

SDG&E, June 15th, 2023

Rakemaking (R) 15-41-008 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, 2023 June Report Appendix 4, Rev. 05/30/2023

Notes:
 Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste value.
 If the end of Annual Emissions column, add a summation total in a cell for column total, and then highlight orange.
 If all the main and services are not surveyed annually, use the "Unsurveyed Pipeline Leaks" to represent emissions.
 Do not record above ground HSA leaks on this table. Use Appendix 1 instead. Do continue to list above ground leaks associated with the Distribution Main & Services pipeline system. After completing the table on "Pipeline Leaks" and "Unsurveyed Pipeline Leaks," fill in the table for "Pipeline Leak Summary."

Sum Total Emissions from leaks carried over from before 2022
 Sum Total Emissions from Surveys taken discovered in 2022
 Sum Total Emissions from O&M leaks discovered in 2022
 Grand Total of all 2022 emissions from leaks
 Note: No change to O&M leak duration for this reporting year

7,309
196
7,239

ID	Geographic Location	Pipe Classification	Pipe Material	Pipe Size (nominal)	Pipe Age (months)	Pressure (psi)	Leak Grade	Upgraded Leak Grade or Downgraded Leak Grade	Allow 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 Submitting a Repair	Number of Days Leaking	Number of Days to Repair	Emission Factor (Mscf/Dw)	Annual Emissions (Mscf)	Explanatory Notes / Comments
220378	92105	MB	PC	1 1/2"	995	Less than or equal to 60	2		B	S	5/26/2022		7/7/2022			182	37	0.11537432	20.99820122	
2206194	92113	MB	P	3"	121	Less than or equal to 60	1		B	S	4/8/2022		4/8/2022			98	1	0.11537432	11.36627374	
2219966	92056	DB	P	1 1/2" CTS	539	Less than or equal to 60	1		B	S	10/24/2022		10/24/2022			227	1	0.11537432	26.2662904	
2207884	91945	DB	PC	3/4"	767	Less than or equal to 60	2		B	S	5/6/2022		5/19/2022			139	14	0.11537432	16.03708775	
2212286	92113	DB	PC	3/4"	779	Less than or equal to 60	1		B	M	11/20/2022		11/20/2022			174	30	0.11537432	19.9257432	
2209250	92116	DB	PC	3/4"	1141	Less than or equal to 60	2		B	S	5/5/2022		6/23/2022			174	14	0.00051972	0.09037102	
2202176	91910	DB	PC	1"	875	Less than or equal to 60	2		B	S	2/5/2022		2/17/2022			148	17	0.11537432	15.3797136	
2202752	92007	DB	PC	3/4"	781	Less than or equal to 60	2		B	M	2/9/2022		2/9/2022			151	9	0.11537432	1.08372088	
2209528	92103	DB	P	Unknown	507	Less than or equal to 60	1		B	S	5/31/2022		5/31/2022			48	17	0.11537432	17.42158453	
2201765	92139	MB	PC	3"	615	Less than or equal to 60	2		B	S	2/26/2022		3/7/2022			66	41	0.11537432	7.64745353	
2201229	92114	DB	PC	3/4"	839	Less than or equal to 60	2		B	S	1/19/2022		1/24/2022			83	65	0.11537432	9.576102756	
2200775	92021	DB	PC	3/4"	695	Less than or equal to 60	1		B	M	1/12/2022		1/12/2022			151	1	0.11537432	0.11537432	
2209024	92105	MB	PC	1 1/2"	628	Less than or equal to 60	2		B	S	6/24/2022		7/7/2022			127	32	0.020813075	0.132730908	
2202299	91911	DB	PC	3/4"	815	Less than or equal to 60	2		B	S	2/27/2022		2/17/2022			48	16	0.11537432	5.537981736	
2208886	92105	DB	PC	3/4"	863	Less than or equal to 60	2		B	S	6/20/2022		7/5/2022			182	43	0.004780775	0.006061051	
2213175	92124	DB	P	1 1/2" CTS	587	Less than or equal to 60	1		B	S	7/14/2022		7/14/2022			195	15	0.11537432	22.49807274	
2212025	92056	DB	PC	3/4"	719	Less than or equal to 60	1		B	M	11/16/2022		11/16/2022			1	1	0.11537432	0.11537432	
2209024	92116	MB	PC	1 1/2"	628	Less than or equal to 60	2		B	S	6/24/2022		6/24/2022			159	17	0.11537432	18.34632829	
2210072	92115	DB	PC	1 1/2"	800	Less than or equal to 60	2		B	S	6/8/2022		7/19/2022			200	42	0.001004063	0.20680559	
2209998	92115	DB	PC	3/4"	915	Less than or equal to 60	2		B	S	6/7/2022		6/6/2022			181	24	0.001203232	0.175496063	
2203829	91910	DB	PC	3/4"	803	Less than or equal to 60	1		B	S	2/10/2022		2/10/2022			41	1	0.11537432	4.79364012	
2212640	92123	DB	PC	1 1/4"	873	Less than or equal to 60	2		B	M	7/19/2022		8/9/2022			16	16	0.11537432	14.80959712	
2212229	92115	DB	PC	3/4"	875	Less than or equal to 60	2		B	S	11/22/2022		11/22/2022			2	2	0.11537432	0.23679664	
2207751	92114	MB	PC	1 1/2"	839	Less than or equal to 60	2		B	S	5/3/2022		5/30/2022			142	18	0.11537432	16.15264248	
2209762	92105	DB	PC	3/4"	827	Less than or equal to 60	2		B	S	6/28/2022		7/6/2022			150	20	0.000964661	0.180373959	
2209724	92114	DB	PC	3/4"	911	Less than or equal to 60	2		B	S	5/5/2022		6/4/2022			150	28	0.007202886	1.07963875	
2212384	92028	DB	PC	3"	491	Less than or equal to 60	1		B	M	11/21/2022		11/22/2022			2	2	0.11537432	0.230749644	
2210583	91941	DB	P	1 1/4"	575	Less than or equal to 60	1		B	S	6/16/2022		7/6/2022			197	31	0.019665827	2.4201108	
2212653	92109	MB	P	3"	1174	Less than or equal to 60	1		B	S	11/14/2022		11/15/2022			2	2	0.11537432	0.230749644	
2210333	92107	DB	PC	3/4"	779	Less than or equal to 60	2		B	S	6/11/2022		6/11/2022			102	2	0.11537432	11.51844661	
2210139	92114	MB	PC	2"	767	Less than or equal to 60	2		B	S	6/11/2022		7/7/2022			145	27	0.001887666	0.154812166	
2204807	92116	DB	PC	3/4"	863	Less than or equal to 60	2		B	S	4/19/2022		5/25/2022			188	37	0.006403031	0.848949470	
2208517	91977	MB	P	1 1/2"	755	Less than or equal to 60	2		B	S	2/16/2022		2/16/2022			43	3	0.11537432	4.814364564	
2212929	91941	DB	PC	3/4"	671	Less than or equal to 60	1		B	M	12/29/2022		12/29/2022			1	1	0.11537432	0.11537432	
2211778	92154	DB	PC	3/4"	839	Less than or equal to 60	2		B	S	8/27/2022		8/27/2022			1	1	0.11537432	0.11537432	
2201764	91950	DB	P	1 1/2" CTS	515	Less than or equal to 60	2		B	S	1/16/2022		4/12/2022			111	86	0.070028845	7.77297801	
2211789	92105	MB	PC	1 1/2"	827	Less than or equal to 60	1		B	M	9/29/2022		9/29/2022			1	1	0.11537432	0.11537432	
2211512	92007	DB	PC	3/4"	755	Less than or equal to 60	2		B	M	11/13/2022		11/14/2022			31	1	0.11537432	3.42761964	
2200312	92028	DB	P	1"	800	Less than or equal to 60	1		B	S	1/5/2022		1/5/2022			5	1	0.11537432	6.57897366	
2200180	92139	MB	PC	3/4"	915	Less than or equal to 60	2		B	S	1/4/2022		1/4/2022			47	24	0.11537432	5.423624064	
2210245	92103	DB	PC	3/4"	1126	Less than or equal to 60	2		B	S	6/10/2022		7/12/2022			193	33	0.007265011	1.402140716	
2206099	92114	MB	PC	3/4"	839	Less than or equal to 60	2		B	S	4/15/2022		5/10/2022			150	26	0.11537432	14.99871516	
2202098	91950	DB	PC	3/4"	743	Less than or equal to 60	1		B	S	1/31/2022		1/31/2022			3	1	0.11537432	3.73616964	
2202503	91910	DB	PC	3/4"	791	Less than or equal to 60	1		B	S	2/7/2022		2/6/2022			2	2	0.11537432	4.28885084	
2202166	92113	DB	PC	3/4"	611	Less than or equal to 60	2		B	S	2/14/2022		2/14/2022			47	24	0.11537432	5.423624064	
2201484	91950	DB	PC	3/4"	683	Less than or equal to 60	2		B	S	1/22/2022		6/4/2022			372	131	0.11537432	17.5869526	
2208487	92116	DB	PC	2"	1157	Less than or equal to 60	2		B	S	5/16/2022		6/21/2022			172	37	0.02646683	4.515727631	
2207444	92115	MB	PC	1 1/4"	863	Less than or equal to 60	2		B	M	4/27/2022		4/28/2022			1	1	0.11537432	11.48137411	
2212034	92111	DB	PC	3/4"	647	Less than or equal to 60	1		B	M	11/14/2022		11/14/2022			2	2	0.11537432	0.230749644	
2212128	92037	DB	PC	3/4"	611	Less than or equal to 60	2		B	S	11/18/2022		11/18/2022			319	3	0.11537432	38.0035312	
2210580	92110	MB	P	1 1/2"	755	Less than or equal to 60	1		B	M	10/31/2022		11/1/2022			2	2	0.11537432	0.230749644	
2212447	92028	DB	PC	3"	1174	Less than or equal to 60	1		B	S	11/13/2022		11/14/2022			318	4	0.11537432	14.80959712	
2212170	92037	DB	PC	3/4"	359	Less than or equal to 60	2		B	S	1/30/2022		1/30/2022			341	1	0.11537432	38.7427386	
2203343	91910	DB	PC	3/4"	586	Less than or equal to 60	2		B	S	2/18/2022		3/21/2022			80	32	0.11537432	9.22978556	
2208064	92114	DB	PC	3/4"	515	Less than or equal to 60	2		B	S	5/7/2022		6/23/2022			151	1	0.11537432	0.230749644	
2211930	91950	DB	PC	3/4"	719	Less than or equal to 60	2		B	M	11/18/2022		11/18/2022			3	3	0.11537432	0.346213496	
2205956	92116	DB	P	1 1/4"	574	Less than or equal to 60	1		B	M	3/9/2022		3/9/2022			1	1	0.11537432	0.11537432	
2211809	92056	DB	PC	3/4"	743	Less than or equal to 60	2		B	S	7/6/2022		7/21/							

2218822	92103	DB	PC	3/4"	707	Less than or equal to 60	2	B	S	6/21/2002	197	26	0.11537432	22.728822
2218840	92011	MB	PC	3/4"	407	Less than or equal to 60	1	B	S	5/17/2002	188	38	0.11537432	22.921302
2218840	92114	MB	PC	2"	755	Less than or equal to 60	2	B	S	5/13/2002	193	61	0.01876008	3.20268822
2214140	92037	DB	PC	3/4"	935	Less than or equal to 60	2	B	M	11/10/2002	2	2	0.11537432	0.23074964
2211027	92114	DB	3/4"	787	Less than or equal to 60	2	B	S	6/11/2002	142	142	0.41088809	2.65504905	
2207891	92114	DB	PC	3/4"	767	Less than or equal to 60	2	B	S	5/5/2002	144	20	0.11537432	16.6136141
2201037	92114	MB	PC	3/4"	839	Less than or equal to 60	2	B	S	4/18/2002	95	95	0.11537432	10.96505954
2202214	91911	MB	PC	1 1/2"	695	Less than or equal to 60	1	B	S	2/2/2002	133	3	0.11537432	3.807361156
2210423	92037	DB	PC	3/4"	635	Less than or equal to 60	1	B	M	6/14/2002	1	1	0.11537432	0.11537432
2207672	92056	MB	PC	1 1/2"	539	Less than or equal to 60	2	B	S	5/1/2002	1	1	0.11537432	0.11537432
2223332	92128	DB	P	1/2"CTS	539	Less than or equal to 60	1	B	M	12/1/2002	1	1	0.11537432	0.11537432
2200660	92139	DB	PC	3/4"	436	Less than or equal to 60	2	B	S	10/10/2002	41	32	0.11537432	4.73034613
2221217	92037	MB	PC	2"	787	Less than or equal to 60	1	B	M	11/18/2002	1	1	0.11537432	0.11537432
2214396	92114	DB	PC	3/4"	935	Less than or equal to 60	1	B	M	9/8/2002	1	1	0.11537432	0.11537432
2208213	92010	MB	PC	1 1/2"	539	Less than or equal to 60	2	B	S	5/24/2002	14	14	0.11537432	1.615246248
2202599	91911	DB	PC	3/4"	767	Less than or equal to 60	2	B	S	2/7/2002	37	37	0.60	11.391349
2207466	92115	MB	PC	3/4"	791	Less than or equal to 60	2	B	S	4/28/2002	118	118	0.11537432	15.6131818
2206105	92124	MB	PC	2"	515	Less than or equal to 60	2	B	M	5/12/2002	96	66	0.11537432	4.153490532
2201441	92139	DB	PC	3/4"	767	Less than or equal to 60	2	B	S	2/21/2002	2	2	0.11537432	1.8839374
2210902	92102	DB	PC	3/4"	623	Less than or equal to 60	2	B	S	6/22/2002	206	34	0.11537432	26.79219479
2206144	91977	DB	PC	3/4"	767	Less than or equal to 60	2	B	S	4/26/2002	115	10	0.11537432	13.88348891
2212650	92084	DB	PC	3/4"	623	Less than or equal to 60	2	B	S	11/12/2002	211	2	0.11537432	2.20520893
2211785	92115	DB	PC	3/4"	827	Less than or equal to 60	2	B	S	7/16/2002	209	23	0.11537432	24.1131899
2202094	91941	MB	PC	1 1/2"	889	Less than or equal to 60	2	B	M	1/13/2002	2	2	0.11537432	0.23074964
2210849	91977	MB	P	2"	755	Less than or equal to 60	2	B	S	6/21/2002	235	64	0.11537432	35.5215049
2203241	92102	DB	P	1/2"PS	587	Less than or equal to 60	2	B	M	2/14/2002	38	38	0.11537432	4.384239816
2212026	92071	MB	P	2"	491	Less than or equal to 60	1	B	S	11/29/2002	334	2	0.11537432	35.5215049
2202422	91911	DB	P	1"	131	Less than or equal to 60	1	B	M	2/4/2002	35	3	0.11537432	4.03811562
2211008	92102	DB	PC	1 1/2"	851	Less than or equal to 60	2	B	S	6/8/2002	17	37	0.02008196	1.96500071
2212604	92139	MB	PC	1 1/2"	695	Less than or equal to 60	2	B	S	7/19/2002	216	17	0.11537432	24.92004211
2206191	91945	DB	PC	3/4"	863	Less than or equal to 60	2	B	S	5/21/2002	193	44	0.11537432	16.2671921
2202087	92088	DB	PC	3/4"	695	Less than or equal to 60	2	B	S	10/2/2002	167	18	0.11537432	30.22873798
2201698	92139	DB	PC	3/4"	731	Less than or equal to 60	1	B	M	1/24/2002	2	2	0.11537432	0.23074964
2200979	91977	DB	PC	3/4"	767	Less than or equal to 60	2	B	S	4/5/2002	192	96	0.11537432	21.92119908
2200740	92129	MB	P	3"	431	Less than or equal to 60	2	B	S	1/18/2002	2	2	0.11537432	1.615246248
2203792	92064	MB	P	2"	563	Less than or equal to 60	2	B	S	2/28/2002	59	59	0.11537432	6.807195188
2200512	92114	MB	PC	3/4"	875	Less than or equal to 60	2	B	S	2/17/2002	48	48	0.11537432	5.5787136
2222943	92110	MB	PC	1 1/2"	754	Less than or equal to 60	1	B	M	12/30/2002	2	2	0.11537432	0.23074964
2219932	92124	MB	PC	1 1/2"	539	Less than or equal to 60	2	B	S	10/24/2002	286	2	0.11537432	34.38170714
2218822	92083	DB	PC	3/4"	779	Less than or equal to 60	2	B	S	10/11/2002	267	16	0.11537432	25.00553709
2211734	92110	DB	PC	3/4"	863	Less than or equal to 60	1	B	S	7/5/2002	198	1	0.11537432	21.49370015
2212263	92119	DB	PC	3/4"	707	Less than or equal to 60	2	B	S	7/15/2002	215	16	0.11537432	25.00553709
2201285	92050	DB	PC	3/4"	743	Less than or equal to 60	1	B	S	1/19/2002	20	2	0.11537432	2.3074964
2218571	91983	DB	PC	3/4"	767	Less than or equal to 60	2	B	S	10/2/2002	281	20	0.11537432	32.4202989
2212328	92021	MB	PC	3/4"	839	Less than or equal to 60	1	M	M	12/1/2002	20	16	0.11537432	2.11537432
2202741	91911	DB	PC	3/4"	767	Less than or equal to 60	2	B	S	2/9/2002	151	112	0.01814993	2.79574472
2212040	92110	MB	PC	3/4"	755	Less than or equal to 60	2	B	S	11/12/2002	112	112	0.11537432	12.79574472
2204809	91950	MB	PC	1 1/2"	743	Less than or equal to 60	2	B	M	3/16/2002	1	1	0.11537432	0.11537432
2205002	91950	MB	PC	1 1/2"	1019	Less than or equal to 60	2	B	S	3/21/2002	120	1	0.11537432	6.22978056
2212109	92024	MB	P	2"	467	Less than or equal to 60	2	B	S	11/16/2002	116	17	0.11537432	24.92004211
2202907	91911	DB	PC	3/4"	779	Less than or equal to 60	2	B	S	2/13/2002	85	84	0.01348816	1.68602009
2212415	92083	DB	PC	1 1/2"	818	Less than or equal to 60	2	B	M	10/27/2002	10	10	0.11537432	0.23074964
2203932	92075	DB	PC	3/4"	815	Less than or equal to 60	2	B	S	3/2/2002	67	7	0.11537432	7.79350470
2204317	91905	DB	PC	3/4"	719	Less than or equal to 60	1	B	S	3/9/2002	68	7	0.11537432	7.845481776
2212241	91842	DB	PC	3/4"	659	Less than or equal to 60	2	B	S	7/13/2002	221	21	0.11537432	25.4971517
2212490	92109	DB	PC	3/4"	899	Less than or equal to 60	2	B	S	8/9/2002	221	23	0.11537432	25.4971517
2210936	92115	MB	PC	3/4"	863	Less than or equal to 60	2	B	S	4/5/2002	125	31	0.11537432	15.42143165
2209567	92105	DB	PC	3/4"	827	Less than or equal to 60	1	B	S	5/31/2002	251	1	0.11537432	17.42148543
2208822	92105	DB	PC	3/4"	251	Less than or equal to 60	2	B	S	5/12/2002	164	34	0.00516829	0.85112722
2208174	92027	DB	PC	3/4"	707	Less than or equal to 60	2	B	S	1/28/2002	152	15	0.11537432	12.74747472
2207929	91941	DB	PC	3/4"	803	Less than or equal to 60	2	B	S	5/5/2002	199	15	0.11537432	16.0870875
2200915	91911	MB	PC	1 1/2"	515	Less than or equal to 60	2	B	S	5/21/2002	1	1	0.11537432	0.11537432
2209071	91911	MB	PC	1 1/2"	647	Less than or equal to 60	2	B	M	5/23/2002	7	47	0.00883453	0.18012571
2200487	92139	MB	PC	1 1/2"	889	Less than or equal to 60	2	B	S	1/10/2002	14	5	0.11537432	1.91214668
2206210	92021	MB	PC	3/4"	539	Less than or equal to 60	2	B	S	4/12/2002	102	10	0.11537432	11.74622926
2210117	92103	MB	PC	1 1/2"	1139	Less than or equal to 60	2	B	S	7/9/2002	12	30	0.01029256	2.962378632
2215616	92105	MB	PC	3/4"	827	Less than or equal to 60	2	B	M	8/29/2002	10	10	0.11537432	1.038733808
2219008	92101	MB	PC	1 1/2"	971	Greater than 60	2	B	M	10/13/2002	19	12	0.11537432	1.18446794
2200904	92105	DB	PC	3/4"	815	Less than or equal to 60	2	B	S	5/26/2002	176	31	0.00094267	0.16388089
2202749	91910	DB	PC	3/4"	599	Less than or equal to 60	2	B	S	5/17/2002	171	31	0.11537432	11.80613832
2200071	92116	MB	PC	1 1/2"	933	Less than or equal to 60	1	B	M	1/10/2002	2	2	0.11537432	0.23074964
2200747	92105	DB	PC	3/4"	719	Less than or equal to 60	2	B	S	5/18/2002	170	33	0.00497668	0.81302052
2201794	91950	DB	PC	3/4"	899	Less than or equal to 60	1	B	S	1/27/2002	27	2	0.11537432	3.115157432
2212040	92025	DB	PC	3/4"	839	Less than or equal to 60	2	B	M	11/29/2002	14	2	0.11537432	0.23074964
2211885	92105	DB	PC	3/4"	851	Less than or equal to 60	2	B	S	8/31/2002	149	1	0.11537432	14.84959172
2207853	92111	DB	PC	3/4"	779	Less than or equal to 60	2	B	M	5/4/2002	27	1	0.11537432	0.11537432
2211507	92054	MB	PC	3/4"	851	Less than or equal to 60	2	B	S	8/24/2002	242	1	0.11537432	27.00266144
2225428	92116	MB	PC	1 1/2"	755	Less than or equal to 60	2	B	M	12/21/2002	1	1	0.11537432	0.11537432
2210844	92114	DB	PC	3/4"	959	Less than or equal to 60	2	B	S	6/21/2002	200	29	0.00180401	0.36808208
2211753	92105	DB	PC	3/4"	635	Less than or equal to 60	2	B	S	9/24/2002	189	3	0.11537432	0.23074964
2214115	92020	MB	PC	1 1/2"	815	Less than or equal to 60	2	B	S	8/8/2002	222	2	0.11537432	25.6131905
2200884	92115	MB	PC	3/4"	1019	Less than or equal to 60	2	B	S	4/7/2002	139	18	0.11537432	15.03700765
2219542	92121	DB	PC	1"	383	Less than or equal to 60	2	B	S	10/19/2002	319	28	0.11537432	36.8045951
2225285	92084	DB	PC	3/4"	887	Less than or equal to 60	2	B	M	12/20/2002	2	2	0.11537432	0.23074964
2209441	92115	MB	PC	1 1/2"	743	Less than or equal to 60	2	B	S	4/5/2002	134	40	0.11537432	25.46024409
2221017	91942	MB	PC	1 1/2"	933	Less than or equal to 60	1	B	M	12/17/2002	2	2	0.11537432	0.23074964
2212009	92056	MB	PC	3/4"	695	Less than or equal to 60	2	B	S	7/11/2002	211	21		

220973	92105	DB	PC	1"	839	Less than or equal to 60	1	B	S	5/25/2002	5/26/2002	146	2	0.11537432	16.84472087
220987	92126	MB	PC	2"	851	Less than or equal to 60	2	B	S	2/5/2002	2/5/2002	45	10	0.11537432	25.49826294
2212626	92113	DB	PC	3/4"	859	Less than or equal to 60	1	B	M	7/19/2002	7/19/2002	1	1	0.11537432	0.11537432
2212928	92109	DB	PC	3/4"	859	Less than or equal to 60	1	B	M	7/22/2002	7/22/2002	1	1	0.11537432	0.11537432
2213011	92111	DB	PC	3/4"	863	Less than or equal to 60	2	B	S	8/15/2002	8/15/2002	227	1	0.11537432	25.90064416
221442	92113	DB	P	1/2"/PS	443	Less than or equal to 60	1	B	M	11/11/2002	11/11/2002	1	1	0.11537432	0.11537432
221443	92114	DB	PC	3/4"	695	Less than or equal to 60	1	B	S	6/28/2002	6/28/2002	160	3	0.11537432	20.76245126
2201074	92119	DB	PC	3/4"	687	Less than or equal to 60	1	B	M	1/16/2002	1/16/2002	3	1	0.11537432	0.16421246
2221474	92127	MB	P	3"	503	Less than or equal to 60	1	B	M	11/11/2002	11/11/2002	1	1	0.11537432	0.11537432
2202429	91811	DB	PC	3/4"	599	Less than or equal to 60	1	B	S	2/4/2002	2/4/2002	35	3	0.11537432	7.49937579
2208200	92110	DB	PC	3/4"	889	Less than or equal to 60	2	B	S	4/28/2002	4/28/2002	169	30	0.11537432	19.4982971
2204084	91941	DB	PC	3/4"	1139	Less than or equal to 60	1	B	M	3/4/2002	3/4/2002	3	3	0.11537432	0.23074944
2201311	91977	MB	PC	2"	612	Less than or equal to 60	2	B	S	1/20/2002	1/20/2002	62	43	0.11537432	7.15333384
2201081	92113	MB	PC	1 1/2"	899	Less than or equal to 60	2	B	S	1/17/2002	1/22/2002	62	65	0.11537432	0.11537432
2212516	92120	DB	PC	3/4"	731	Less than or equal to 60	1	B	S	7/18/2002	7/18/2002	199	1	0.11537432	21.857147
2212265	91942	DB	PC	3/4"	659	Less than or equal to 60	1	B	S	7/13/2002	7/14/2002	195	2	0.11537432	22.49827274
2205154	92139	DB	PC	3/4"	899	Less than or equal to 60	2	B	S	7/28/2002	7/28/2002	47	1	0.11537432	5.42824264
2211387	92109	DB	PC	3/4"	889	Less than or equal to 60	2	B	S	7/28/2002	7/28/2002	222	14	0.11537432	25.6131905
2204243	91911	DB	P	1"	131	Less than or equal to 60	1	B	S	2/4/2002	2/4/2002	35	1	0.11537432	4.0381562
2209963	92020	DB	P	1/2"CTS	539	Less than or equal to 60	2	B	S	6/7/2002	6/7/2002	150	33	0.02089374	30.49520897
2208092	92139	DB	PC	3/4"	899	Less than or equal to 60	2	B	S	4/13/2002	4/13/2002	66	54	0.11537432	7.61473312
2205465	91977	MB	PC	1 1/2"	755	Less than or equal to 60	2	B	S	4/7/2002	4/7/2002	160	64	0.11537432	16.40595712
2212545	92120	MB	PC	1 1/2"	803	Less than or equal to 60	1	B	S	7/18/2002	7/19/2002	200	2	0.11537432	23.0749644
2218565	92101	MB	P	2"	587	Less than or equal to 60	1	B	S	10/7/2002	10/8/2002	281	2	0.11537432	34.2020909
2201481	92037	DB	PC	3/4"	558	Less than or equal to 60	1	B	M	1/22/2002	1/22/2002	1	1	0.11537432	0.11537432
2207380	92115	DB	PC	3/4"	791	Less than or equal to 60	2	B	S	4/27/2002	5/3/2002	147	31	0.11537432	16.9008556
2201786	92037	DB	P	1/2"CTS	515	Less than or equal to 60	1	B	M	1/27/2002	1/27/2002	1	1	0.11537432	0.11537432
2212169	92119	MB	PC	1 1/2"	803	Less than or equal to 60	2	B	S	7/27/2002	8/29/2002	241	34	0.00180467	0.44635444
2223001	92040	MB	PC	2"	767	Less than or equal to 60	2	B	M	11/29/2002	11/29/2002	2	2	0.11537432	0.23074944
2212168	92126	DB	PC	3/4"	628	Less than or equal to 60	1	B	S	1/14/2002	1/14/2002	118	1	0.11537432	36.4693478
2204825	92110	MB	PC	2"	683	Less than or equal to 60	2	B	M	1/17/2002	1/17/2002	1	1	0.11537432	0.11537432
2213002	92030	DB	PC	3/4"	842	Less than or equal to 60	2	B	S	4/4/2002	4/4/2002	216	13	0.11537432	14.9200211
2208413	92104	MB	PC	1 1/2"	815	Less than or equal to 60	2	B	S	5/13/2002	6/14/2002	165	33	0.00114026	0.5113433
2216977	92048	MB	PC	1 1/2"	795	Less than or equal to 60	2	B	M	9/21/2002	9/21/2002	6	6	0.11537432	0.60224892
2218006	92054	DB	PC	1 1/2"/PS	455	Less than or equal to 60	2	B	M	9/28/2002	9/28/2002	1	1	0.11537432	0.11537432
2208228	92102	DB	PC	3/4"	635	Less than or equal to 60	2	B	S	6/11/2002	6/7/2002	158	28	0.01393278	2.2048680
2215210	92037	DB	P	1/2"CTS	887	Less than or equal to 60	2	B	S	8/23/2002	8/23/2002	251	17	0.11537432	15.9250773
2213737	92064	DB	P	1"	395	Less than or equal to 60	1	B	M	8/1/2002	8/1/2002	2	2	0.11537432	0.23074944
2209904	92114	DB	PC	3/4"	659	Less than or equal to 60	1	B	S	6/6/2002	6/6/2002	107	1	0.11537432	15.1193292
2210081	92105	DB	PC	3/4"	875	Less than or equal to 60	2	B	S	6/8/2002	7/13/2002	194	1	0.04009261	21.7147202
2212253	92056	DB	PC	3/4"	695	Less than or equal to 60	2	B	S	7/13/2002	7/27/2002	258	15	0.11537432	29.2979426
2209837	91945	DB	PC	3/4"	791	Less than or equal to 60	2	B	S	6/16/2002	6/16/2002	142	16	0.11537432	14.40595712
2208012	92103	MB	P	2"	559	Less than or equal to 60	1	B	M	5/8/2002	5/8/2002	2	2	0.11537432	0.23074944
2204639	91977	DB	PC	3/4"	647	Less than or equal to 60	2	B	M	3/14/2002	4/4/2002	22	22	0.11537432	2.5384104
2209229	92105	DB	PC	1 1/2"	824	Less than or equal to 60	2	B	S	6/8/2002	6/8/2002	181	3	0.00447042	0.44635444
2201664	92139	MB	PC	2"	863	Less than or equal to 60	2	B	S	1/25/2002	2/1/2002	302	8	0.11537432	3.69191424
2208444	92102	DB	P	7/8"CTS	779	Less than or equal to 60	1	B	M	1/27/2002	1/27/2002	151	20	0.05018986	0.11537432
2202403	92084	MB	P	2"	527	Less than or equal to 60	1	B	S	10/24/2002	10/27/2002	32	2	0.11537432	34.6124196
2202049	92110	DB	PC	3/4"	839	Less than or equal to 60	2	B	S	2/13/2002	2/13/2002	78	38	0.11537432	21.9519008
2202768	91977	MB	PC	3/4"	747	Less than or equal to 60	2	B	S	4/14/2002	4/28/2002	118	41	0.11537432	15.1440818
2204635	92104	MB	PC	4"	1188	Less than or equal to 60	1	B	S	1/14/2002	1/14/2002	43	1	0.11537432	8.42235436
2204739	92118	MB	PC	3/4"	575	Less than or equal to 60	2	B	S	3/15/2002	3/15/2002	283	1	0.11537432	15.1140898
2209801	92115	DB	PC	3/4"	983	Less than or equal to 60	2	B	S	6/4/2002	7/6/2002	190	36	0.11537432	21.9119008
2208241	92103	DB	PC	1 1/2"	795	Less than or equal to 60	2	B	S	5/11/2002	7/9/2002	206	76	0.11537432	20.1674928
2213162	92114	DB	PC	3/4"	453	Less than or equal to 60	1	B	M	7/29/2002	7/29/2002	10	10	0.11537432	0.23074944
2213844	92117	DB	PC	3/4"	767	Less than or equal to 60	1	B	S	8/3/2002	8/3/2002	27	21	0.11537432	0.11537432
2212586	92119	DB	PC	3/4"	767	Less than or equal to 60	1	B	S	8/3/2002	8/3/2002	282	2	0.11537432	25.2824104
2209271	91910	MB	PC	1 1/2"	1055	Less than or equal to 60	2	B	M	5/25/2002	5/26/2002	1	1	0.11537432	0.23074944
2204046	92021	DB	P	1 1/4"	539	Less than or equal to 60	1	B	M	1/8/2002	1/8/2002	1	1	0.11537432	0.11537432
2207467	91945	DB	PC	3/4"	791	Less than or equal to 60	2	B	S	4/28/2002	4/28/2002	153	2	0.00252486	0.44635444
2215489	92101	DB	PC	3/4"	839	Less than or equal to 60	2	B	S	9/6/2002	9/6/2002	249	13	0.11537432	28.7380827
2211793	92008	MB	PC	1 1/4"	515	Less than or equal to 60	2	B	S	7/6/2002	7/6/2002	209	21	0.11537432	13.111889
2211248	92114	MB	PC	2"	887	Less than or equal to 60	2	B	S	6/27/2002	7/12/2002	107	25	0.11537432	23.3056856
2204743	92101	DB	PC	1 1/2"	785	Less than or equal to 60	2	B	S	3/15/2002	6/6/2002	252	84	0.11537432	21.181202
2208395	92116	MB	PC	1 1/2"/PS	453	Less than or equal to 60	2	B	S	1/13/2002	6/6/2002	159	2	0.01019051	0.11537432
2215105	92119	MB	PC	2"	731	Less than or equal to 60	2	B	S	4/22/2002	5/15/2002	258	25	0.11537432	29.7668086
2203113	91977	MB	PC	3/4"	743	Less than or equal to 60	2	B	S	4/12/2002	4/12/2002	102	102	0.11537432	15.76822166
2204260	92024	DB	PC	3/4"	803	Less than or equal to 60	1	B	M	1/8/2002	1/8/2002	1	1	0.11537432	0.11537432
2202064	92119	DB	PC	3/4"	989	Less than or equal to 60	2	B	S	1/11/2002	3/14/2002	171	63	0.11537432	8.24625436
2202062	92084	DB	PC	3/4"	827	Less than or equal to 60	2	B	S	10/11/2002	11/11/2002	315	1	0.11537432	34.8400628
2210763	92140	MB	PC	1 1/2"	993	Less than or equal to 60	2	B	S	6/20/2002	7/9/2002	193	21	0.11537432	22.8027381
2218333	92014	DB	P	2"	509	Less than or equal to 60	1	B	M	10/4/2002	10/4/2002	1	1	0.11537432	0.11537432
2214287	92011	DB	P	3"	551	Less than or equal to 60	2	B	M	8/10/2002	8/11/2002	2	2	0.11537432	0.23074944
2202055	92129	DB	P	1/2"CTS	515	Less than or equal to 60	2	B	S	1/11/2002	1/11/2002	11	1	0.11537432	1.26912052
2210462	92114	DB	PC	3/4"	839	Less than or equal to 60	2	B	S	6/14/2002	6/14/2002	166	1	0.11537432	14.9200211
2211906	92020	MB	P	3"	575	Less than or equal to 60	1	B	S	8/3/2002	8/3/2002	243	1	0.11537432	28.0380588
2211445	92114	DB	PC	3/4"	647	Less than or equal to 60	2	B	S	6/24/2002	7/8/2002	207	20	0.11537432	22.8825952
2204044	92139	MB	PC	2"	875	Less than or equal to 60	2	B	S	1/8/2002	1/8/2002	1	1	0.11537432	0.11537432
2212179	92102	DB	PC	3/4"	623	Less than or equal to 60	2	B	M	11/30/2002	12/5/2002	6	6	0.11537432	0.60224892
2212922	92102	DB	PC	1 1/2"	851	Less than or equal to 60	2	B	S	7/22/					

Pipeline Leaks

Removed

2220138

SDG&E, June 15th, 2023

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, 2023 June Report Appendix 4; Rev. 03/30/2023

Notes:
 Definitions in Data Request R15-01-008, 2023 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 _{AS}]	Miles on Multi-Year Survey Cycles [M _{MS}]	Survey Interval [Yr]	Miles Surveyed Annually from Multi-Year Survey Cycles [M _{AY}]	Total # of Leaks Detected from Survey [N _{LD}]	If using a 3-year trailing leak rate average then include - 2020 Annual Leak Rate [R ₂₀]	If using a 3-year trailing leak rate average then include - 2021 Annual Leak Rate [R ₂₁]	2022 Annual Leak Rate [R ₂₂]	If applicable, then calculate the 3-year Average Leak Rate (Leaks / Mile / Yr)	# of Unknown Leaks Detected from O&M* [N _{UL}]	Total # of Leaks Detected from O&M* [N _{UL}]
									$R_{3,y} = \frac{N_{LD}}{M_{S,A} + (Y \times M_{S,Y})}$	$\bar{R}_3 = \frac{1}{3} \sum_{i=20}^{2022} R_{X,i}$	$N_{UL} = R_{3,y} \times (M_{MS} - M_{AS}) \times \frac{1}{2}$	
Main/Vintage* Plastic	1,498	1,498	-	1	0	43	0.0168	0.0257	0.02871	0.02375	-	35
Main/Plastic	NA	NA	NA	3	NA	NA	N/A	N/A	NA	NA	NA	NA
Main/Plastic	NA	NA	NA	4	NA	NA	N/A	N/A	NA	NA	NA	NA
Main/Plastic	3,218	1,057	2,161	3	720	6	0.0003	0.0003	0.00186	0.00083	1.80	2
Main/Unprotected Steel	NA	NA	NA	3	NA	NA	N/A	N/A	NA	NA	NA	NA
Main/Unprotected Steel	NA	NA	NA	4	NA	NA	N/A	N/A	NA	NA	NA	NA
Main/Unprotected Steel	NA	NA	NA	5	NA	NA	N/A	N/A	NA	NA	NA	NA
Main/Vintage* Protected Steel	483	483	-	1	0	42	0.0815	0.1139	0.08696	0.09413	-	22
Main/Protected Steel	NA	NA	NA	3	NA	NA	N/A	N/A	NA	NA	NA	NA
Main/Protected Steel	NA	NA	NA	4	NA	NA	N/A	N/A	NA	NA	NA	NA
Main/Protected Steel	3,127	1,037	2,090	3	697	83	0.0148	0.0129	0.02654	0.01808	87.79	35
Main/Unknown	NA	NA	NA	3	NA	NA	N/A	N/A	NA	NA	NA	NA
Service/Vintage* Plastic	1,247	1,247	-	1	0	39	0.0231	0.0184	0.03128	0.02426	-	26
Service/Plastic	NA	NA	NA	3	NA	NA	N/A	N/A	NA	NA	NA	NA
Service/Plastic	NA	NA	NA	4	NA	NA	N/A	N/A	NA	NA	NA	NA
Service/Plastic	3,023	843	2,180	3	727	8	0.0000	0.0023	0.00265	0.00166	3.63	6
Service/Unprotected Steel	NA	NA	NA	3	NA	NA	N/A	N/A	NA	NA	NA	NA
Service/Unprotected Steel	NA	NA	NA	4	NA	NA	N/A	N/A	NA	NA	NA	NA
Service/Unprotected Steel	NA	NA	NA	5	NA	NA	N/A	N/A	NA	NA	NA	NA
Service/Vintage* Protected Steel	290	290	-	1	0	44	0.2368	0.2181	0.15172	0.20223	-	24
Service/Protected Steel	NA	NA	NA	3	NA	NA	N/A	N/A	NA	NA	NA	NA
Service/Protected Steel	NA	NA	NA	4	NA	NA	N/A	N/A	NA	NA	NA	NA
Service/Protected Steel	3,138	1,093	1,643	3	481	200	0.0200	0.0471	0.07887	0.04864	70.18	82
Service/Copper	NA	NA	NA	3	NA	NA	N/A	N/A	NA	NA	NA	NA
Service/Copper	NA	NA	NA	4	NA	NA	N/A	N/A	NA	NA	NA	NA
Service/Copper	NA	NA	NA	5	NA	NA	N/A	N/A	NA	NA	NA	NA
Service/Unknown	NA	NA	NA	3	NA	NA	N/A	N/A	NA	NA	NA	NA
Total	15,422	7,548	7,874	NA	2,625	465	N/A	N/A	NA	N/A	113	242

*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)	2022 Emissions from Leaks detected Prior to 2022 (Mscf)	2022 Emissions from Leaks Detected from 2022 Survey (Mscf)	2022 Emissions from O&M* Leaks Detected in 2022 (Mscf)	2022 Estimated Emissions from Unknown Leaks (Mscf)	Total Estimated 2022 Emissions from Distribution Pipelines (Mscf)
Main/Vintage* Plastic	0.1154	0	1,005	17	0	1,022
Main/Plastic	0.1154	NA	NA	NA	NA	NA
Main/Plastic	0.1154	NA	NA	NA	NA	NA
Main/Plastic	0.1154	0	74	0	76	153
Main/Unprotected Steel	0.1154	NA	NA	NA	NA	NA
Main/Unprotected Steel	0.1154	NA	NA	NA	NA	NA
Main/Unprotected Steel	0.1154	NA	NA	NA	NA	NA
Main/Vintage* Protected Steel	0.1154	0	528	40	0	568
Main/Protected Steel	0.1154	0	1,088	49	1,591	2,728
Main/Protected Steel	0.1154	NA	NA	NA	NA	NA
Main/Protected Steel	0.1154	NA	NA	NA	NA	NA
Main/Unknown	0.1154	NA	NA	NA	NA	NA
Service/Vintage* Plastic	0.1154	0	753	13	0	766
Service/Plastic	0.1154	NA	NA	NA	NA	NA
Service/Plastic	0.1154	NA	NA	NA	NA	NA
Service/Plastic	0.1154	0	76	5	153	227
Service/Unprotected Steel	0.1154	NA	NA	NA	NA	NA
Service/Unprotected Steel	0.1154	NA	NA	NA	NA	NA
Service/Unprotected Steel	0.1154	NA	NA	NA	NA	NA
Service/Vintage* Protected Steel	0.1154	0	609	7	0	616
Service/Protected Steel	0.1154	NA	NA	NA	NA	NA
Service/Protected Steel	0.1154	NA	NA	NA	NA	NA
Service/Protected Steel	0.1154	0	2,911	59	2,966	5,925
Service/Copper	0.1154	NA	NA	NA	NA	NA
Service/Copper	0.1154	NA	NA	NA	NA	NA
Service/Copper	0.1154	NA	NA	NA	NA	NA
Service/Unknown	0.1154	NA	NA	NA	NA	NA
Total	N/A	0	7,039	190	4,775	12,004

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).

	2022 Emissions from Leaks detected Prior to 2022 (Mscf)	2022 Emissions from Leaks Detected from 2022 Survey (Mscf)	2022 Emissions from O&M* Leaks Detected in 2022 (Mscf)	2022 Estimated Emissions from Unknown Leaks (Mscf)	Total Estimated 2022 Emissions from Distribution Pipelines (Mscf)
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 15th, 2023

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, 2023 June Report

Appendix 4; Rev. 03/30/2023

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 (12/31/22)	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	-	279	279	1	NA	-	-	2,204	NA	2,204
Grade 2	-	428	426	29	NA	-	-	5,025	NA	5,025
Grade 3	-	-	-	-	NA	-	-	-	NA	-
Graded Leak Total	-	707	705	NA	-	-	-	7,229	-	7,229
Above Ground Hazardous	0	0	0	0	0	-	0	0	NA	0
Above Ground Non-Hazardous	0	0	0	0	0	-	0	0	NA	0
Above Ground Non-Hazardous Minor	0	0	0	0	0	-	0	0	NA	0
AG Total	-	-	-	-	-	-	-	-	-	-
Total of All Leaks	-	707	705	NA	-	2	-	7,229	-	7,229
Main/Plastic	0	8	8	10.5	1.8	0	0	75	76	151
Main Vintage Plastic	0	78	78	6.9	-	0	0	1,022	0	1,022
Main/Unprotected Steel	0	0	0	NA	NA	0	NA	NA	NA	-
Main/Protected Steel	0	118	118	21.7	37.8	0	0	1,137	1,591	2,728
Main Vintage Protected Steel	0	69	69	25.4	-	0	0	568	0	568
Main Unknown	0	0	0	-	-	0	NA	NA	NA	-
Service/Plastic	0	14	14	10.2	3.6	0	0	74	153	227
Service Vintage Plastic	0	65	65	10.0	-	0	0	766	0	766
Service/Unprotected Steel	0	0	0	NA	NA	0	NA	NA	NA	-
Service Vintage Steel	0	68	68	20.4	-	0	0	616	0	616
Service/Protected Steel	0	287	287	20.3	70.2	0	0	2,970	2,956	5,925
Service Unknown	0	0	0	-	-	0	NA	NA	NA	-
Service/Copper	0	0	0	-	-	0	0	0	0	0
Total	0	707	707	NA	113	0	0	7,229	4,775	12,004

Large Leak or Super Emitter Program Categorization										
Compliance Leak Survey - Non-LL						0				0
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 2022:										
% Change Due to LL/SE Program on 2022:										

This section added to the template for 2020 Reporting. Send any suggestions to improve this worksheet to Staff for consideration.

Reimbursement of the Risk Reduction and Procedures Governing Commission Regulated Natural Gas Pipelines and Facilities to Reduce Natural Gas Leaks Consistent with Senate Bill 1371, Leno. In Response to the Request, RB-21-005, 2023 Case Report
Appendix C, Rev. 03/30/2023

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 to the column total, and then highlight orange.

Distribution Main & Service Pipeline, Damage (3rd party dig, lands, natural disasters, etc.)										Emission Factor or Engineering Estimate (lb/Mcf/Day)		Annual Emissions (Mcf)		Explanatory Notes / Comments	
ID	Geographic Location	Damage Type	Pipe Classification	Pipe Material	Pipe Size (Nominal)	Pipe Age (Months)	Pressure (psi)	Leak Code	Above Ground or Below Ground	Discovery Date (MM/DD/YYYY)	Repair Date (MM/DD/YYYY)	Number of Days Leaking	Emission Factor or Engineering Estimate (lb/Mcf/Day)	Annual Emissions (Mcf)	Explanatory Notes / Comments
2000881 00104	E	DE	P	1/2" CT	195	1	1	1	1	1/3/2022	1/3/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000889 00126	E	DE	P	1/2" CT	359	1	1	1	1	1/3/2022	1/3/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000898 00118	E	DE	P	1/2" CT	443	1	1	1	1	1/3/2022	1/3/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000883 00214	E	DE	P	1/2" CT	347	1	1	1	1	1/3/2022	1/3/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000907 00116	E	DE	P	1/2" CT	539	1	1	1	1	1/3/2022	1/3/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000612 00113	O	DE	P	1"	138	1	1	1	1	1/4/2022	1/4/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000512 00205	E	DE	P	1/2" CT	395	1	1	1	1	1/4/2022	1/4/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000608 00202	E	DE	P	3/4"	923	1	1	1	1	1/8/2022	1/8/2022	1	21.115	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000643 00118	O	DE	P	1 1/4"	574	1	1	1	1	1/8/2022	1/8/2022	1	21.115	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000644 00203	E	DE	PC	2"	1043	1	1	1	1	1/12/2022	1/12/2022	1	70.729	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000645 00118	O	DE	P	1 1/4"	574	1	1	1	1	1/12/2022	1/12/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000614 00204	E	DE	P	1 1/4"	431	1	1	1	1	1/12/2022	1/12/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000646 00104	E	DE	PC	3"	1087	1	1	1	1	1/12/2022	1/12/2022	1	29.483	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000633 00203	E	DE	M	P	2"	515	1	1	1	1/14/2022	1/14/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000634 00104	E	DE	P	1/2" CT	366	1	1	1	1	1/12/2022	1/12/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000627 00208	E	DE	P	1"	19	1	1	1	1	1/14/2022	1/14/2022	1	24.655	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000640 00104	E	DE	P	1"	41	1	1	1	1	1/14/2022	1/14/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000645 00204	E	DE	P	1 1/2" CT	113	1	1	1	1	1/12/2022	1/12/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000621 00113	E	DE	P	1/2" CT	359	1	1	1	1	1/19/2022	1/19/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000608 00203	E	DE	P	1/2" PS	587	1	1	1	1	1/20/2022	1/20/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000613 00113	E	DE	P	1/2" CT	150	1	1	1	1	2/1/2022	2/1/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000615 00205	E	DE	P	1"	399	1	1	1	1	2/1/2022	2/1/2022	1	24.439	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000615 00207	E	DE	P	1/2" PS	383	1	1	1	1	2/1/2022	2/1/2022	1	5.802	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000612 00203	E	DE	P	1/2" CT	347	1	1	1	1	2/1/2022	2/1/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000607 00201	E	DE	P	1/2" CT	575	1	1	1	1	2/2/2022	2/2/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000613 00208	E	DE	P	1/2" CT	128	1	1	1	1	2/3/2022	2/3/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000601 00213	E	DE	P	1/2" PS	599	1	1	1	1	2/3/2022	2/3/2022	1	7.038	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000607 00201	E	DE	P	1/2" PS	763	1	1	1	1	2/3/2022	2/3/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000779 00113	O	DE	PC	3/4"	683	1	1	1	1	2/9/2022	4/20/2022	71	40.623	4.345	
2000640 00104	E	DE	P	1"	251	1	1	1	1	2/11/2022	2/11/2022	1	24.439	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000639 00102	E	DE	PC	1/2"	743	1	1	1	1	2/16/2022	2/16/2022	1	21.115	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000712 00114	E	DE	P	1/2" PS	515	1	1	1	1	2/29/2022	2/29/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000740 00104	E	DE	P	1/2" PS	623	1	1	1	1	2/29/2022	2/29/2022	1	24.842	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000712 00114	E	DE	P	1/2" PS	602	1	1	1	1	2/29/2022	2/29/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000704 00113	E	DE	P	1"	63	1	1	1	1	2/29/2022	2/29/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000703 00207	O	DE	P	1/2" CT	587	1	1	1	1	2/28/2022	2/28/2022	1	1.047	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000630 00118	E	DE	P	1/2" CT	443	1	1	1	1	1/20/2022	1/20/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000646 00104	E	DE	P	1/2" PS	122	1	1	1	1	2/22/2022	2/22/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000617 00104	E	DE	P	2"	58	1	1	1	1	2/22/2022	2/22/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000608 00204	E	DE	PC	1 1/4"	913	1	1	1	1	2/23/2022	2/23/2022	1	9.110	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000645 00204	E	DE	P	1"	36	1	1	1	1	2/23/2022	2/23/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000665 00201	E	DE	P	1"	144	1	1	1	1	2/23/2022	2/23/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000608 00204	E	DE	P	1/2" CT	418	1	1	1	1	2/28/2022	2/28/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000608 00201	E	DE	P	1"	443	1	1	1	1	4/20/2022	4/20/2022	1	7.038	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000617 00219	E	DE	P	1/2" CT	563	1	1	1	1	3/1/2022	3/1/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000619 00104	E	DE	P	1/2" CT	323	1	1	1	1	3/1/2022	3/1/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000616 00102	N	DE	M	P	2"	443	1	1	1	3/7/2022	3/8/2022	2	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000620 00102	E	DE	P	1/2" CT	454	1	1	1	1	3/8/2022	3/8/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000612 00118	E	DE	PC	2"	943	1	1	1	1	3/8/2022	3/8/2022	1	70.729	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000608 00102	E	DE	P	1/2" PS	419	1	1	1	1	3/7/2022	3/7/2022	1	8.103	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000642 00118	E	DE	P	1/2" PS	385	1	1	1	1	3/8/2022	3/8/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000640 00104	E	DE	PC	3/4"	913	1	1	1	1	3/8/2022	3/8/2022	1	21.115	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000643 00201	E	DE	P	1/2" CT	605	1	1	1	1	3/10/2022	3/10/2022	1	4.487	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000640 00104	E	DE	P	1/2" CT	454	1	1	1	1	3/9/2022	3/9/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000612 00118	E	DE	P	1/2" CT	563	1	1	1	1	3/9/2022	3/9/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000645 00204	E	DE	P	1/2" CT	611	1	1	1	1	3/12/2022	3/12/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000619 00102	N	DE	P	1/2" PS	551	1	1	1	1	3/10/2022	3/10/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000612 00118	E	DE	P	1"	287	1	1	1	1	3/10/2022	3/10/2022	1	10.813	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000645 00208	E	DE	P	1/2" CT	587	1	1	1	1	3/12/2022	3/12/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000603 00114	E	DE	P	1"	452	1	1	1	1	3/17/2022	3/17/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000601 00219	E	DE	P	1"	16	1	1	1	1	3/14/2022	3/14/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000617 00201	E	DE	P	1"	809	1	1	1	1	3/17/2022	3/17/2022	1	43.293	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000621 00104	N	DE	P	1/2" CT	467	1	1	1	1	3/16/2022	3/16/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000609 00201	E	DE	P	1"	219	1	1	1	1	3/17/2022	3/17/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000672 00119	E	DE	P	1/2" PS	563	1	1	1	1	3/17/2022	3/17/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000673 00219	E	DE	PC	1"	587	1	1	1	1	3/14/2022	3/14/2022	1	70.729	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000674 00118	E	DE	P	1"	623	1	1	1	1	3/16/2022	3/16/2022	1	184.539	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000618 00113	E	DE	M	P	2"	755	1	1	1	3/18/2022	4/7/2022	41	40.623	2.309	
2000613 00104	E	DE	P	1"	20	1	1	1	1	3/12/2022	3/12/2022	1	18.799	Emission estimated from population of similar events. See Explanatory Notes/Comments for Distribution Pipeline All Damages in Appendix B.	
2000603 00217	E	DE	P	2"	215	1	1	1	1	3/12/2022	3/12/2022	1	18.799	Emission estimated from population of similar events.	

SDG&E, June 15th, 2023

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 2023 June Report

Appendix 4; Rev. 03/30/2023

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) (inches)	Length of Pipe (feet)	Pressure (psi)	Annual Emissions (Mscf)	Explanatory Notes / Comments
N/A	SDG&E Territory	260	N/A	N/A	N/A	0.6990	Distribution Odor Intensity Tests
N/A	SDG&E Territory	1	2"	114	320	0.0625	ABANDONED HP MAIN PIPE
N/A	SDG&E Territory	1	3"	5	320	0.0063	ABANDONED HP MAIN PIPE
N/A	SDG&E Territory	1	4"	1075	320	2.3466	ABANDONED HP MAIN PIPE
N/A	SDG&E Territory	1	6"	49	320	0.2456	ABANDONED HP MAIN PIPE
N/A	SDG&E Territory	1	8"	6	320	0.0508	ABANDONED HP MAIN PIPE
N/A	SDG&E Territory	1	10"	25	320	0.3371	ABANDONED HP MAIN PIPE
N/A	SDG&E Territory	1	3/4"	329	55	0.0049	ABANDONED MP MAIN PIPE
N/A	SDG&E Territory	1	1"	2143	55	0.0608	ABANDONED MP MAIN PIPE
N/A	SDG&E Territory	1	1 1/4"	24	55	0.0012	ABANDONED MP MAIN PIPE
N/A	SDG&E Territory	1	1 1/2"	24129	55	1.6116	ABANDONED MP MAIN PIPE
N/A	SDG&E Territory	1	2"	16495	55	1.8160	ABANDONED MP MAIN PIPE
N/A	SDG&E Territory	1	3"	705	55	0.1773	ABANDONED MP MAIN PIPE
N/A	SDG&E Territory	1	4"	9955	55	4.3627	ABANDONED MP MAIN PIPE
N/A	SDG&E Territory	1	6"	186	55	0.1872	ABANDONED MP MAIN PIPE
N/A	SDG&E Territory	1	8"	4	55	0.0068	ABANDONED MP MAIN PIPE
N/A	SDG&E Territory	1	1 1/4"	4795	55	0.2146	ABANDONED MP MAIN PIPE
N/A	SDG&E Territory	1	2"	123213	55	11.8385	ABANDONED MP MAIN PIPE
N/A	SDG&E Territory	1	3"	30672	55	6.5372	ABANDONED MP MAIN PIPE
N/A	SDG&E Territory	1	4"	49	55	0.0184	ABANDONED MP MAIN PIPE
N/A	SDG&E Territory	1	6"	17	55	0.0138	ABANDONED MP MAIN PIPE
N/A	SDG&E Territory	1	1"	150	55	0.0043	ABANDONED MP SERVICE PIPE
N/A	SDG&E Territory	1	1/2"	28	55	0.0003	ABANDONED MP SERVICE PIPE
N/A	SDG&E Territory	1	3/4"	69874	55	1.0400	ABANDONED MP SERVICE PIPE
N/A	SDG&E Territory	1	1"	1732	55	0.0491	ABANDONED MP SERVICE PIPE
N/A	SDG&E Territory	1	1 1/4"	694	55	0.0337	ABANDONED MP SERVICE PIPE
N/A	SDG&E Territory	1	1 1/2"	400	55	0.0267	ABANDONED MP SERVICE PIPE
N/A	SDG&E Territory	1	2"	150	55	0.0165	ABANDONED MP SERVICE PIPE
N/A	SDG&E Territory	1	3"	5	55	0.0013	ABANDONED MP SERVICE PIPE
N/A	SDG&E Territory	1	4"	75	55	0.0329	ABANDONED MP SERVICE PIPE
N/A	SDG&E Territory	1	1/2"	142753	55	0.7025	ABANDONED MP SERVICE PIPE
N/A	SDG&E Territory	1	1"	4409	55	0.1293	ABANDONED MP SERVICE PIPE
N/A	SDG&E Territory	1	1 1/4"	6851	55	0.3067	ABANDONED MP SERVICE PIPE
N/A	SDG&E Territory	1	2"	1634	55	0.1570	ABANDONED MP SERVICE PIPE
N/A	SDG&E Territory	1	3"	2	55	0.0004	ABANDONED MP SERVICE PIPE
N/A	SDG&E Territory	1	20"	53	400	0.0127	Distribution Blowdown
N/A	SDG&E Territory	1	20"	7920	400	7.4106	Distribution Blowdown

Sum Total	41
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SDG&E, June 15th, 2023

**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 2023 June Report
Appendix 4; Rev. 03/30/2023**

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
				Sum Total	0	

SDG&E, June 15th, 2023

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 2023 June Report
Appendix 4; Rev. 03/30/2023

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
Sum Total								0	

Appendix 4; Rev. 03/30/2023

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	If the utility uses grades for above ground leaks, it is unnecessary to use the AH,AN, or AM designations. 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
Upgraded Leak Grade or Downgraded Leak Grade	U: Upgraded Leak such as a grade 2 or 3 leak that was surveyed again and changed designation to grade 1 or 2. D: downgraded leak, such as a grade 1 or 2 leak that was surveyed again and changed designation to grade 2 or 3.
Above Ground or Below Ground	A = Above Ground B = below ground

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.)</p> <p>M = O&M (E.G. O&M Activities, Third party reports, customer odor reports etc.)</p> <p>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, whichever 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	<p>Use only Repair-Discovery +1. Do not use January 1st for time to repair.</p> <p>For regraded leaks, use Repair Date - Regrade Date +1.</p>
Emission Factor (Mscf/Day)	
Annual Emissions (Mscf)	
Explanatory Notes / Comments	
Unknown Leaks	
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 [$N_{x,L}$]	
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 [$R_{x,2}$]	
2022 Annual Leak Rate [$R_{x,3}$]	$R_{x,3} = \frac{N_{x,L}}{M_{x,A} + (I \times M_{x,I})}$
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	$N_{x,unk} = \bar{R}_x \times (M_x^{Tot} - M_{x,I}) \times \frac{I}{2}$
Total # of Leaks Detected from O&M* [$N_{x,O}$]	
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	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. 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.
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.	Based on a leak start date prior to the first day of the year of interest. This includes leaks discovered through O&M and survey activities.
Emissions from Leaks Discovered in the Year of Interest.	The total number of leaks by grade or category discovered in the year of interest. This includes leaks discovered through O&M and survey activities.
Emissions from Estimated Unsurveyed Leaks in the Year of Interest	The emissions by grade would be on the same basis that used to extrapolate the count of leaks in the unsurveyed areas. 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. 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.
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 = distriibution main, above ground MB = distriibution 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 = unptotected steel, coated
Pipe Size (nominal)	
Pipe Age (months)	
Pressure (psi)	MOP = maximum operating pressure over the past year
Leak Grade	1 = grade 1 2 = grade 2 2+ = grade 2+ 3 = grade 3 N = Non-Graded
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 Fugitive 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	