

 U.S. Department of Transportation  Pipeline and Hazardous Materials  Safety Administration	<b>ANNUAL REPORT FOR CALENDAR YEAR 20__</b>  <b>GAS DISTRIBUTION SYSTEM</b>	<b>DOT USE ONLY</b>	
		Initial Date Submitted	
		Report Submission Type	
		Date Submitted	

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is. Public reporting for this collection of information is estimated to be approximately **2246** hours per submission, including the time for reviewing instructions, gathering the data needed, and completing and reviewing the collection of information. All responses to this collection of information are mandatory. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Information Collection Clearance Officer, PHMSA, Office of Pipeline Safety (PHP-30) 1200 New Jersey Avenue, SE, Washington, D.C. 20590.

**Important:** Please read the separate instructions for completing this form before you begin. They clarify the information requested and provide specific examples. If you do not have a copy of the instructions, you can obtain one from the PHMSA Pipeline Safety Community Web Page at <http://www.phmsa.dot.gov/pipeline/library/forms>.

<b>PART A - OPERATOR INFORMATION</b>	<b>DOT USE ONLY</b>
<p><b>1. NAME OF OPERATOR</b> _____</p> <p><b>2. LOCATION OF OFFICE WHERE ADDITIONAL INFORMATION MAY BE OBTAINED</b></p> <p>_____</p> <p style="text-align: center;">Number and Street</p> <p>_____</p> <p style="text-align: center;">City and County</p> <p>_____</p> <p style="text-align: center;">State and Zip Code</p> <p><b>5. STATE IN WHICH SYSTEM OPERATES:</b> / ___ / ___ / (provide a separate report for each state in which system operates)</p> <p><b>6. THIS REPORT PERTAINS TO THE FOLLOWING COMMODITY GROUP</b> (Select Commodity Group based on the predominant gas carried and complete the report for that Commodity Group. File a separate report for each Commodity Group included in this OPID.)</p> <p><input type="checkbox"/> Natural Gas</p> <p><input type="checkbox"/> Synthetic Gas</p> <p><input type="checkbox"/> Hydrogen Gas</p> <p><input type="checkbox"/> Propane Gas</p> <p><input type="checkbox"/> Landfill Gas</p> <p><input type="checkbox"/> Other Gas → Name of Other Gas: _____</p> <p><b>7. THIS REPORT PERTAINS TO THE FOLLOWING TYPE OF OPERATOR</b> (Select Type of Operator based on the structure of the company included in this OPID for which this report is being submitted.):</p> <p><input type="checkbox"/> Investor Owned</p> <p><input type="checkbox"/> Municipally Owned</p> <p><input type="checkbox"/> Privately Owned</p> <p><input type="checkbox"/> Cooperative</p>	<p><b>3. OPERATOR'S 5 DIGIT IDENTIFICATION NUMBER</b> _ / _ / _ / _ / _</p> <p><b>4. HEADQUARTERS NAME &amp; ADDRESS, IF DIFFERENT</b></p> <p>_____</p> <p style="text-align: center;">Number and Street</p> <p>_____</p> <p style="text-align: center;">City and County</p> <p>_____</p> <p style="text-align: center;">State and Zip Code</p>

**PART B - SYSTEM DESCRIPTION** Report miles of main and number of services in system at end of year.

1. GENERAL											
	STEEL				PLASTIC	CAST/ WROUGHT IRON	DUCTILE IRON	COPPER	OTHER	Reconditioned Cast Iron	SYSTEM TOTAL
	UNPROTECTED		CATHODICALLY PROTECTED								
	BARE	COATED	BARE	COATED							
MILES OF MAIN					Calc	Calc	Calc	Calc	Calc	Calc	Calc
NO. OF SERVICES					Calc	Calc	Calc	Calc	Calc	Calc	Calc

2. MILES OF MAINS IN SYSTEM AT END OF YEAR							
MATERIAL	UNKNOWN	2" OR LESS	OVER 2" THRU 4"	OVER 4" THRU 8"	OVER 8" THRU 12"	OVER 12"	SYSTEM TOTALS
STEEL							Calc
DUCTILE IRON							Calc
COPPER							Calc
CAST/WROUGHT IRON							Calc
PLASTIC 1. PVC							Calc
2. PE							Calc
3. ABS							Calc
4. OTHER PLASTIC							Calc
OTHER							Calc
Reconditioned Cast Iron							Calc
SYSTEM TOTALS	Calc	Calc	Calc	Calc	Calc	Calc	Calc

Describe Other Material: \_\_\_\_\_

3. NUMBER OF SERVICES IN SYSTEM AT END OF YEAR					AVERAGE SERVICE LENGTH _____ FEET		
MATERIAL	UNKNOWN	1" OR LESS	OVER 1" THRU 2"	OVER 2" THRU 4"	OVER 4" THRU 8"	OVER 8"	TOTAL
STEEL							Calc
DUCTILE IRON							Calc
COPPER							Calc
CAST/WROUGHT IRON							Calc
PLASTIC 1. PVC							Calc
2. PE							Calc
3. ABS							Calc
4. OTHER PLASTIC							Calc
OTHER							Calc
Reconditioned Cast Iron							Calc
SYSTEM TOTALS	Calc	Calc	Calc	Calc	Calc	Calc	Calc

Describe Other Material: \_\_\_\_\_

4. MILES OF MAIN AND NUMBER OF SERVICES BY DECADE OF INSTALLATION												
	UN-KNOWN	PRE-1940	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	2000-2009	2010-2019	2020-2029	TOTAL
MILES OF MAIN												Calc
NUMBER OF SERVICES												Calc

**PART C - LEAKS DISCOVERED, REPAIRED, AND SCHEDULED FOR REPAIR DURING CALENDAR YEAR**

**PART C1 - GENERAL TOTAL LEAKS INFORMATION AND HAZARDOUS LEAKS ELIMINATED/REPAIRED DURING YEAR**

CAUSE OF LEAK	Mains		Services	
	Total	Hazardous	Total	Hazardous
CORROSION FAILURE				
NATURAL FORCE DAMAGE				
EXCAVATION DAMAGE				
OTHER OUTSIDE FORCE DAMAGE				
PIPE, WELD, OR JOINT FAILURE				
EQUIPMENT FAILURE				
INCORRECT OPERATION				
OTHER CAUSE				

NUMBER OF KNOWN SYSTEM LEAKS AT END OF YEAR SCHEDULED FOR REPAIR \_\_\_\_\_

NUMBER OF LEAKS INITIALLY DISCOVERED BY THE PUBLIC \_\_\_\_\_

NUMBER OF GRADE 1 HAZARDOUS LEAKS DISCOVERED INVOLVING A MECHANICAL JOINT FAILURE \_\_\_\_\_

**PART C2 - LEAKS SCHEDULED FOR REPAIR**

Leak Grade	Above ground	Below ground
Grade 1		
Grade 2		
Grade 3		

**PART C3 - LEAKS DISCOVERED ON MAINS OR SERVICE LINES DUE TO CORROSION OR PIPE, WELD, OR JOINT FAILURE BY MATERIAL - Do not report leaks from equipment. Do not report leaks on the service riser or anything downstream of the service riser.**

FACILITY TYPE	STEEL				PLASTIC	CAST/WROUGHT IRON	DUCTILE IRON	COPPER	OTHER	Reconditioned Cast Iron	TOTAL
	UNPROTECTED		CATHODICALLY PROTECTED								
	BARE	COATED	BARE	COATED							
MAINS											calc
SERVICES											calc

<b>PART C4 - LEAKS DISCOVERED BY LOCATION</b>			
<u>Facility Location</u>	<u>Grade 1</u>	<u>Grade 2</u>	<u>Grade 3</u>
<u>Customer Meter/Regulator</u>			
<u>Meter and Regulating Station</u>			
<u>Valves and Fittings</u>			
<u>Service Riser</u>			
<u>Relief Device</u>			
<u>Mains</u>			
<u>Service</u>			
<u>Other</u>			

<b>PART C5 - LEAKS DISCOVERED BY CAUSE</b>						
<u>Leak Cause</u>	<u>Mains</u>			<u>Services</u>		
	<u>Grade 1</u>	<u>Grade 2</u>	<u>Grade 3</u>	<u>Grade 1</u>	<u>Grade 2</u>	<u>Grade 3</u>
<u>CORROSION FAILURE</u>						
<u>NATURAL FORCE DAMAGE</u>						
<u>EXCAVATION DAMAGE</u>						
<u>OTHER OUTSIDE FORCE DAMAGE</u>						
<u>PIPE, WELD, or JOINT FAILURE</u>						
<u>EQUIPMENT FAILURE</u>						
<u>INCORRECT OPERATION</u>						
<u>OTHER CAUSE</u>						

<b>PART C6 - LEAKS REPAIRED BY CAUSE</b>						
<u>Leak Cause</u>	<u>Mains</u>			<u>Services</u>		
	<u>Grade 1</u>	<u>Grade 2</u>	<u>Grade 3</u>	<u>Grade 1</u>	<u>Grade 2</u>	<u>Grade 3</u>
<u>CORROSION FAILURE</u>						
<u>NATURAL FORCE DAMAGE</u>						
<u>EXCAVATION DAMAGE</u>						
<u>OTHER OUTSIDE FORCE DAMAGE</u>						
<u>PIPE, WELD, or JOINT FAILURE</u>						
<u>EQUIPMENT FAILURE</u>						
<u>INCORRECT OPERATION</u>						
<u>OTHER CAUSE</u>						

**PART D – EXCAVATION DAMAGE**

1. Total Number of Excavation Damages by Apparent Root Cause Calc
- a. One-Call Notification Practices Not Sufficient: \_\_\_\_\_
  - b. Locating Practices Not Sufficient: \_\_\_\_\_
  - c. Excavation Practices Not Sufficient: \_\_\_\_\_
  - d. Other: \_\_\_\_\_
2. Number of Excavation Tickets \_\_\_\_\_

**PART E – EXCESS FLOW VALVE (EFV) AND SERVICE VALVE DATA**

Total Number Of Services with EFV Installed During Year \_\_\_\_\_

Estimated Number of Services with EFV In the System At End Of Year \_\_\_\_\_

Total Number of Manual Service Line Shut-off Valves Installed During Year \_\_\_\_\_

Estimated Number of Services with Manual Service Line Shut-off Valves Installed in the System at End of Year \_\_\_\_\_

**PART JF - ESTIMATED EMISSIONS DURING CALENDAR YEAR**

<u>Emissions Source</u>	<u>Estimated Emissions (MMCF)</u>
<u>Leaks from Mains and Service Lines</u>	
<u>Leaks from metering or regulating stations</u>	
<u>Leaks from customer meters</u>	
<u>Releases from Pressure Relief Devices</u>	
<u>Blowdowns, venting and purging</u>	
<u>Other equipment leaks</u>	

PART <b>F-G</b> - TOTAL NUMBER OF LEAKS ON FEDERAL LAND REPAIRED OR SCHEDULED FOR REPAIR
<p>_____</p>

PART <b>G-H</b> - PERCENT OF UNACCOUNTED FOR GAS
<p>Unaccounted for gas as a percent of total consumption for the 12 months ending June 30 of the reporting year.</p> <p>[(Purchased gas + produced gas) minus (customer use + company use + appropriate adjustments)] divided by (customer use + company use + appropriate adjustments) times 100 equals percent unaccounted for.</p> <p>For year ending 6/30 _____ %.</p>

PART <b>H-I</b> - ADDITIONAL INFORMATION
<p>_____</p>

PART <b>I-J</b> - PREPARER
Preparer's Name and Title
Preparer's email address
Name and Title of Person Signing

Area Code and Telephone Number
Area Code and Facsimile Number
Area Code and Telephone Number

**Instructions (rev 5-2021) for completing Form PHMSA F 7100.1-1 (rev 5-2021)**  
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All section references are to Title 49 of the Code of Federal Regulations. Reporting requirements are contained in Part 191, "Transportation of Natural and Other Gas by Pipeline; Annual Reports, Incident Reports and Safety Related Condition Reports." Except as provided in §191.11(b), each operator of a gas distribution pipeline (see definitions below) must submit an annual report Form PHMSA F 7100.1-1 for the preceding calendar year not later than **March 15th**. Be sure to report TOTAL miles of main pipeline and services in the system at the end of the reporting year, including additions to the system during the year. The annual reporting period is on a calendar year basis ending on December 31st of each year.

If you need copies of the Form PHMSA F 7100.1-1 and/or instructions, they can be found on <http://www.phmsa.dot.gov/pipeline/library/forms>. The documents are included in the section titled Accident/Incident/Annual Reporting Forms.

**ONLINE SUBMISSION IS REQUIRED UNLESS AN ALTERNATIVE REPORTING METHOD IS GRANTED BY PHMSA**

**ALTERNATE REPORTING METHOD**

If electronic reporting imposes an undue burden and hardship, an operator may submit a written request for an alternative reporting method to the Information Resources Manager, Office of Pipeline Safety, Pipeline and Hazardous Materials Safety Administration, PHP-20, 1200 New Jersey Avenue, SE Washington DC 20590. The request must describe the undue burden and hardship. PHMSA will review the request and may authorize, in writing, an alternative reporting method. An authorization will state the period for which it is valid, which may be indefinite. An operator must contact PHMSA at 202-366-8075, or electronically to [informationresourcesmanager@dot.gov](mailto:informationresourcesmanager@dot.gov) or make arrangements for submitting a report that is due after a request for alternative reporting is submitted but before an authorization or denial is received.

**ONLINE REPORTING METHOD**

Annual Reports must be submitted online through the PHMSA Portal at <https://portal.phmsa.dot.gov/portal>, unless an alternate method is approved (see Alternate Reporting Methods below).

You will not be able to submit reports until you have met all of the Portal registration requirements – see

<https://portal.phmsa.dot.gov/PHMSAPortal2/staticContentRedesign/howto/PortalAccountCreation.pdf>  
[http://opsweb.phmsa.dot.gov/portal\\_message/PHMSA\\_Portal\\_Registration.pdf](http://opsweb.phmsa.dot.gov/portal_message/PHMSA_Portal_Registration.pdf)

Completing these registration requirements could take several weeks. Plan ahead and register well in advance of the report due date.

Use the following procedure for online reporting:

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1. Go to the PHMSA Portal at <https://portal.phmsa.dot.gov/portal>
2. Enter PHMSA Portal Username and Password ; press *enter*
3. Select OPID; press “*continue*” button.
4. Under “**Create Reports**” on the left side of the screen, under *Annual* select “Gas Distribution” and proceed with entering your data. *Note: Data fields marked with a single asterisk are considered required fields that must be completed before the system will accept your initial submission.* Also, only one annual report by commodity for an OPID may be submitted per year.
5. To save intermediate work without formally submitting it to PHMSA, click **Save**. To modify a draft of an annual report that you saved, go to **Saved Reports** and click on *Gas Distribution*. Locate your saved report by the date, report year, or commodity. Select the record by clicking on it once, and then click **Modify** above the record.
6. Once all sections of the form have been completed, click on **Validate** to ensure all required fields have been completed and data meets all other requirements. A list of errors will be generated that must be fixed prior to submitting an Annual Report.
7. Click **Submit** when you have completed the Report (for either an Initial Report or a Supplemental Report), and are ready to initiate formal submission of your Report to PHMSA.
8. A confirmation message will appear that confirms a record has been successfully submitted. To save or print a copy of your submission, go to **Submitted Reports** on the left hand side, and click on *Gas Distribution*. Locate your submitted report by the date, report year, or Commodity Group, and then click on the PDF icon to either open the file and print it, or save an electronic copy.
9. To submit a *Supplemental Report*, go to **Submitted Reports** on the left hand side, and click on *Gas Distribution*. Locate your submitted report by the date, report year, or Commodity Group. Select the record by clicking on it once, and then click “Create Supplemental”.

**GENERAL INSTRUCTIONS**

The following definitions are from § 192.3:

1. “Distribution line” means a pipeline other than a gathering or transmission line.
2. “Gathering line” means a pipeline that transports gas from a current production facility to a transmission line or main.
3. “Transmission line” means a pipeline, other than a gathering line, that:



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- a. Transports gas from a gathering line or storage facility to a distribution center, storage facility, or large volume customer that is not downstream from a distribution center;
- b. Operates at a hoop stress of 20 percent or more of SMYS; or
- c. Transports gas within a storage field. A large volume customer may receive similar volumes of gas as a distribution center, and includes factories, power plants, and institutional users of gas.

4. “Operator” means a person who engages in the transportation of gas.

Make an entry in each block for which data are available. Estimate data if necessary. Avoid entering any data in the **UNKNOWN** columns, if possible. Some companies may have very old pipe for which installation records do not exist. Estimate the total of such mileage in the **UNKNOWN** column of Part B, item 2 “Miles of Main in System at End of Year” and item 3 “Number of Services in System at End of Year”, and item 4 “Miles of Main and Number of Services by Decade of Installation.”

Do not report miles of pipe, pipe segments, or pipeline in feet. When main miles and service counts for the same set of pipelines is reported in different parts of the form, the online system will require the different parts to be consistent. Main miles and service counts over 60 must be within 0.5% of the baseline and values under 60 must be within 0.3 miles for main and service counts must match exactly. Part B4, decade of installation, will serve as the baseline for main miles and service counts. For example, if you report 60 miles of main in Part B4, the miles of main in Parts B1 and B2 must be within 0.3 miles of 60. For main miles, use the number of decimal places needed to satisfy these consistency checks. Service counts may only be entered as positive integers.

**For a given OPID, a separate Annual Report is required for each Commodity Group within that OPID. As an example, if an operator uses a single OPID and has one set of pipeline facilities transporting natural gas and another transporting landfill gas, this operator must file two Annual Reports – one Annual Report covering natural gas facilities and a second for the landfill gas facilities. When a pipeline facility transports two or more Commodity Groups, the pipeline facility should be reported only once under the predominantly transported Commodity Group.**

## **PART A – OPERATOR INFORMATION**

### **1. Name of Operator**

This is the company name associated with the OPID. For online entries, the name will be automatically populated based on the OPID entered in A3. If the name that appears is not correct, you need to submit an Operator Name Change (Type A) Notification.

### **2. Location of Office Where Additional Information May Be Obtained**

Enter the appropriate address.

### **3. Operator’s 5-digit Identification Number (OPID)**

For online entries, the OPID will automatically populate based on the selection you made when entering

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the Portal. If you have log-in credentials for multiple OPID, be sure the report is being created for the appropriate OPID. Contact PHMSA's Operator Hotline at 202-366-8075 if you need assistance with an OPID.

#### **4. Headquarters Name and Address**

This is the headquarters address associated with the OPID. For online entries, the address will automatically populate based on the OPID entered in A3. If the address that appears is not correct, you need to change it in the online Contacts module.

#### **5. State of Operation**

Enter the **State for which information is being reported. Submit a separate report for each State** in which the company operates a gas distribution pipeline system.

#### **6. Commodity Group**

It is a PHMSA requirement that operators submit separate Reports for each Commodity Group within a particular OPID.

**File a separate Annual Report for each** of the following Commodity Groups:

**Natural Gas**

**Synthetic Gas** (such as manufactured gas based on naphtha)

**Hydrogen Gas**

**Propane Gas**

**Landfill Gas** (includes biogas)

**Other Gas** – If this Commodity Group is selected, report the name of the other gas in the space provided.

Note: When a pipeline facility transports two or more of the above Commodity Groups, the pipeline facility should be reported only once under the predominantly transported Commodity Group. For example, if an operator has a pipeline segment that is used to transport natural gas during the majority of the year and propane for a couple of weeks, that operator should only file an annual report for the natural gas. If an operator has two pipeline segments with one pipeline segment used to transport natural gas and the other pipeline segment transporting hydrogen gas, that operator should file two annual reports - 1 report for natural gas and 1 report for hydrogen gas.

#### **7. Operator Type**

Enter the Type of Operator based on the structure of the company included in this OPID for which this report is being submitted. "Investor Owned" means the operator is controlled by a corporation with

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publicly traded stock. “Municipally Owned” means the operator is controlled by any type of State or local government entity including, county, parish, utility district, or municipality. “Privately Owned” means the operator is controlled by a corporation without publicly traded stock. All other operators should report “Cooperative.”

**PART B – SYSTEM DESCRIPTION**

“Coated” means pipe coated with any effective hot or cold applied dielectric coating or wrapper.

“Reconditioned Cast Iron” means cast iron gas distribution pipe that has been lined internally by use of suitable materials that ensure safe operation at an MAOP not to exceed the previously established MAOP. “Reconditioned Cast Iron” does not include cast iron pipe inserted with a gas pipe that is, by itself, suitable for gas service under Part 192, e.g., an ASTM D2513 pipe meeting code requirements for the intended gas service. Such insertions shall be reported as the material used in the insertion. The intent of the definition is to make a clear distinction between a liner and inserted pipe. An example of “Reconditioned Cast Iron” would be the insertion of a liner inside cast iron pipe where the liner relies on the structural integrity of the cast iron pipe. For details on liner insertion, see ASTM F2207, Standard Specification for Cured-in-Place Pipe Lining System for Rehabilitation of Metallic Gas Pipe. Methods of installation like pipe-splitting or bursting that involve the installation of a new stand-alone pipe while the host pipe is destroyed does not result in “Reconditioned Cast Iron”.

“PVC” means polyvinyl chloride plastic.

“PE” means polyethylene plastic.

“ABS” means acrylonitrile-butadiene-styrene plastic.

“Cathodically protected” applies to both “bare” and “coated.”

“Other” means a pipe of any material not specifically designated on the form. If you enter miles of main or services in the “other” category, describe these materials in the appropriate text box.

“Number of service” is the number of service lines, not the number of customers served.

Provide miles of main and numbers of services by decade installed in Part B, section 4.

If you do not know the decade of installation of the pipe because there are no records containing such information, enter an estimate in the UNKNOWN column. The sum total of mileage and number of services reported for Part B, section 4 must be consistent with total mileage and number of services reported in sections 1, 2, and 3 in Part B.

**PART C – TOTAL LEAKS AND HAZARDOUS LEAKS ELIMINATED/REPAIRED DURING YEAR**

~~In the appropriate column, include the total number of leaks and the number of hazardous leaks eliminated by repair, replacement or other action during the reporting year. The number of “hazardous~~

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~~leaks” eliminated or repaired during the year is reported as a performance measure for integrity management per § 192.1007(g).~~

A “leak” is defined as a “leak or hazardous leak” as defined in 49 CFR 192.3, as any release of gas from a pipeline that is uncontrolled at the time of discovery and is an existing, probable, or future hazard to persons, property, or the environment, or any uncontrolled release of gas from a pipeline that is or can be discovered using equipment, sight, sound, smell, or touch.

When reporting leaks or hazardous leaks eliminated by replacing or abandoning a segment of pipe, count the leaks that existed in the pipe segment before it was replaced or abandoned. Also include leaks and ~~hazardous~~ leaks reported on form PHMSA 7100.1, “Incident Report Gas Distribution Systems.” A reportable incident is one described in § 191.3. Do not include leaks that occurred during testing.

~~A “leak” is defined as an unintentional escape of gas from the pipeline. Do NOT report a leak determined to be non-hazardous and eliminated by lubrication, adjustment, or tightening.~~

Grade 1, Grade 2, and Grade 3 leaks are defined in accordance with the criteria in § 192.760.A “hazardous leak” means a leak that represents an existing or probable hazard to persons or property and requires immediate repair or continuous action until the conditions are no longer hazardous. A “hazardous leak”leak which occurs aboveground or belowground is a leak and must be reported.

Operators who do not grade leaks for hazard, but rather promptly repair all leaks when found, need not grade repaired leaks solely for the purpose of this report. Such operators treat all leaks as if ~~hazardous~~grade 1. Operators who do not grade leaks must report the same values for both total and ~~hazardous~~grade 1 leaks for each cause.

### C1 General Leak Information

The number of leaks initially discovered by the public includes any leak initially discovered by notification from the public, including reports of gas odor reported under an operator’s procedures in §§ 192.605(b)(11) and 192.615(a)(3).

Enter the number of grade 1 leaks by any cause involving a mechanical joint failure during the calendar year. “Mechanical joint” means a connection of two sections of pipe using one of the following types of fittings: stab, nut follower, bolted, or other compression type. The first three types are further described below:

*Stab* - Internally there are specially designed components including an elastomer seal, such as an “O” ring, and a gripping device to affect pressure sealing and pull-out resistance capabilities. Self-contained stiffeners are included in this type of fitting. With this style fitting the operator would have to prepare the pipe ends, mark the stab depth on the pipe, and “stab” the pipe in to the depth prescribed for the fitting being used.

*Nut Follower* – The components are generally a body; a threaded compression nut or a follower; an elastomer seal ring; a stiffener or an integrated stiffener for plastic pipe; and, with some, a gripping ring. Normally the design concept of this type of fitting typically includes an elastomer seal in the assembly. The seal, when compressed by tightening of a threaded compression nut grips the outside of the pipe, affecting a pressure-tight seal and, in some designs, providing pull-out resistance. For plastic

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pipe, the inside of the pipe wall should be supported by the stiffener under the seal ring and under the gripping ring (if incorporated in the design), to prevent collapse of the pipe. A lack of this support could result in a loss of the seal affected by the seal ring or the gripping of the pipe for pull-out resistance. This fitting style is normally used in pipelines 2-inches in diameter and smaller. There are two categories of this type of joining device manufactured. One type provides a seal only, and the other provides a seal plus pipe restraint against pull-out.

*Bolted* – The bolt type mechanical fitting has similar components as the nut follower except instead of a threaded compression nut or follower, there is a bolt arrangement. This fitting style is most often used in pipelines 2-inches in diameter and larger.

### **C2 Leaks Scheduled for Repair**

~~The “number of known system leaks at the end of the year scheduled for repair” is~~ Report the total number pipeline system leaks being monitored and scheduled for repair at the end of the calendar year by grade and location. Monitored leaks also include those leaks which have been temporarily repaired until a permanent repair can be performed. ~~These leaks are non-hazardous unless reclassified following the operator’s operation and maintenance procedures.~~

~~Enter the number of hazardous leaks by any cause involving a mechanical joint failure during the calendar year. “Mechanical joint” means a connection of two sections of pipe using one of the following types of fittings: stab, nut follower, bolted, or other compression type. The first three types are further described below:~~

~~*Stab*—Internally there are specially designed components including an elastomer seal, such as an “O” ring, and a gripping device to affect pressure sealing and pull-out resistance capabilities. Self-contained stiffeners are included in this type of fitting. With this style fitting the operator would have to prepare the pipe ends, mark the stab depth on the pipe, and “stab” the pipe in to the depth prescribed for the fitting being used.~~

~~*Nut Follower*—The components are generally a body; a threaded compression nut or a follower; an elastomer seal ring; a stiffener or an integrated stiffener for plastic pipe; and, with some, a gripping ring. Normally the design concept of this type of fitting typically includes an elastomer seal in the assembly. The seal, when compressed by tightening of a threaded compression nut grips the outside of the pipe, affecting a pressure tight seal and, in some designs, providing pull-out resistance. For plastic pipe, the inside of the pipe wall should be supported by the stiffener under the seal ring and under the gripping ring (if incorporated in the design), to prevent collapse of the pipe. A lack of this support could result in a loss of the seal affected by the seal ring or the gripping of the pipe for pull-out resistance. This fitting style is normally used in pipelines 2-inches in diameter and smaller. There are~~

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~~two categories of this type of joining device manufactured. One type is provides a seal only, and the other provides a seal plus pipe restraint against pull-out.~~

~~*Bolted*—The bolt type mechanical fitting has similar components as the nut follower except instead of a threaded compression nut or follower, there is a bolt arrangement. This fitting style is most often used in pipelines 2 inches in diameter and larger.~~

**C3. Leaks Discovered on Mains or Service Lines Due to Corrosion or Pipe, Weld, or Joint Failure by Materials.**

Report the number of leaks discovered on mains and service lines due to 1) Corrosion Failure or 2) Pipe Weld or Joint Failure, as defined in the leak cause instructions for sections C5 and C6 below.

Refer to the instructions in section C2 for information on classifying main and service line materials.

**C4. Leaks Discovered by Location**

Include leaks discovered based on the origin of the leak by grade.

Leaks from components, equipment, and fittings should be reported under the appropriate category, even if they are located on a distribution main or service line.

**C5 and C6 Leaks Discovered and Repaired by Cause**

Include the leaks discovered and repaired by cause and by grade as defined in § 192.760. Separately report leaks on mains and leaks on service lines. A leak discovered and repaired in the same calendar year should be reported in both C5 and C6. A leak has been repaired following a successful post-repair inspection in accordance with § 192.760(e)(1). If a repair has been done but the inspection has not been completed or gas was detected during the inspection do not report the leak on C6 and instead report the leak under part C2 as a leak scheduled for repair.

**Leak causes are classified as:**

**CORROSION FAILURE:** leak caused by galvanic, atmospheric, stray current, microbiological, or other corrosive action. A corrosion release or failure is not limited to a hole in the pipe or other piece of equipment. If the bonnet or packing gland on a valve or flange on piping deteriorates or becomes loose and leaks due to corrosion and failure of bolts, it is classified as Corrosion. (Note: If the bonnet, packing, or other gasket has deteriorated to failure, whether before or after the end of its expected life, but not due to corrosive action, report it under a different cause category, such as G4 Incorrect Operation for improper installation or G6 Equipment Failure if the gasket failed)

**NATURAL FORCE DAMAGE:** leak caused by outside forces attributable to causes NOT involving humans, such as earth movement, earthquakes, landslides, subsidence, heavy rains/floods, lightning, temperature, thermal stress, frozen components, high winds (Including damage caused by impact from objects blown by wind), or other similar natural causes. Lightning includes both damage and/or fire caused by a direct lightning strike and damage and/or fire as a secondary effect from a lightning strike in the area. An example of such a secondary effect would be a forest fire started by lightning that results in damage to a gas distribution system asset which results in an incident.

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**EXCAVATION DAMAGE:** leak resulting directly from excavation damage by operator's personnel (oftentimes referred to as "first party" excavation damage) or by the operator's contractor (oftentimes referred to as "second party" excavation damage) or by people or contractors not associated with the operator (oftentimes referred to as "third party" excavation damage). Also, this section includes a release or failure determined to have resulted from previous damage due to excavation activity. For damage from outside forces OTHER than excavation which results in a release, use Natural Force Damage or Other Outside Force, as appropriate.

**OTHER OUTSIDE FORCE DAMAGE:** leak resulting from outside force damage, other than excavation damage or natural forces such as:

- Nearby Industrial, Man-made or Other Fire/Explosion as Primary Cause of Incident (unless the fire was caused by natural forces, in which case the leak should be classified Natural Forces. Forest fires that are caused by human activity and result in a release should be reported as Other Outside Force),
- Damage by Car, Truck, or Other Motorized Vehicle/Equipment NOT Engaged in Excavation. Other motorized vehicles/equipment includes tractors, mowers, backhoes, bulldozers and other tracked vehicles, and heavy equipment that can move. Leaks resulting from vehicular traffic loading or other contact (except report as "Excavation Damage" if the activity involved digging, drilling, boring, grading, cultivation or similar activities.
- Damage by Boats, Barges, Drilling Rigs, or Other Maritime Equipment or Vessels so long as those activities are not excavation activities. If those activities are excavation activities such as dredging or bank stabilization or renewal, the leak repair should be reported as "Excavation Damage".
- Previous Mechanical Damage NOT Related to Excavation. A leak caused by damage that occurred at some time prior to the release that was apparently NOT related to excavation activities, and would include prior outside force damage of an unknown nature, prior natural force damage, prior damage from other outside forces, and any other previous mechanical damage other than that which was apparently related to prior excavation. Leaks resulting from previous damage sustained during construction, installation, or fabrication of the pipe, weld, or joint from which the release eventually occurred are to be reported under "Pipe, Weld, or Joint Failure". Leaks resulting from previous damage sustained as a result of excavation activities should be reported under "Excavation Damage" unless due to corrosion in which case it should be reported as a corrosion leak.
- Intentional Damage/. Vandalism means willful or malicious destruction of the operator's pipeline facility or equipment. This category would include pranks, systematic damage inflicted to harass the operator, motor vehicle damage that was inflicted intentionally, and a variety of other intentional acts.
- Terrorism, per 28 C.F.R. § 0.85 General functions, includes the unlawful use of force and violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives.
- Theft. Theft means damage by any individual or entity, by any mechanism, specifically to steal, or attempt to steal, the transported gas or pipeline equipment.

**PIPE, WELD, OR JOINT FAILURE :** Leak resulting from a material defect within the pipe, component or joint due to faulty manufacturing procedures, design defects, or in-service stresses such as vibration, fatigue and environmental cracking. Material defect means an inherent flaw in the material or weld that occurred in the manufacture or at a point prior to construction, fabrication or installation. Design defect means an aspect inherent in a component to which a subsequent failure has been attributed

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that is not associated with errors in installation, i.e., is not a construction defect. This could include, for example, errors in engineering design. Fitting means a device, usually metal, for joining lengths of pipe into various piping systems. It includes couplings, ells, tees, crosses, reducers, unions, caps and plugs. Any leak that is associated with a component or process that joins pipe such as threaded connections, flanges, mechanical couplings, welds, and pipe fusions that leak as a result from poor construction should be classified as "Incorrect Operation". Leaks resulting from failure of original sound material from force applied during construction that caused a dent, gouge, excessive stress, or other defect, including leaks due to faulty wrinkle bends, faulty field welds, and damage sustained in transportation to the construction or fabrication site that eventually resulted in a leak, should be reported as "Pipe, Weld or Joint Failure".

**EQUIPMENT FAILURE:** leak caused by malfunctions of control and relief equipment including regulators, valves, meters, compressors, or other instrumentation or functional equipment, Failures may be from threaded components, Flanges, collars, couplings and broken or cracked components, or from O- Ring failures, Gasket failures, seal failures, and failures in packing or similar leaks. Leaks caused by overpressurization resulting from malfunction of control or alarm device; relief valve malfunction; and valves failing to open or close on command; or valves which opened or closed when not commanded to do so. If overpressurization or some other aspect of this incident was caused by incorrect operation, the incident should be reported under "Incorrect Operation."

**INCORRECT OPERATION:** leak resulting from inadequate procedures or safety practices, or failure to follow correct procedures, or other operator error. It includes leaks due to improper valve selection or operation, inadvertent overpressurization, or improper selection or installation of equipment. It includes a leak resulting from the unintentional ignition of the transported gas during a welding or maintenance activity.

**OTHER CAUSE:** leak resulting from any other cause not attributable to the above causes. A best effort should be made to assign a specific leak cause before choosing the Other cause category. An operator replacing a bare steel pipeline with a history of external corrosion leaks without visual observation of the actual leak, may form a hypothesis based on available information that the leak was caused by external corrosion and assign the Corrosion cause category to the leak.

**PART D – EXCAVATION DAMAGE**

Excavation damages are reported as a measure of the effectiveness of integrity management programs (§ 192.1007(g)).

Report the "Number of Excavation Damages" experienced during the calendar year by the following apparent root cause which are classified as:

**One-Call Notification Practices Not Sufficient:** Damages resulting from no notification made to the One-Call Center; or notification to one-call center made, but not sufficient; or wrong information provided to One Call Center.

**Locating Practices Not Sufficient:** Damages resulting from facility could not be found or located; or facility marking or location not sufficient; or facility was not located or marked; or incorrect facility records/maps.

**Excavation Practices Not Sufficient:** Damages resulting from failure to maintain marks; or failure to



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support exposed facilities; or failure to use hand tools where required; or failure to test-hole (pot-hole); or improper backfilling practices; or failure to maintain clearance; or other insufficient excavation practices.

**Other:** Damages resulting from One-Call Center error; or abandoned facility; or deteriorated facility; or previous damage or data not collected; or other.

The Total Number of Excavation Damages will be calculated automatically based on the data entered. For this purpose, “Excavation Damage” means any impact that results in the need to repair or replace an underground facility due to a weakening, or the partial or complete destruction, of the facility, including, but not limited to, the protective coating, plastic pipe tracer wire, lateral support, cathodic protection or the housing for the line device or facility.

Report also the “Number of Excavation Tickets” received during the year, (i.e., receipt of information by the operator from the notification center).

**PART E – EXCESS FLOW VALVE (EFV) AND SERVICE VALVE DATA**

Report the number of EFV and manual service line shut-off valves installed during the calendar year. Report the estimated total number of EFV and manual service line shut-off valves in the system at the end of the calendar reporting year. Be sure to include the number installed during the calendar year when reporting the estimated number in the system at the end of the calendar year.

**PART F – ESTIMATED EMISSIONS DURING CALENDAR YEAR**

Report estimated emissions of natural gas to the atmosphere in million cubic feet. Include both unintentional and intentional releases.

Releases from pressure relief devices includes unintentional leaks and releases from the device operating as intended to provide overpressure protection.

**PART ~~F~~G – TOTAL NUMBER OF LEAKS ON FEDERAL LAND REPAIRED/ELIMINATED OR SCHEDULED FOR REPAIR**

Federal Lands: As defined in 30 U.S.C. §185, federal lands means “all lands owned by the United States except lands in the National Park System, lands held in trust for an Indian or Indian tribe, and lands on the Outer Continental Shelf.” Indicate only those leaks repaired, eliminated, or scheduled for repair during the reporting year, including those incidents reported on Form PHMSA F 7100.1.

**PART ~~G~~H – PERCENT OF UNACCOUNTED FOR GAS**

“Unaccounted for gas” is gas lost; that is, gas that the operator cannot account for as usage or through appropriate adjustment. Adjustments are appropriately made for such factors as variations in temperature, pressure, meter-reading cycles, or heat content; calculable losses from construction, purging, line breaks, etc., where specific data are available to allow reasonable calculation or estimate; or other similar factors.

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State the amount of unaccounted for gas as a percent of total consumption for the 12 months ending June 30 of the reporting year.

[(Purchased gas + produced gas) minus (customer use + company use + appropriate adjustments)]  
divided by (customer use + company use + appropriate adjustments) times 100 equals percent  
unaccounted for.

**PART ~~H~~I – ADDITIONAL INFORMATION**

Include any additional information which will assist in clarifying or classifying the reported data.

**PART ~~I~~J - PREPARER**

**PREPARER** is the name of the person most knowledgeable about the report or the person to be contacted for more information. Please include the direct phone number and email address as applicable (e-mail address is desired but not required). It should be noted that PHMSA will use your e-mail address to issue correspondence that is normally sent via mass mailings. "Correspondence" includes notifications such as the annual reminder letter for Annual Report filings.