SDG&E, June 14, 2019

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 - 2019 June Report

Appendix 1 - Rev. 03/29/19

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	87.1	232 Miles - For 2018, 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	87	

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In Response to Data Request, R15-01-008 - 2019 June Report

Appendix 1 - Rev. 03/29/19

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
Note: No Damages Reported in 2018														
												Sum total	0	

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Appendix 1 - Rev. 03/29/19

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 Blowdowns:

ID	Geographic Location	Number of Blowdown Events	Annual Emissions (Mscf)	Explanatory Notes / Comments
N/A	SDG&E Territory	60	0.16	Transmission Odor Intensity Test
N/A	SDG&E Territory	1	58	Pipe section replacment
N/A	SDG&E Territory	5	0.1	Relief Valve Inspections at Transmission Pipeline - Estimated avg. gas vented = 20 scf/insp (annual test with Nitrogen, gas vented is volume of gas in valve)
N/A	SDG&E Territory	6	0.18	Filter Change-outs or Filter Inspections w/parts replacement - Estimated avg. gas vented = 30 scf/ea
N/A	SDG&E Territory	1	0.03	Gas Chromatograph
N/A	SDG&E Territory	13	0.39	Pipeline Drip Accumulation - Estimated avg. gas vented = 11,300 cfh for 5min/device
	Sum Total		**58.9**	

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In Response to Data Request, R15-01-008 2019 June Report
Appendix 1; Rev. 03/29/19

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
Notes: No devices.						
				Sum total	0	

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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 2019 June Report

Appendix 1; Rev. 03/29/19

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 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
Note: No pipeline component leaks reported for 2018										
								Sum total	0	

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In Response to Data Request, R15-01-008 2019 June Report
Appendix 1; Rev. 03/29/19

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
Gas Quality Equipment	SDG&E Territory	2	N/A	1.04	Transmission (Producers), Gas Sample/Quality Tests. Use manufacturing specs. See Notes in Appendix 9.
Odorizer	SDG&E Territory	2	N/A	1.15	YZ Odorizer. Use manufacturing specs. See Notes in Appendix 9.
			Sum Total	**2.2**	

Header column "Comment" boxes displayed below for reference.	
Column Heading	Description and Definition of Required Contents (IF not self-explanatory)
Tab: 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 synonoumous 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.

Header column "Comment" boxes displayed below for reference.	
Column Heading	Description and Definition of Required Contents (IF not self-explanatory)
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 thru repair date or December 31st of subject year, which ever 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 thru repair date or December 31st of subject year, whichever is earlier.
Emission Factor (Mscf/Day)	
Annual Emissions (Mscf)	
Explanatory Notes / Comments	
Tab: 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

Header column "Comment" boxes displayed below for reference.	
Column Heading	Description and Definition of Required Contents (IF not self-explanatory)
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)	
Number of Days Leaking	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. 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. 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.
Emission Factor (Mscf/Day)	
Annual Emissions (Mscf)	
Explanatory Notes / Comments	Provide method of calculation and example of formula. Explain how any EF's used were derived.
Tab: Blowdowns	

Header column "Comment" boxes displayed below for reference.	
Column Heading	Description and Definition of Required Contents (IF not self-explanatory)
ID	
Geographic Location	GIS, zip code, or equivalent
Number of Blowdown Events	
Annual Emissions (Mscf)	
Explanatory Notes / Comments	Provide method of calculation and example of formula.
Tab: Component Vented Emissions	
Geographic Location	GIS, zip code, or equivalent
Device Type	C = connector O = open-ended line M = meter P = pneumatic device PR = pressure relief valve V = valve
Bleed Rate	L = low bleed I = intermittent bleed H = high bleed NA = not applicable
Manufacturer	
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.
Tab: Component Leaks	
ID	
Geographic Location	GIS, zip code, or equivalent

Header column "Comment" boxes displayed below for reference.	
Column Heading	Description and Definition of Required Contents (IF not self-explanatory)
Device Type	C = connector O = open-ended line M = meter P = pneumatic device PR = pressure relief valve V = valve
Bleed Rate	L = low bleed I = intermittent bleed H = high bleed NA = not applicable
Manufacturer	
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.
Annual Emissions (Mscf)	
Explanatory Notes / Comments	
Tab: Odorizers	
ID	
Geographic Location	GIS, zip code, or equivalent
Number of Units	

Header column "Comment" boxes displayed below for reference.	
Column Heading	Description and Definition of Required Contents (IF not self-explanatory)
Emission Factor (Mscf/yr)	
Annual Emission (Mscf)	All of the emissions from the odorizing process and equipment.
Explanatory Notes / Comments	