

SDG&E, July 1st, 2024
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 - 2024 June Report
Appendix 1; Rev. 03/29/2024

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/Mile/Year)	Annual Emissions (Mscf)	Explanatory Notes / Comments
Transmission	SDG&E Territory	PC	All	All	All	All	All	N/A	N/A	N/A	N/A	N/A	0.38	82.8	218 Miles - For 2022, the INGAA Greenhouse Gas Emission Estimation Guidelines for Natural Gas Transmission and Storage - Volume 1 GHG Emission Estimation Methodologies and Procedures (September 28, 2005 - Revision 2) - Table 4-4 study provides the best available estimate of emissions for Transmission Pipeline, which includes emissions from Flanges and Valves.
Sum Total														83	

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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
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Sum Total 0

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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.

The emissions reported under the column Methane Abatement (Mscf) are for information purposes only, and should be separated 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)
BD-2023-810	92082	1	R	XC	1211.54	Pipeline blowdown	60.05
BD-2023-819	92082	1	R	XC	7.20	Pipeline blowdown	164.00
BD-2023-909	92082	1	R	XC	0.36	Pipeline blowdown	33.25
BD-2023-910	92025	1	R	XC	0.71	Pipeline blowdown	66.51
BD-2023-1035	92064	1	R	XC	8.43	Pipeline blowdown	902.66
BD-2023-1066	92082	1	R	N	50.80	Pipeline blowdown	0.00
BD-2023-1083	92101	1	R	XC	21.03	Pipeline blowdown	3,897.38
BD-2024-1320	92145	1	IM	XC	8.21	Pipeline blowdown	874.31
BD-2024-1321	92145	1	R	XC	5.26	Pipeline blowdown	439.49
NA	Various	2			0.04	Relief Valve Inspections (20 scf/inspection)	
NA	Various	13			0.39	Drips (30 scf/inspection)	
NA	Various	40			0.08	Pneumatic Device Annual Inspections (actuators & controllers) - Estimated avg. gas vented = 2 scf/insp	
NA	Various	26			0.05	LineBreaks - Estimated avg. gas vented = 2 scf/insp	
NA	Various	5			0.01	Analyzers (2scf/inspection)	
NA	Various	1			0.03	Meter Inspections - 25 scf/inspection	
NA	Various	35			1.05	Filter Change-outs or Filter Inspections w/parts replacement - Estimated avg. gas vented = 30 scf/inspection	
NA	Various	16		XC	2.30	Pigging Operation Launcher/Receiver Emissions	27.51
NA	Various	100			0.27	Transmission Odor Intensity Tests	
Sum Total					1,318		

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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 with the operational design and function of the component. Any intentional 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
28	P	I		0.0576	589	
				Sum Total	589	

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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 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 Pipeline Component Fugitive Leaks:										12/31/2023	1/1/2023
ID	Geographic Location	Device Type	Bleed Rate	Manufacturer	Discovery Date (MM/DD/YY)	Repair Date (MM/DD/YY)	Number of Days Leaking	Emission Factor (Misc/day)	Annual Emission (Misc)	Explanatory Notes / Comments	Prd Survey Date (DD/MM/YYYY)
Sum Total										0	

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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.

Transmission Pipeline Odorizers:

ID	Geographic Location	Number of Units	Emission Factor (Mscf/yr)	Annual Emission (Mscf)	Explanatory Notes / Comments
Gas Quality Equipment	Various	5		7.89	Transmission (BTU, Gas Quality), Gas Chromatographs (GC). Use manufacturing specs. See Notes in Appendix 9.
Gas Quality Equipment	Various	5		27.45	Transmission (Interstate, Interutilities), GCs and Gas Analyzers. Use manufacturing specs. See Notes in Appendix 9.
Gas Quality Equipment	Various	5		42.87	Transmission (Producers), Gas Analyzers. Use manufacturing specs. See Notes in Appendix 9.
Gas Quality Equipment	Various	2		0.03	Transmission (Producers), Gas Sample/Quality Tests. Use manufacturing specs. See Notes in Appendix 9.
Gas Quality Equipment	Various	5		6.11	Big GEMs, GCs and Gas Analyzers. Use manufacturing specs. See Notes in Appendix 9.
Odorizer	Various	5		2.07	YZ Odorizer. Use manufacturing specs. See Notes in Appendix 9.
Sum Total				86	

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Header column "Comment" boxes displayed below for reference.	
Column Heading	Description and Definition of Required Contents (IF not self-explanatory)
Pipeline Leaks	
ID	
Geographic Location	GIS, zip code, or equivalent
Pipe Material	PB = cathodically protected steel, bare PC = cathodically protected steel, coated UB = unprotected steel, bare UC = unprotected steel, coated
Pipe Size (nominal)	
Pipe Age (months)	
Pressure (psi)	MOP = maximum operating pressure over the past year
Leak Grade	1 = grade 1 2 = grade 2 2+ = grade 2+ 3 = grade 3 AH = Above Ground Hazardous synonymous with Grade 1. AN = Above Ground Non-Hazardous AM = Above Ground Non-Hazardous Minor (akin to grade 3 below ground leak). N = non-graded or ungraded
Above Ground or Below Ground	A = above ground B = below ground
Discovery Date (MM/DD/YY)	
Repair Date (MM/DD/YY)	Date that the pipeline repair stopped the leak. Any associated blowdowns resulting from the repair should be included in the blowdowns tab.
Scheduled Repair Date (MM/DD/YY)	If leak is open, specify the scheduled date of repair, or type "M," signifying that the leak is being monitored with no scheduled date of repair. Then, provide the reason for not scheduling a repair in Column for that purpose.
Reason for Not Scheduling a Repair	If not scheduled for repair (e.g. with a "M" for monitoring the leak in Scheduled Repair Date), then provide the reason for not scheduling a repair.
Number of Days Leaking	If the leak was discovered by survey in the year of interest, then assume leaking from January 1st of subject year <u>thru</u> repair date or December 31st of subject year, whichever is earlier. (E.G. Days Leaking = Repair - Jan 1st + 1 day.) (For days leaking for leaks carried over use January 1st as start date for emissions calculations.) For O&M discovered leaks, assume that the leak begins with the discovery date <u>thru</u> repair date or December 31st of subject year, whichever is earlier.

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Column Heading	Description and Definition of Required Contents (IF not self-explanatory)
Emission Factor (Mscf/Day)	
Annual Emissions (Mscf)	
Explanatory Notes / Comments	
All Damages	
ID	
Geographic Location	GIS, zip code, or equivalent
Damage Type	E = excavation damage N = natural force damage O = other outside force damage
Pipe Material	PB = cathodically protected steel, bare PC = cathodically protected steel, coated UB = unprotected steel, bare UC = unptotected steel, coated
Pipe Size (nominal)	
Pipe Age (months)	
Pressure (psi)	MOP = maximum operating pressure over the past year
Leak Grade	1 = grade 1 2 = grade 2 2+ = grade 2+ 3 = grade 3 N = non-graded or ungraded
Above Ground or Below Ground	AH = above ground, hazardous AN = above ground, non-hazardous B = below ground
Discovery Date (MM/DD/YY)	
Repair Date (MM/DD/YY)	

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Number of Days Leaking	<p>If date and time stamp are reliable and used consistently by respondent, then emissions may be calculated based on actual time leaking. E.G. Repair time - damage event time = duration of event.</p> <p>If respondent has average or historical leak duration based on the nature and circumstances of damages, then these may be applied to like damage events. The emissions factors should be adequately supported and explained in the filing.</p> <p>If actual time stamps and historical averages are not available, then whole days should be used in the engineering calculation. The leak begins with the damage event date thru repair date or December 31st of subject year, whichever is later. E.G. Days Leaking = Repair date - date of damage + 1 day.</p>
Emission Factor (Mscf/Day)	
Annual Emissions (Mscf)	
Explanatory Notes / Comments	<p>Provide method of calculation and example of formula.</p> <p>Explain how any EF's used were derived.</p>
Tab: Blowdowns	
ID	
Geographic Location	GIS, zip code, or equivalent
Number of Blowdown Events	
Reason	<p>Maintenance (M) Repair or Replacement (R) Integrity Management (IM) Pressure Reduction or Deactivation (PR) Other (O)</p> <p>In the case of Other(O), please provide a description of the reason.</p>
Emission Reduction Strategy	<p>Drafting (D) Cross Compression (XC) Gas Capture (GC) Flaring or Thermal Oxidation (FTO) Project Bundling (PB) Multiple Methods (M) None (N) Other (O)</p> <p>In the case of Multiple Methods (M), please list each method.</p> <p>In the case of Other (O), please provide a description of the strategy.</p>

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Column Heading	Description and Definition of Required Contents (IF not self-explanatory)
Annual Emissions (Mscf)	
Explanatory Notes / Comments	
Methane Abatement (Mscf)	
Tab: Component Vented Emissions	
Total Number of Devices	
Device Type	P = pneumatic device H = Hydraulic valve operator T = turbine valve operator PR = pressure relief valve O = other devices
Bleed Rate	L = low bleed I = intermittent bleed H = high bleed NA = not applicable
Manufacturer	
Emission Factor (Mscf/day)	
Annual Emissions (Mscf)	Because the emissions are a factor of design or function, these emissions counted for the entire year. E.G. 365 days times the actual volume emitting if known, or the approved Emissions Factor.
Explanatory Notes / Comments	Note whether the emissions are based on actual volumetric measures.
Component Fugitive Leaks	
ID	
Geographic Location	GIS, zip code, or equivalent
Device Type	P = pneumatic device H = Hydraulic valve operator T = turbine valve operator PR = pressure relief valve O = other devices
Bleed Rate	L = low bleed I = intermittent bleed H = high bleed NA = not applicable
Manufacturer	

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Header column "Comment" boxes displayed below for reference.	
Column Heading	Description and Definition of Required Contents (IF not self-explanatory)
Discovery Date (MM/DD/YY)	List the actual discovery date. If the leak was discovered in the year of interest, then we will assume the component was leaking from the beginning of the year for emissions reporting purposes, or prior survey date if surveyed previously within the year of interest.
Repair Date (MM/DD/YY)	Date that the component repair stopped the leak. Any associated blowdowns as a result of the repair should be included in the blowdowns tab.
Number of Days Leaking	Assume Leaking from January 1 of subject year or prior survey date, whichever is later, thru the repair date (if repaired in year of interest) or December 31 of subject year, whichever is earlier. For O&M discovered leaks, assume that the leak begins with the discovery date thru repair date or December 31st of subject year, whichever is earlier.
Emission Factor (Mscf/day)	
Annual Emissions (Mscf)	
Explanatory Notes / Comments	
Odorizers	
ID	
Geographic Location	GIS, zip code, or equivalent
Number of Units	
Emission Factor (Mscf/yr)	
Annual Emission (Mscf)	All of the emissions from the odorizing process and equipment.
Explanatory Notes / Comments	