SDG&E, June 15, 2018

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 2018 June Report

Appendix 7; Rev. 03/31/18

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

Use the Population based emission factor if facility is not surveyed. Use Leaker based emission factor if facility is surveyed, and report only the found leaking components.

Underground Storage Facility Leaks and Emissions:

ID	Geographic Location	Source	Number of Sources	Emission Factor (Mscf/yr)	Annual Emissions (Mscf)	Explanatory Notes / Comments

Note: No facilities of this type.

SDG&E, June 15, 2018

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 2018 June Report

Appendix 7; Rev. 03/31/18

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 compressor. Any intentional release of natural gas for safety or maintenance purposes should be included on the Blowdowns worksheet.

Underground Storage Facility Compressor Vented Emissions (see note above):

ID	Geographic Location	Compressor Type	Prime Mover	Number of Cylinders in Compressor	Number of Seals	Seal Type	Operating Mode: Pressurized Operating (hours)	Operating Mode: Pressurized Idle (hours)	Operating Mode: Depressurized Idle (hours)	Emission Factor: Pressurized Operating (scf/hr)	Emission Factor: Pressurized Idle (scf/hr)	Emission Factor: Depressurized Idle (scf/hr)	Annual Emissions (Mscf)	Explanatory Notes / Comments

Note: No facilities of this type.

SDG&E, June 15, 2018

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 2018 June Report

Appendix 7; Rev. 03/31/18

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

Underground Storage Blowdowns:

ID	Geographic Location	Source	Compressor Type	Number of Blowdown Events	Annual Emissions (Mscf)	Explanatory Notes / Comments

Note: No facilities of this type.

SDG&E, June 15, 2018

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 2018 June Report

Appendix 7; Rev. 03/31/18

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.

Underground Storage Component Vented Emissions (See note above):

ID	Geographic Location	Device Type	Bleed Rate	Manufacturer	Pressure (psi)	Survey Date (MM/DD/YY)	Number of Days Emitting	Emission Factor, Engineering or Manufacturer's based Estimate of Emissions (Mscf/day)	Annual Emissions (Mscf)	Explanatory Notes / Comments

Note: No facilities of this type.

SDG&E, June 15, 2018

Rulemaking (R.) 15-01-008 to Adopt Rules and Procedures Governing Commission Regulated Natural Gas Pipelines and Facilities to Reduce Natural Gas Leaks Consistent

In Response to Data Request, R15-01-008 2018 June Report

Appendix 7; Rev. 03/31/18

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 ther

Underground Storage: Compressor and Component Fugitive Leaks (see note

12/31/2017 1/1/2017

ID	Geographic Location	Device Type	Bleed Rate	Manufacturer	Pressure (psi)	Discovery Date (MM/DD/YY)	Repair Date (MM/DD/YY)	Prior Survey Date (MM/DD/YY)	Number of Days Leaking	Emission Factor or Engineering Estimate (Mscf/day)	Annual Emissions (Mscf)	Explanatory Notes / Comments

Note: No facilities of this type.

SDG&E, June 15, 2018

Rulemaking (R.) 15-01-008 to Adopt Rules and Procedures Governing Commission Regulated Natural Gas Pipelines and Facilities to Reduce Natural Gas

In Response to Data Request, R15-01-008 2018 June Report

Appendix 7; Rev. 03/31/18

Pursuant to SB 1371, Leno - Natural gas: leakage abatement, the California Public Utilities Commission (CPUC) requests that the following information be transmitted to the CPUC and the State
Note - Definitions in Data Request, R15-01-008 2018 June Report

The following question in the above mentioned data request is answered using the spreadsheets in this Appendix (#7):
(6) Calculable or estimated emissions and non-graded gas leaks, as defined in Data Request R15-01-008 2018 June Report.

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

Underground Storage Dehydrator Vented Emissions:

ID	Geographic Location	Type of Dehydrator (Glycol or Desiccant)	Vapor Recovery Unit AND Thermal Oxidizer (Y/N)	Annual Volume of Gas Withdrawn (Mscf)	Emission Factor (Y/N)	Engineering Estimate (Y/N)	Annual Emissions (Mscf)	Explanatory Notes / Comments

Note: No facilities of this type.

Header column "Comment" boxes displayed below for reference.	
Column Heading	**Description and Definition of Required Contents (IF not self-explanatory)**
Storage Leaks & Emissions	
ID	
Geographic Location	GIS, zip code, or equivalent
Source	W = wellhead C = casing P = pipeline O = other
Number of Sources	
Emission Factor (Mscf/yr)	
Annual Emissions (Mscf)	
Explanatory Notes / Comments	

Compressor Vented Emissions	
ID	
Geographic Location	GIS, zip code, or equivalent
Compressor Type	C = centrifugal R = reciprocating
Prime Mover	E = electric motor C = internal combustion engine
Number of Cylinders in Compressor	
Number of Seals	
Seal Type	W = wet D = dry O = other

Column Heading	Description and Definition of Required Contents (IF not self-explanatory)
Operating Mode: Pressurized Operating (hours)	
Operating Mode: Pressurized Idle (hours)	
Operating Mode: Depressurized Idle (hours)	
Emission Factor: Pressurized Operating (scf/hr)	
Emission Factor: Pressurized Idle (scf/hr)	
Emission Factor: Depressurized Idle (scf/hr)	
Annual Emissions (Mscf)	
Explanatory Notes / Comments	

Blowdowns	
ID	
Geographic Location	GIS, zip code, or equivalent
Source	W = wellhead rework C = compressor P= pipeline O = other
CompressorType	C = centrifugal R = reciprocating
Number of Blowdown Events	
Annual Emissions(Mscf)	

Column Heading	Description and Definition of Required Contents (IF not self-explanatory)
Explanatory Notes / Comments	

Component Vented Emissions	
ID	
Geographic Location	GIS, zip code, or equivalent
Device Type	C = connector OE = open-ended line M = meter P = pneumatic device PR = pressure relief valve V = valve O = other devices
Bleed Rate	L = low bleed I = intermittent bleed H = high bleed NA = not applicable
Manufacturer	
Pressure (psi)	MOP = maximum operating pressure over the past year
Survey Date (MM/DD/YY)	
Number of Days Emitting	Because the emissions are a factor of design or function, these emissions counted for the entire year.
Emission Factor, Engineering or Manufacturer's based Estimate of Emissions (Mscf/day)	Explain in the comment column the basis for your emission estimate.
Annual Emissions (Mscf)	
Explanatory Notes / Comments	

Component Leaks

Column Heading	Description and Definition of Required Contents (IF not self-explanatory)
ID	
Geographic Location	GIS, zip code, or equivalent
Device Type	C = connector OE = open-ended line M = meter P = pneumatic device PR = pressure relief valve V = valve O = other devices
Bleed Rate	L = low bleed I = intermittent bleed H = high bleed NA = not applicable
Manufacturer	
Pressure (psi)	MOP = maximum operating pressure over the past year
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.
Prior Survey Date (MM/DD/YY)	Before the discovery date of the leak, there was a "Prior Survey Date" when the compressor station was tested and no leak was found. There should be records as to when the compressor station was last surveyed. If the survey spanned two or more days, enter the final date. Note, a facility level survey date is sufficient to establish the prior survey date.

Column Heading	Description and Definition of Required Contents (IF not self-explanatory)
Number of Days Leaking	The algorithm that is used for determining the number of days leaking should conform to the following guidance: For the number days leaking prior to the date of discovery (survey date in the year of interest), calculate the number of days between the Discovery Date and the Prior Survey Date then divided by 2. [Dividing by 2 approximates the average time leaking between the leak discovery and the prior survey date. See below guidance when a leak is discovered in a prior period and repaired in the year of interest.] (Discovery Date – Prior Survey Date)/2 Calculate the number of days leaking after discovery (survey) date, by subtracting the discovery date from the repair date, unless the leak has not been repaired, where the number of days should be calculated by subtracting the discovery date from December 31 of the year of interest.* (Repair Date – Discovery Date), unless repair date greater than 12/31/XX then use 12/31/XX) --- Days Leaking = (Repair Date - Discovery Date) + (Discovery Date - Prior Survey Date)/2 +1 * [This requires tracking the leak across different years, because the leak could be minor and conceivably span more than year before getting repaired. Therefore, in the cases where a leak is carried over to a subsequent year, an annual calculation should be made to reflect that the number of days leaking in the prior year have already been reported in the annual emissions inventory. In subsequent years the carried over leaks should reflect a beginning date of January 1 of the year of interest.]
Emission Factor or Engineering Estimate (Mscf/day)	
Annual Emissions (Mscf)	
Explanatory Notes / Comments	

Column Heading	Description and Definition of Required Contents (IF not self-explanatory)

Dehydrator Vented Emissions	
ID	
Geographic Location	GIS, zip code, or equivalent
Type of Dehydrator (Glycol or Desiccant)	
Vapor Recovery Unit AND Thermal Oxidizer (Y/N)	In order to claim 0 emissions, a Vapor Recovery Unit AND thermal oxidizer must be used 100% of the time during oeration
Annual Volume of Gas Withdrawn (Mscf)	
Emission Factor (Y/N)	If the glycol dehydrator has a Vapor Recovery Unit (VRU) and a thermal oxidizer, the emission factor is 0. If using a desiccant dehydrator, the emission factor is 2.23E-03 mt CH4/MMscf
Engineering Estimate (Y/N)	If using an engineering estimate, please include an attachment of methodology or software used as a separate document. Record the annual emissions
Annual Emissions (Mscf)	For dehydrators using an emission factor, annual emissions are calculated by multiplying annual volume of gas withdrawn and the emission factor For dehydrators using an engineering estimate, record the annual emissions
Explanatory Notes / Comments	