

SDG&E, June 15, 2022

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 2022 June Report

Appendix A, Rev. 03/31/22

Notes:

Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-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 leaks on this tab. Use Appendix A 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."

Sum Total Emissions from leaks carried over from before 2021

7

Sum Total Emissions from Surveys discovered in 2021

6,202

Sum Total Emissions from O&M Leaks discovered in 2021

6,446

Grand Total of all 2021 emissions from leaks

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/YYYY)	Re-Grade Date (MM/DD/YYYY)	Repair Date (MM/DD/YYYY)	Scheduled Repair Date (MM/DD/YYYY)	Reason for Not Scheduling a Repair	Number of Days Leaking	Number of Days to Repair	Emission Factor (Mscf/Day)	Annual Emissions (lbs/yr)	Explanatory Notes / Comments
210500	91911 MB	PC	2"	683	Less than or equal to 60	Code 2	B	M	6/5/2021	4/5/2021	1.00	1	0.1336	0.133618844			1	0.1336	0.133618844	
211305	91941 MB	P	2"	399	Less than or equal to 60	Code 1	B	M	12/24/2021	12/25/2021	2.00	2	0.1336	0.267237687			2	0.1336	0.267237687	
212139	92026 MB	P	2"		Less than or equal to 60	Code 1	B	M	12/27/2021	12/28/2021	2.00	2	0.1336	0.267237687			2	0.1336	0.267237687	
212148	92024 MB	P	2"		Less than or equal to 60	Code 1	B	M	12/31/2021	12/31/2021	1.00	1	0.1336	0.133618844			1	0.1336	0.133618844	
211016	91945 MB	PC	1 1/2"		Less than or equal to 60	Code 1	B	S	6/11/2021	6/11/2021	162.00	1	0.1336	21.646225268			1	0.1336	21.646225268	
211975	92154 DB	PC	3/4"	539	Less than or equal to 60	Code 1	B	M	11/3/2021	11/3/2021	1.00	1	0.1336	0.133618844			1	0.1336	0.133618844	
211460	92020 DB	PC	3/4"	815	Less than or equal to 60	Code 1	B	M	6/27/2021	6/27/2021	1.00	1	0.1336	0.133618844			1	0.1336	0.133618844	
211700	92122 DB	PC	3/4"	707	Less than or equal to 60	Code 2	B	S	10/4/2021		365.00		0.1336	48.70878794						
207565	92064 MB	P	4"	95	Less than or equal to 60	Code 1	B	M	5/2/2021	5/4/2021	2.00	2	0.1336	0.267237687			2	0.1336	0.267237687	
210872	92064 MB	P	1 1/4"		Less than or equal to 60	Code 1	B	M	2/1/2021	2/2/2021	1.00	1	0.1336	0.133618844			1	0.1336	0.133618844	
210818	92103 MB	P	3"		Less than or equal to 60	Code 1	B	S	5/13/2021	5/15/2021	135.00	3	0.1336	18.0385439			3	0.1336	18.0385439	
211807	92008 MB	P	3"		Less than or equal to 60	Code 1	B	M	10/20/2021	10/21/2021	2.00	2	0.1336	0.267237687			2	0.1336	0.267237687	
212347	91945 MB	P	2"		Less than or equal to 60	Code 1	B	M	12/30/2021	12/31/2021	2.00	2	0.1336	0.267237687			2	0.1336	0.267237687	
210805	92101 MB	P	2"	587	Less than or equal to 60	Code 1	B	M	1/9/2021	1/10/2021	1.00	1	0.1336	0.133618844			1	0.1336	0.133618844	
211744	92071 MB	P	3"		Less than or equal to 60	Code 1	B	M	10/9/2021	10/9/2021	2.00	2	0.1336	0.267237687			2	0.1336	0.267237687	
210679	92009 MB	P	2"	563	Less than or equal to 60	Code 1	B	M	3/30/2021	3/30/2021	1.00	1	0.1336	0.133618844			1	0.1336	0.133618844	
210845	92129 MB	P	2"	527	Less than or equal to 60	Code 1	B	M	6/25/2021	6/26/2021	1.00	1	0.1336	0.133618844			1	0.1336	0.133618844	
212138	92123 MB	P	2"	443	Less than or equal to 60	Code 1	B	S	12/9/2021	12/9/2021	337.00	1	0.1336	45.02501502			1	0.1336	45.02501502	
210718	92129 MB	P	3"	486	Less than or equal to 60	Code 1	B	M	2/12/2021	2/13/2021	1.00	1	0.1336	0.133618844			1	0.1336	0.133618844	
212126	92084 MB	P	2"		Less than or equal to 60	Code 1	B	M	12/2/2021	12/2/2021	337.00	2	0.1336	45.02501502			2	0.1336	45.02501502	
210441	92056 MB	P	2"	10	Less than or equal to 60	Code 1	B	M	2/7/2021	2/9/2021	3.00	3	0.1336	0.400856311			3	0.1336	0.400856311	
210652	92128 MB	P	2"		Less than or equal to 60	Code 1	B	M	1/11/2021	1/11/2021	1.00	1	0.1336	0.133618844			1	0.1336	0.133618844	
212078	92064 MB	P	2"		Less than or equal to 60	Code 1	B	M	11/25/2021	11/25/2021	1.00	1	0.1336	0.133618844			1	0.1336	0.133618844	
210672	92014 MB	P	2"	599	Less than or equal to 60	Code 1	B	M	4/9/2021	4/16/2021	1.00	1	0.1336	0.133618844			1	0.1336	0.133618844	
211361	92026 MB	P	2"		Less than or equal to 60	Code 1	B	M	8/5/2021	8/6/2021	238.00	2	0.1336	29.12807952			2	0.1336	29.12807952	
212332	92105 MB	P	1 1/4"		Less than or equal to 60	Code 1	B	M	12/15/2021	12/16/2021	2.00	2	0.1336	0.267237687			2	0.1336	0.267237687	
211414	92081 MB	P	2"		Less than or equal to 60	Code 1	B	M	14/6/2021	14/6/2021	219.00	2	0.1336	29.26212677			2	0.1336	29.26212677	
211042	92101 MB	P	2"	515	Less than or equal to 60	Code 1	B	S	6/4/2021	6/15/2021	166.00	2	0.1336	22.18072805			2	0.1336	22.18072805	
211876	92115 MB	P	1 1/4"		Less than or equal to 60	Code 1	B	M	11/2/2021	11/2/2021	2.00	2	0.1336	0.267237687			2	0.1336	0.267237687	
211993	92104 MB	P	3"		Less than or equal to 60	Code 1	B	M	9/20/2021	9/20/2021	1.00	1	0.1336	0.133618844			1	0.1336	0.133618844	
211873	92101 MB	P	3"		Less than or equal to 60	Code 1	B	M	11/3/2021	11/3/2021	1.00	1	0.1336	0.133618844			1	0.1336	0.133618844	
212033	91910 MB	P	2"		Less than or equal to 60	Code 1	B	M	12/12/2021	12/12/2021	1.00	1	0.1336	0.133618844			1	0.1336	0.133618844	
210862	92083 MB	P	3"	479	Less than or equal to 60	Code 1	B	M	5/19/2021	5/19/2021	1.00	1	0.1336	0.133618844			1	0.1336	0.133618844	
212162	92124 MB	P	2"		Less than or equal to 60	Code 1	B	M	11/17/2021	11/17/2021	1.00	1	0.1336	0.133618844			1	0.1336	0.133618844	
210925	92103 MB	P	1 1/4"	516	Less than or equal to 60	Code 1	B	M	5/6/2021	5/6/2021	1462.00	2	0.1336	19.50815118			2	0.1336	19.50815118	
210073	91911 MB	P	2"	421	Less than or equal to 60	Code 1	B	M	1/12/2021	1/13/2021	2.00	2	0.1336	0.267237687			2	0.1336	0.267237687	
212136	92101 MB	P	1 1/4"		Less than or equal to 60	Code 1	B	M	12/16/2021	12/16/2021	1.00	1	0.1336	0.133618844			1	0.1336	0.133618844	
210494	92026 MB	P	1 1/4"	503	Less than or equal to 60	Code 1	B	M	3/17/2021	3/18/2021	2.00	2	0.1336	0.267237687			2	0.1336	0.267237687	
210691	92171 MB	P	2"	587	Less than or equal to 60	Code 1	B	M	4/24/2021	4/24/2021	1.00	1	0.1336	0.133618844			1	0.1336	0.133618844	
211012	92104 MB	P	2"	411	Less than or equal to 60	Code 1	B	M	6/18/2021	6/18/2021	187.00	2	0.1336	22.3144646			2	0.1336	22.3144646	
212190	92139 MB	P	3"	503	Less than or equal to 60	Code 1	B	M	12/23/2021	12/23/2021	2.00	2	0.1336	0.267237687			2	0.1336	0.267237687	
211790	92103 MB	P	2"		Less than or equal to 60	Code 1	B	M	7/12/2021	7/12/2021	1.00	1	0.1336	0.133618844			1	0.1336	0.133618844	
212169	92084 MB	P	2"		Less than or equal to 60	Code 1	B	S	12/7/2021	12/8/2021	342.00	2	0.1336	46.6974454			2	0.1336	46.6974454	
210304	92102 MB	P	1 1/4"		Less than or equal to 60	Code 1	B	M	2/7/2021	2/8/2021	2.00	2	0.1336	0.267237687			2	0.1336	0.267237687	
211784	92028 MB	P	2"		Less than or equal to 60	Code 1	B	M	10/4/2021	10/4/2021	288.00	2	0.1336	38.48222608			2	0.1336	38.48222608	
211943	92108 MB	P	2"		Less than or equal to 60	Code 1	B	M	11/3/2021	11/3/2021	1.00	1	0.1336	0.133618844			1	0.1336	0.133618844	
210905	92101 MB	P	2"	539	Less than or equal to 60	Code 1	B	S	5/26/2021	5/26/2021	147.00	2	0.1336	19.64547002			2	0.1336	19.64547002	
210436	92103 MB	P	2"	547	Less than or equal to 60	Code 1	B	M	3/15/2021	3/15/2021	1.00	1	0.1336	0.133618844			1	0.1336	0.133618844	
212181	92028 MB	P	2"		Less than or equal to 60	Code 1	B	S	12/2/2021	12/2/2021	336.00	1	0.1336	44.89593148			1	0.1336	44.89593148	
212151	92040 MB	P	1 1/4"		Less than or equal to 60	Code 1	B	M	4/30/2021	4/30/2021	120.00	1	0.1336	16.03426124			1	0.1336	16.03426124	
210540	92064 MB	P	2"	87	Less than or equal to 60	Code 1	B	M	12/6/2021	12/7/2021	1.00	1	0.1336	0.133618844			1	0.1336	0.133618844	
210819	92103 MB	P	3"	568	Less than or equal to 60	Code 1	B	M	1/31/2021	2/1/2021	2.00	2	0.1336	0.267237687			2	0.1336	0.267237687	
212087	92071 MB	P	2"		Less than or equal to 60	Code 1	B	M	11/30/2021	11/30/2021	334.00	1	0.1336	44.6260379			1	0.1336	44.6260379	
210006	92009 MB	P	2"	599	Less than or equal to 60	Code 1	B	M	12/18/2021	12/18/2021	1.00	1	0.1336	0.133618844			1	0.1336	0.133618844	
210822	92009 MB	P	1 1/4"	541	Less than or equal to 60	Code 1	B	M	2/16/2021	2/17/2021	2.00	2	0.1336	0.267237687			2	0.1336	0.267237687	
212185	92101 MB	P	2"		Less than or equal to 60	Code 1	B	M	12/19/2021	12/19/2021	1.00	1	0.1336	0.133618844			1	0.1336	0.133618844	
210168	92020 MB	P	2"	575	Less than or equal to 60	Code 1	B	M	1/19/2021	1/20/2021	2.00	2	0.1336	0.267237687			2	0.1336	0.267237687	
210929	92009 MB	P	2"	491	Less than or equal to 60	Code 1	B	M	2/2/2021	2/3/2021	2.00	2	0.1336	0.267237687			2	0.1336	0.267237687	
212130																				

2101865	92106	MB	PC	1 1/2"	875	Less than or equal to 60	Code 1	B	M	2/1/2021	2/1/2021	1,000	1	0.1336	0.133618844
2101767	92106	MB	PC	1 1/2"	1095	Less than or equal to 60	Code 1	B	S	4/30/2021	4/30/2021	123.00	4	0.1336	16.4811377
2109939	92141	MB	PC	1"	1043	Less than or equal to 60	Code 1	B	S	6/30/2021	6/1/2021	162.00	2	0.1336	21.6462558
2121533	92116	MB	PC	1 1/2"		Less than or equal to 60	Code 1	B	M	12/6/2021	12/6/2021	2,000	2	0.1336	0.267237687
2110716	92110	MB	PC	1 1/2"	743	Less than or equal to 60	Code 1	B	M	6/13/2021	6/13/2021	1,000	1	0.1336	0.133618844
2104181	91977	MB	PC	1 1/2"		Less than or equal to 60	Code 1	B	M	3/10/2021	3/11/2021	2,000	2	0.1336	0.267237687
2116346	91945	MB	PC	2"		Less than or equal to 60	Code 1	B	M	9/23/2021	9/24/2021	2,000	2	0.1336	0.267237687
2104234	92106	MB	PC	2"	851	Less than or equal to 60	Code 1	B	M	3/11/2021	3/12/2021	2,000	2	0.1336	0.267237687
2106263	92116	MB	PC	2"	1007	Less than or equal to 60	Code 1	B	M	3/1/2021	2/12/2021	2,000	2	0.1336	0.267237687
2111361	92139	MB	PC	3"		Less than or equal to 60	Code 1	B	M	8/2/2021	8/2/2021	1,000	1	0.1336	0.133618844
2105403	91932	MB	PC	1 1/2"	885	Less than or equal to 60	Code 1	B	S	1/1/2021	1/23/2021	23.00	2	0.1336	3.07233405
2100708	91932	MB	PC	1 1/2"	119	Less than or equal to 60	Code 1	B	S	12/2/2021	12/2/2021	62.00	1	0.1336	8.26466808
2100116	92071	MB	PC	2"	743	Less than or equal to 60	Code 1	B	M	1/4/2021	1/5/2021	2,000	2	0.1336	0.267237687
2116568	92027	MB	PC	2"		Less than or equal to 60	Code 1	B	M	9/8/2021	9/8/2021	1,000	1	0.1336	0.133618844
2111501	91941	MB	PC	1 1/2"		Less than or equal to 60	Code 1	B	M	6/23/2021	6/23/2021	1,000	1	0.1336	0.133618844
2100013	92114	MB	PC	1 1/2"	863	Less than or equal to 60	Code 1	B	M	1/2/2021	1/3/2021	2,000	2	0.1336	0.267237687
2107774	91950	MB	PC	1 1/2"	883	Less than or equal to 60	Code 1	B	M	1/6/2021	1/6/2021	1,000	1	0.1336	0.133618844
2121749	92104	MB	PC	2"	767	Less than or equal to 60	Code 1	B	M	12/7/2021	12/8/2021	2,000	2	0.1336	0.267237687
2111468	92117	MB	PC	3/4"		Less than or equal to 60	Code 1	B	M	7/2/2021	7/2/2021	1,000	1	0.1336	0.133618844
2112338	92037	MB	PC	1 1/2"		Less than or equal to 60	Code 1	B	M	12/2/2021	12/2/2021	1,000	1	0.1336	0.133618844
2106233	92009	MB	PC	1 1/2"	823	Less than or equal to 60	Code 1	B	M	4/14/2021	4/15/2021	2,000	2	0.1336	0.267237687
2116992	91977	MB	PC	1 1/2"	855	Less than or equal to 60	Code 1	B	M	6/22/2021	6/23/2021	2,000	2	0.1336	0.267237687
2106266	91910	MB	PC	1 1/2"		Less than or equal to 60	Code 1	B	M	11/22/2021	11/23/2021	2,000	2	0.1336	0.267237687
2119137	92113	MB	PC	2"		Less than or equal to 60	Code 1	B	M	11/4/2021	11/4/2021	2,000	2	0.1336	0.267237687
2109758	92103	MB	PC	2"	803	Less than or equal to 60	Code 1	B	M	6/8/2021	6/9/2021	160.00	1	0.1336	21.37901499
2118655	92117	MB	PC	3/4"		Less than or equal to 60	Code 1	B	S	10/7/2021	10/8/2021	301.00	2	0.1336	40.21973195
2102779	92123	MB	PC	6"	827	Less than or equal to 60	Code 1	B	M	2/16/2021	2/17/2021	2,000	2	0.1336	0.267237687
2115520	92113	MB	PC	1 1/2"		Less than or equal to 60	Code 1	B	M	8/19/2021	8/19/2021	1,000	1	0.1336	0.133618844
2105130	92008	MB	PC	2"	659	Less than or equal to 60	Code 1	B	M	3/25/2021	3/26/2021	2,000	2	0.1336	0.267237687
2123954	92037	MB	PC	4"		Less than or equal to 60	Code 1	B	M	12/7/2021	12/7/2021	1,000	1	0.1336	0.133618844
2119283	92114	MB	PC	1 1/2"		Less than or equal to 60	Code 1	B	M	11/5/2021	11/5/2021	1,000	1	0.1336	0.133618844
2106378	92025	MB	PC	2"	711	Less than or equal to 60	Code 1	B	M	5/13/2021	5/14/2021	2,000	2	0.1336	0.267237687
2112875	92021	MB	PC	1 1/2"		Less than or equal to 60	Code 1	B	M	7/29/2021	7/29/2021	1,000	1	0.1336	0.133618844
2117183	92054	MB	PC	2"		Less than or equal to 60	Code 1	B	M	10/6/2021	10/6/2021	3.00	3	0.1336	0.400856311
2108450	92109	MB	PC	1 1/2"	851	Less than or equal to 60	Code 1	B	M	5/17/2021	5/17/2021	187.00	1	0.1336	0.133618844
2104822	92056	MB	PC	1"	707	Less than or equal to 60	Code 1	B	M	3/22/2021	3/22/2021	1,000	1	0.1336	0.133618844
2102091	92075	MB	PC	2"		Less than or equal to 60	Code 1	B	M	7/2/2021	7/2/2021	24.00	1	0.1336	4.674619239
2102169	92075	MB	PC	1 1/2"	839	Less than or equal to 60	Code 1	B	S	2/4/2021	2/5/2021	36.00	2	0.1336	4.810278733
2109598	91932	MB	PC	1 1/2"	827	Less than or equal to 60	Code 1	B	S	1/14/2021	1/14/2021	14.00	1	0.1336	1.670638112
2107524	92024	MB	PC	1 1/2"	803	Less than or equal to 60	Code 1	B	M	3/19/2021	3/19/2021	125.00	1	0.1336	16.76231546
2114204	92056	MB	PC	1"		Less than or equal to 60	Code 1	B	M	8/19/2021	8/20/2021	2,000	2	0.1336	0.267237687
2104304	91945	MB	PC	2"	899	Less than or equal to 60	Code 1	B	M	3/14/2021	3/14/2021	1,000	1	0.1336	0.133618844
2115000	92054	MB	PC	1 1/2"		Less than or equal to 60	Code 1	B	M	9/3/2021	9/3/2021	1,000	1	0.1336	0.133618844
2112093	91950	MB	PC	1 1/2"		Less than or equal to 60	Code 1	B	M	7/16/2021	7/16/2021	1,000	1	0.1336	0.133618844
2111247	92116	MB	PC	1 1/2"		Less than or equal to 60	Code 1	B	M	7/19/2021	7/20/2021	1,000	1	0.1336	0.267237687
2115818	92056	MB	PC	2"		Less than or equal to 60	Code 1	B	M	9/6/2021	9/7/2021	2,000	2	0.1336	0.267237687
2116651	92114	MB	PC	1 1/2"		Less than or equal to 60	Code 1	B	M	9/20/2021	9/20/2021	2,000	2	0.1336	0.267237687
2104694	91911	MB	PC	1 1/2"	671	Less than or equal to 60	Code 1	B	S	3/20/2021	3/21/2021	80.00	2	0.1336	16.68950749
2122978	92106	MB	PC	1"		Less than or equal to 60	Code 1	B	M	12/1/2021	12/1/2021	1,000	1	0.1336	0.133618844
2105169	92106	MB	PC	1 1/2"	851	Less than or equal to 60	Code 1	B	M	4/13/2021	4/13/2021	1,000	1	0.1336	0.133618844
2117351	91902	MB	PC	2"		Less than or equal to 60	Code 1	B	M	10/10/2021	10/10/2021	1,000	1	0.1336	0.133618844
2113446	92071	MB	PC	1 1/2"		Less than or equal to 60	Code 1	B	M	8/6/2021	8/6/2021	2,000	2	0.1336	0.267237687
2103240	92116	MB	PC	1 1/2"	823	Less than or equal to 60	Code 1	B	M	2/23/2021	2/24/2021	2,000	2	0.1336	0.267237687
2101121	91932	MB	PC	1 1/2"	903	Less than or equal to 60	Code 1	B	S	1/4/2021	1/5/2021	5.00	2	0.1336	0.688942218
2107975	92104	MB	PC	1 1/2"		Less than or equal to 60	Code 2	B	M	5/11/2021	5/11/2021	187.00	1	0.1336	24.946723177
2105186	92116	MB	PC	2"	1145	Less than or equal to 60	Code 2	B	M	3/29/2021	3/29/2021	1,000	1	0.1336	0.133618844
2111289	92037	MB	PC	1 1/2"		Less than or equal to 60	Code 2	B	M	7/12/2021	7/12/2021	217.00	1	0.1336	28.99529808
2109845	92109	MB	PC	2"		Less than or equal to 60	Code 2	B	S	6/9/2021	7/14/2021	195.00	36	0.1336	26.055167452
2111166	92123	MB	PC	4"		Less than or equal to 60	Code 2	B	M	8/2/2021	8/2/2021	235.00	22	0.1336	31.40042827
2110786	91950	MB	PC	1 1/2"		Less than or equal to 60	Code 2	B	M	6/13/2021	6/13/2021	21.00	1	0.1336	1.071213405
2111373	92117	MB	PC	2"		Less than or equal to 60	Code 2	B	S	8/4/2021	8/13/2021	240.00	28	0.1336	32.46017901
2111344	92025	MB	PC	2"		Less than or equal to 60	Code 2	B	M	7/22/2021	7/26/2021	5.00	1	0.1336	0.688942218
2105163	92103	MB	PC	1 1/2"	875	Less than or equal to 60	Code 2	B	M	1/19/2021	2/11/2021	24.00	24	0.1336	3.206852248
2107509	92118	MB	PC	2"	731	Less than or equal to 60	Code 2	B	M	5/9/2021	6/7/2021	36.00	36	0.1336	4.810278733
2111071	92037	MB	PC	1 1/2"		Less than or equal to 60	Code 2	B	M	11/2/2021	11/2/2021	307.00	2	0.1336	41.02098051
2104502	92139	MB	PC	3"	823	Less than or equal to 60	Code 2	B	S	3/17/2021	4/19/2021	109.00	34	0.1336	14.56453396
2104077	91932	MB	PC	1 1/2"	707	Less than or equal to 60	Code 2	B	M	3/8/2021	3/8/2021	68.00	1	0.1336	9.288081317
2115212	91942	MB	PC	2"		Less than or equal to 60	Code 2	B	M	9/8/2021	9/9/2021	272.00	22	0.1336	36.34432548
2109430	92106	MB	PC	1 1/2"	851	Less than or equal to 60	Code 2	B	S	6/2/2021	6/16/2021	167.00	15	0.1336	22.3343469
2105817	92102	MB	PC	1 1/2"	755	Less than or equal to 60	Code 2	B	M	5/2/2021	5/2/2021	124.00	1	0.1336	15.56873602
2108822	92116	MB	PC	2"		Less than or equal to 60	Code 2	B	S	5/2/2021	7/22/2021	203.00	62	0.1336	27.12462527
2109955	91941	MB	PC	2"		Less than or equal to 60	Code 2	B	M	6/10/2021	6/10/2021	216.00	56	0.1336	28.86167024
2111902	92025	MB	PC	2"		Less than or equal to 60	Code 2	B	S	7/14/2021	7/8/2021	211.00	17	0.1336	28.19357602
2114138	92110	MB	PC	1 1/2"		Less than or equal to 60	Code 2	B	S	8/8/2021	9/17/2021	260.00	31	0.1336	34.74689936
2110034	91941	MB	PC	1 1/2"		Less than or equal to 60	Code 2	B	M	6/12/2021	9/2/2021	245.00	13	0.1336	32.77661617
2121304	92040	MB	PC	2"		Less than or equal to 60	Code 2	B	S	12/2/2021	12/3/2021	137.00	2	0.1336	45.02955032
2114864	92110	MB	PC	1 1/2"		Less than or equal to 60	Code 2	B	M	8/12/2021	8/12/2021	267.00	29	0.1336	35.67673126
2121567	92054	MB	PC	1 1/2"		Less than or equal to 60	Code 2	B	S	12/6/2021	12/8/2021	342.00	3	0.1336	45.6974454
2118657	92017	MB	PC	2"		Less than or equal to 60	Code 2	B	M	10/7/2021	10/29/2021	3.00	3	0.1336	0.400856311
2111464	92037	MB	PC	1 1/2"		Less than or equal to 60	Code 2	B	M	7/22/2021	7/22/2021	246.00	1		

2104465	91950 MB	PC	1 1/2"	779	Less than or equal to 60	Code 2	B	S	3/17/2021	6/9/2021	160.00	85	0.1336	21.37901499
2109595	92106 MB	PC	2"	810	Less than or equal to 60	Code 2	B	S	4/10/2021	6/10/2021	281.00	121	0.1336	37.54695957
2104129	921010 MB	PC	1 1/2"	815	Less than or equal to 60	Code 2	B	S	3/9/2021	6/17/2021	168.00	101	0.1336	22.44796574
2109178	92117 MB	P	1 1/4"	839	Less than or equal to 60	Code 1	B	M	5/27/2021	5/28/2021	2.00	2	0.1336	0.267237687
2114218	92020 MB	P	1 1/4"	843	Less than or equal to 60	Code 2	B	S	8/30/2021	9/8/2021	251.00	20	0.1336	31.13832976
2115355	92008 MB	P	1 1/4"	853	Less than or equal to 60	Code 1	B	S	9/10/2021	9/11/2021	254.00	2	0.1336	33.9391863
2112679	92021 MB	P	1 1/4"	870	Less than or equal to 60	Code 1	B	M	7/20/2021	7/20/2021	1.00	1	0.1336	0.133618844
2111055	92102 MB	P	1 1/2" IPS	491	Less than or equal to 60	Code 1	B	S	6/28/2021	6/29/2021	180.00	2	0.1336	24.05139186
2112115	92025 MB	P	2"	515	Less than or equal to 60	Code 1	B	M	7/16/2021	7/16/2021	1.00	1	0.1336	0.133618844
2100536	921173 MB	P	1 1/2" CTS	535	Less than or equal to 60	Code 1	B	M	8/20/2021	8/20/2021	1.00	1	0.1336	1.202509593
2102622	92014 MB	P	1 1/2" IPS	527	Less than or equal to 60	Code 1	B	M	2/11/2021	2/11/2021	1.00	1	0.1336	0.133618844
2111667	92121 MB	P	2"	544	Less than or equal to 60	Code 1	B	M	11/20/2021	11/20/2021	314.00	1	0.1336	41.95611692
2101802	921128 MB	P	1 1/2" CTS	503	Less than or equal to 60	Code 1	B	M	1/30/2021	1/30/2021	1.00	1	0.1336	0.133618844
2115108	92069 MB	P	1 1/2" CTS	503	Less than or equal to 60	Code 1	B	M	9/7/2021	9/7/2021	1.00	1	0.1336	0.133618844
2111911	92126 MB	P	1 1/2" CTS	443	Less than or equal to 60	Code 1	B	M	11/30/2021	11/30/2021	1.00	1	0.1336	1.48807923
2111917	92024 MB	P	1 1/2" CTS	503	Less than or equal to 60	Code 1	B	M	8/13/2021	8/13/2021	1.00	1	0.1336	0.133618844
2102024	92009 MB	P	1 1/2" IPS	515	Less than or equal to 60	Code 1	B	M	2/16/2021	2/16/2021	1.00	1	0.1336	0.133618844
2110868	92116 MB	P	1 1/4"	416	Less than or equal to 60	Code 1	B	S	6/24/2021	6/25/2021	176.00	2	0.1336	23.51691649
2105782	92009 MB	P	1"	227	Less than or equal to 60	Code 1	B	S	4/6/2021	4/6/2021	96.00	1	0.1336	12.8274089
2002327	92021 MB	P	1 1/2" CTS	587	Less than or equal to 60	Code 2	B	M	12/29/2020	1/3/2021	13.00	16	0.1336	1.73549468
2114724	92029 MB	P	1 1/2" IPS	587	Less than or equal to 60	Code 1	B	S	8/21/2021	8/26/2021	238.00	6	0.1336	31.8012648
2117792	92122 MB	P	1 1/2" IPS	587	Less than or equal to 60	Code 2	B	S	10/15/2021	7/14/2021	2.00	2	0.1336	0.267237687
2115637	92021 MB	P	1 1/4"	587	Less than or equal to 60	Code 2	B	S	9/15/2021	9/27/2021	270.00	13	0.1336	36.07708779
2118671	91950 MB	P	2"	587	Less than or equal to 60	Code 2	B	M	10/26/2021	12/2/2021	36.00	36	0.1336	48.01027873
2115483	92021 MB	P	1 1/2" IPS	587	Less than or equal to 60	Code 2	B	S	9/13/2021	9/13/2021	285.00	30	0.1336	38.08137045
2119193	92084 MB	P	1 1/2" IPS	515	Less than or equal to 60	Code 2	B	S	11/4/2021	11/15/2021	319.00	12	0.1336	40.62441113
2111895	91978 MB	P	1 1/2" CTS	587	Less than or equal to 60	Code 2	B	M	7/13/2021	7/14/2021	2.00	2	0.1336	0.267237687
2107297	92102 MB	P	1 1/2" CTS	407	Less than or equal to 60	Code 1	B	S	4/30/2021	4/30/2021	120.00	1	0.1336	16.03426124
2116757	92027 MB	P	1 1/2" CTS	587	Less than or equal to 60	Code 1	B	M	9/26/2021	9/30/2021	2.00	2	0.1336	0.267237687
2100663	92029 MB	P	1 1/4"	413	Less than or equal to 60	Code 1	B	M	1/11/2021	1/11/2021	1.00	1	0.1336	0.133618844
2119527	91902 MB	P	1 1/2" CTS	563	Less than or equal to 60	Code 1	B	M	11/8/2021	11/9/2021	2.00	2	0.1336	0.267237687
2109962	921010 MB	P	1 1/4"	503	Less than or equal to 60	Code 1	B	M	5/25/2021	5/25/2021	1.00	1	0.1336	0.133618844
2105965	921014 MB	P	1 1/2" CTS	575	Less than or equal to 60	Code 1	B	S	4/8/2021	4/8/2021	98.00	1	0.1336	13.09446668
2107362	92029 MB	P	1 1/2" CTS	527	Less than or equal to 60	Code 1	B	S	4/30/2021	4/30/2021	120.00	1	0.1336	16.03426124
2102941	92118 MB	P	1 1/2" CTS	503	Less than or equal to 60	Code 1	B	M	3/18/2021	3/18/2021	50.00	1	0.1336	6.480842184
2101445	92019 MB	P	1"	23	Less than or equal to 60	Code 1	B	M	1/27/2021	1/27/2021	1.00	1	0.1336	0.133618844
2111646	92126 MB	P	1"	102	Less than or equal to 60	Code 2	B	S	10/27/2021	10/27/2021	311.00	1	0.1336	41.82319802
2105770	92102 MB	P	1"	95	Less than or equal to 60	Code 2	B	S	4/6/2021	4/27/2021	117.00	22	0.1336	15.61340471
2118481	92020 MB	P	1 1/2" CTS	587	Less than or equal to 60	Code 2	B	S	9/17/2021	10/4/2021	277.00	18	0.1336	37.0124187
2111819	92083 MB	P	1 1/2" CTS	575	Less than or equal to 60	Code 2	B	M	3/6/2021	3/6/2021	166.00	1	0.1336	21.48222658
2108780	92054 MB	P	1 1/2" IPS	587	Less than or equal to 60	Code 1	B	M	3/4/2021	3/13/2021	10.00	10	0.1336	1.336118847
2111382	92117 MB	P	1 1/4"	416	Less than or equal to 60	Code 1	B	M	8/14/2021	8/26/2021	231.00	10	0.1336	30.86539128
2109170	92107 MB	P	1 1/4"	527	Less than or equal to 60	Code 2	B	S	5/27/2021	6/23/2021	172.00	26	0.1336	22.38244111
2114276	92029 MB	P	1 1/4"	503	Less than or equal to 60	Code 2	B	S	8/3/2021	8/30/2021	242.00	10	0.1336	32.33576017
2107601	92009 MB	P	1 1/4"	589	Less than or equal to 60	Code 2	B	M	3/4/2021	3/4/2021	1.00	1	0.1336	0.133618844
2108071	92103 MB	P	2"	575	Less than or equal to 60	Code 2	B	S	5/12/2021	8/2/2021	214.00	83	0.1336	28.59432355
2115449	92103 MB	P	1 1/4"	527	Less than or equal to 60	Code 2	B	S	1/27/2021	1/27/2021	35.00	35	0.1336	4.576619529
2108057	92113 MB	P	1"	77	Less than or equal to 60	Code 2	B	S	5/11/2021	6/15/2021	166.00	36	0.1336	22.18072805
2107377	91977 MB	P	1 1/2" CTS	587	Less than or equal to 60	Code 1	B	M	3/2/2021	3/2/2021	1.00	1	0.1336	0.133618844
2111449	92114 MB	P	1 1/4"	815	Less than or equal to 60	Code 1	B	M	6/1/2021	6/1/2021	166.00	1	0.1336	22.18072805
2121373	92104 MB	P	1 1/4"	503	Less than or equal to 60	Code 1	B	M	12/29/2021	12/29/2021	1.00	1	0.1336	0.133618844
2109575	921010 MB	P	1 1/4"	503	Less than or equal to 60	Code 1	B	M	6/29/2021	6/29/2021	1.00	1	0.1336	0.133618844
2105395	92120 MB	PC	3/4"	413	Less than or equal to 60	Code 1	B	M	3/28/2021	3/28/2021	2.00	2	0.1336	0.267237687
2119857	92101 MB	PC	3/4"	413	Less than or equal to 60	Code 1	B	M	11/11/2021	11/11/2021	1.00	1	0.1336	0.133618844
2109422	92106 MB	PC	3/4"	413	Less than or equal to 60	Code 2	B	M	6/20/2021	7/6/2021	187.00	1	0.1336	24.98672377
2105154	92069 MB	PC	1 1/2"	611	Less than or equal to 60	Code 2	B	M	3/26/2021	4/15/2021	21.00	21	0.1336	2.80595717
2111920	92020 MB	PC	3/4"	413	Less than or equal to 60	Code 1	B	M	11/20/2021	11/20/2021	2.00	2	0.1336	0.267237687
2119968	92126 MB	PC	3/4"	587	Less than or equal to 60	Code 1	B	M	11/15/2021	11/16/2021	320.00	2	0.1336	42.75802998
2104904	92114 MB	PC	3/4"	527	Less than or equal to 60	Code 1	B	S	2/2/2021	2/2/2021	32.00	1	0.1336	4.275802998
2107786	92106 MB	PC	3/4"	479	Less than or equal to 60	Code 1	B	M	5/7/2021	5/7/2021	127.00	1	0.1336	16.96059315
2109491	92009 MB	PC	1"	491	Less than or equal to 60	Code 1	B	M	4/19/2021	4/19/2021	1.00	1	0.1336	0.133618844
2109099	92101 MB	PC	2"	443	Less than or equal to 60	Code 1	B	M	5/27/2021	5/27/2021	1.00	1	0.1336	0.133618844
2106165	91932 MB	PC	3/4"	70	Less than or equal to 60	Code 1	B	S	1/5/2021	1/6/2021	6.00	2	0.1336	0.801713062
2110932	92106 MB	PC	3/4"	567	Less than or equal to 60	Code 1	B	S	6/25/2021	6/26/2021	177.00	2	0.1336	23.65035333
2104193	92109 MB	PC	3/4"	571	Less than or equal to 60	Code 1	B	M	3/16/2021	3/16/2021	2.00	2	0.1336	0.267237687
2104495	92009 MB	PC	3/4"	515	Less than or equal to 60	Code 2	B	M	3/17/2021	3/17/2021	1.00	1	0.1336	0.133618844
2102552	92102 MB	PC	1 1/2"	413	Less than or equal to 60	Code 2	B	M	5/29/2021	5/29/2021	380.00	1	0.1336	24.05139186
2107992	92115 MB	PC	3/4"	383	Less than or equal to 60	Code 2	B	M	5/14/2021	6/11/2021	3.00	32	0.1336	4.275802998
2106070	91950 MB	PC	3/4"	311	Less than or equal to 60	Code 2	B	M	1/11/2021	1/28/2021	18.00	18	0.1336	2.405139186
2100908	92014 MB	PC	3/4"	413	Less than or equal to 60	Code 2	B	M	1/24/2021	1/24/2021	26.00	13	0.1336	3.474809935
2104675	92075 MB	PC	3/4"	413	Less than or equal to 60	Code 2	B	M	3/19/2021	3/29/2021	88.00	11	0.1336	11.73945824
2104458	92075 MB	PC	3/4"	413	Less than or equal to 60	Code 2	B	M	3/17/2021	3/17/2021	91.00	16	0.1336	12.12511478
2104813	92024 MB	PC	3/4"	347	Less than or equal to 60	Code 1	B	M	3/22/2021	3/22/2021	1.00	1	0.1336	0.133618844
2108885	92101 MB	PC	3/4"	647	Less than or equal to 60	Code 2	B	M	5/24/2021	6/30/2021	181.00	38	0.1336	24.18510071
2101326	91977 MB	PC	3/4"	413	Less than or equal to 60	Code 2	B	M	1/22/2021	1/22/2021	2.00	2	0.1336	0.267237687
2103527	92075 MB	PC	3/4"	203	Less than or equal to 60	Code 2	B	S	2/27/2021	3/16/2021	75.00	18	0.1336	10.02141328
2102508	92014 MB	PC	3/4"	179	Less than or equal to 60	Code 2	B	M	2/19/2021	2/19/2021	71.00	32	0.1336	9.620516745
2114201	92117 MB	PC	3/4"	587	Less than or equal to 60	Code 2	B	S	8/19/2021	8/23/2021	235.00	5	0.1336	31.40042827
2103635	91977 MB	PC	3/4"	519	Less than or equal to 60	Code 1	B	M	3/1/2021	3/1/2021	1.00	1	0.1336	0.133618844
2110115	92107 MB	PC	3/4"	413	Less than or equal to 60	Code 1	B	M	6/14/2021	6/14/2021	165.00	13	0.1336	21.247119023
2108169	92057 MB	PC	2"	38	Less than or equal to 60	Code 1	B	M	3/4/2021	3/4/2021	2.			

211582	92054	DB	PC	3/4"	Less than or equal to 60	Code 1	B	S	8/14/2021	9/15/2021	258.00	2	0.1336	34.47366187
210580	91950	DB	PC	3/4"	Less than or equal to 60	Code 1	B	S	4/16/2021	4/17/2021	2.00	2	0.1336	0.2673737687
2108363	92106	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	5/12/2021	5/12/2021	1.00	1	0.1336	0.133618844
210344	92105	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	3/12/2021	2/23/2021	1.00	1	0.1336	0.133618844
210048	92107	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	1/17/2021	1/17/2021	1.00	1	0.1336	0.133618844
2108394	92054	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	5/17/2021	5/18/2021	2.00	2	0.1336	0.2673737687
210201	91932	DB	PC	1"	Less than or equal to 60	Code 1	B	S	7/15/2021	7/15/2021	34.00	2	0.1336	4.54065055
2106874	92054	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	4/23/2021	4/23/2021	1.00	1	0.1336	0.133618844
2117139	91911	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	10/6/2021	10/6/2021	1.00	1	0.1336	0.133618844
2107779	92115	DB	PC	3/4"	Less than or equal to 60	Code 1	B	S	5/10/2021	5/10/2021	127.00	2	0.1336	16.9605915
2112074	92025	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	7/16/2021	7/16/2021	197.00	1	0.1336	26.3232121
2102175	92113	DB	PC	3/4"	Less than or equal to 60	Code 1	B	S	7/16/2021	7/16/2021	36.00	2	0.1336	4.610276373
2101821	92115	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	1/15/2021	2/1/2021	2.00	2	0.1336	0.2673737687
2107772	91910	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	1/12/2021	1/13/2021	2.00	2	0.1336	0.2673737687
2108130	92139	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	5/16/2021	5/16/2021	2.00	1	0.1336	0.2673737687
2101431	92106	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	3/25/2021	2/24/2021	2.00	2	0.1336	0.2673737687
2111296	92054	DB	PC	3/4"	Less than or equal to 60	Code 1	B	S	7/19/2021	7/19/2021	181.00	1	0.1336	24.13843095
2119241	92037	DB	PC	3/4"	Less than or equal to 60	Code 1	B	S	11/4/2021	11/5/2021	309.00	2	0.1336	41.2882227
2118114	92109	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	10/20/2021	10/20/2021	1.00	1	0.1336	0.133618844
2111631	92110	DB	PC	3/4"	Less than or equal to 60	Code 1	B	S	6/30/2021	6/30/2021	223.00	2	0.1336	29.79700214
2121794	92054	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	12/8/2021	12/8/2021	342.00	1	0.1336	45.6976454
2108526	92054	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	5/18/2021	5/18/2021	1.00	1	0.1336	0.133618844
2108506	92109	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	3/4/2021	3/25/2021	84.00	2	0.1336	11.22398287
2104993	91932	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	2/11/2021	2/11/2021	2.00	2	0.1336	0.2673737687
2104073	91932	DB	PC	3/4"	Less than or equal to 60	Code 1	B	S	3/8/2021	3/9/2021	68.00	2	0.1336	9.08608137
2104998	91932	DB	PC	3/4"	Less than or equal to 60	Code 1	B	S	3/24/2021	3/25/2021	84.00	2	0.1336	11.22398287
2102391	92014	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	2/8/2021	2/9/2021	2.00	2	0.1336	0.2673737687
2104811	92014	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	3/2/2021	3/22/2021	1.00	1	0.1336	0.133618844
2104383	92007	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	3/15/2021	3/16/2021	2.00	2	0.1336	0.2673737687
2108685	91977	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	4/23/2021	4/24/2021	2.00	2	0.1336	0.2673737687
2107373	92106	DB	PC	3/4"	Less than or equal to 60	Code 1	B	S	4/29/2021	4/29/2021	120.00	2	0.1336	16.09476124
2111572	92111	DB	PC	3/4"	Less than or equal to 60	Code 1	B	S	7/8/2021	7/9/2021	190.00	2	0.1336	25.3875803
2109776	92106	DB	PC	3/4"	Less than or equal to 60	Code 1	B	S	6/4/2021	6/5/2021	156.00	2	0.1336	20.8445991
2111433	92110	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	8/18/2021	8/18/2021	231.00	2	0.1336	30.86039289
2116116	92019	DB	PC	3/4"	Less than or equal to 60	Code 1	B	S	9/12/2021	9/22/2021	265.00	2	0.1336	35.40899318
2108684	92115	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	4/7/2021	4/7/2021	2.00	2	0.1336	0.2673737687
2110246	92056	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	4/15/2021	6/16/2021	2.00	2	0.1336	0.2673737687
2107125	92107	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	3/2/2021	3/2/2021	1.00	1	0.1336	0.133618844
2111854	92111	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	7/9/2021	7/9/2021	190.00	2	0.1336	25.3875803
2119422	91977	DB	PC	3/8"	Less than or equal to 60	Code 1	B	M	11/7/2021	11/8/2021	2.00	2	0.1336	0.2673737687
2117362	92106	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	10/1/2021	10/1/2021	1.00	1	0.1336	0.133618844
2116657	92054	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	9/28/2021	9/28/2021	1.00	1	0.1336	0.133618844
2105730	92106	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	4/6/2021	4/6/2021	96.00	2	0.1336	12.8274089
2118320	91950	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	8/12/2021	8/12/2021	2.00	1	0.1336	0.2673737687
2107088	92014	DB	PC	3/4"	Less than or equal to 60	Code 1	B	S	4/27/2021	4/27/2021	117.00	1	0.1336	15.63340471
2102925	92075	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	2/18/2021	2/18/2021	49.00	2	0.1336	6.54732336
2109597	91911	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	6/5/2021	6/6/2021	2.00	2	0.1336	0.2673737687
2121196	92054	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	12/2/2021	12/1/2021	1.00	1	0.1336	0.133618844
2108941	92054	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	8/24/2021	8/24/2021	1.00	1	0.1336	0.133618844
2108929	92054	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	5/24/2021	5/24/2021	1.00	1	0.1336	0.133618844
2104298	92054	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	3/13/2021	4/30/2021	1.00	1	0.1336	0.133618844
2104988	91932	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	3/24/2021	3/25/2021	84.00	2	0.1336	11.22398287
2108180	92154	DB	PC	3/4"	Less than or equal to 60	Code 1	B	S	1/9/2021	1/30/2021	2.00	2	0.1336	0.2673737687
2106531	92107	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	4/19/2021	4/19/2021	110.00	2	0.1336	14.69807281
2111806	92117	DB	PC	3/4"	Less than or equal to 60	Code 1	B	S	8/12/2021	8/13/2021	225.00	2	0.1336	30.06423983
2100200	92025	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	1/29/2021	1/29/2021	1.00	1	0.1336	0.2673737687
2108561	91950	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	5/18/2021	5/19/2021	2.00	2	0.1336	0.2673737687
2109430	92116	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	6/2/2021	6/2/2021	1.00	1	0.1336	0.133618844
2111740	92109	DB	PC	1 1/2"	Less than or equal to 60	Code 2	B	M	8/10/2021	8/10/2021	258.00	1	0.1336	34.46728051
2110420	92007	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	1/10/2021	1/28/2021	28.00	17	0.1336	3.741327623
2109171	92113	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	5/27/2021	5/27/2021	174.00	2	0.1336	23.42976188
2111308	92037	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	7/2/2021	8/13/2021	243.00	61	0.1336	32.46037901
2101511	92106	DB	PC	3/4"	Less than or equal to 60	Code 2	B	M	4/18/2021	7/18/2021	21.00	21	0.1336	2.80599717
2102323	92103	DB	PC	1 1/2"	Less than or equal to 60	Code 2	B	M	6/12/2021	6/12/2021	173.00	2	0.1336	23.11605096
2108180	92102	DB	PC	3/4"	Less than or equal to 60	Code 1	B	S	5/12/2021	4/6/2021	157.00	17	0.1336	20.97815846
2101141	92114	DB	PC	3/4"	Less than or equal to 60	Code 2	B	M	2/22/2021	2/22/2021	76.00	24	0.1336	10.15510212
2105276	91932	DB	PC	3/4"	Less than or equal to 60	Code 2	B	S	3/29/2021	4/16/2021	106.00	19	0.1336	14.16159743
2101172	92103	DB	PC	3/4"	Less than or equal to 60	Code 2	B	S	4/15/2021	7/23/2021	203.00	38	0.1336	27.12462527
2110220	92115	DB	PC	3/4"	Less than or equal to 60	Code 2	B	M	6/16/2021	6/16/2021	210.00	2	0.1336	28.05997127
2111683	92114	DB	PC	3/4"	Less than or equal to 60	Code 1	B	M	7/10/2021	7/25/2021	16.00	16	0.1336	2.137961499
2121356	92037	DB	PC	3/4"	Less than or equal to 60	Code 2	B	M	7/1/2021	7/1/2021	259.00	2	0.1336	34.46728051
2121814	92054	DB	PC	3/4"	Less than or equal to 60	Code 1	B	S	12/8/2021	12/9/2021	343.00	2	0.1336	45.8326338
2120221	92057	DB	PC	3/4"	Less than or equal to 60	Code 2	B	M	11/17/2021	11/29/2021	333.00	13	0.1336	44.49597495
2111093	92116	DB	PC	3/4"	Less than or equal to 60	Code 2	B	M	6/25/2021	6/25/2021	207.00	18	0.1336	27.65910064
2119109	92122	DB	PC	3/4"	Less than or equal to 60	Code 2	B	M	11/18/2021	11/12/2021	316.00	10	0.1336	42.2335446
2120036	91902	DB	PC	3/4"	Less than or equal to 60	Code 2	B	M	1/29/2021	1/29/2021	14.00	1	0.1336	1.87861812
2109225	92105	DB	PC	3/4"	Less than or equal to 60	Code 1	B	S	5/28/2021	4/30/2021	181.00	34	0.1336	24.18510771
2101538	92115	DB	PC	3/4"	Less than or equal to 60	Code 2	B	M	4/20/2021	6/21/2021	2.00	2	0.1336	0.2673737687
2101251	92021	DB	PC	3/4"	Less than or equal to 60	Code 2	B	M	7/18/2021	8/7/2021	11.00	1	0.1336	1.486807281
2102988	92106	DB	PC	3/4"	Less than or equal to 60	Code 2	B	M	11/30/2021	12/1/2021	2.00	2	0.1336	0.2673737687
2104776	92139	DB	PC	3/4"	Less than or equal to 60	Code 2	B	M	3/22/2021	3/22/2021	809.00	29	0.1336	14.56416386
2114064	92117	DB	PC	3/4"	Less than or equal to 60	Code 2	B	S	8/17/2021	9/14/2021	257.00	29	0.1336	34.34024283
2103111	92075	DB	PC	3/4"	Less than or equal to 60	Code 2	B	M	3/24/2021	3/11/2021	70.00	16	0.1336	9.93319018

2105052	92139	DB	PC	3/4"	887	Less than or equal to 60	Code 2	B	S	3/25/2021	4/22/2021	112.00	29	0.1336	14.96333049
2105252	92102	DB	PC	3/4"	947	Less than or equal to 60	Code 2	B	S	4/28/2021	6/27/2021	178.00	9	0.1336	21.78415418
2103332	92075	DB	PC	3/4"	887	Less than or equal to 60	Code 2	B	S	2/24/2021	3/11/2021	70.00	16	0.1336	9.353119058
2105007	92114	DB	PC	3/4"	827	Less than or equal to 60	Code 2	B	M	3/24/2021	4/8/2021	16.00	16	0.1336	2.137804499
2105280	91932	DB	PC	3/4"	787	Less than or equal to 60	Code 2	B	S	3/20/2021	4/21/2021	111.00	24	0.1336	14.831659165
2111472	92109	DB	PC	3/4"	875	Less than or equal to 60	Code 2	B	S	7/7/2021	10/12/2021	285.00	98	0.1336	38.08137045
2105117	92118	DB	PC	3/4"	767	Less than or equal to 60	Code 2	B	M	3/26/2021	7/27/2021	124.00	124	0.1336	16.58873662
2104579	92118	DB	PC	3/4"	767	Less than or equal to 60	Code 2	B	S	3/18/2021	7/26/2021	209.00	133	0.1336	27.92633833
2101075	92106	DB	PC	3/4"	863	Less than or equal to 60	Code 2	B	S	6/15/2021	12/20/2021	354.00	189	0.1336	47.30210706
2108734	92103	DB	PC	1 1/2"	791	Less than or equal to 60	Code 2	B	S	5/20/2021	7/13/2021	184.00	55	0.1336	25.92205527
2110222	91941	DB	PC	3/4"	757	Less than or equal to 60	Code 2	B	S	6/15/2021	8/12/2021	224.00	59	0.1336	29.93620099
2107811	92104	DB	PC	3/4"	711	Less than or equal to 60	Code 2	B	S	7/17/2021	9/1/2021	193.00	67	0.1336	25.78843683
2109863	92111	DB	PC	3/4"	695	Less than or equal to 60	Code 2	B	S	6/9/2021	6/29/2021	180.00	21	0.1336	24.05139186
2116402	92109	DB	PC	3/4"	757	Less than or equal to 60	Code 2	B	S	9/10/2021	9/30/2021	273.00	21	0.1336	36.47784433
2108862	92110	DB	PC	3/4"	767	Less than or equal to 60	Code 2	B	S	5/24/2021	10/6/2021	188.00	46	0.1336	25.21591646
2110234	92115	DB	PC	3/4"	895	Less than or equal to 60	Code 2	B	S	6/15/2021	6/25/2021	176.00	11	0.1336	21.51891649
2106536	92102	DB	PC	3/4"	847	Less than or equal to 60	Code 2	B	S	6/25/2021	8/2/2021	21.00	21	0.1336	2.809597117
2107169	92114	DB	PC	3/4"	827	Less than or equal to 60	Code 2	B	M	4/28/2021	5/22/2021	21.00	25	0.1336	3.340671092
2110441	92106	DB	PC	3/4"	757	Less than or equal to 60	Code 2	B	S	6/17/2021	7/14/2021	195.00	28	0.1336	26.05167412
2107709	92037	DB	PC	3/4"	815	Less than or equal to 60	Code 2	B	M	6/15/2021	6/15/2021	41.00	41	0.1336	6.012847966
2111070	92116	DB	PC	3/4"	851	Less than or equal to 60	Code 2	B	S	6/29/2021	7/9/2021	190.00	11	0.1336	25.3875803
2111981	92109	DB	PC	3/4"	695	Less than or equal to 60	Code 2	B	S	7/15/2021	7/15/2021	245.00	50	0.1336	32.76616167
2102998	91932	DB	PC	3/4"	851	Less than or equal to 60	Code 2	B	S	2/19/2021	3/18/2021	77.00	28	0.1336	10.28865096
2104819	91932	DB	PC	3/4"	851	Less than or equal to 60	Code 2	B	S	3/12/2021	3/24/2021	83.00	3	0.1336	11.0930463
2100111	91932	DB	PC	3/4"	899	Less than or equal to 60	Code 2	B	S	1/4/2021	1/6/2021	6.00	3	0.1336	0.801113902
2103135	91932	DB	PC	3/4"	851	Less than or equal to 60	Code 2	B	S	2/22/2021	3/19/2021	78.00	26	0.1336	10.4220891
2102947	92101	DB	PC	3/4"	719	Less than or equal to 60	Code 2	B	S	1/14/2021	1/21/2021	21.00	8	0.1336	2.805957117
2100434	92102	DB	PC	3/4"	863	Less than or equal to 60	Code 2	B	M	1/7/2021	2/17/2021	42.00	42	0.1336	5.611991455
2111650	92117	DB	PC	3/4"	757	Less than or equal to 60	Code 2	B	S	7/9/2021	9/7/2021	250.00	61	0.1336	33.40471092
2111580	92117	DB	PC	3/4"	757	Less than or equal to 60	Code 2	B	S	7/8/2021	8/9/2021	215.00	27	0.1336	28.73801119
2111036	92116	DB	PC	3/4"	851	Less than or equal to 60	Code 2	B	S	6/28/2021	7/13/2021	192.00	14	0.1336	25.65481799
2110399	92105	DB	PC	3/4"	875	Less than or equal to 60	Code 2	B	S	6/17/2021	7/2/2021	183.00	16	0.1336	24.45214839
2118171	92057	DB	PC	3/4"	757	Less than or equal to 60	Code 2	B	S	10/21/2021	10/21/2021	294.00	1	0.1336	39.28394004
2111661	92117	DB	PC	3/4"	757	Less than or equal to 60	Code 2	B	S	7/9/2021	8/4/2021	216.00	27	0.1336	28.86167024
2107354	92106	DB	PC	3/4"	807	Less than or equal to 60	Code 2	B	S	4/30/2021	4/9/2021	160.00	41	0.1336	21.37901499
2110851	92116	DB	PC	3/4"	767	Less than or equal to 60	Code 2	B	S	6/24/2021	7/11/2021	192.00	18	0.1336	25.65481799
2110822	91945	DB	PC	3/4"	791	Less than or equal to 60	Code 2	B	S	6/24/2021	8/12/2021	224.00	50	0.1336	29.93620099
2107966	92102	DB	PC	3/4"	803	Less than or equal to 60	Code 2	B	S	5/10/2021	5/22/2021	142.00	13	0.1336	18.9788758
2120332	92117	DB	PC	3/4"	803	Less than or equal to 60	Code 2	B	S	11/18/2021	11/22/2021	326.00	5	0.1336	43.55974304
2111436	92037	DB	PC	3/4"	757	Less than or equal to 60	Code 2	B	S	7/22/2021	8/13/2021	241.00	11	0.1336	31.46017901
2116556	91945	DB	PC	3/4"	757	Less than or equal to 60	Code 2	B	M	9/27/2021	9/28/2021	2.00	2	0.1336	0.267237687
2116112	92057	DB	PC	3/4"	757	Less than or equal to 60	Code 2	B	S	10/20/2021	10/27/2021	300.00	8	0.1336	40.4665611
2112107	92111	DB	PC	3/4"	755	Less than or equal to 60	Code 2	B	S	7/16/2021	9/8/2021	251.00	55	0.1336	33.53832976
2111038	92116	DB	PC	3/4"	755	Less than or equal to 60	Code 2	B	S	6/28/2021	7/12/2021	193.00	15	0.1336	25.78843683
2110705	92105	DB	PC	3/4"	275	Less than or equal to 60	Code 2	B	S	6/22/2021	7/15/2021	196.00	24	0.1336	26.18029336
2112281	92111	DB	PC	3/4"	755	Less than or equal to 60	Code 2	B	S	7/20/2021	9/8/2021	251.00	51	0.1336	33.53832976
2107660	92009	DB	PC	3/4"	539	Less than or equal to 60	Code 2	B	S	5/5/2021	6/5/2021	181.00	17	0.1336	24.18010371
2109505	92106	DB	PC	3/4"	755	Less than or equal to 60	Code 2	B	S	6/9/2021	7/12/2021	193.00	40	0.1336	25.78843683
2110877	92115	DB	PC	3/4"	875	Less than or equal to 60	Code 2	B	M	6/25/2021	6/25/2021	1.00	1	0.1336	0.133618844
2111585	92117	DB	PC	3/4"	757	Less than or equal to 60	Code 2	B	S	8/11/2021	9/7/2021	250.00	28	0.1336	33.40471092
2111793	92117	DB	PC	1"	851	Less than or equal to 60	Code 2	B	S	8/12/2021	9/13/2021	256.00	33	0.1336	34.20642398
2111497	92110	DB	PC	3/4"	757	Less than or equal to 60	Code 2	B	S	9/16/2021	9/16/2021	259.00	29	0.1336	34.60728051
2103521	92075	DB	PC	3/4"	755	Less than or equal to 60	Code 2	B	S	2/26/2021	3/13/2021	72.00	16	0.1336	9.620556745
2103542	92075	DB	PC	3/4"	815	Less than or equal to 60	Code 2	B	S	2/27/2021	3/14/2021	73.00	16	0.1336	9.754175589
2103987	92054	DB	PC	3/4"	589	Less than or equal to 60	Code 2	B	M	6/5/2021	4/9/2021	8.00	8	0.1336	1.088050749
2110183	92014	DB	PC	3/4"	647	Less than or equal to 60	Code 2	B	S	2/1/2021	2/18/2021	49.00	18	0.1336	6.54732334
2104637	91911	DB	PC	3/4"	163	Less than or equal to 60	Code 2	B	S	3/19/2021	4/8/2021	98.00	21	0.1336	13.09466668
2100839	92014	DB	PC	3/4"	599	Less than or equal to 60	Code 2	B	S	1/13/2021	1/28/2021	28.00	16	0.1336	3.741127623
2104132	91932	DB	PC	3/4"	791	Less than or equal to 60	Code 2	B	S	3/9/2021	4/6/2021	96.00	29	0.1336	12.82740889
2111397	91950	DB	PC	3/4"	757	Less than or equal to 60	Code 2	B	S	7/21/2021	8/2/2021	13.00	11	0.1336	1.735494968
2104488	91911	DB	PC	3/4"	851	Less than or equal to 60	Code 2	B	S	3/18/2021	1/17/2021	137.00	61	0.1336	18.30578158
2102944	92014	DB	PC	3/4"	695	Less than or equal to 60	Code 2	B	S	2/16/2021	3/16/2021	74.00	26	0.1336	9.887794413
2111417	92057	DB	PC	3/4"	767	Less than or equal to 60	Code 2	B	M	7/6/2021	8/10/2021	36.00	36	0.1336	4.810278773
2110195	91977	DB	PC	3/4"	767	Less than or equal to 60	Code 2	B	S	6/15/2021	8/11/2021	223.00	58	0.1336	29.79700214
2106635	92024	DB	PC	3/4"	787	Less than or equal to 60	Code 2	B	S	4/21/2021	6/11/2021	161.00	52	0.1336	21.64623268
2107163	92024	DB	PC	3/4"	755	Less than or equal to 60	Code 2	B	S	4/28/2021	6/7/2021	158.00	41	0.1336	21.1117773
2102106	91932	DB	PC	3/4"	851	Less than or equal to 60	Code 2	B	S	1/4/2021	1/21/2021	13.00	10	0.1336	1.737614968
2110173	92114	DB	PC	3/4"	767	Less than or equal to 60	Code 2	B	S	6/15/2021	7/12/2021	193.00	28	0.1336	25.78843683
2104918	91932	DB	PC	3/4"	767	Less than or equal to 60	Code 2	B	S	3/21/2021	4/20/2021	110.00	29	0.1336	14.69807281
2113623	92117	DB	PC	3/4"	791	Less than or equal to 60	Code 2	B	S	8/20/2021	11/26/2021	330.00	109	0.1336	44.09621842
2104143	91911	DB	PC	3/4"	839	Less than or equal to 60	Code 2	B	S	3/9/2021	6/23/2021	174.00	107	0.1336	23.4969788
2106886	92101	DB	PC	2"	671	Less than or equal to 60	Code 1	B	M	4/22/2021	4/22/2021	1.00	1	0.1336	0.133618844
2102821	92124	DB	P	1/2" CTS	407	Less than or equal to 60	Code 1	B	M	11/24/2021	11/24/2021	1.00	1	0.1336	0.133618844
2111442	92026	DB	P	1 1/4"	851	Less than or equal to 60	Code 2	B	M	8/6/2021	8/7/2021	2.00	2	0.1336	0.267237687
2114090	92056	DB	P	3/4"	487	Less than or equal to 60	Code 2	B	S	8/18/2021	8/26/2021	241.00	13	0.1336	31.31076017
2101088	92127	DB	P	3/4"	479	Less than or equal to 60	Code 2	B	S	1/5/2021	1/28/2021	28.00	24	0.1336	3.741127623
2106344	92024	DB	P	3/4"	613	Less than or equal to 60	Code 2	B	S	4/15/2021	4/7/2021	158.00	54	0.1336	21.1117773
2106027	92116	DB	P	3/4"	875	Less than or equal to 60	Code 2	B	S	4/9/2021	9/7/2021	250.00	152	0.1336	33.40471092

SDG&E, June 15, 2022

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 2022 June Report

Appendix 4; Rev. 03/31/22

Notes:

Definitions in Data Request R15-01-008 2018 June Report

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

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 [$N_{X,I}$]	If using a 3-year trailing leak rate average then include - 2019 Annual Leak Rate [$R_{X,1}$]	If using a 3-year trailing leak rate average then include - 2020 Annual Leak Rate [$R_{X,2}$]	2021 Annual Leak Rate [$R_{X,3}$] $R_{X,3} = \frac{N_{X,LL}}{M_{X,A} + (I \times M_{X,I})}$	If applicable, then calculate the 3-year Average Leak Rate [Leaks / Mile / Yr] $\bar{R}_X = \frac{1}{3} \sum_{i=1}^3 R_{X,i}$	# of Unknown Leaks $N_{X,unk} = \bar{R}_X \times (M_{X,Tot} - \frac{I}{2} \times M_{X,I})$	Total # of Leaks Detected from O&M* [$N_{X,O}$]
Main/Vintage* Plastic	1,515	1,515	-	1	0	39	0.025	0.017	0.026	-	-	49
Main/Plastic	N/A	N/A	N/A	3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Main/Plastic	N/A	N/A	N/A	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Main/Plastic	3,168	1,006	2,162	3	720.65	1	0.0010	0.0003	0.0003	0.0005	1	3
Main/Unprotected Steel	N/A	N/A	N/A	3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Main/Unprotected Steel	N/A	N/A	N/A	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Main/Unprotected Steel	N/A	N/A	N/A	5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Main/Vintage* Protected Steel	474	474	-	1	-	54	N/A	0.0815	0.114	N/A	-	48
Main/Protected Steel	N/A	N/A	N/A	3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Main/Protected Steel	N/A	N/A	N/A	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Main/Protected Steel	3,090	759	2,331	3	776.87	40	0.015	0.015	0.013	0.0141	33	23
Main/Unknown	N/A	N/A	N/A	-	-	-	-	-	-	-	-	N/A
Service/Vintage* Plastic	1,251	1,251	-	1	0	23	0.0303	0.0231	0.018	0.0239	-	18
Service/Plastic	N/A	N/A	N/A	3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Service/Plastic	N/A	N/A	N/A	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Service/Plastic	2,984	1,928	1,056	3	351.95	7	0.0009	0.0000	0.002	0.0011	1	2
Service/Unprotected Steel	N/A	N/A	N/A	3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Service/Unprotected Steel	N/A	N/A	N/A	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Service/Unprotected Steel	N/A	N/A	N/A	5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Service/Vintage* Protected Steel	298	298	-	1	-	65	N/A	0.2368	0.218	N/A	-	34
Service/Protected Steel	N/A	N/A	N/A	3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Service/Protected Steel	N/A	N/A	N/A	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Service/Protected Steel	2,548	1,296	1,253	3	417.54	120	0.0378	0.0200	0.047	0.0349	44	84
Service/Copper	N/A	N/A	N/A	3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Service/Copper	N/A	N/A	N/A	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Service/Copper	N/A	N/A	N/A	5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Service/Unknown	N/A	N/A	N/A	-	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	15,328	8,527	6,801	N/A	2,267	349				N/A	79	261

*Definitions for "vintage" materials:

Vintage Plastic	Pipe installed before 1986 + "unknown" manufacture PE pipe
Vintage Protected Steel	Pipe installed before 1950

Estimated Emissions by Pipeline Facility/Material for Each Leakage Category

Leakage Category	Emission Factor (Mscf/day/leak)	2021 Emissions from Leaks detected Prior to 2021 (Mscf)	2021 Emissions from Leaks Detected from 2021 Survey (Mscf)	2021 Emissions from O&M* Leaks Detected in 2021 (Mscf)	2021 Estimated Emissions from Unknown Leaks (Mscf)	Total Estimated 2021 Emissions from Distribution Pipelines (Mscf)
Facility/Material						
Main/Vintage* Plastic	0.1336	0	1,122	22	0	1,144
Main/Plastic	0.1336	N/A	N/A	N/A	N/A	N/A
Main/Plastic	0.1336	N/A	N/A	N/A	N/A	N/A
Main/Plastic	0.1336	0	22	1	56	80
Main/Unprotected Steel	0.1336	N/A	N/A	N/A	N/A	N/A
Main/Unprotected Steel	0.1336	N/A	N/A	N/A	N/A	N/A
Main/Unprotected Steel	0.1336	N/A	N/A	N/A	N/A	N/A
Main/Vintage* Protected Steel	0.1336	2	1,584	62		1,648
Main/Protected Steel	0.1336	1	544	27	1,601	2,173
Main/Protected Steel	0.1336	N/A	N/A	N/A	N/A	N/A
Main/Protected Steel	0.1336	N/A	N/A	N/A	N/A	N/A
Service/Vintage* Plastic	0.1336	2	635	13	0	650
Service/Plastic	0.1336	N/A	N/A	N/A	N/A	N/A
Main/Unknown	0.1336	0	0	0	0	0

Service/Plastic	0.1336	N/A	N/A	N/A	N/A	N/A
Service/Plastic	0.1336	0	164	0	55	220
Service/Unprotected Steel	0.1336	N/A	N/A	N/A	N/A	N/A
Service/Unprotected Steel	0.1336	N/A	N/A	N/A	N/A	N/A
Service/Unprotected Steel	0.1336	N/A	N/A	N/A	N/A	N/A
Service/Vintage* Protected Steel	0.1336	0	1,767	16	0	1,783
Service/Protected Steel	0.1336	N/A	N/A	N/A	N/A	N/A
Service/Protected Steel	0.1336	N/A	N/A	N/A	N/A	N/A
Service/Protected Steel	0.1336	0	2,369	89	2,135	4,594
Service/Copper	0.1336	N/A	N/A	N/A	N/A	N/A
Service/Copper	0.1336	N/A	N/A	N/A	N/A	N/A
Service/Copper	0.1336	N/A	N/A	N/A	N/A	N/A
Service/Unknown	0	0	0	-	N/A	N/A
Total	N/A	4	8,208	231	3,848	12,291

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).

	2020 Emissions from Leaks detected Prior to 2019 (Mscf)	2020 Emissions from Leaks Detected from 2020 Survey (Mscf)	2020 Emissions from O&M* Leaks Detected in 2020 (Mscf)	2020 Estimated Emissions from Unknown Leaks (Mscf)	Total Estimated 2020 Emissions from Distribution Pipelines

Large Leak Emitter Program					
Compliance Leak Survey - Non-LL					-
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	-	-	-	-	-

SDG&E, June 15, 2022

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 2022 June Report

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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/xx)	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	0	290	290	2	N/A*	0	0	2143	NA	N/A
Grade 2	4	319	322	30	N/A*	1	0	6264	NA	N/A
Grade 3	0	1	1	64	N/A*	0	0	32	NA	N/A
Graded Leak Total	4	610	613	N/A**	-	1	-	8,439	-	-
Above Ground Hazardous	0	0	0	N/A**		0	0	0	N/A*	N/A
Above Ground Non-Hazardous	0	0	0	N/A**		0	0	0	N/A*	N/A
Above Ground Non-Hazardous Minor	0	0	0	N/A**		0	0	0	N/A*	N/A
AG Total	0	0	0	N/A**	-	0	0	0	N/A*	N/A
Total of All Leaks	4	610	613	N/A**	-	1	-	8,439	N/A*	N/A
Main/Plastic	0	51	51	12	1	0	0.000	23	56	80
Main Vintage Plastic	0	41	41	15	0	0	0.000	1144	0	1144
Main/Unprotected Steel					N/A	0	0.534	0	0	1
Main/Protected Steel	2	148	150	22	33	0	0.534	571	1601	2173
Main Vintage Protected Steel	0	17	17					1646		1646
Main Unknownwon	0				0	0	0.000		0	0
Service/Plastic	0	24	24	24	1	0	0.000	165	55	220
Service Vinatge	1	26	27	20	0	0	1.737	648	0	650
Service/Unprotected Steel	0	0	0	0	N/A	0	0.000		0	0
Service Vintage Steel	0	40	40					1783		1783
Service/Protected Steel	1	263	263	17	44	1	0.000	2459	2135	4594
Service Unknownwon	0			N/A	0	0	0.000	0	0	0
Service/Copper				0	0	0	0.000	0	0	0
Total	4	610	613	N/A	79	1	3	8,439	3,848	12,290

Large Leak or Super Emitter Program Categorization

Compliance Leak Survey - Non-LL						0				0
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Compliance Leak Survey - LL						0				0
Large Leak/Super Emitter Program Outside Compliance Area - Non-LL						0				0
Large Leak/Super Emitter Program Outside Compliance Area - LL						0				0
O&M - Non-LL						0				0
O&M - LL						0				0
TOTAL	-	-	-	-	-	-	-	-	-	-
Change Due to LL/SE Program on 2020:	(4)	(610)	(613)	#VALUE!	(79)	(1)	(3)	(8,439)	(3,848)	(12,290)
% Change Due to LL/SE Program on 2020:	(100.0%)	(100.0%)	(100.0%)		(100.0%)	(100.0%)	(100.0%)	(100.0%)	(100.0%)	(100.0%)

This section added
to the template for
2021 Reporting.
Send any
suggestions to
improve this
worksheet to Staff
for consideration.

SDG&E, June 15, 2022

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 2022 June Report

Appendix 4, Rev. 03/31/22

Notes:

Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-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	Segment Location	Segment Type	Pipe Classification	Pipe Material	Pipe Size (nominal)	Pipe Age (months)	Pressure (psi)	Depth (feet)	Above Ground or Below Ground	Discovery Date (MM/DD/YYYY)	Repair Date (MM/DD/YYYY)	Number of Repairs	Emission Factor or Engineering Estimate	Annual Emissions (Mcf)	Explanatory Notes / Comments
212120	92021 N	DB	P	1/2" CTS					Code 1	12/27/2021	12/27/2021	1.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
210203	92114 N	DB	P	1/2" CTS					Code 1	1/6/2021	1/6/2021	2.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
212246	92009 N	DB	P	1/2" CTS					Code 1	12/16/2021	12/17/2021	2.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211840	92003 N	DB	P	1/2" CTS					Code 1	8/10/2021	8/10/2021	3.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211870	92008 N	DB	P	1/2" CTS					Code 1	11/5/2021	11/5/2021	1.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211103	92019 N	MB	P	2"					Code 1	7/8/2021	7/8/2021	2.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211171	92139 N	MB	P	1 1/4"					Code 1	10/12/2021	10/12/2021	1.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211485	92054 N	MB	P	2"					Code 1	8/25/2021	8/26/2021	2.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211455	91977 N	MB	P	1 1/4"					Code 1	9/16/2021	9/17/2021	2.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211763	92124 N	MB	P	2"					Code 1	10/11/2021	10/11/2021	3.00		144.559	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211547	91901 N	MB	P	3"					Code 1	9/8/2021	9/10/2021	3.00		144.559	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211919	92021 N	MB	P	2"					Code 1	11/4/2021	11/5/2021	2.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211365	92123 N	MB	P	2"					Code 2	8/5/2021	8/5/2021	1.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
210703	91977 N	MB	P	2"					Code 2	5/5/2021	5/7/2021	3.00	0.288	0.836	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211170	92124 N	MB	P	2"					Code 2	7/12/2021	8/2/2021	22.00	0.288	6.574	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
210695	92101 N	MB	P	2"					Code 2	6/7/2021	6/8/2021	2.00	0.288	0.558	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
210297	92129 N	MB	P	2"					Code 2	2/18/2021	2/19/2021	20.00	0.288	5.976	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211395	92109 N	MB	P	2"					Code 1	8/6/2021	8/6/2021	1.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211050	92054 N	MB	P	2"					Code 1	6/18/2021	6/18/2021	1.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
210442	92154 E	MB	P	2"					Code 2	1/27/2021	1/27/2021	1.00	0.288	0.339	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
210017	92121 E	MB	P	3"					Code 1	5/25/2021	5/25/2021	1.00		144.559	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
210930	92154 E	MB	P	1 1/4"					Code 1	5/24/2021	5/25/2021	1.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211490	92124 E	MB	P	2"					Code 1	8/25/2021	8/25/2021	1.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211149	92114 E	MB	P	1 1/4"					Code 1	6/7/2021	6/7/2021	1.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211492	91901 N	MB	P	2"					Code 1	8/2/2021	8/1/2021	1.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211193	91902 E	MB	P	2"					Code 1	12/1/2021	12/14/2021	14.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
210907	92007 N	MB	P	2"					Code 1	5/16/2021	5/16/2021	1.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211086	92001 E	MB	P	2"					Code 1	11/30/2021	11/30/2021	1.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211100	92009 N	MB	P	2"					Code 1	12/2/2021	12/2/2021	1.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
210001	92008 E	MB	P	1"					Code 1	1/2/2021	1/2/2021	1.00		144.559	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211238	92009 N	MB	P	2"					Code 1	11/30/2021	12/30/2021	29.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
210508	92109 N	MB	P	2"					Code 1	4/19/2021	4/19/2021	1.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211208	92173 E	MB	P	2"					Code 1	7/19/2021	7/19/2021	1.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
210043	91911 E	MB	P	3"					Code 1	7/17/2021	1/8/2021	2.00		144.559	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211704	92024 E	MB	P	1"					Code 1	10/4/2021	10/4/2021	1.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211603	91935 E	MB	P	2"					Code 1	8/10/2021	8/11/2021	2.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
210217	92080 N	MB	P	2"					Code 1	3/5/2021	3/5/2021	1.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211054	92126 E	MB	P	3"					Code 1	7/15/2021	7/16/2021	2.00		144.559	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211297	92028 E	MB	P	2"					Code 1	10/22/2021	10/23/2021	1.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211041	92048 E	MB	P	1"					Code 1	1/24/2021	6/24/2021	1.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211380	92100 E	MB	P	2"					Code 1	8/10/2021	8/10/2021	1.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211485	92054 E	MB	P	1"					Code 1	7/7/2021	7/7/2021	1.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
212714	92008 E	MB	P	2"					Code 1	12/20/2021	12/20/2021	1.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
210694	92120 E	MB	P	1 1/4"					Code 1	4/26/2021	4/27/2021	2.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
210734	92024 E	MB	P	1"					Code 1	1/30/2021	4/30/2021	1.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
210238	92082 E	MB	P	2"					Code 1	2/10/2021	2/10/2021	1.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
210417	92173 E	MB	P	2"					Code 1	3/17/2021	3/17/2021	1.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
210670	92111 E	MB	P	2"					Code 1	4/11/2021	4/12/2021	2.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211106	92124 E	MB	P	2"					Code 1	7/8/2021	7/9/2021	2.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211841	92118 E	MB	P	1"					Code 1	8/17/2021	8/17/2021	1.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211011	92064 E	MB	P	1"					Code 1	7/2/2021	7/2/2021	1.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
210937	92109 N	MB	P	2"					Code 1	6/4/2021	6/4/2021	1.00		144.559	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
210670	91977 E	MB	P	1 1/4"					Code 1	4/22/2021	4/23/2021	2.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
210580	92105 N	MB	PC	1 1/2"					Code 1	4/7/2021	4/8/2021	2.00		70.729	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
210237	92008 E	PC	1"						Code 1	6/15/2021	6/16/2021	2.00		70.729	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211549	92123 N	MB	P	1 1/2"					Code 1	8/9/2021	9/1/2021	24.00	0.0612	1.460	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211979	91945 N	MB	PC	1 1/2"					Code 2	8/17/2021	10/6/2021	20.00	0.0612	1.234	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
210481	91950 N	MB	PC	1 1/2"					Code 2	3/8/2021	4/27/2021	26.00	0.0612	1.591	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211499	92125 N	MB	PC	1 1/2"					Code 1	8/25/2021	8/25/2021	1.00		70.729	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
210008	92110 E	MB	P	1 1/2"					Code 1	6/25/2021	6/25/2021	1.00		70.729	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211179	92118 E	MB	UC	1 1/2"					Code 1	11/19/2021	11/19/2021	1.00		73.733	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
210091	92111 E	MB	P	2"					Code 1	2/10/2021	2/4/2021	1.00		70.729	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
210876	92111 E	MB	P	2"					Code 1	5/18/2021	5/18/2021	1.00		70.729	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211164	92014 E	MB	P	1"					Code 1	7/6/2021	7/10/2021	11.00		70.729	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211731	92037 E	MB	P	1 1/2"					Code 2	10/6/2021	10/5/2021	18.00	0.0612	0.979	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
210718	91977 E	MB	P	1 1/2"					Code 1	3/2/2021	3/2/2021	1.00		70.729	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
210641	92008 E	MB	P	1"					Code 1	4/20/2021	4/20/2021	1.00		70.729	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
210554	91950 E	MB	PC	8"					Code 1	5/18/2021	5/20/2021	3.00		70.729	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
210614	92116 E	MB	P	1 1/2"					Code 1	5/13/2021	5/14/2021	2.00		70.729	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
210350	92102 E	MB	PC	2"					Code 1	3/5/2021	3/6/2021	2.00		70.729	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
210152	92113 E	MB	P	2"					Code 1	3/26/2021	3/26/2021	1.00		70.729	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
210844	92008 E	MB	P	2"					Code 3	5/17/2021	8/9/2021	116.00	0.0612	7.099	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
212857	92024 E	DB	P	1/2" CTS					Code 1	12/21/2021	12/21/2021	1.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
212472	92009 E	DB	P	1/2" CTS					Code 2	7/2/2021	8/5/2021	15.00	0.0089	0.134	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211704	92009 E	DB	P	1/2" CTS					Code 1	10/4/2021	10/4/2021	1.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
211858	91942 N	DB	P	1/2" CTS					Code 1	7/13/2021	7/13/2021	1.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
210239	91942 N	DB	P	1/2" PS					Code 1	6/16/2021	6/16/2021	1.00		18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix 9.
210592	92104 N	DB	P	1/2" CTS					Code 1	4/8/2021	4/8/2021	1.00		18.799	Emission estimated from population of similar events. See Explan

[illegible]

Total Sum	8,827
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SDG&E, June 15, 2022

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 2022 June Report

Appendix 4; Rev. 03/31/22

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) (in)	Length of Pipe (ft)	Pressure (psi)	Annual Emissions (Mscf)	Explanatory Notes / Comments
N/A	SDG&E Territory	268	N/A	N/A	N/A	0.72	Distribution Odor Intensity Tests
N/A	SDG&E Territory	1		2	37	320	0.02 Abandoned HP Pipe
N/A	SDG&E Territory	1		4	128	320	0.28 Abandoned HP Pipe
N/A	SDG&E Territory	1		6	44	320	0.22 Abandoned HP Pipe
N/A	SDG&E Territory	1		8	20	320	0.17 Abandoned HP Pipe
N/A	SDG&E Territory	1		16	9	320	0.28 Abandoned HP Pipe
N/A	SDG&E Territory	1		2	23	320	0.01 Abandoned HP Service Pipe
N/A	SDG&E Territory	1	0.75	4	55		0 Abandoned MP Pipe
N/A	SDG&E Territory	1		1	4260	55	0.12 Abandoned MP Pipe
N/A	SDG&E Territory	1	1.25	10095	55		0.46 Abandoned MP Pipe
N/A	SDG&E Territory	1	1.5	16757	55		1.13 Abandoned MP Pipe
N/A	SDG&E Territory	1	2	125686	55		12.36 Abandoned MP Pipe
N/A	SDG&E Territory	1	3	25763	55		5.55 Abandoned MP Pipe
N/A	SDG&E Territory	1	4	1490	55		0.66 Abandoned MP Pipe
N/A	SDG&E Territory	1	6	1494	55		1.52 Abandoned MP Pipe
N/A	SDG&E Territory	1	8	28	55		0.05 Abandoned MP Pipe
N/A	SDG&E Territory	1	0.5	133671	55		0.66 Abandoned MP Service Pipe
N/A	SDG&E Territory	1	0.75	41421	55		0.62 Abandoned MP Service Pipe
N/A	SDG&E Territory	1	1	6169	55		0.18 Abandoned MP Service Pipe
N/A	SDG&E Territory	1	1.25	7598	55		0.35 Abandoned MP Service Pipe
N/A	SDG&E Territory	1	1.5	1559	55		0.1 Abandoned MP Service Pipe
N/A	SDG&E Territory	1	2	2027	55		0.2 Abandoned MP Service Pipe
N/A	SDG&E Territory	1	3	87	55		0.02 Abandoned MP Service Pipe
Sum Total						26	

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 2022 June Report
Appendix 4; Rev. 03/31/22

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
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Note: No devices

0

Sum Total - Provided as an example.

SDG&E, June 15, 2022

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 2022 June Report
Appendix 4; Rev. 03/31/22

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
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Sum total

0 Provided as an example.

Appendix 4 - Rev. 03/31/22

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 Classification	MA = distribution main, above ground MB = distribution main, below ground DA = distribution service, above ground DB = distribution service, below ground
Pipe Material	C = copper CI = cast iron P = plastics (Acetyl, ABS, PE, PVC, etc.) 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	<p>If the utility uses grades for above ground leaks, it is unnecessary to use the AH,AN, or AM designations.</p> <p>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, synonymous with Grade 2 and 2+. AM = Above Ground Non-Hazardous Minor (akin to grade 3 below ground leak). N = non-graded or ungraded</p>
Upgraded Leak Grade or Downgraded Leak Grade	<p>U: Upgraded Leak such as a grade 2 or 3 leak that was surveyed again and changed designation to grade 1 or 2.</p> <p>D: downgraded leak, such as a grade 1 or 2 leak that was surveyed again and changed designation to grade 2 or 3.</p>
Above Ground or Below Ground	<p>A = Above Ground B = below ground</p>
Leak Discovery Method	<p>S = Routine Leak Survey (This discovery method should be parsed and the emissions summarized into leaks carried over from before 2016, and those detected in 2016. The totals for these subcategories should be carried over to column C43 through D63 on the Unsurveyed Pipeline Leaks tab.) M = O&M (E.G. O&M Activities, Third party reports, customer odor reports etc.) O = Other (This will be grouped with M in the summary categorization of leaks.)</p>
Discovery Date (MM/DD/YY)	

Re-Grade 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)	<p>If leak is open, specify the scheduled date of repair;</p> <p>Otherwise type "M," signifying that the leak is being monitored with no scheduled date of repair;</p> <p>Then, provide the reason for not scheduling a repair in Column P.</p>
Reason for Not Scheduling a Repair	If Repair Date is blank, and Scheduled Repair Date (Column O) = "M", then provide the reason for not scheduling a repair.
Number of Days Leaking	<p>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, which ever is earlier. (E.G. Days Leaking = Repair - Jan 1st + 1 day.)</p> <p>(For days leaking for leaks carried over use January 1st as start date for emissions calculations.)</p> <p>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.</p>

Number of Days to Repair	Use only Repair-Discovery +1. Do not use January 1st for time to repair. For regraded leaks, use Repair Date - Regrade Date +1.
Emission Factor (Mscf/Day)	
Annual Emissions (Mscf)	
Explanatory Notes / Comments	

Unsurveyed Pipeline Leaks	
2017 Emissions from O&M* Leaks Detected in 2016 (Mscf)	O&M Sources Include: O&M Activities Customer Odor Reports Third Party Reports and other
2017 Estimated Emissions from Unknown Leaks (Mscf)	Calculation based on the input from column J above.

Pipeline Leaks Summary	
Count of Leaks Carried over from Prior Year	Based on a leak start date prior to the first day of the year of interest.
Count of Leaks Discovered in the Year of Interest	The total number of leaks by grade or category discovered in the year of interest. If a leak is downgraded to not leaking, do not count it.
Count of Leaks Repaired in the Year of Interest	
Average Days to Repair Leaks	The average days to repair leaks should be baase on the formula: (Repair Date/Time minus Discovery Date/Time) plus (one day, unless using a discrete time stamp for leak repairs), then take the sum and divide by number of leaks repaired by grade to get the average days to repair.

Count of Estimated Unsurveyed Leaks in the Year of Interest	<p>For leaks identified in Unsurveyed areas extrapolate the proportion of leak counts by grade that were found in the respective areas based on the year or periods used to estimate the unsurveyed leak count.</p> <p>If the unsurveyed leak count was based on the current year leak count by grade detected then use the current proportion of graded leak count applied to the unsurveyed leaks.</p>
Count of Remaining Leaks at final day of the Year of Interest (12/31/xx)	This count is only of the actual leaks detected in the operator's system that have not been repaired as of 12/31 of the year of interest.
Emissions from Leaks Carried over from Prior Year.	<p>Based on a leak start date prior to the first day of the year of interest.</p> <p>This includes leaks discovered through O&M and survey activities.</p>
Emissions from Leaks Discovered in the Year of Interest.	<p>The total number of leaks by grade or category discovered in the year of interest.</p> <p>This includes leaks discovered through O&M and survey activities.</p>
Emissions from Estimated Unsurveyed Leaks in the Year of Interest	<p>The emissions by grade would be on the same basis that used to extrapolate the count of leaks in the unsurveyed areas.</p> <p>For example: For leaks identified in Unsurveyed areas extrapolate the proportion of leak emissions by grade that were found in the respective areas based on the year or periods used to estimate the unsurveyed leak count.</p> <p>If the unsurveyed leak count was based on the current year leaks detected then use the current proportion of graded leaks applied to the unsurveyed leak emissions.</p>
Total Emissions in the Year of Interest [Mscf of Natural Gas]	

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 Classification	MA = distribution main, above ground MB = distribution main, below ground DA = distribution service, above ground DB = distribution service, below ground
Pipe Material	C = copper CI = cast iron P = plastics (Acetal, ABS, PE, PVC, etc.) 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 N = Non-Graded
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	<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 or Engineering Estimate (Mscf/Day)	
Annual Emissions (Mscf)	
Explanatory Notes / Comments	

Blowdowns	
ID	
Geographic Location	GIS, zip code, or equivalent
Number of Blowdown Events	If counting a series of small blowdowns associated with services such as MSA replacement, or Service pipe of small diameter or section length then enter total and the formula in the explanation column.
Pipe Size (nominal)	
Length of Pipe	
Pressure (psi)	MOP = maximum operating pressure over the past year

Annual Emissions (Mscf)	
Explanatory Notes / Comments	

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	
Engineering or Manufacturer's based Estimate of Emissions	
Annual Emissions (Mscf)	
Explanatory Notes / Comments	

Component Leaks	
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	
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.
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 <u>thru</u> repair date or December 31st of subject year, whichever is earlier.
Emission Factor (Mscf/day)	
Annual Emission (Mscf)	
Explanatory Notes / Comments	