR	1	1	BUBBLES	01626632	
1003033512	92394	R	AN	M	2/9/2024	3/19/2024	N/A	TLA	40	40	Fuzz	55146901	
1003033516	92394	R	AN	M	2/9/2024	2/27/2024	N/A	TLA	19	19	BUBBLES	01579590	
1003899512	92392	R	AN	M	12/19/2024	12/19/2024	N/A	CR	1	1	BUBBLES	01579069	
1003915575	92307	R	AN	M	12/30/2024	12/31/2024	N/A	CR	2	2	BUBBLES	54868742	
1003805608	92308	R	AN	M	11/8/2024	11/8/2024	N/A	TLA	1	1	BUBBLES	55146589	
1003525443	92308	R	AN	S	7/19/2024	8/12/2024	N/A	CR	225	25	Fuzz	03655594	
1003591279	92395	R	AN	M	8/16/2024	8/16/2024	N/A	CR	1	1	Fuzz	01580740	
1003042642	92345	R	AN	S	2/14/2024	3/21/2024	N/A	CR	81	37	BUBBLES	05738427	
1003291364	92345	R	AN	S	5/20/2024	6/6/2024	N/A	CR	158	18	Fuzz	55148078	
1003586384	92392	R	AN	M	8/14/2024	8/14/2024	N/A	TLA	1	1	Fuzz	06795023	
1003801005	92392	R	AN	M	11/6/2024	11/6/2024	N/A	CR	1	1	Fuzz	06794594	
1003214281	92345	R	AN	S	4/18/2024	4/23/2024	N/A	CR	114	6	Fuzz	08557729	
1003344613	92344	R	AN	M	6/9/2024	6/9/2024	N/A	CR	1	1	BUBBLES	01530408	
1003547989	92395	R	AN	M	7/30/2024	7/30/2024	N/A	CR	1	1	BUBBLES	03578069	
1003610568	92356	R	AN	M	8/26/2024	8/26/2024	N/A	TLA	1	1	BUBBLES	09916425	
1003577815	92394	R	AN	M	8/10/2024	8/10/2024	N/A	CR	1	1	BUBBLES	01530011	
1003096416	92307	R	AN	M	3/5/2024	3/5/2024	N/A	CR	1	1	BUBBLES	55147428	
1002942981	92394	R	AN	M	1/8/2024	1/8/2024	N/A	CR	1	1	Fuzz	0N087410	
1002958637	92395	R	AN	M	1/12/2024	1/12/2024	N/A	CR	1	1	Fuzz	55120873	
1003217535	92395	CI	AN	M	4/19/2024	4/19/2024	N/A	TLA	1	1	Fuzz	03580124	
1002953133	92308	R	AN	M	1/11/2024	1/11/2024	N/A	CR	1	1	Fuzz	01528071	
1003092423	92308	R	AN	M	3/4/2024	3/4/2024	N/A	CR	1	1	BUBBLES	03627408	
1003735645	92308	R	AN	S	10/14/2024	10/15/2024	N/A	CR	289	2	Fuzz	06794063	
1003365129	92395	R	AN	M	6/17/2024	6/17/2024	N/A	CR	1	1	BUBBLES	0K921759	
1003108081	92308	R	AN	M	3/8/2024	3/8/2024	N/A	CR	1	1	BUBBLES	0N186295	
1003794694	92307	R	AN	M	11/4/2024	11/4/2024	N/A	CR	1	1	BUBBLES	01109245	
1003881157	92307	R	AN	M	12/12/2024	12/12/2024	N/A	CR	1	1	BUBBLES	06794623	
1003894658	92307	R	AN	M	12/18/2024	12/18/2024	N/A	CR	1	1	BUBBLES	06794561	
1003288149	92307	R	AN	M	5/17/2024	5/17/2024	N/A	TLA	1	1	BUBBLES	55105594	
1003083123	92345	R	AN	M	2/29/2024	2/29/2024	N/A	TLA	1	1	BUBBLES	09882406	
1003039857	92345	R	AN	M	2/13/2024	4/23/2024	N/A	CR	71	71	BUBBLES	55147066	
1003753882	92311	R	AN	M	10/21/2024	10/21/2024	N/A	TLA	1	1	Fuzz	06794116	

Customer Meter Fugitive Leaks:

ID	Geographic Location	Meter Classification (Commercial/Industrial or Residential)	Leak Classification (Grade)	Leak Discovery Method	Discovery Date (DD/MM/YY)	Leak Repair Date (MM/DD/YY)	If not repaired by 12/31/24 List the Scheduled Date of Repair (DD/MM/YY)	Repair Type	Number of Days Leaking	Number of Days to Repair	Bubble Size Classification	MSA Identification Number	Comments or Additional Information (If you are able to quantify the leak rate by bubble pattern or other methods please include this volumetric data, and state what method was used to determine the flow/leak rate in these columns.)
1003230357	92311	R	AN	M	4/25/2024	4/25/2024	N/A	TLA	1	1	BUBBLES	54917142	
1003033074	92327	CI	AH	S	2/9/2024	3/8/2024	N/A	CR	68	29	Bubbles Blown Off	00888298	
1003735297	92308	R	AN	S	10/14/2024	10/17/2024	N/A	CR	291	4	BUBBLES	01536264	
1003808713	92307	R	AN	M	11/10/2024	11/10/2024	N/A	CR	1	1	Fuzz	01527456	
1003289833	92394	R	AN	M	5/17/2024	5/17/2024	N/A	CR	1	1	Fuzz	01527513	
1003278347	92344	CI	AN	M	5/14/2024	5/14/2024	N/A	TLA	1	1	BUBBLES	08488660	
1003254173	92345	CI	AN	S	5/3/2024	5/6/2024	N/A	CR	127	4	BUBBLES	03288400	
1003915180	92394	R	AN	M	12/30/2024	12/30/2024	N/A	CR	1	1	BUBBLES	55147458	
1003841024	92392	R	AN	M	11/22/2024	11/22/2024	N/A	CR	1	1	Fuzz	55147735	
1003114758	92392	R	AN	M	3/12/2024	3/12/2024	N/A	CR	1	1	BUBBLES	08542942	
1003214163	92345	R	AN	S	4/18/2024	4/23/2024	N/A	TLA	114	6	BUBBLES	01535537	
1003199984	92345	R	AN	S	4/12/2024	4/23/2024	N/A	CR	114	12	BUBBLES	55344463	
1003250129	92395	CI	AN	S	5/2/2024	5/2/2024	N/A	TLA	123	1	BUBBLES	01217125	
1003096350	92392	R	AN	M	3/5/2024	3/5/2024	N/A	CR	1	1	Fuzz	07622309	
1003588604	92392	R	AN	M	8/15/2024	8/15/2024	N/A	CR	1	1	BUBBLES	05846383	
1002939411	92344	R	AN	M	1/5/2024	1/5/2024	N/A	CR	1	1	Fuzz	12276864	
1003735336	92308	R	AN	S	10/14/2024	10/17/2024	N/A	CR	291	4	BUBBLES	22284748	
1003735456	92308	CI	AN	S	10/14/2024	10/15/2024	N/A	CR	289	2	Fuzz	08555447	
1003503114	92308	R	AN	S	7/10/2024	8/12/2024	N/A	CR	225	34	Fuzz	56352541	
1003087579	92345	R	AN	M	3/1/2024	3/1/2024	N/A	CR	1	1	BUBBLES	55147725	
1003525315	92308	R	AN	S	7/19/2024	8/8/2024	N/A	CR	221	21	Fuzz	06760093	
1003574566	92392	R	AN	M	8/8/2024	8/8/2024	N/A	CR	1	1	BUBBLES	0K921730	
1003891395	92345	R	AN	M	12/17/2024	12/17/2024	N/A	TLA	1	1	BUBBLES	55148154	
1003867476	92345	R	AN	M	12/5/2024	12/5/2024	N/A	CR	1	1	BUBBLES	54916208	
1003206265	92345	R	AN	M	4/16/2024	4/16/2024	N/A	CR	1	1	Fuzz	03710692	
1003291355	92345	R	AN	S	5/20/2024	6/6/2024	N/A	CR	158	18	Fuzz	03580505	
1003278660	92345	R	AN	M	5/14/2024	5/14/2024	N/A	CR	1	1	BUBBLES	0E052516	
1003529442	92345	R	AN	M	7/22/2024	7/22/2024	N/A	CR	1	1	BUBBLES	55147579	
1003253930	92345	R	AN	S	5/3/2024	5/9/2024	N/A	CR	130	7	BUBBLES	0M674999	
1003534043	92392	R	AN	M	7/24/2024	7/24/2024	N/A	CR	1	1	Fuzz	08543030	
1002968775	92392	R	AN	M	1/18/2024	1/18/2024	N/A	TLA	1	1	Fuzz	01626740	
1003099539	92395	R	AN	M	3/6/2024	3/6/2024	N/A	CR	1	1	Fuzz	55120558	
1002957068	92395	R	AN	M	1/12/2024	1/12/2024	N/A	CR	1	1	BUBBLES	55120897	
1003900485	92395	R	AN	M	12/20/2024	12/20/2024	N/A	CR	1	1	BUBBLES	05738537	
1003557128	92395	CI	AN	M	8/1/2024	8/6/2024	N/A	CR	6	6	Fuzz	01535234	
1002982221	92342	R	AN	M	1/23/2024	1/23/2024	N/A	TLA	1	1	Fuzz	55048776	
1003115373	92392	R	AN	M	3/12/2024	3/12/2024	N/A	TLA	1	1	BUBBLES	00754374	
1003288824	92308	CI	AN	M	5/17/2024	5/17/2024	N/A	CR	1	1	BUBBLES	01528872	
1003872657	92308	R	AN	M	12/9/2024	12/9/2024	N/A	CR	1	1	BUBBLES	55079095	
1003562429	92308	R	AN	M	8/5/2024	8/5/2024	N/A	CR	1	1	BUBBLES	55146325	
1002950911	92307	R	AN	M	1/10/2024	1/10/2024	N/A	CR	1	1	BUBBLES	09785753	
1003527332	92307	R	AN	M	7/21/2024	7/21/2024	N/A	CR	1	1	BUBBLES	54896088	
1003572026	92307	CI	AN	M	8/8/2024	8/8/2024	N/A	CR	1	1	BUBBLES	09799111	
1003891765	92345	R	AN	M	12/17/2024	12/17/2024	N/A	CR	1	1	Fuzz	54856838	
1003030374	92345	R	AN	M	2/8/2024	2/28/2024	N/A	CR	21	21	BUBBLES	55148198	
1003033245	92345	R	AN	M	2/9/2024	2/21/2024	N/A	CR	13	13	BUBBLES	55148264	
1003886119	92345	R	AN	M	12/13/2024	12/13/2024	N/A	CR	1	1	BUBBLES	0N252991	
1003108796	92345	R	AN	M	3/10/2024	3/10/2024	N/A	CR	1	1	BUBBLES	0N087353	
1003858854	92311	CI	AN	M	12/3/2024	12/3/2024	N/A	TLA	1	1	BUBBLES	05413801	
1003845345	92311	R	AN	M	11/25/2024	11/25/2024	N/A	CR	1	1	BUBBLES	06794056	
1003557596	92315	R	AN	S	8/1/2024	10/28/2024	N/A	TLA	302	89	BUBBLES	05765622	
1003557636	92315	R	AN	M	8/1/2024	10/28/2024	N/A	CR	89	89	BUBBLES	54903572	
1003570601	92315	R	AN	S	8/7/2024	10/29/2024	N/A	TLA	303	84	BUBBLES	07571632	
1003570824	92315	R	AN	M	8/7/2024	10/29/2024	N/A	TLA	84	84	BUBBLES	None	
1003570755	92315	R	AN	M	8/7/2024	10/29/2024	N/A	TLA	84	84	BUBBLES	09858685	
1002954551	92311	R	AN	M	1/11/2024	3/29/2024	N/A	TLA	79	79	Fuzz	55121444	
1003570874	92315	R	AN	M	8/7/2024	10/22/2024	N/A	CR	77	77	BUBBLES	07566581	
1002953258	92311	R	AN	M	1/11/2024	3/19/2024	N/A	TLA	69	69	Fuzz	0R581762	
1003610296	92315	R	AN	S	8/26/2024	10/29/2024	N/A	CR	303	65	BUBBLES	08495419	
1003572017	92315	R	AN	M	8/8/2024	10/9/2024	N/A	TLA	63	63	Fuzz	54759447	
1003574870	92315	R	AN	M	8/9/2024	10/9/2024	N/A	TLA	62	62	BUBBLES	12445833	
1003574866	92315	R	AN	S	8/9/2024	10/9/2024	N/A	CR	283	62	Fuzz	56157972	
1003610189	92315	R	AN	S	8/26/2024	10/24/2024	N/A	CR	298	60	BUBBLES	0T116622	

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1003032740	92345	R	AN	S	2/9/2024	4/8/2024	N/A	TLA	99	60	Fuzz	55121242	
1003581651	92315	R	AN	S	8/13/2024	10/9/2024	N/A	CR	283	58	BUBBLES	55041420	
1003035401	92394	R	AN	M	2/12/2024	4/8/2024	N/A	TLA	57	57	BUBBLES	09916614	
1003040219	92345	R	AN	S	2/13/2024	4/8/2024	N/A	TLA	99	56	BUBBLES	0F621775	
1003033470	92394	R	AN	S	2/9/2024	4/4/2024	N/A	TLA	95	56	Fuzz	03577971	
1003039927	92345	R	AN	M	2/13/2024	4/4/2024	N/A	TLA	52	52	Fuzz	04360838	
1003031803	92345	R	AN	M	2/9/2024	3/28/2024	N/A	TLA	49	49	BUBBLES	55146755	
1003040577	92345	R	AN	M	2/13/2024	3/28/2024	N/A	CR	45	45	BUBBLES	55146756	
1003042516	92345	R	AN	M	2/14/2024	3/28/2024	N/A	TLA	44	44	BUBBLES	08488694	
1003059665	92345	R	AN	S	2/21/2024	4/4/2024	N/A	TLA	95	44	BUBBLES	0M927715	
1003032073	92345	R	AN	S	2/9/2024	3/21/2024	N/A	CR	81	42	Fuzz	01108564	
1003071797	92345	R	AN	S	2/26/2024	4/4/2024	N/A	TLA	95	39	BUBBLES	0M684590	
1003071847	92345	R	AN	S	2/26/2024	4/4/2024	N/A	TLA	95	39	BUBBLES	54949830	
1003071759	92345	R	AN	M	2/26/2024	4/4/2024	N/A	TLA	39	39	BUBBLES	54950463	
1003071825	92345	R	AN	S	2/26/2024	4/4/2024	N/A	TLA	95	39	BUBBLES	09799287	
1003664348	92315	R	AN	S	9/17/2024	10/24/2024	N/A	CR	298	38	BUBBLES	08495647	
1003075326	92345	R	AN	M	2/27/2024	4/4/2024	N/A	TLA	38	38	BUBBLES	12276802	
1003042540	92345	R	AN	M	2/14/2024	3/20/2024	N/A	TLA	36	36	Fuzz	01579525	
1003042531	92345	R	AN	M	2/14/2024	3/19/2024	N/A	TLA	35	35	Fuzz	0L707355	
1003693735	92315	R	AN	M	9/27/2024	10/28/2024	N/A	CR	32	32	BUBBLES	00650662	
1003042562	92345	CI	AN	S	2/14/2024	3/15/2024	N/A	TLA	75	31	Fuzz	0N316790	
1003664337	92315	CI	AN	M	9/17/2024	10/17/2024	N/A	TLA	31	31	BUBBLES	54818717	
1003664471	92315	R	AN	M	9/17/2024	10/17/2024	N/A	CR	31	31	Fuzz	54952079	
1003664496	92315	R	AN	M	9/17/2024	10/17/2024	N/A	TLA	31	31	Fuzz	09891152	
1003664500	92315	R	AN	M	9/17/2024	10/17/2024	N/A	CR	31	31	BUBBLES	56390658	
1003496809	92395	R	AN	S	7/8/2024	8/6/2024	N/A	TLA	219	30	Fuzz	08539590	
1003810175	92308	R	AN	M	11/12/2024	12/10/2024	N/A	CR	29	29	BUBBLES	08542309	
1003072200	92345	R	AN	S	2/26/2024	3/25/2024	N/A	TLA	85	29	Fuzz	09884081	
1003072153	92345	R	AN	S	2/26/2024	3/25/2024	N/A	TLA	85	29	Fuzz	0M813406	
1003072031	92345	R	AN	S	2/26/2024	3/25/2024	N/A	TLA	85	29	Fuzz	0R435460	
1003489231	92392	CI	AN	S	7/3/2024	7/30/2024	N/A	TLA	212	28	Fuzz	03711835	
1003622032	92392	CI	AN	S	8/29/2024	9/25/2024	N/A	CR	269	28	BUBBLES	08558502	
1003525111	92308	R	AN	M	7/19/2024	8/13/2024	N/A	TLA	26	26	BUBBLES	00882268	
1003524994	92308	R	AN	M	7/19/2024	8/13/2024	N/A	TLA	26	26	BUBBLES	08541333	
1003084400	92395	R	AN	M	2/29/2024	3/25/2024	N/A	TLA	26	26	Fuzz	03712386	
1003489215	92345	R	AN	M	7/3/2024	7/24/2024	N/A	TLA	22	22	Fuzz	54817106	
1003291313	92345	R	AN	M	5/20/2024	6/10/2024	N/A	TLA	22	22	BUBBLES	55330349	
1003488662	92345	R	AN	S	7/3/2024	7/24/2024	N/A	TLA	206	22	Fuzz	01113264	
1003291318	92311	R	AN	M	5/20/2024	6/10/2024	N/A	TLA	22	22	BUBBLES	01532082	
1003488708	92345	R	AN	S	7/3/2024	7/23/2024	N/A	TLA	205	21	Fuzz	55147848	
1003525461	92308	R	AN	M	7/19/2024	8/8/2024	N/A	TLA	21	21	BUBBLES	0F544167	
1003489085	92345	R	AN	S	7/3/2024	7/23/2024	N/A	CR	205	21	BUBBLES	09374933	
1003693713	92315	R	AN	M	9/27/2024	10/17/2024	N/A	CR	21	21	BUBBLES	08498256	
1003489191	92345	R	AN	S	7/3/2024	7/23/2024	N/A	CR	205	21	BUBBLES	0N316807	
1003132653	92345	R	AN	M	3/19/2024	4/8/2024	N/A	TLA	21	21	BUBBLES	07568664	
1003503000	92395	CI	AN	M	7/10/2024	7/29/2024	N/A	TLA	20	20	BUBBLES	01017320	
1003030436	92345	R	AN	M	2/8/2024	2/26/2024	N/A	TLA	19	19	BUBBLES	04096763	
1003033569	92394	R	AN	M	2/9/2024	2/27/2024	N/A	TLA	19	19	Fuzz	05764232	
1003030417	92345	R	AN	M	2/8/2024	2/26/2024	N/A	TLA	19	19	BUBBLES	01528908	
1003291367	92345	R	AN	S	5/20/2024	6/6/2024	N/A	TLA	158	18	Fuzz	55146948	
1003095070	92398	CI	AN	S	3/5/2024	3/21/2024	N/A	TLA	81	17	BUBBLES	55105538	
1003496556	92392	R	AN	S	7/8/2024	7/24/2024	N/A	TLA	206	17	Fuzz	54917175	
1003036408	92394	R	AN	M	2/12/2024	2/28/2024	N/A	TLA	17	17	Fuzz	01534947	
1003496475	92392	R	AN	S	7/8/2024	7/24/2024	N/A	TLA	206	17	Fuzz	54918722	
1003496467	92392	R	AN	S	7/8/2024	7/24/2024	N/A	TLA	206	17	Fuzz	54916695	
1003035356	92394	R	AN	M	2/12/2024	2/27/2024	N/A	TLA	16	16	BUBBLES	09785902	
1003810340	92308	R	AN	S	11/12/2024	11/27/2024	N/A	CR	332	16	BUBBLES	06759319	
1003036345	92394	R	AN	M	2/12/2024	2/27/2024	N/A	TLA	16	16	BUBBLES	03709528	
1003810305	92308	R	AN	S	11/12/2024	11/27/2024	N/A	CR	332	16	BUBBLES	03710481	
1003544173	92308	CI	AN	M	7/29/2024	8/13/2024	N/A	CR	16	16	BUBBLES	08537604	
1003035755	92345	R	AN	M	2/12/2024	2/27/2024	N/A	TLA	16	16	BUBBLES	0F622013	
1003039610	92392	CI	AN	M	2/13/2024	2/28/2024	N/A	TLA	16	16	Fuzz	05767112	
1003496865	92345	R	AN	S	7/8/2024	7/23/2024	N/A	CR	205	16	BUBBLES	03717526	

Customer Meter Fugitive Leaks:

ID	Geographic Location	Meter Classification (Commercial/Industrial or Residential)	Leak Classification (Grade)	Leak Discovery Method	Discovery Date (DD/MM/YY)	Leak Repair Date (MM/DD/YY)	If not repaired by 12/31/24 List the Scheduled Date of Repair (DD/MM/YY)	Repair Type	Number of Days Leaking	Number of Days to Repair	Bubble Size Classification	MSA Identification Number	Comments or Additional Information (If you are able to quantify the leak rate by bubble pattern or other methods please include this volumetric data, and state what method was used to determine the flow/leak rate in these columns.)
1002954498	92311	R	AN	M	1/11/2024	1/26/2024	N/A	TLA	16	16	Fuzz	0N271162	
1003496926	92345	R	AN	S	7/8/2024	7/23/2024	N/A	CR	205	16	BUBBLES	05763091	
1003036078	92394	R	AN	M	2/12/2024	2/26/2024	N/A	TLA	15	15	BUBBLES	54858673	
1003042901	92345	R	AN	S	2/14/2024	2/28/2024	N/A	TLA	59	15	Fuzz	0R326309	
1003525768	92386	R	AN	M	7/19/2024	8/2/2024	N/A	TLA	15	15	BUBBLES	11876474	
1003040499	92345	R	AN	S	2/13/2024	2/27/2024	N/A	TLA	58	15	BUBBLES	05845859	
1003304206	92308	R	AN	M	5/23/2024	6/6/2024	N/A	TLA	15	15	Fuzz	03578164	
1003503287	92395	CI	AN	M	7/10/2024	7/23/2024	N/A	TLA	14	14	BUBBLES	01089441	
1003503246	92395	CI	AN	M	7/10/2024	7/23/2024	N/A	TLA	14	14	BUBBLES	08491058	
1003503351	92308	R	AN	M	7/10/2024	7/23/2024	N/A	TLA	14	14	Fuzz	00888445	
1003811258	92308	R	AN	S	11/12/2024	11/25/2024	N/A	TLA	330	14	Fuzz	06759389	
1003503189	92308	R	AN	S	7/10/2024	7/23/2024	N/A	TLA	205	14	BUBBLES	09372278	
1003503090	92308	CI	AN	S	7/10/2024	7/23/2024	N/A	TLA	205	14	BUBBLES	56360787	
1003503184	92308	R	AN	M	7/10/2024	7/23/2024	N/A	TLA	14	14	Fuzz	0M769661	
1003849755	92308	R	AN	M	11/27/2024	12/10/2024	N/A	TLA	14	14	BUBBLES	55147386	
1002954586	92307	R	AN	M	1/11/2024	1/24/2024	N/A	TLA	14	14	Fuzz	01626804	
1002954436	92395	R	AN	M	1/11/2024	1/24/2024	N/A	TLA	14	14	Fuzz	55123117	
1003042533	92345	R	AN	M	2/14/2024	2/26/2024	N/A	TLA	13	13	BUBBLES	54949356	
1003032347	92345	R	AN	M	2/9/2024	2/21/2024	N/A	CR	13	13	Fuzz	06759257	
1003044923	92392	R	AN	M	2/14/2024	2/26/2024	N/A	TLA	13	13	Fuzz	54947593	
1003491995	92345	CI	AN	M	7/5/2024	7/16/2024	N/A	TLA	12	12	BUBBLES	55129964	
1003556992	92395	CI	AN	M	8/1/2024	8/12/2024	N/A	TLA	12	12	Fuzz	12481739	
1003291332	92345	R	AN	S	5/20/2024	5/30/2024	N/A	TLA	151	11	Fuzz	03655120	
1003095364	92395	CI	AN	M	3/5/2024	3/15/2024	N/A	TLA	11	11	Fuzz	55147656	
1003291363	92345	R	AN	M	5/20/2024	5/29/2024	N/A	TLA	10	10	BUBBLES	0F130935	
1003035783	92345	R	AN	M	2/12/2024	2/21/2024	N/A	TLA	10	10	BUBBLES	03580366	
1003810888	92308	R	AN	S	11/12/2024	11/21/2024	N/A	TLA	326	10	Fuzz	06759385	
1003811033	92308	R	AN	S	11/12/2024	11/21/2024	N/A	CR	326	10	Fuzz	06759387	
1003810983	92308	CI	AN	S	11/12/2024	11/21/2024	N/A	CR	326	10	Fuzz	54917849	
1003035789	92345	CI	AN	S	2/12/2024	2/21/2024	N/A	TLA	52	10	BUBBLES	54858608	
1003810964	92308	R	AN	S	11/12/2024	11/21/2024	N/A	CR	326	10	Fuzz	0N086917	
1003811087	92308	R	AN	M	11/12/2024	11/21/2024	N/A	CR	10	10	BUBBLES	55148079	
1003811016	92308	R	AN	M	11/12/2024	11/21/2024	N/A	CR	10	10	Fuzz	09793068	
1003811376	92308	R	AN	M	11/12/2024	11/21/2024	N/A	CR	10	10	Fuzz	06762962	
1003811384	92308	R	AN	M	11/12/2024	11/21/2024	N/A	CR	10	10	Fuzz	06762966	
1003664533	92356	CI	AN	S	9/17/2024	9/25/2024	N/A	CR	269	9	BUBBLES	03650049	
1003556989	92392	CI	AN	M	8/1/2024	8/8/2024	N/A	TLA	8	8	BUBBLES	55146351	
1002954564	92307	R	AN	M	1/11/2024	1/18/2024	N/A	TLA	8	8	Fuzz	02862652	
1002966715	92301	R	AN	M	1/17/2024	1/24/2024	N/A	TLA	8	8	BUBBLES	55120938	
1003059763	92345	R	AN	S	2/21/2024	2/28/2024	N/A	TLA	59	8	BUBBLES	12443948	
1003059596	92345	R	AN	S	2/21/2024	2/28/2024	N/A	TLA	59	8	BUBBLES	09799384	
1003556215	92314	R	AN	M	8/1/2024	8/7/2024	N/A	TLA	7	7	BUBBLES	00650746	
1003502855	92345	R	AN	M	7/10/2024	7/16/2024	N/A	TLA	7	7	Fuzz	08560246	
1003556389	92314	R	AN	S	8/1/2024	8/7/2024	N/A	TLA	220	7	BUBBLES	08496445	
1003556441	92314	R	AN	S	8/1/2024	8/7/2024	N/A	TLA	220	7	Fuzz	0P966374	
1003502921	92345	R	AN	M	7/10/2024	7/16/2024	N/A	TLA	7	7	Fuzz	09785775	
1003574996	92308	CI	AN	S	8/9/2024	8/15/2024	N/A	CR	228	7	BUBBLES	08491421	
1003254025	92345	R	AN	S	5/3/2024	5/9/2024	N/A	TLA	130	7	Fuzz	55050213	
1003062457	92345	R	AN	M	2/22/2024	2/28/2024	N/A	TLA	7	7	BUBBLES	08560161	
1003062318	92345	R	AN	M	2/22/2024	2/28/2024	N/A	TLA	7	7	BUBBLES	07569746	
1003033224	92345	R	AN	M	2/9/2024	2/14/2024	N/A	TLA	6	6	Fuzz	55147339	
1003556457	92345	CI	AN	M	8/1/2024	8/6/2024	N/A	TLA	6	6	Fuzz	54889027	
1003557567	92345	CI	AN	M	8/1/2024	8/6/2024	N/A	TLA	6	6	Fuzz	54888993	
1003557082	92392	CI	AN	S	8/1/2024	8/6/2024	N/A	TLA	219	6	Fuzz	01584112	
1003556408	92356	R	AN	S	8/1/2024	8/6/2024	N/A	TLA	219	6	BUBBLES	03627220	
1003557359	92307	CI	AN	S	8/1/2024	8/6/2024	N/A	TLA	219	6	BUBBLES	01579698	
1003557446	92307	CI	AN	M	8/1/2024	8/6/2024	N/A	TLA	6	6	BUBBLES	55080783	
1003557574	92395	R	AN	S	8/1/2024	8/6/2024	N/A	TLA	219	6	Fuzz	0B885308	
1003544432	92386	R	AN	M	7/29/2024	8/2/2024	N/A	TLA	5	5	BUBBLES	09926427	
1003525000	92308	R	AN	M	7/19/2024	7/23/2024	N/A	TLA	5	5	BUBBLES	08544671	
1003525017	92308	R	AN	S	7/19/2024	7/23/2024	N/A	TLA	205	5	BUBBLES	08541733	
1003525121	92308	R	AN	S	7/19/2024	7/23/2024	N/A	TLA	205	5	BUBBLES	05845917	
1003268441	92345	R	AN	S	5/9/2024	5/13/2024	N/A	TLA	134	5	BUBBLES	0R385718	

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1003525128	92308	R	AN	S	7/19/2024	7/23/2024	N/A	TLA	205	5	BUBBLES	09784531	
1003735621	92308	R	AN	M	10/14/2024	10/18/2024	N/A	TLA	5	5	BUBBLES	01532890	
1003735333	92308	R	AN	S	10/14/2024	10/18/2024	N/A	TLA	292	5	BUBBLES	01529034	
1003735406	92308	R	AN	S	10/14/2024	10/18/2024	N/A	CR	292	5	BUBBLES	54822739	
1003199968	92345	R	AN	M	4/12/2024	4/16/2024	N/A	TLA	5	5	Fuzz	0N252659	
1003141184	92345	CI	AN	S	3/22/2024	3/25/2024	N/A	TLA	85	4	Fuzz	08489106	
1003525129	92386	R	AN	S	7/19/2024	7/22/2024	N/A	TLA	204	4	BUBBLES	00855065	
1003033482	92394	R	AN	M	2/9/2024	2/12/2024	N/A	TLA	4	4	BUBBLES	02864254	
1003735634	92308	R	AN	M	10/14/2024	10/17/2024	N/A	TLA	4	4	BUBBLES	03650767	
1003735232	92308	R	AN	M	10/14/2024	10/17/2024	N/A	TLA	4	4	BUBBLES	08560623	
1003187814	92345	CI	AN	S	4/9/2024	4/11/2024	N/A	TLA	102	3	Fuzz	00887961	
1003072009	92345	R	AN	M	2/26/2024	2/28/2024	N/A	TLA	3	3	BUBBLES	01184577	
1003265685	92311	R	AN	M	5/8/2024	5/10/2024	N/A	TLA	3	3	Fuzz	05846027	
1003265595	92311	R	AN	M	5/8/2024	5/10/2024	N/A	TLA	3	3	Fuzz	0T117886	
1003583428	92307	CI	AN	S	8/13/2024	8/15/2024	N/A	CR	228	3	BUBBLES	54950905	
1003117277	92307	R	AN	M	3/13/2024	3/15/2024	N/A	CR	3	3	Fuzz	55148209	
1003742883	92308	R	AN	S	10/16/2024	10/18/2024	N/A	CR	292	3	BUBBLES	01194559	
1003071974	92392	CI	AN	M	2/26/2024	2/28/2024	N/A	TLA	3	3	Fuzz	55105644	
1003165813	92395	R	AN	M	4/1/2024	4/2/2024	N/A	TLA	2	2	BUBBLES	03578578	
1003264952	92345	R	AN	M	5/8/2024	5/9/2024	N/A	TLA	2	2	Fuzz	09792892	
1003264963	92345	R	AN	S	5/8/2024	5/9/2024	N/A	TLA	130	2	Fuzz	0M927568	
1003264949	92345	R	AN	M	5/8/2024	5/9/2024	N/A	TLA	2	2	Fuzz	01582203	
1003268443	92345	R	AN	M	5/9/2024	5/10/2024	N/A	CR	2	2	Fuzz	55148128	
1003165840	92345	R	AN	M	4/1/2024	4/2/2024	N/A	TLA	2	2	BUBBLES	01580881	
1003291541	92301	R	AN	M	5/20/2024	5/21/2024	N/A	TLA	2	2	Fuzz	00853334	
1003735230	92308	R	AN	M	10/14/2024	10/15/2024	N/A	TLA	2	2	Fuzz	03671784	
1003269796	92392	R	AN	M	5/9/2024	5/10/2024	N/A	TLA	2	2	Fuzz	03710980	
1003264902	92395	CI	AN	S	5/8/2024	5/9/2024	N/A	TLA	130	2	Fuzz	55049310	
1003735613	92308	R	AN	M	10/14/2024	10/15/2024	N/A	TLA	2	2	Fuzz	07874162	
1003735617	92308	R	AN	M	10/14/2024	10/15/2024	N/A	TLA	2	2	Fuzz	08555999	
1003265701	92345	R	AN	S	5/8/2024	5/9/2024	N/A	TLA	130	2	BUBBLES	54949826	
1003735521	92301	CI	AN	M	10/14/2024	10/15/2024	N/A	TLA	2	2	Fuzz	12370199	
1003743172	92307	R	AN	M	10/16/2024	10/17/2024	N/A	TLA	2	2	BUBBLES	01528298	
1003607887	92314	CI	AN	M	8/23/2024	8/23/2024	N/A	TLA	1	1	Fuzz	54816630	
1003858019	92345	R	AN	M	12/2/2024	12/3/2024	N/A	CR	2	2	BUBBLES	0F130142	
1003032537	92311	R	AN	M	2/9/2024	2/9/2024	N/A	TLA	1	1	BUBBLES	01626763	
1003458405	92315	R	AN	M	6/25/2024	6/25/2024	N/A	TLA	1	1	BUBBLES	05767674	
1003864954	92307	R	AN	M	12/4/2024	12/4/2024	N/A	CR	1	1	BUBBLES	06759383	
1003494295	92395	R	AN	M	7/5/2024	7/6/2024	N/A	TLA	2	2	Fuzz	01533169	
1003627203	92345	R	AN	M	8/31/2024	8/31/2024	N/A	TLA	1	1	BUBBLES	55105621	
1003069696	92395	R	AN	M	2/25/2024	2/25/2024	N/A	TLA	1	1	Fuzz	54817854	
1003144663	92345	R	AN	M	3/24/2024	3/24/2024	N/A	CR	1	1	BUBBLES	54949193	
1002975245	92392	R	AN	M	1/20/2024	1/20/2024	N/A	TLA	1	1	BUBBLES	55146158	
1003893415	92308	R	AN	M	12/17/2024	12/17/2024	N/A	CR	1	1	BUBBLES	05739336	
1003816584	92307	R	AN	M	11/13/2024	11/13/2024	N/A	CR	1	1	Fuzz	55105691	
1003766062	92345	CI	AN	M	10/24/2024	10/24/2024	N/A	TLA	1	1	BUBBLES	03751959	
1003575887	92311	CI	AN	M	8/9/2024	8/9/2024	N/A	CR	1	1	BUBBLES	55146558	
1003253021	92311	R	AN	M	5/3/2024	5/3/2024	N/A	TLA	1	1	BUBBLES	55146066	
1003871126	92345	R	AN	M	12/7/2024	12/7/2024	N/A	CR	1	1	BUBBLES	55148055	
1003868042	92394	R	AN	M	12/5/2024	12/5/2024	N/A	TLA	1	1	BUBBLES	06759384	
1003912032	92345	R	AN	M	12/27/2024	12/27/2024	N/A	TLA	1	1	BUBBLES	03960838	
1003291410	92395	CI	AN	M	5/20/2024	5/20/2024	N/A	TLA	1	1	BUBBLES	54889021	
1003044091	92311	R	AN	M	2/14/2024	2/14/2024	N/A	TLA	1	1	BUBBLES	55121394	
1002987437	92395	R	AN	M	1/24/2024	1/25/2024	N/A	TLA	2	2	BUBBLES	03671634	
1003237187	92311	R	AN	M	4/28/2024	4/29/2024	N/A	TLA	2	2	BUBBLES	0T118024	
1003160062	92344	R	AN	M	3/28/2024	3/28/2024	N/A	TLA	1	1	BUBBLES	55105673	
1003182745	92301	R	AN	M	4/5/2024	4/5/2024	N/A	TLA	1	1	Fuzz	09803156	
1003494782	92392	R	AN	M	7/7/2024	7/7/2024	N/A	TLA	1	1	BUBBLES	54951059	
1003491935	92345	R	AN	M	7/5/2024	7/5/2024	N/A	TLA	1	1	Fuzz	12443948	
1003095037	92395	R	AN	M	3/5/2024	3/5/2024	N/A	TLA	1	1	BUBBLES	55147246	
1002986705	92392	R	AN	M	1/24/2024	1/24/2024	N/A	CR	1	1	BUBBLES	01528838	
1003484361	92395	R	AN	M	7/1/2024	7/1/2024	N/A	TLA	1	1	Fuzz	55147615	
1003841656	92394	R	AN	M	11/23/2024	11/23/2024	N/A	CR	1	1	Fuzz	03573647	

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1003545135	92345	R	AN	M	7/29/2024	7/29/2024	N/A	CR	1	1	BUBBLES	0F622351	
1003880211	92307	R	AN	M	12/11/2024	12/11/2024	N/A	TLA	1	1	BUBBLES	0M198757	
1003566219	92311	CI	AN	M	8/6/2024	8/6/2024	N/A	TLA	1	1	BUBBLES	55146558	
1003804840	92307	R	AN	M	11/7/2024	11/7/2024	N/A	TLA	1	1	BUBBLES	01527503	
1003867125	92301	R	AN	M	12/5/2024	12/5/2024	N/A	TLA	1	1	BUBBLES	01626401	
1003502697	92345	R	AN	M	7/10/2024	7/10/2024	N/A	TLA	1	1	BUBBLES	08540085	
1003870762	92311	R	AN	M	12/6/2024	12/6/2024	N/A	TLA	1	1	Fuzz	08537009	
1003806274	92307	R	AN	M	11/8/2024	11/8/2024	N/A	CR	1	1	Fuzz	06793651	
1003788611	92345	R	AN	M	11/1/2024	11/1/2024	N/A	TLA	1	1	Fuzz	06792981	
1003853178	92356	R	AN	M	12/1/2024	12/1/2024	N/A	TLA	1	1	Fuzz	01580936	
1002997148	92308	R	AN	M	1/29/2024	1/29/2024	N/A	CR	1	1	BUBBLES	03709786	
1003794926	92308	R	AN	M	11/4/2024	11/4/2024	N/A	TLA	1	1	BUBBLES	07876862	
1003140665	92308	R	AN	M	3/21/2024	3/22/2024	N/A	TLA	2	2	BUBBLES	55146184	
1003095020	92308	R	AN	M	3/5/2024	3/5/2024	N/A	TLA	1	1	BUBBLES	54738764	
1003371888	92395	CI	AN	M	6/19/2024	6/19/2024	N/A	TLA	1	1	BUBBLES	06109725	
1003908768	92394	R	AN	M	12/26/2024	12/26/2024	N/A	TLA	1	1	Fuzz	06759641	
1003839009	92345	R	AN	M	11/22/2024	11/22/2024	N/A	CR	1	1	Fuzz	0N316597	
1003731998	92308	R	AN	M	10/11/2024	10/11/2024	N/A	TLA	1	1	BUBBLES	0N186477	
1003491741	92392	R	AN	M	7/4/2024	7/4/2024	N/A	TLA	1	1	Fuzz	54950959	
1003871476	92392	R	AN	M	12/8/2024	12/8/2024	N/A	TLA	1	1	BUBBLES	05767190	
1003192990	92395	R	AN	M	4/10/2024	4/10/2024	N/A	TLA	1	1	BUBBLES	03712085	
1003873601	92395	CI	AN	M	12/9/2024	12/9/2024	N/A	CR	1	1	BUBBLES	06792969	
1002973836	92301	R	AN	M	1/19/2024	1/19/2024	N/A	TLA	1	1	Fuzz	54918590	
1003526895	92345	R	AN	M	7/20/2024	7/20/2024	N/A	TLA	1	1	BUBBLES	55146357	
1003741676	92307	R	AN	M	10/16/2024	10/16/2024	N/A	CR	1	1	BUBBLES	06794121	
1003587944	92345	R	AN	M	8/15/2024	8/15/2024	N/A	TLA	1	1	BUBBLES	55037128	
1002968761	92342	R	AN	M	1/18/2024	1/18/2024	N/A	TLA	1	1	BUBBLES	55100295	
1003035094	92307	R	AN	M	2/11/2024	2/11/2024	N/A	TLA	1	1	Fuzz	01626762	
1003069340	92345	CI	AN	M	2/25/2024	2/25/2024	N/A	TLA	1	1	BUBBLES	03741844	
1003859969	92307	R	AN	M	12/3/2024	12/3/2024	N/A	TLA	1	1	BUBBLES	06759320	
1003779972	92308	R	AN	M	10/30/2024	10/30/2024	N/A	TLA	1	1	Fuzz	01526592	
1002959010	92311	R	AN	M	1/13/2024	1/13/2024	N/A	TLA	1	1	Fuzz	01579451	
1003645526	92307	CI	AN	M	9/9/2024	9/9/2024	N/A	TLA	1	1	BUBBLES	54855775	
1003740098	92394	R	AN	M	10/15/2024	10/15/2024	N/A	TLA	1	1	BUBBLES	05764841	
1003787810	92395	R	AN	M	11/1/2024	11/1/2024	N/A	CR	1	1	BUBBLES	01530594	
1002932330	92342	R	AN	M	1/3/2024	1/3/2024	N/A	TLA	1	1	BUBBLES	0C057011	
1003905996	92345	R	AN	M	12/24/2024	12/24/2024	N/A	TLA	1	1	BUBBLES	09811034	
1002995457	92392	R	AN	M	1/28/2024	1/28/2024	N/A	TLA	1	1	Fuzz	08556386	
1003853019	92392	R	AN	M	11/30/2024	11/30/2024	N/A	TLA	1	1	Fuzz	05845545	
1003144441	92345	R	AN	M	3/24/2024	3/24/2024	N/A	TLA	1	1	Fuzz	0F429220	
1003497388	92308	R	AN	M	7/8/2024	7/8/2024	N/A	CR	1	1	BUBBLES	06762970	
1003192224	92395	R	AN	M	4/10/2024	4/10/2024	N/A	TLA	1	1	Fuzz	03649821	
1003834104	92345	R	AN	M	11/20/2024	11/20/2024	N/A	TLA	1	1	Fuzz	01213301	
1002954576	92308	R	AN	M	1/11/2024	1/11/2024	N/A	TLA	1	1	Fuzz	01581695	
1003892315	92345	R	AN	M	12/17/2024	12/17/2024	N/A	TLA	1	1	BUBBLES	07568217	
1003108351	92344	R	AN	M	3/9/2024	3/9/2024	N/A	CR	1	1	BUBBLES	03572693	
1003886981	92315	R	AN	M	12/14/2024	12/14/2024	N/A	TLA	1	1	BUBBLES	12278816	
1003218639	92311	R	AN	M	4/19/2024	4/19/2024	N/A	TLA	1	1	Fuzz	55122859	
1003108477	92311	R	AN	M	3/9/2024	3/9/2024	N/A	TLA	1	1	Fuzz	09918318	
1003288300	92307	R	AN	M	5/17/2024	5/17/2024	N/A	CR	1	1	BUBBLES	55146993	
1003555512	92344	R	AN	M	8/1/2024	8/1/2024	N/A	TLA	1	1	Fuzz	54948869	
1003205187	92301	R	AN	M	4/15/2024	4/15/2024	N/A	TLA	1	1	Fuzz	01534956	
1003183411	92392	R	AN	M	4/7/2024	4/7/2024	N/A	TLA	1	1	BUBBLES	54917307	
1002956171	92345	R	AN	M	1/12/2024	1/12/2024	N/A	TLA	1	1	Fuzz	01626433	
1003294857	92307	R	AN	M	5/20/2024	5/20/2024	N/A	TLA	1	1	Fuzz	0J699384	
1003326687	92307	R	AN	M	6/2/2024	6/2/2024	N/A	TLA	1	1	BUBBLES	0E508627	
1003220119	92392	R	AN	M	4/22/2024	4/22/2024	N/A	TLA	1	1	BUBBLES	55147896	
1003756186	92345	R	AN	M	10/21/2024	10/21/2024	N/A	TLA	1	1	BUBBLES	54916966	
1003552089	92395	R	AN	M	7/31/2024	7/31/2024	N/A	TLA	1	1	Fuzz	05846925	
1002995540	92392	R	AN	M	1/28/2024	1/28/2024	N/A	TLA	1	1	BUBBLES	01626572	
1003125859	92307	R	AN	M	3/15/2024	3/15/2024	N/A	CR	1	1	BUBBLES	55105691	
1003570261	92395	R	AN	M	8/7/2024	8/7/2024	N/A	TLA	1	1	BUBBLES	05739142	
1003198745	92395	R	AN	M	4/12/2024	4/12/2024	N/A	TLA	1	1	Fuzz	0L646613	

Customer Meter Fugitive Leaks:

ID	Geographic Location	Meter Classification (Commercial/Industrial or Residential)	Leak Classification (Grade)	Leak Discovery Method	Discovery Date (DD/MM/YY)	Leak Repair Date (MM/DD/YY)	If not repaired by 12/31/24 List the Scheduled Date of Repair (DD/MM/YY)	Repair Type	Number of Days Leaking	Number of Days to Repair	Bubble Size Classification	MSA Identification Number	Comments or Additional Information (If you are able to quantify the leak rate by bubble pattern or other methods please include this volumetric data, and state what method was used to determine the flow/leak rate in these columns.)
1003203540	92392	R	AN	M	4/15/2024	4/15/2024	N/A	TLA	1	1	BUBBLES	0F622677	
1002961339	92307	R	AN	M	1/16/2024	1/16/2024	N/A	TLA	1	1	Fuzz	0F130384	
1003543170	92307	R	AN	M	7/27/2024	7/27/2024	N/A	CR	1	1	BUBBLES	55048588	
1003032563	92345	R	AN	S	2/9/2024	2/9/2024	N/A	TLA	40	1	Fuzz	54858598	
1002955555	92394	R	AN	M	1/11/2024	1/11/2024	N/A	CR	1	1	BUBBLES	0K504701	
1003643618	92356	CI	AN	S	9/9/2024	9/9/2024	N/A	CR	253	1	BUBBLES	03649945	
1003116457	92345	R	AN	M	3/13/2024	3/13/2024	N/A	TLA	1	1	BUBBLES	01532031	
1003886170	92301	R	AN	M	12/13/2024	12/13/2024	N/A	CR	1	1	BUBBLES	01528305	
1003603632	92301	R	AN	M	8/22/2024	8/22/2024	N/A	CR	1	1	BUBBLES	55147596	
1002953573	92307	R	AN	M	1/11/2024	1/11/2024	N/A	CR	1	1	BUBBLES	55342705	
1003572482	92392	R	AN	M	8/8/2024	8/8/2024	N/A	TLA	1	1	Fuzz	08545047	
1003808809	92315	CI	AN	M	11/10/2024	11/10/2024	N/A	TLA	1	1	BUBBLES	03747592	
1003858753	92344	R	AN	M	12/3/2024	12/3/2024	N/A	TLA	1	1	Fuzz	01582837	
1003594547	92345	R	AN	M	8/19/2024	8/19/2024	N/A	CR	1	1	BUBBLES	55146341	
1003019904	92307	R	AN	M	2/5/2024	2/5/2024	N/A	TLA	1	1	BUBBLES	05767277	
1003210303	92345	R	AN	M	4/17/2024	4/17/2024	N/A	TLA	1	1	BUBBLES	55048381	
1003569148	92307	R	AN	M	8/7/2024	8/7/2024	N/A	TLA	1	1	Fuzz	22284693	
1003175822	92392	R	AN	M	4/3/2024	4/3/2024	N/A	TLA	1	1	Fuzz	01582665	
1003221621	92394	R	AN	M	4/22/2024	4/22/2024	N/A	TLA	1	1	Fuzz	08541005	
1003192092	92301	R	AN	M	4/10/2024	4/10/2024	N/A	TLA	1	1	BUBBLES	08540466	
1003833624	92394	R	AN	M	11/20/2024	11/20/2024	N/A	TLA	1	1	BUBBLES	01581116	
1003045417	92308	R	AN	M	2/14/2024	2/14/2024	N/A	CR	1	1	BUBBLES	0N016926	
1003862854	92307	R	AN	M	12/4/2024	12/4/2024	N/A	TLA	1	1	BUBBLES	07569323	
1002945883	92301	R	AN	M	1/8/2024	1/8/2024	N/A	TLA	1	1	BUBBLES	03709576	
1003871715	92394	R	AN	M	12/8/2024	12/8/2024	N/A	TLA	1	1	Fuzz	06759631	
1003464950	92392	CI	AN	M	6/26/2024	6/26/2024	N/A	TLA	1	1	Fuzz	08710045	
1003546194	92301	R	AN	M	7/29/2024	7/29/2024	N/A	TLA	1	1	Fuzz	54818123	
1003100909	92394	R	AN	M	3/6/2024	3/6/2024	N/A	TLA	1	1	Fuzz	08559390	
1003914809	92308	R	AN	M	12/30/2024	12/30/2024	N/A	CR	1	1	BUBBLES	06759378	
1003714891	92392	R	AN	M	10/6/2024	10/6/2024	N/A	TLA	1	1	BUBBLES	54951294	
1003148499	92301	R	AN	M	3/25/2024	3/25/2024	N/A	TLA	1	1	Fuzz	59480566	
1003007911	92314	R	AN	M	1/31/2024	1/31/2024	N/A	TLA	1	1	BUBBLES	02859970	
1002988580	92307	R	AN	M	1/25/2024	1/25/2024	N/A	TLA	1	1	Fuzz	55105721	
1003588396	92308	R	AN	M	8/15/2024	8/15/2024	N/A	TLA	1	1	BUBBLES	01582076	
1003614734	92315	R	AN	M	8/27/2024	8/27/2024	N/A	TLA	1	1	BUBBLES	07622995	
1003601255	92344	R	AN	M	8/21/2024	8/21/2024	N/A	TLA	1	1	BUBBLES	0G231840	
1003039059	92394	R	AN	M	2/13/2024	2/13/2024	N/A	TLA	1	1	BUBBLES	08540140	
1003912944	92308	R	AN	M	12/29/2024	12/29/2024	N/A	TLA	1	1	Fuzz	22284474	
1002995002	92314	R	AN	M	1/27/2024	1/27/2024	N/A	TLA	1	1	BUBBLES	02862466	
1002995604	92301	R	AN	M	1/28/2024	1/28/2024	N/A	TLA	1	1	BUBBLES	02863651	
1003339961	92345	R	AN	M	6/6/2024	6/6/2024	N/A	TLA	1	1	Fuzz	03889704	
1003757543	92392	CI	AN	M	10/22/2024	10/22/2024	N/A	TLA	1	1	BUBBLES	01626462	
1003790848	92345	R	AN	M	11/2/2024	11/2/2024	N/A	TLA	1	1	BUBBLES	05846104	
1003845591	92345	R	AN	M	11/25/2024	11/25/2024	N/A	CR	1	1	BUBBLES	03580222	
1003883623	92345	R	AN	M	12/12/2024	12/12/2024	N/A	TLA	1	1	BUBBLES	54918393	
1003814777	92395	R	AN	M	11/13/2024	11/13/2024	N/A	CR	1	1	BUBBLES	08556556	
1003912561	92392	R	AN	M	12/28/2024	12/28/2024	N/A	TLA	1	1	BUBBLES	0K931906	
1003562145	92345	R	AN	M	8/4/2024	8/4/2024	N/A	TLA	1	1	BUBBLES	55146341	
1002959953	92314	R	AN	M	1/15/2024	1/15/2024	N/A	TLA	1	1	BUBBLES	08496294	
1003686794	92345	R	AN	M	9/25/2024	9/25/2024	N/A	TLA	1	1	BUBBLES	54918508	
1003354098	92345	R	AN	M	6/12/2024	6/12/2024	N/A	TLA	1	1	BUBBLES	55082172	
1003348290	92345	R	AN	M	6/10/2024	6/10/2024	N/A	TLA	1	1	Fuzz	0N588108	
1003795826	92345	R	AN	M	11/5/2024	11/5/2024	N/A	TLA	1	1	BUBBLES	54915245	
1003177619	92344	R	AN	M	4/4/2024	4/4/2024	N/A	TLA	1	1	Fuzz	54896060	
1003245789	92345	R	AN	S	5/1/2024	5/1/2024	N/A	TLA	122	1	BUBBLES	08082854	
1003132140	92301	R	AN	M	3/19/2024	3/19/2024	N/A	TLA	1	1	Fuzz	09802632	
1003610187	92392	CI	AN	M	8/26/2024	8/26/2024	N/A	TLA	1	1	BUBBLES	12248219	
1003380273	92307	R	AN	M	6/24/2024	6/24/2024	N/A	TLA	1	1	Fuzz	54948950	
1003786521	92392	R	AN	M	10/31/2024	10/31/2024	N/A	CR	1	1	BUBBLES	54949415	
1003216515	92307	R	AN	M	4/19/2024	4/19/2024	N/A	TLA	1	1	BUBBLES	09792394	
1003300093	92345	CI	AN	M	5/22/2024	5/22/2024	N/A	TLA	1	1	Fuzz	05738624	
1003204292	92392	R	AN	M	4/15/2024	4/15/2024	N/A	TLA	1	1	Fuzz	54868915	
1002945456	92301	R	AN	M	1/8/2024	1/8/2024	N/A	CR	1	1	BUBBLES	03579329	

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1003190176	92301	R	AN	M	4/9/2024	4/9/2024	N/A	TLA	1	1	BUBBLES	02862127	
1003603609	92308	R	AN	M	8/22/2024	8/22/2024	N/A	TLA	1	1	Fuzz	54950377	
1003704813	92308	R	AN	S	10/2/2024	10/2/2024	N/A	TLA	276	1	Fuzz	55078425	
1002928504	92308	R	AN	M	1/2/2024	1/2/2024	N/A	CR	1	1	BUBBLES	03578164	
1003885801	92392	R	AN	M	12/13/2024	12/13/2024	N/A	TLA	1	1	BUBBLES	54916846	
1003803260	92392	R	AN	M	11/7/2024	11/7/2024	N/A	TLA	1	1	Fuzz	S4618986	
1003002250	92345	R	AN	M	1/30/2024	1/30/2024	N/A	TLA	1	1	Fuzz	54817227	
1003045400	92315	R	AN	M	2/14/2024	2/14/2024	N/A	TLA	1	1	BUBBLES	02860724	
1003249915	92395	CI	AN	S	5/2/2024	5/2/2024	N/A	TLA	123	1	BUBBLES	55130119	
1003123906	92395	R	AN	M	3/15/2024	3/15/2024	N/A	TLA	1	1	BUBBLES	01231803	
1003691563	92307	R	AN	M	9/26/2024	9/26/2024	N/A	TLA	1	1	Fuzz	55147862	
1003027620	92395	R	AN	M	2/7/2024	2/7/2024	N/A	TLA	1	1	Fuzz	55145840	
1003290179	92308	R	AN	M	5/17/2024	5/17/2024	N/A	TLA	1	1	BUBBLES	03710492	
1003657401	92345	R	AN	M	9/13/2024	9/13/2024	N/A	TLA	1	1	BUBBLES	11862393	
1003896585	92344	R	AN	M	12/18/2024	12/18/2024	N/A	TLA	1	1	BUBBLES	01536127	
1003853131	92395	R	AN	M	12/1/2024	12/1/2024	N/A	TLA	1	1	Fuzz	0K941247	
1002957067	92307	R	AN	M	1/12/2024	1/12/2024	N/A	TLA	1	1	Fuzz	55342705	
1002985539	92301	R	AN	M	1/24/2024	1/24/2024	N/A	TLA	1	1	Fuzz	01626642	
1003852557	92307	R	AN	M	11/29/2024	11/29/2024	N/A	TLA	1	1	Fuzz	11862723	
1003874196	92392	R	AN	M	12/9/2024	12/9/2024	N/A	TLA	1	1	BUBBLES	09918457	
1003872647	92395	R	AN	M	12/9/2024	12/9/2024	N/A	TLA	1	1	BUBBLES	05846881	
1002980476	92301	R	AN	M	1/23/2024	1/23/2024	N/A	TLA	1	1	Fuzz	0R385158	
1003760164	92392	R	AN	M	10/22/2024	10/22/2024	N/A	TLA	1	1	BUBBLES	06794079	
1003682485	92308	R	AN	M	9/24/2024	9/24/2024	N/A	TLA	1	1	Fuzz	06794170	
1003905885	92307	R	AN	M	12/23/2024	12/24/2024	N/A	TLA	2	2	BUBBLES	01530544	
1003217968	92345	R	AN	M	4/19/2024	4/19/2024	N/A	TLA	1	1	Fuzz	55330378	
1003839082	92345	R	AN	M	11/22/2024	11/22/2024	N/A	TLA	1	1	BUBBLES	55146734	
1003789098	92345	R	AN	M	11/1/2024	11/1/2024	N/A	TLA	1	1	Fuzz	08556846	
1003052486	92345	R	AN	M	2/17/2024	2/17/2024	N/A	TLA	1	1	Fuzz	09811027	
1003301665	92395	R	AN	M	5/22/2024	5/22/2024	N/A	TLA	1	1	BUBBLES	09916674	
1003830142	92345	R	AN	M	11/19/2024	11/19/2024	N/A	TLA	1	1	Fuzz	01582332	
1003102486	92308	R	AN	M	3/7/2024	3/7/2024	N/A	TLA	1	1	BUBBLES	03711097	
1003915274	92395	R	AN	M	12/30/2024	12/30/2024	N/A	CR	1	1	BUBBLES	55081227	
1003757520	92392	CI	AN	M	10/22/2024	10/22/2024	N/A	TLA	1	1	Fuzz	04511935	
1003569137	92307	R	AN	M	8/7/2024	8/7/2024	N/A	TLA	1	1	Fuzz	03572822	
1002980254	92301	R	AN	M	1/23/2024	1/23/2024	N/A	TLA	1	1	Fuzz	0R385158	
1003218993	92307	R	AN	M	4/20/2024	4/20/2024	N/A	TLA	1	1	BUBBLES	03654727	
1003545022	92311	R	AN	M	7/29/2024	7/29/2024	N/A	TLA	1	1	Fuzz	55122119	
1003220680	92395	R	AN	M	4/22/2024	4/22/2024	N/A	TLA	1	1	BUBBLES	02863023	
1003896951	92392	R	AN	M	12/19/2024	12/19/2024	N/A	TLA	1	1	BUBBLES	0E080945	
1003879301	92392	R	AN	M	12/11/2024	12/11/2024	N/A	TLA	1	1	Fuzz	01584797	
1003174904	92392	CI	AN	M	4/3/2024	4/3/2024	N/A	TLA	1	1	Fuzz	55049097	
1003032815	92345	R	AN	M	2/9/2024	2/9/2024	N/A	TLA	1	1	BUBBLES	55343115	
1003594251	92395	R	AN	M	8/18/2024	8/18/2024	N/A	TLA	1	1	BUBBLES	54868974	
1003132435	92345	R	AN	M	3/19/2024	3/19/2024	N/A	TLA	1	1	Fuzz	0F130348	
1002935800	92345	R	AN	S	1/4/2024	1/4/2024	N/A	TLA	4	1	Fuzz	54868828	
1002958492	92392	R	AN	M	1/12/2024	1/12/2024	N/A	CR	1	1	BUBBLES	54950353	
1003002385	92392	R	AN	M	1/30/2024	1/30/2024	N/A	TLA	1	1	BUBBLES	54949862	
1003796354	92301	R	AN	M	11/5/2024	11/5/2024	N/A	TLA	1	1	Fuzz	01579994	
1002973321	92307	R	AN	M	1/19/2024	1/19/2024	N/A	TLA	1	1	Fuzz	03710212	
1003126204	92307	R	AN	M	3/16/2024	3/16/2024	N/A	TLA	1	1	BUBBLES	01532470	
1003233788	92307	R	AN	M	4/26/2024	4/26/2024	N/A	TLA	1	1	BUBBLES	03572755	
1002983214	92395	R	AN	M	1/23/2024	1/23/2024	N/A	TLA	1	1	Fuzz	01582684	
1003006072	92311	R	AN	M	1/31/2024	1/31/2024	N/A	CR	1	1	BUBBLES	01582671	
1003019409	92307	R	AN	M	2/5/2024	2/5/2024	N/A	TLA	1	1	BUBBLES	55130106	
1003811275	92308	R	AN	M	11/12/2024	11/12/2024	N/A	TLA	1	1	BUBBLES	55343894	
1002928124	92392	R	AN	M	1/2/2024	1/2/2024	N/A	TLA	1	1	BUBBLES	54917998	
1003120322	92308	CI	AN	S	3/14/2024	3/14/2024	N/A	TLA	74	1	Fuzz	03751966	
1002969387	92308	R	AN	M	1/18/2024	1/18/2024	N/A	TLA	1	1	BUBBLES	01535506	
1003100282	92392	R	AN	M	3/6/2024	3/6/2024	N/A	TLA	1	1	BUBBLES	55148273	
1003705178	92392	R	AN	M	10/2/2024	10/2/2024	N/A	TLA	1	1	Fuzz	08555799	
1003183267	92307	R	AN	M	4/7/2024	4/7/2024	N/A	TLA	1	1	BUBBLES	02863997	
1003351792	92345	R	AN	M	6/11/2024	6/11/2024	N/A	TLA	1	1	BUBBLES	03577635	

Customer Meter Fugitive Leaks:

ID	Geographic Location	Meter Classification (Commercial/Industrial or Residential)	Leak Classification (Grade)	Leak Discovery Method	Discovery Date (DD/MM/YY)	Leak Repair Date (MM/DD/YY)	If not repaired by 12/31/24 List the Scheduled Date of Repair (DD/MM/YY)	Repair Type	Number of Days Leaking	Number of Days to Repair	Bubble Size Classification	MSA Identification Number	Comments or Additional Information (If you are able to quantify the leak rate by bubble pattern or other methods please include this volumetric data, and state what method was used to determine the flow/leak rate in these columns.)
1003052216	92345	R	AN	M	2/16/2024	2/16/2024	N/A	TLA	1	1	Fuzz	07567595	
1003020991	92345	R	AN	M	2/6/2024	2/6/2024	N/A	TLA	1	1	Fuzz	01581856	
1003491104	92315	R	AN	M	7/3/2024	7/3/2024	N/A	TLA	1	1	Fuzz	07566374	
1003190597	92315	R	AN	M	4/9/2024	4/9/2024	N/A	TLA	1	1	Fuzz	0D671697	
1003032644	92301	R	AN	M	2/9/2024	2/9/2024	N/A	TLA	1	1	BUBBLES	55105551	
1003137267	92395	R	AN	M	3/20/2024	3/20/2024	N/A	TLA	1	1	Fuzz	08558239	
1003100043	92394	R	AN	M	3/6/2024	3/6/2024	N/A	TLA	1	1	BUBBLES	54947893	
1003688978	92345	R	AN	M	9/26/2024	9/26/2024	N/A	TLA	1	1	Fuzz	09370884	
1003777931	92308	R	AN	M	10/29/2024	10/29/2024	N/A	TLA	1	1	BUBBLES	02862884	
1003596583	92392	R	AN	M	8/19/2024	8/19/2024	N/A	TLA	1	1	BUBBLES	54951252	
1003843564	92342	R	AN	M	11/25/2024	11/25/2024	N/A	TLA	1	1	Fuzz	55121020	
1003818194	92307	R	AN	M	11/14/2024	11/14/2024	N/A	CR	1	1	Fuzz	01532437	
1003894268	92392	R	AN	M	12/18/2024	12/18/2024	N/A	TLA	1	1	BUBBLES	08543470	
1003361792	92314	CI	AN	M	6/14/2024	6/14/2024	N/A	TLA	1	1	BUBBLES	08497642	
1003687100	92345	R	AN	M	9/25/2024	9/25/2024	N/A	TLA	1	1	BUBBLES	06760073	
1003910387	92392	R	AN	M	12/27/2024	12/27/2024	N/A	TLA	1	1	BUBBLES	01580674	
1003883845	92345	R	AN	M	12/12/2024	12/12/2024	N/A	TLA	1	1	BUBBLES	54918679	
1003807339	92301	R	AN	M	11/8/2024	11/8/2024	N/A	TLA	1	1	Fuzz	03718427	
1003259841	92395	R	AN	M	5/6/2024	5/6/2024	N/A	TLA	1	1	BUBBLES	03288343	
1003731183	92392	R	AN	M	10/11/2024	10/11/2024	N/A	CR	1	1	BUBBLES	02856486	
1003817131	92311	R	AN	M	11/13/2024	11/13/2024	N/A	CR	1	1	BUBBLES	02859451	

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Notes:
Please show the calculation for determining the total emissions. If additional worksheets are necessary, please include those to show intermediate calculations, such as the formula for Emissions from Leaks Detected from Survey.
At utilities request, fill out with two, three, or four categories that correspond to the bubble-size classificationm and label the type of leak, whether AG-Haz, or AG-Non-Haz
If highlighted cells are filled in, the other cells will auto-populate

The term "Non-leaker EF" aligns with CARB's definition for "No Bubble EF" for the event of finding a leak even though not through bubble testing

The number of miles surveyed (Column C) should be the number of unique miles surveyed, and should not include any repeated miles surveyed multiple times per year (Column D).

To clarify the the definition of O&M Leaks (Column K), the following criteria for O&M Leaks should be met: (1) occur stochastically across the whole territory, (2) are leask reported by customers, (3) found quickly after occuring, (4) found independently of survey activities but would have been found later by surveyors, and (5) considered a small number of leaks.

To clarify the the definition of Survey Leaks (Column G), the following criteria for Survey Leaks should be met: (1) found from company employees or contractors actively serarching for leaks (2) including, but not limited to, compliance survey leaks and non-compliance survey leaks (e.g. Super Emitter Programs, Aerial Methane Mapping, Corrosion Surveying.)

Please provide the additional information requested on lines 58-60.

Summary of Data by Meters Survey Interval and Results for Annual System Leak Rate and Resulting Number of Unknown Leaks for Each Meter

Meter Classification (AG-Haz, AG-Non-Haz); Bubble Size Category	Total System Meters per survey Cycle	Meters on Annual Survey [$M_{X,A}$]	Meters on Multi-Year Survey Cycles [M_X^{Tot}]	Survey Interval (yrs) [I]	Meters Surveyed Annually from Multi-Year Survey Cycles [$M_{X,I}$]	Total # of Leaks Detected from Survey [$N_{X,L}$] $R_X = \frac{N_{X,L}}{M_{X,A} + (I \times M_{X,I})}$	Annual Leak Rate [Leaks / Meter]	# of Unknown Leaks $N_{X,unk} = \overline{R_X} \times (M_X^{Tot} - M_{X,I}) \times \frac{I}{2}$	Total # of Leaks Detected from O&M* [$N_{X,O}$]	
Aboveground Hazardous - Class 1	56,755	11,378	45,377	1	11,256	2	0.00009	2	8	Aboveground Hazardous - Class 1
Aboveground Hazardous - Class 1	201,242	4,754	196,488	3	73,931	2	0.00001	2	3	Aboveground Hazardous - Class 1
				5			-	-		
Aboveground Non-Hazardous - Class 3	56,755	11,378	45,377	1	11,256	75	0.00331	57	144	Aboveground Non-Hazardous - Class 3
Aboveground Non-Hazardous - Class 3	201,242	4,754	196,488	3	73,931	234	0.00103	190	547	Aboveground Non-Hazardous - Class 3
				5			-	-		
				1			-	-		
				3			-	-		
				5			-	-		
				1			-	-		
				3			-	-		
				5			-	-		
				1			-	-		
				3			-	-		
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				1			-	-		
				3			-	-		
				5			-	-		
				1			-	-		
				3			-	-		
				5			-	-		
Total	**257,997**	**16,132**	**241,865**	**N/A**	**85,187**	**313**		**250**	**702**	

For this reporting, Southwest Gas was conservative with the Emission Factor used in the bottom table by using the factor for Residential Meters as listed on Appendix 9.

Estimated Emissions by Leak Code

Leakage Category / Facility/Material	Emission Factor (Mscf/Year/leak)	Emissions from Leaks Detected from Survey (Mscf)	Emissions from O&M* Leaks Detected (Mscf)	Estimated Emissions from Unknown Leaks (Mscf)	Total Estimated Emissions from Leaks (Mscf)	Show Calculations
AG-Haz	0.1480	0.59	1.63	0.59	2.81	(# of Leaks * Emission Factor)
AG-Non Haz	0.1480	45.73	102.27	36.41	184.41	(# of Leaks * Emission Factor)
Non-leaker EF		0.00	0.00	0.00	0.00	
Total	**N/A**	**46.32**	**103.90**	**37.00**	**187.22**	

Please Provide the following:	Total Count
The number of MSA's which were within the surveyed areas but were not accessible for surveying (e.g. Cannot Get-Ins)	0
The number of MSAs which were estimated to be surveyed by the walking compliance survey but were inaccesible to surveyors.	0
The portion of the survey mileage that includes mileage that is surveyed multiple times per year. Repeated mileage will not be accounted for in the unknown leak calculation	79

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Notes:

Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.

At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange.

Response:

Damage to MSAs (Customer, third party, natural disasters, etc.):

ID	Geographic Location	Damage Type	Meter Type	Leak Classification (Grade)	Discovery Date (DD/MM/YY)	Leak Repair Date (MM/DD/YY)	If not repaired by 12/31/24 List the Scheduled Date of Repair (DD/MM/YY)	Reason for Not Scheduling a Repair	Number of Days Leaking	Engineering Estimate (Mscf/Day)	Annual Emissions (Mscf)	Explanatory Notes / Comments
5200060482	92395 O	R	AH	1/24/2024	1/24/2024			0.009	0.047	0.047	
5200006146	92307 O	R	AH	2/12/2024	2/12/2024			0.018	0.000	0.000	
5200398178	92395 O	R	AH	2/13/2024	2/13/2024			0.010	0.000	0.000	
5200468372	92342 O	R	AH	3/20/2024	3/20/2024			0.007	1.001	1.001	
5200148507	92356 O	R	AH	3/28/2024	3/28/2024			0.015	0.125	0.125	
5200276916	92345 O	R	AH	1/5/2024	1/5/2024			0.018	0.013	0.013	
5200432718	92394 O	R	AH	4/22/2024	4/22/2024			0.015	0.005	0.005	
5200010336	92301 N	R	AH	4/29/2024	4/29/2024			0.017	0.006	0.006	
5200188003	92345 O	R	AH	5/8/2024	5/8/2024			0.020	0.074	0.074	
5200053794	92394 N	R	AH	5/22/2024	5/22/2024			0.008	0.003	0.003	
5200098947	92345 O	R	AH	5/24/2024	5/24/2024			0.013	0.004	0.004	
5200068790	92392 O	R	AH	5/14/2024	5/14/2024			0.108	0.221	0.221	
5200060046	92344 O	R	AH	7/8/2024	7/8/2024			0.029	0.167	0.167	
5200068430	92301 O	R	AH	7/29/2024	7/29/2024			0.037	0.671	0.671	
5200155628	92301 O	R	AH	8/25/2024	8/25/2024			0.027	0.009	0.009	
5200161188	92344 O	R	AH	9/3/2024	9/3/2024			0.017	0.005	0.005	
5200026677	92395 O	R	AH	11/14/2024	11/14/2024			0.014	0.001	0.001	
5200340638	92307 O	R	AH	11/14/2024	11/14/2024			0.001	0.000	0.000	
5200263629	92392 O	R	AH	11/28/2024	11/28/2024			0.022	0.007	0.007	
5200027700	92392 O	R	AH	11/8/2024	11/8/2024			0.012	0.000	0.000	
5200035777	92314 O	R	AH	11/11/2024	11/11/2024			0.003	0.288	0.288	
5200087120	92315 O	R	AH	7/9/2024	7/9/2024			0.009	0.000	0.000	
									Total	**2.65**	

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Notes:

Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.

At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange.

Include items <u>like the following</u> in this tab (Note whether emissions are included in the MSA EF used to estimate emissions for the MSA population and show only the event count.):
Gas vented during all Regulator Change outs due to other than vent leakage.
Large Customer MSA Regulator Inspection - External Regulator Inspections. List avg. amount vented.
Large Customer MSA Regulator Inspection - Regulator change out & Internal Reg Inspection. List avg. amount vented.
Diaphragm - CSF Read & Verify - List amounted vented thru meter during read & verify order for decreased usage.
Diaphragm - CSF Clock Test - List amount vented during Clock Test
Diaphragm - CSF Registration Check - List amount ventedn during Registration Checks
Diaphragm Size 1,2,3 Meter Change Out - List avg. gas vented on Size 1 Meter Change Out
All Meter Change Out Size 4 thru 28 - List avg. gas vented for Size 5 to 10 Meter Change outs
Field Meter Test of Diaphragm & Rotary - List avg. gas vented for Size 9 Meters
Customer Orifice Meter Plate Insp. - Orifice Plate Inspected Monthly. List avg. amount vented

Response:

Customer Meter Blowdowns:

Number of Blowdowns	Meter Type	Emission Factor (Mscf/yr)	Annual Emissions (Mscf)	Explanatory Notes / Comments
8,100	R	0.0002	1.621	Meter Change Outs, Family Samples, Meter Set Inspections - Engineering estimate of .2 cubic ft per device.
750	CI	0.0002	0.15	Meter Change Outs, Family Samples, Meter Set Inspections - Engineering estimate of .2 cubic ft per device.
		Total	**1.771**	

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Notes:

This worksheet is intended to capture the actual number of equipment and components in this asset category that vent emissions as a part of their design and normal function. By listing the number and types of components (not captured elsewhere in other templates) that vent emissions we hope to obtain information that may provide insight into how to evolve to a method of reporting emissions based on the actual number of units and types emitting rather than a crude population based estimate.

Currently, the component related leaks are accounted for in the population based estimate for MSAs and any estimate of emissions associated with this list of equipment and components will not be added to that total. This tab in not intended to replace or supplant the Vented and Blowdown Emissions tab which are activity based emissions.

No emissions estimates from this worksheet should be included in Appendix 8, as this is being collected for informational purposes at this time.
Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.
At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange.
Response:

Customer Meter Component/Equipment Vented Emissions:

ID	Geographic Location	Device Type	Bleed Rate	Manufacturer	Number of Days Emitting	Engineering or Manufacturer's based Estimate of Emissions	Annual Emissions (Mscf)	Explanatory Notes / Comments

Southwest Gas did not have any Customer Meter Component/Equipment vented emissions in 2024.

Total **0**

Appendix 7
Storage Facilities

SOUTHWEST GAS CORPORATION, JUNE 13, 2025

Rulemaking (R.) 15-01-008 to Adopt Rules and Procedures Governing Commission Regulated Natural Gas Pipelines and Facilities to Reduce Natural Gas Leaks Consistent with Senate Bill 1371, Leno. In Response to Data Request, R15-01-008 2025 June Report.

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Notes:

Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.

At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange

Use the Population based emission factor if facility is not surveyed. Use Leaker based emission factor if facility is surveyed, and report only the found leaking components.

Underground Storage Facility Leaks and Emissions:

ID	Geographic Location	Source	Number of Sources	Discovery Date (MM/DD/YY)	Repair Date (MM/DD/YY)	Number of Days Leaking	Emission Factor (Mscf/day/dev)	Annual Emissions (Mscf)	Explanatory Notes / Comments

Southwest Gas does not have any Underground Storage Facilities in its California service territories

Total **0.00**

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Notes:
Enter either the initials of the facility to be included in the "ID" column or the name be provided along with the zip code in the "Geographic Location."
Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.
At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange.
The emissions captured on this tab represent the emissions associated with the operational design and function of the compressor. Any intentional release of natural gas for safety or maintenance purposes should be included on the Blowdowns worksheet.

Previous Reporting Changes:
1) New Column for Measurement Frequency - See box comments.
2) Added new column for Emission Factor: Measurement Date - Pressurized Operations.
3) Added a fourth compressor operating mode "Offline". In addition, a measurement of emissions (EF) should be taken during Offline mode, to ensure that no emissions are eminating from the system.
4) Alternate emissions measurement method, where applicable and measured by the operator:
5) Alternate emissions measurement method, where applicable and measured by the operator:
- Blowdown and Isolation valves
6) Measure centrifugal compressor emissions additional columns added for these emissions:
- Dry seals
- Wet seals
- Wet seal oil degassing vents in Pressurized Idle mode

CPUC Staff strongly encourage more frequent measurement of the following compressor vented emissions. Compliance minimum is once annually, though Staff suggest the minimum frequency should be quarterly and measured at roughly the same time each quarter (e.g. on or around the component survey given mode of operation). More frequent measurements, e.g. monthly would be better due to the temporal changes in conditions that effect emissions. The more frequent measurements also provide an opportunity to detect worn rod packing or seals, which exacerbate emissions, and with timely awareness of suboptimal operations gas operators have an opportunity for accelerating maintenance to correct worn parts. The following steps for reporting more frequent measurements in 2019 are outlined in the adjacent cell, and should be provided if available.

The Columns P thru T were added to the template and should be used for the indicated measured compressor emissions, which include Centrifugal compressors in accordance with OGR and your operating practice.

For the 2024 data reporting of compressor vented emissions:
Where more than one measurement was taken during the year (e.g. after a maintenance cycle*, monthly, or quarterly), use the measured EF multiplied by the activity hours that occurred during the corresponding period. For example, if the compressor measurement was taken quarterly, then the measured EF should be multiplied by the activity hours that occurred in the respective quarter, and the same for more frequent measurments (e.g. monthly, weekly etc.). For each compressor devote one row per measurement period (see example provided). In the case of a single annual measurement EF, then that EF would apply to the activity hours for each respective mode for the entire year (which is consistent with prior year reporting practice).

*** If a measurement is taken after a maintenance cycle and no other measurements were taken during the remainder of the year, then use this measured EF for the activity hours occurring after the measurement date thru 12/31/xx. The activity hours prior to the maintenance of the compressor from the beginning of the year should use the previously measured EF, even if the EF was measured in the prior year.**

Transmission Compressor Vented Emissions:

Use these EF columns as well as the columns for the Compressor Measurements noted in Columns Q thru T when they are applicable. If the data is not captured by the operator, then add a note explaining why the applicable measurement data was not recorded or available in the Explanatory Notes / Comments column.

ID	Geographic Location	Compressor Type	Prime Mover	Number of Cylinders	Number of Seals	Seal Type	Measurement Frequency	Emission Factor: Measurement Date - Pressurized Operations	Operating Mode: Pressurized Operating (hours)	Operating Mode: Pressurized Idle (hours)	Operating Mode: Depressurized Idle (hours)	Operating Mode: Offline (Hours)	Emission Factor: Pressurized Operating(scf/hr)	Emission Factor: Pressurized Idle (scf/hr)	Emission Factor: Depressurized Idle (scf/hr)	Emission Factor: Pressurized Operating - Rod Packing (scf/hr)	Emission Factor: Pressurized Operating - Blowdown Valve (scf/hr)	Emission Factor: Pressurized Idle - Rod Packing (scf/hr)	Emission Factor: Pressurized Idle - Blowdown Valve (scf/hr)	Annual Emissions (Mscf)	Explanatory Notes / Comments

Southwest Gas does not have any Underground Storage Facilities in its California service territories.

Total 0.00

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Notes:

Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.

At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange

Underground Storage Blowdowns:

ID	Geographic Location	Source	Compressor Type	Number of Blowdown Events	Annual Emissions (Mscf)	Explanatory Notes / Comments
Southwest Gas does not have any Underground Storage Facilities in its California service territories						
				Total	**0.00**	

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Notes:

Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.
At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange

The emissions captured on this tab represent the emissions associated with the operational design and function of the component. Any intentional release of natural gas for safety or maintenance purposes should be included on the Blowdowns worksheet.

Underground Storage Component Vented Emissions (See note above):

Quantity	Geographic Location	Device Type	Bleed Rate	Manufacturer	Pressure (psi)	Survey Date (MM/DD/YY)	Number of Days Emitting	Emission Factor, Engineering or Manufacturer's based Estimate of Emissions (Mscf/day)	Annual Emissions (Mscf)	Explanatory Notes / Comments

Southwest Gas does not have any Underground Storage Facilities in its California service territories

Total **0.00**

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Notes:

The number of days leaking may be more than 365 days due to including the estimation function of the leak occurring at half the number of days between the prior survey date and the discovery date.

Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.

At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange
The emissions captured on this tab represent the emissions associated unintentional leaks that if repaired would not leaking. If the component is releasing gas or "bleeding" as a result of its design or function then it is not to be captured in this tab.
Please include emissions from leaks found with concentrations below 10,000ppm, and include in the total emissions column. Please use the associated emission factors provided in Appendix 9, Emission Factors.

Underground Storage: Compressor and Component Fugitive Leaks (see note above): 12/31/2024 1/1/2024

ID	Geographic Location	Device Type	Bleed Rate	Manufacturer	Pressure (psi)	Discovery Date (MM/DD/YY)	Repair Date (MM/DD/YY)	Prior Survey Date (MM/DD/YY)	Number of Days Leaking	Emission Factor or Engineering Estimate (Mscf/day)	Emissions (Mscf)	Explanatory Notes / Comments
Southwest Gas does not have any Underground Storage Facilities in its California service territories.												

Total **0.00**

SOUTHWEST GAS CORPORATION, JUNE 13, 2025

Rulemaking (R.) 15-01-008 to Adopt Rules and Procedures Governing Commission Regulated Natural Gas Pipelines and Facilities to Reduce Natural Gas Leaks Consistent with Senate Bill 1371, Leno. In Response to Data Request, R15-01-008 2025 June Report.
Appendix 7; Rev. 03/27/2025

Pursuant to SB 1371, Leno - Natural gas: leakage abatement, the California Public Utilities Commission (CPUC) requests that the following information be transmitted to the CPUC and the California Air Resources Board (CARB):
Note - Definitions in Data Request, R15-01-008 2025 June Report

The following question in the above mentioned data request is answered using the spreadsheets in this Appendix (#7):
(6) Calculable or estimated emissions and non-graded gas leaks, as defined in Data Request R15-01-008 2025 June Report.

Notes:

Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.

At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange

Underground Storage Dehydrator Vented Emissions:

ID	Geographic Location	Type of Dehydrator (Glycol or Desiccant)	Vapor Recovery Unit or Thermal Oxidizer (Y/N)	Annual Volume of Gas Withdrawn (Mscf)	Emission Factor (Y/N)	Engineering Estimate (Y/N)	Annual Emissions (Mscf)	Explanatory Notes / Comments

Southwest Gas does not have any Underground Storage Facilities in its California service territories.

Total	0.00

Appendix 8
Summary

SOUTHWEST GAS CORPORATION, JUNE 13, 2025
Rulemaking (R.) 15-01-008 to Adopt Rules and Procedures Governing Commission Regulated Natural Gas Pipelines and Facilities to Reduce Natural Gas Leaks Consistent with Senate Bill 1371, Leno. In Response to Data Request, R15-01-008, 2025 June Report.
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Notes:
Please round all natural gas emissions to nearest Mscf.
As a reminder, please use the latest version of each of the worksheets.

Summary Tables:

System Categories	Emission Source Categories	Fugitive or Vented	For Informational and Reference Purposes Only: Original 2015 Baseline Emissions (Mscf)	Approved 2015 Baseline Emissions [Mscf]	Proposed Adjusted 2015 Baseline Emissions (Mscf)	2023 Total Annual Volume of Leaks & Emissions (Mscf)	2023 Total Annual Count of Leak & Emission Items	2024 Total Annual Volume of Leaks & Emissions (Mscf)	2024 Total Annual Count of Leak & Emission Items	Emission Change for Year Over Year Comparison from 2023 to 2024 (Mscf)	Percentage Change for Year Over Year Comparison from 2023 to 2024	Count Change for Year Over Year Comparison from 2023 to 2024	Percentage Change for Year Over Year Comparison from 2023 to 2024	Emission Change for Year Over Year Comparison from 2015 to 2024 (Mscf)	Percentage Change for Year Over Year Comparison from 2015 to 2024	Explanation for Significant Percentage Change for Year Over Year Comparison from 2023 to 2024
Transmission Pipelines	Pipeline Leaks	Fugitive	0	0	0	7	1	0	0	(7)	(100.0%)	(1)	(100.0%)	0	(100.0%)	Leak discovered on valve in 2023, no leaks in 2024.
	All Damages	Fugitive	0	0	0	0	0	0	0	0.00	0.0%	0.00	0.0%	0	0.0%	
	Blowdowns	Vented	327	0	0	0	0	0	0	0.00	0.0%	0.00	0.0%	-327	(100.0%)	
	Component Vented Emissions	Vented	0	0	0	0	0	0	0	0.00	0.0%	0.00	0.0%	0	0.0%	
	Component Fugitive Leaks	Fugitive	0	0	0	0	0	0	0	0.00	0.0%	0.00	0.0%	0	0.0%	
	Odorizers	Vented	0	0	0	0	0	0	0	0.00	0.0%	0.00	0.0%	0	0.0%	
Transmission M&R Stations	Station Leaks & Emissions	Fugitive	24	0	0	10,884	7	10,884	7	0.00	0.0%	0.00	0.0%	10,859	44,504.9%	
	Blowdowns	Vented	0	0	0	8	14	8	15	1	7.1%	1	7.1%	8	806,500.0%	
Transmission Compressor Stations	Compressor Emissions	Vented	0	0	0	0	0	0	0	0.00	0.0%	0.00	0.0%	0	0.0%	
	Compressor Leaks	Fugitive	0	0	0	0	0	0	0	0.00	0.0%	0.00	0.0%	0.00	0.0%	
	Blowdowns	Vented	0	0	0	0	0	0	0	0.00	0.0%	0.00	0.0%	0.00	0.0%	
	Component Vented Emissions	Vented	0	0	0	0	0	0	0	0.00	0.0%	0.00	0.0%	0.00	0.0%	
	Component Fugitive Leaks	Fugitive	0	0	0	0	0	0	0	0.00	0.0%	0.00	0.0%	0.00	0.0%	
	Storage Tank Leaks & Emissions	Vented	0	0	0	0	0	0	0	0.00	0.0%	0.00	0.0%	0.00	0.0%	
Distribution Main & Service Pipelines	Pipeline Leaks (including Unknown Leaks)	Fugitive	512	0	0	1112	183	1091.35	126	(21)	(1.9%)	(57)	(31.1%)	579.35	113.2%	Less leaks discovered in 2024.
	All Damages	Fugitive	1,905	0	0	642	123	525.87	95	(116)	(18.1%)	(28)	(22.8%)	(1,379.13)	(72.4%)	Less damages in 2024.
	Blowdowns	Vented	32	0	0	80	4,108	86.494	4,503	7	8.4%	395	9.6%	54.49	170.3%	
	Component Vented Emissions	Vented	0	0	0	0	0	0	0	0.00	0.0%	0.00	0.0%	0.00	0.0%	
	Component Fugitive Leaks	Fugitive	0	0	0	0	0	0	0	0.00	0.0%	0.00	0.0%	0.00	0.0%	
Distribution M&R Stations	Station Leaks & Emissions	Fugitive	184,084	0	0	175,423	225	170,274.64	218	(5,148)	(2.9%)	(7)	(3.1%)	(13,809.36)	(7.5%)	Change in number of M&R Stations dues to 9 stations being abandoned in 2024 and 2 new stations installed for a yeild of 7 less stations in 2024.
	All Damages	Fugitive	0	0	0	3	2	0	0	(3)	(100.0%)	(2)	(100.0%)	(0.00)	(100.0%)	No M&R station damages in 2024.
	Blowdowns	Vented	38	0	0	40	227	41.183	251	1	2.6%	24	10.6%	3.18	8.4%	
Customer Meters	Meter Leaks	Fugitive	27,377	0	0	29,783	207,645	29,816.67	207,866	33	0.1%	221	0.1%	2,439.67	8.9%	
	All Damages	Fugitive	0	0	0	201	107	2.65	22	(198)	(98.7%)	(85)	(79.4%)	2.65	264,900.0%	Less MSA damages in 2024.
	Vented Emissions	Vented	15	0	0	4	18,311	1.771	8,850	(2)	(51.6%)	(9,461)	(51.7%)	(13.23)	(88.2%)	Less meter change outs in 2024.
Underground Storage	Storage Leaks & Emissions	Fugitive	0	0	0	0	0	0	0	0.00	0.0%	0.00	0.0%	0.00	0.0%	
	Compressor Vented Emissions	Vented	0	0	0	0	0	0	0	0.00	0.0%	0.00	0.0%	0.00	0.0%	
	Blowdowns	Vented	0	0	0	0	0	0	0	0.00	0.0%	0.00	0.0%	0.00	0.0%	
	Component Vented Emissions	Vented	0	0	0	0	0	0	0	0.00	0.0%	0.00	0.0%	0.00	0.0%	
	Compressor and Component Fugitive Leaks	Fugitive	0	0	0	0	0	0	0	0.00	0.0%	0.00	0.0%	0.00	0.0%	
	Dehydrator Vent Emissions	Fugitive	0	0	0	0	0	0	0	0.00	0.0%	0.00	0.0%	0.00	0.0%	
Unusual Large Leaks	(Description)		0	0	0	0	0	0	0	0.00	0%		0%	0.00	0.0%	
		Total	**214,314**			**218,186**	NA	**212,732**	NA	(5,454)	-2%	NA	NA	**(1,582.11)**	(0.7%)	

SOUTHWEST GAS CORPORATION, JUNE 13, 2025

Rulemaking (R.) 15-01-008 to Adopt Rules and Procedures Governing Commission Regulated Natural Gas Pipelines and Facilities to Reduce Natural Gas Leaks Consistent with Senate Bill 1371, Leno. In Response to Data Request, R15-01-008, 2025 June Report.
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System Wide Leak Rate Data

1/1/2024 - 12/31/2024

The highlighted cells show the volumes that are summed together as the throughput for calculating the system wide leak rate.

Gas Storage Facilities:

Average Close of the Month Cushion Gas Storage Inventory (Mscf)	Average Close of the Month Working Gas Storage Inventory (Mscf)	Total Annual Volume of Injections into Storage (Mscf)	Total Annual Volume of Gas Used (Mscf)	Total Annual Volume of Withdrawals from Storage (Mscf)	Explanatory Notes / Comments
N/A	N/A	N/A	N/A	N/A	

Transmission System:

Total Annual Volume of Gas Used (Mscf)	Total Annual Volume of Gas Transported to or for Customers* in State (Mscf)	Total Annual Volume of Gas Transported to or for Customers* out of State (Mscf)	Total Annual Volume of Gas Transported to utility-owned or third-party storage fields for injection into storage (Mscf)	Explanatory Notes / Comments
N/A	2,333,215	N/A	N/A	

Distribution System:

Total Annual Volume of Gas Used (Mscf)	Total Annual Volume of Gas Transported to or for Customers* in State (Mscf)	Total Annual Volume of Gas Transported to or for Customers* out of State (Mscf)	Explanatory Notes / Comments
N/A	12,230,409	N/A	

Total **14,563,624**

*The term customers includes anyone that the utility is transporting gas for, including customers who purchase gas from the utility.
Customers can be anyone including residential, businesses, other utilities, gas transportation companies, etc.

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Rulemaking (R.) 15-01-008 to Adopt Rules and Procedures Governing Commission Regulated Natural Gas Pipelines and Facilities to Reduce Natural Gas Leaks Consistent with Senate Bill 1371, Leno. In Response to Data Request, R15-01-008, 2025 June Report.
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Summary Tables:

Natural Gas Properties	Average Mole Percent	Explanatory Notes / Comments
Methane		
Carbon Dioxide		
Ethane		
C3+		
C6+		
Oxygen		Please note that Southwest Gas' natural gas for its California Service Territories is supplied by its 7 upstream suppliers, e.g., Southern California Gas Company, Transwestern Pipeline, Kern River Pipeline, Great Basin Gas Transmission Company, Tuscarora Pipeline, Northwest Pipeline, and El Paso Pipeline.
Hydrogen		
Sulfur		
Water		
Carbon Monoxide		
Particulate Matter		
Inert Gas		
Odorant		

Appendix 9
Emission Factors

SOUTHWEST GAS CORPORATION, JUNE 13, 2025

Rulemaking (R.) 15-01-008 to Adopt Rules and Procedures Governing Commission Regulated Natural Gas Pipelines and Facilities to Reduce Natural Gas Leaks Consistent with Senate Bill 1371, Leno.. In Response to Data Request, R15-01-008 2025 June Report.
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System Categories	Emission Source Categories	Emission Factor Sources	Description [in natural gas volume]
Transmission Pipeline	Transmission Pipeline Leaks	Engineering Estimate	Emissions estimated from size of breach / pressure / duration calculation
	All damages (as defined by PHMSA)	Engineering Estimate	Emissions estimated either from modelling or size of breach / pressure / duration
	Transmission Pipeline Blowdowns	Engineering Estimate	Unique equipment volume (corrected for pressure and temperature)
	Pneumatic Devices - Pneumatic/Hydraulic Valve Operators, and Turbine Valve Operators	MRR	Low Continuous Bleed = 0.0336 Mscf/day/dev Intermittent Bleed = 0.0576 Mscf/day/dev High Continuous Bleed = 0.4457 Mscf/day/dev Hydraulic Valve Operator = TBD Turbine Valve Operator = TBD
	Pressure Relief Valves	MRR	Pressure relief valve = 0.9518 Mscf/day/dev
	Odorizer (Odorizer and Gas Sampling Vents)	TCR	1.27 Mscf/yr/odorizer (if manufacturing specs are available, use the manufacting specs instead of the default emission factor)
Transmission M&R	M&R Stations - Direct Industrial Sales	MRR	# of leaks > 10,000 ppm x Subpart W EF (ref: Table W-3 of Subpart W of Part 98) Direct Sale = 12.2 Mscf/yr/station (ref: Table W-4 of Subpart W of Part 98) **Compressor Components** Continuous Low Bleed = 0.163 Mscf/day/dev Continuous High Bleed = 0.720 Mscf/day/dev Intermittent Bleed = 0.055 Mscf/day/dev **Non-compressor Components** Valve = 0.154 Mscf/day/dev Connector = 0.137 Mscf/day/dev Open-ended line = 0.270 Mscf/day/dev Pressure relief valve = 0.048 Mscf/day/dev Meter = 0.070 Mscf/day/dev Other = 0.098 Mscf/day/dev
	M&R Stations - Transmission-to-Transmission Company Interconnect	MRR	# of leaks > 10,000 x Subpart W EF (ref: Table W-3 of Subpart W of Part 98) Trans-to-trans = 1554.8 Mscf/yr/stations (ref: Table W-4 of Subpart W of Part 98) **Compressor Components** Continuous Low Bleed = 0.163 Mscf/day/dev Continuous High Bleed = 0.720 Mscf/day/dev Intermittent Bleed = 0.055 Mscf/day/dev **Non-compressor Components** Valve = 0.154 Mscf/day/dev Connector = 0.137 Mscf/day/dev Open-ended line = 0.270 Mscf/day/dev Pressure relief valve = 0.048 Mscf/day/dev Meter = 0.070 Mscf/day/dev Other = 0.098 Mscf/day/dev
	Transmission M&R Leaks	MRR	(ref: Table W-4 of Subpart W of Part 98) **Compressor Components** Continuous Low Bleed = 0.163 Mscf/day/dev Continuous High Bleed = 0.720 Mscf/day/dev Intermittent Bleed = 0.055 Mscf/day/dev **Non-compressor Components** Valve = 0.154 Mscf/day/dev Connector = 0.137 Mscf/day/dev Open-ended line = 0.270 Mscf/day/dev Pressure relief valve = 0.048 Mscf/day/dev Meter = 0.070 Mscf/day/dev Other = 0.098 Mscf/day/dev
	Transmission M&R blowdown	Engineering Estimate	Unique equipment volume (corrected for pressure and temperature)

System Categories	Emission Source Categories	Emission Factor Sources	Description [in natural gas volume]
Transmission Compressor Stations	Compressor station - Equipment leaks from valves, connectors, open ended lines, pressure relief valves, and meters (using leak detection)	MRR	**Leaker EFs-Compressor Station** **(Component Leaks identified per survey use the following EFs)** # of leaks > 10,000 ppm x Subpart W EF (ref: Table W-3 of Subpart W of Part 98) **Compressor Components** Valve = 0.3562Mscf/day/dev Connector = 0.1342 Mscf/day/dev Open-Ended Line = 0.4145 Mscf/day/dev Pressure Relief Valve = 0.9518 Mscf/day/dev Meter = 0.4639 Mscf/day/dev Other = 0.0984 Mscf/day/dev **Non-compressor components** Valve = 0.1541 Mscf/day/dev Connector = 0.1370 Mscf/day/dev Open-ended line = 0.2705 Mscf/day/dev Pressure relief valve = 0.0482 Mscf/day/dev Meter = 0.0703 Mscf/day/dev Other = 0.0984 Mscf/day/dev
	Compressor Station - Transmission storage tanks	MRR	Direct measurement of tank vapor vent stack + operating hours (pg 218-219 of Regulation for MRR)
	Compressors (Centrifugal) - Transmission--data collection will require time spent in modes (active, pressurized idle, de-pressurized idle), compressor venting	MRR	Direct measurement x operating hours (operating mode)
	Compressors (Reciprocating) - Transmission--data collection will require time spent in modes (active, pressurized idle, de-pressurized idle)compressor rod packing venting	MRR	Direct measurement x operating hours (operating mode)
	Compressor station - Equipment and pipeline blowdowns	MRR	Eq. W - 14A # of blowdowns * piping volume
	Compressor Station - Natual gas pneumatic device venting	MRR	Low Continuous Bleed = 0.0336 Mscf/day/dev Intermittent Bleed = 0.0576 Mscf/day/dev High Continuous Bleed = 0.4457 Mscf/day/dev
Distribution Mains and Services Pipelines	Distribution Mains (Below-Ground Leaks)	GRI (1996)	Unprotected Steel Main = 0.1548 Mscf/day/leak Protected Steel Main = 0.0612 Mscf/day/leak Plastic Main = 0.2988 Mscf/day/leak
	Distribution Mains (Above Ground Leaks) - Not MSA	GRI (1996)	Unprotected Steel Main = 0.1548 Mscf/day/leak Protected Steel Main = 0.0612 Mscf/day/leak Plastic Main = 0.2988 Mscf/day/leak
	Distribution Service (Below-Ground Leaks)	GRI (1996)	Copper = 0.0226 Mscf/day/leak Unprotected Steel Service = 0.0600 Mscf/day/leak Protected Steel Servce = 0.0276 Mscf/day/leak Plastic Service = 0.0089 Msc/day/leak
	Distribution Service (Above-Ground Leaks) - Not MSA	GRI (1996)	Copper = 0.0226 Mscf/day/leak Unprotected Steel Service = 0.0600 Mscf/day/leak Protected Steel Servce = 0.0276 Mscf/day/leak Plastic Service = 0.0089 Msc/day/leak
	Distribution Main, Pressure Relief Valves	MRR	Pressure relief valve = 0.00696 Mscf/day/dev
	Distribution Mains and Services blowdown	MRR	Equation W-14A , Eq. W-35 , Eq. W-36
	All damages (as defined by PHMSA)	MRR	Equation W-14A , Eq. W-35 , Eq. W-36
	Pneumatic Devices - Pneumatic/Hydraulic Valve Operators, and Turbine Valve Operators	Engineering Estimate	Manufacturer Supplied Information (e.g., Bristol, Becker, Moore, etc)

System Categories	Emission Source Categories	Emission Factor Sources	Description [in natural gas volume]
Distribution M&R Stations	Distribution Above grade M&R Station Leaks (> 300 psi)	GRI (1996)	1,684.5 Mscf/yr/station
	Distribution Above grade M&R Station Leaks (100 - 300 psi)	GRI (1996)	896.5 Mscf/yr/station
	Distribution Above grade M&R Station Leaks (< 100 psi)	GRI (1996)	40.6 Mscf/yr/station
	Distribution Below grade M&R Station Leaks (> 300 psi)	GRI (1996)	12.176 Mscf/yr/station
	Distribution Below grade M&R Station Leaks (100 - 300 psi)	GRI (1996)	1.840 Mscf/yr/station
	Distribution Below grade M&R Station Leaks (< 100 psi)	GRI (1996)	0.964 Mscf/yr/station
	Distribution M&R Station, Leaker Based	MRR	**Leaker EFs** **(Component Leaks identified per survey use the following EFs)** Connector = 0.041Mscf/day/dev Block Valve = 0.013 Mscf/day/dev Control Valve = 0.224 Mscf/day/dev Pressure Relief Valve = 0.006 Mscf/day/dev Orifice Meter = 0.005 Mscf/day/dev Regulator = 0.019 Mscf/day/dev Open-Ended Line = 0.627 Mscf/day/dev
	M&R Stations - Farm Taps	MRR	# of leaks > 10,000 ppm x Subpart W EF (ref: Table W-3 of Subpart W of Part 98) Farm Tap = 12.2 Mscf/yr/station (ref: Table W-6 of Subpart W of Part 98) **Leaker EFs** (Component Leaks identified per survey use the following EFs) Connector = 0.041Mscf/day/dev Block Valve = 0.013 Mscf/day/dev Control Valve = 0.224 Mscf/day/dev Pressure Relief Valve = 0.006 Mscf/day/dev Orifice Meter = 0.005 Mscf/day/dev Regulator = 0.019 Mscf/day/dev Open-Ended Line = 0.627 Mscf/day/dev
	Distribution M&R Station Blowdowns	Engineering Estimate	Average Pressure x Average Volume x # of inspections & Maintenance Activities
	Distribution M&R Station Pneumatics	Engineering Estimate	Manufacturer Supplied Information (e.g., Bristol, Bettis Actuators, etc)
Commercial, Industrial and Residential Meters	Residential Meters	GRI (1996)	0.148 Mscf/yr/meter
	Commercial and Industrial Meters	GRI (1996)	0.051 Mscf/yr/meter
	Vented Emission from MSA	Engineering Estimate	Estimated volume release by MSA and activity type

System Categories	Emission Source Categories	Emission Factor Sources	Description [in natural gas volume]
Underground Storage	Dehydrator Vents - Storage (dehydrator vent emissions tab)	GRI (1996)	One of the following three cases per dehydrator facility 1. Glycol dehydrator with VRU and thermal oxidizer = 0 Mscf 2. Glycol dehydrator with no control device = Engineering Estimate 3. Desiccant dehydrator = 2.23E-03 mt CH4/MMscf (Alternative: Eq. 5 in MRR)
	Storage - piping leakage (compressor and component fugitive leaks tab)	MRR	**Leaker EFs-Storage Station, Gas Service** **(Component Leaks identified per survey use the following EFs)** Connector = 0.1342 Mscf/day/dev Valve = 0.3562 Mscf/day/dev Pressure Relief Valve = 0.9518 Mscf/day/dev Open-Ended Line = 0.4145 Mscf/day/dev Meter = 0.4639 Mscf/day/dev Other = 0.0984 Mscf/day/dev **Population EFs-Storage Wellheads, Gas Service** **(For all un-surveyed components use the following EFs)** Connector = 0.0002 Mscf/day/dev Valve = 0.0024 Mscf/day/dev Pressure Relief Valve = 0.0041 Mscf/day/dev Open Ended Line = 0.0007 Mscf/day/dev
	Storage - surface casing leakage (storage leaks and emissions tab)	Engineering Estimate	TBD
	Storage - Wellhead leakage (storage leaks and emissions tab)	MRR	**Leaker EFs-Storage Wellheads, Gas Service** **(Component Leaks identified per survey use the following EFs)** Connector (other than flanges) = 0.0288 Mscf/day/dev Valve = 0.1080 Mscf/day/dev Pressure Relief Valve = 0.0984 Mscf/day/dev Open-Ended Line = 0.0600 Mscf/day/dev Flange = 0.0912 Mscf/day/dev Other = 0.0984 Mscf/day/dev **Population EFs-Storage Wellheads, Gas Service** **(For all un-Surveyed components, use the following EFs)** Connector = 0.0002 Mscf/day/dev Valve = 0.0024 Mscf/day/dev Pressure Relief Valve = 0.0041 Mscf/day/dev Open-Ended Line = 0.0007 Mscf/day/dev
	Storage - Compressor & blowdowns (Blowdowns tab)	Engineering Estimate	Eq. 13 of MRR (piping volume x # of blowdowns)
	Storage - Wellhead Rework blowdown and bring-in (Blowdowns tab)	Engineering Estimate	Eq. 9,10,11,12 of MRR
	Pressure Relief Valves (Component Vented Emissions tab)	MRR	Pressure relief vallve = 0.9518 Mscf/day/dev.
	Pneumatic Devices - Pneumatic/Hydraulic Valve Operators, and Turbine Valve Operators (Component Vented Emissions tab)	MRR	Low Continuous Bleed = 0.0336 Mscf/day/dev Intermittent Bleed = 0.0576 Mscf/day/dev High Continuous Bleed = 0.4457 Mscf/day/dev Hydraulic Valve Operator = TBD Turbine Valve Operator = TBD