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 8; Rev. 03/29/19

Summary Tables:

System Categories	Emission Source Categories	Fugitive or Vented	For Reference Only: 2015 Baseline Emissions (Mscf)	2017 Total Annual Volume of Leaks & Emissions (Mscf)	2017 Total Annual Count of Leak & Emission Items	2018 Total Annual Volume of Leaks & Emissions (Mscf)	2018 Total Annual Count of Leak & Emission Items	Emission Change for Year Over Year Comparison from 2017 to 2018 (Mscf)	Percentage Emission Change for Year Over Year Comparison from 2017 to 2018	Count Change for Year Over Year Comparison from 2017 to 2018	Percentage Count Change for Year Over Year Comparison from 2017 to 2018	Emission Change for Year Over Year Comparison from 2015 to 2018 (Mscf)	Percentage Change for Year Over Year Comparison from 2015 to 2018	Explanation for Significant Percentage Change for Year Over Year Comparison from 2017 to 2018
Transmission Pipelines	Pipeline Leaks	Fugitive	87	88	Leak count: 0 Total System Mileage: 234	87	Leak count: 0 Total System Mileage: 232	(1)	(0.9%)	(2)	(0.9%)	0	0.1%	
	All Damages	Fugitive	0	0	Number of emission items: 0	0	Number of emission items: 0	-		-				
	Blowdowns	Vented	3,426	2,012	Number of blowdown events: 86	58.9	Number of blowdown events: 86	(1,954)	(97.1%)	-	0.0%	-3,367	(98.3%)	Blowdowns emissions are a function of activity level. Blowdown volume varies by activity, depending on the type of work performed. In 2017 there were seven construction projects, in 2018 only 1 project occurred.
	Component Emissions	Vented	1	0	Number of devices: 0	0	Number of devices: 0	-	0.0%	-	0.0%	-1	(100.0%)	
	Component Leaks	Fugitive	N/A	0	Number of leaks: 14	0	Number of leaks: 0	-	-	(14)	(100.0%)	0	0.0%	No Pipeline Component Leaks Reported for 2018
	Odorizers	Vented	2	2	Number of units: 4	2	Number of units: 4	-	0.0%	-	0.0%	0	0.0%	
Transmission M&R Stations	Station Leaks & Emissions	Fugitive	22,216	25,121	Number of facilities: 36	25,121	Number of facilities: 36	-	0.0%	-	0.0%	2,905	13.1%	
	Blowdowns	Vented	31	3	Number of blowdown events: 109	22	Number of blowdown events: 109	19	634.4%	-	0.0%	-9	(29.0%)	The primary reason for the emission increase is due to one blowdown event at a Pressure Limiting Station that was responsible for 20 Mscf.
Transmission Compressor Stations	Compressor Emissions	Vented	1,262	722	Number of compressors: 10	1305	Number of compressors: 10	583	80.7%	-	0.0%	43	3.4%	The increase in the emissions can be attributed to the compressor rod packing at one facility. The rod packing was subsequently replaced in 2018.
	Compressor Leaks	Fugitive	NA	N/A	N/A	N/A	N/A							This worksheet was combined with Component Leaks worksheet in 2018 template.
	Blowdowns	Vented	3,956	3,695	Number of blowdown events: 268	1562	Number of blowdown events: 184	(2,133)	(57.7%)	(84)	(31.3%)	-2,394	(60.5%)	Blowdowns emissions are a function of activity level. Blowdown volume varies by activity, depending on the type of work performed. There were less blowdowns in 2018 compared to 2017.
	Component Emissions	Vented	NA	887	Number of devices: 43	887	Number of devices: 43	-	0.0%	-	0.0%	0	0.0%	
	Component Leaks	Fugitive	1,085	988	Number of leaks: 24	2,919	Number of leaks: 90	1,931	195.5%	66	275.0%	1,834	169.0%	In 2018, quarterly survey was performed at compressor stations, compared with annual survey in previous years.
	Storage Tank Leaks & Emissions	Vented	3	2	Number of emission items: 33	13	Number of emission items: 110	11	550.0%	77	233.3%	10	333.3%	The increase in emissions from 2017 to 2018 is due to temperature fluctuation that required venting to reduce vessel pressure.
Distribution Main & Service Pipelines	Pipeline Leaks	Fugitive	33,730	4,501	Number of known leaks: 652 Estimated number of unknown leaks: 174 Total number of leaks: 826	3,937	Number of known leaks: 545 Estimated number of unknown leaks: 80 Total number of leaks: 625	(564)	(12.5%)	(201)	(24.3%)	-29,793	(88.3%)	• The # of Unknown Leaks for all the categories of Plastic material was calculated using the Leak Rate of 2018 only as opposed to the last 3-year average leak rate because this is the first time the template asks for the Vintage Plastic data separately. • The # of Unknown Leaks of Main/Service of protected and unprotected steel was calculated using the Average of the last 2-year average leak rate as opposed to the last 3-year average leak rate because the equation used to calculate the number of unknown leaks in 2016 was overstating the rate when using actual survey miles and it was corrected in 2017. The variation is due to variables in areas surveyed, variability in the operating environment, and variation in the rate at which system leaks develop. Leak inventory reduction efforts and increased leak survey may have influenced this decrease in emissions.
	All Damages	Fugitive	8,894	9,142	Number of damages: 431	9,673	Number of damages: 415	531	5.8%	(16)	(3.7%)	779	8.8%	This is normal variation based on damage severity and the damaged asset's dimensions
	Blowdowns	Vented	45	652	Number of blowdown events*: 257	455	Number of blowdown events: 252	(197)	(30.3%)	(5)	(1.9%)	410	911.1%	Blowdowns emissions are a function of activity level. Blowdown volume varies by activity, depending on the type of work performed.
	Component Emissions	Vented	0	0	0	0	0	-	-	-	0.0%	0	0.0%	
	Component Leaks	Fugitive	0	0	0	0	0	-	-	-	0.0%	0	0.0%	
Distribution M&R Stations	Station Leaks & Emissions	Fugitive	80,978	78,389	Number of stations: 478	75,883	Number of stations: 475	(2,506)	(3.2%)	(3)	(0.6%)	-5,095	(6.3%)	
	All Damages	Fugitive	NA	0	0	0.2	2	0.2	-	2		0	0.0%	
	Blowdowns	Vented	16	25	Number of blowdowns: 2,665	21	Number of blowdowns: 2901	(4)	(16.0%)	236	8.9%	5	31.3%	Blowdowns emissions are a function of activity level. Blowdown volume varies by activity, depending on the type of work performed.
Customer Meters	Meter Leaks	Fugitive	126,261	127,573	Number of meters: 883,162	128,476	Number of meters: 889,274	903	0.7%	6,112	0.7%	2,215	1.8%	
	All Damages	Fugitive	NA	2,942	Number of damages: 171	3,003	Number of damages: 244	61	2.1%	73	42.7%	0	0.0%	This is normal variation based on damage severity and the damaged asset.
	Vented Emissions	Vented	54	48	Number of blowdown events: 55,917	171	Number of blowdown events: 54,007	123	254.7%	(1,910)	(3.4%)	117	216.7%	Blowdowns emissions are a function of activity level. Blowdown volume varies by activity, depending on the type of work performed. In 2018, customer requested high pressure projects resulted in increased blowdowns from meter sets.
Underground Storage	Storage Leaks & Emissions	Fugitive	0					-	0.0%	-	0.0%	0	0.0%	
	Compressor Emissions	Vented	0					-	0.0%	-	0.0%	0	0.0%	
	Compressor Leaks	Fugitive	0					-	0.0%	-	0.0%	0	0.0%	
	Blowdowns	Vented	0					-	0.0%	-	0.0%	0	0.0%	
	Component Emissions	Vented	0					-	0.0%	-	0.0%	0	0.0%	
	Component Leaks	Fugitive	0					-	0.0%	-	0.0%	0	0.0%	
	Dehydrator Vent Emissions	Fugitive	0					-	0.0%	-	0.0%	0	0.0%	
Unusual Large Leaks	(Description)			0								0	0.0%	
		Total	**282,047**	**256,791**		**253,596**		(3,196)	-1%			**-28,451**	**(10.1%)**	

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System Wide Leak Rate Data

1/1/2018 - 12/31/2018

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 by the Gas Department (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 by the Gas Department (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
87,181.00	86,178,809.00	0		

Distribution System:

Total Annual Volume of Gas Used by the Gas Department (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
42,546.00	86,237,065		

*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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Summary Tables:

Natural Gas Properties	Average Mole Percent	Explanatory Notes / Comments
Methane	93.00%	Rainbow
Carbon Dioxide	0.92%	Rainbow
Ethane	4.42%	Rainbow
C3+	0.46%	Rainbow
C6+	0.01%	Rainbow
Oxygen	0.20%	Estimated up to limit, Not Tested
Hydrogen		Not Tested
Sulfur	0.00%	Rainbow
Water	0.01%	Estimated to limit
Carbon Monoxide		Not Tested
Particulate Matter		Not Tested
Inert Gas	1.80%	Rainbow
Odorant	0.00%	Rainbow