

Notes:

Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and p
At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight
The emissions captured on this tab represent the emissions associated with the operational design and function

2020 Reporting Changes:

- 1) New Column for Measurement Frequency - See box comments. If you have any questions contact Ed Charkc
- 2) Added new column for Emission Factor: Measurement Date - Pressurized Operations.
- 3) Added a fourth compressor operating mode "Offline". In addition, a measurement of emissions (EF) should
- 4) Alternate emissions measurement method, where applicable and measured by the operator:
- 5) Alternate emissions measurement method, where applicable and measured by the operator:
 - Blowdown and Isolation valves
- 6) Measure centrifugal compressor emissions additional columns added for these emissions:
 - Dry seals
 - Wet seals
 - Wet seal oil degassing vents in Pressurized Idle mode

Transmission Compressor Vented Emissions:

ID	Geographic Location	Compressor Type	Prime Mover	Number of Cylinders	Number of Seals
Unit 1	Example	R	C	4	N/A
Unit 1	Example	R	C	4	N/A
Unit 2	Example	R	C	4	N/A
Unit 2	Example	R	C	4	N/A

aste-as-value.

: orange.

1 of the compressor. Any intentional release of natural gas for safety or maintenance purposes should

owicz at 415-703-2421 or via email.

be taken during Offline mode, to ensure that no emissions are emanating from the system.

Seal Type	Measurement Frequency	Emission Factor: Measurement Date - Pressurized Operations	Operating Mode: Pressurized Operating (hours)	Operating Mode: Pressurized Idle (hours)
N/A	Q	2/23/2019	744	100
N/A	Q	5/25/2019	950	40
N/A	Q	2/15/2019	150	150
N/A	Q	5/15/2019	350	100

**Rulemaking (R.) 15-01-008 to Adopt Rules and Procedures Governing Comm
In Resp**

d be included on the Blowdowns worksheet.

Use these EF columns as well as the columns for
Measurements noted in Columns R thru AB w
applicable. If the data is not captured by the
note explaining why the applicable measurem
recorded or available in the Explanatory Note
column.

Operating Mode: Depressurized Idle (hours)	Operating Mode: Offline (Hours)	Emission Factor: Pressurized Operating(scf/hr)	Emission Factor: Pressurized Idle (scf/hr)
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Hypothetical values used to provide an example.

200	1116	312.96	10
150	1020	250	80
400	1484	165.48	25
50	1684	100.08	30

[Company Name], [Date Submitted]

Commission Regulated Natural Gas Pipelines and Facilities to Reduce Natural Gas Emissions
 Response to Data Request, R15-01-008 - 2021 June Report

Appendix 3 - Rev. 03/30/21

		<p>CPUC Staff strongly encourage more frequent measurements taken each quarter (e.g. on or around the completion of a maintenance cycle) and also provide an opportunity to detect worn rods and seals. Please contact CPUC staff for steps for reporting more frequent measurements.</p>	
<p>for the Compressor when they are in operation, then add a separate row for each measurement. If no measurements were taken in 2019, then enter N/A</p>	<p>If no measurements were taken in 2019, then enter N/A</p>	<p>The Columns P through AB were added to the 2020 data reporting of compressor valves. Where more than one measurement was taken per quarter, please devote one row per measurement period (see Appendix 1 for reporting practice).</p> <p>* If a measurement is taken after a maintenance activity, please indicate this in the comments prior to the maintenance of the compressor facility.</p>	
<p>Emission Factor: Depressurized Idle (scf/hr)</p>	<p>Emission Factor: Offline (scf/hr)</p>	<p>Emission Factor: Pressurized Operating - Rod Packing (scf/hr)</p>	<p>Emission Factor: Pressurized Operating - Blowdown Valve (scf/hr)</p>
<p>10</p> <p>0</p> <p>0</p> <p>25</p>	<p>10</p> <p>0</p> <p>0</p> <p>25</p>		

Leaks Consistent with Senate Bill 1371, Leno.

measurement of the following compressor vented emissions. Compliance minimum is once per year (one component survey given mode of operation). More frequent measurements, e.g. monthly would be preferred for rod packing or seals, which exacerbate emissions, and with timely awareness of suboptimal operations. Measurements in 2020 are outlined in the adjacent cell, and should be provided if available.

This template and should be used for the indicated measured compressor emissions, which include:

vented emissions:

When measured during the year (e.g. after a maintenance cycle*, monthly, or quarterly), use the measured emission factor (EF). If multiple measurements are taken during the year, then the measured EF should be multiplied by the activity hours that occurred in the respective period (e.g. example provided). In the case of a single annual measurement EF, then that EF would apply for the entire year.

If no measurements were taken during the remainder of the year, then use the EF from the beginning of the year should use the previously measured EF, even if the EF was measured during the maintenance cycle.

<p>Emission Factor: Pressurized Operating - Wet Seal Oil Degassing Vent (scf/hr)</p>	<p>Emission Factor: Pressurized Operating - Wet Seal (scf/hr)</p>	<p>Emission Factor: Pressurized Operating - Dry Seal (scf/hr)</p>	<p>Emission Factor: Pressurized Idle - Rod Packing (scf/hr)</p>
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be annually, though Staff suggest the minimum frequency should be quarterly and measured more frequently would be better due to the temporal changes in conditions that effect emissions. The more frequent measurements would allow operations gas operators have an opportunity for accelerating maintenance to correct worn components.

Include Centrifugal compressors in accordance with OGR and your operating practice.

Use the measured EF multiplied by the activity hours that occurred during the corresponding period. For example, if measured quarterly, use the EF for each respective quarter, and the same for more frequent measurements (e.g. monthly, weekly etc.). For annual measurements, apply to the activity hours for each respective mode for the entire year (which is consistent with OGR requirements).

Use the measured EF for the activity hours occurring after the measurement date thru 12/31/2020. If measured in the prior year, use the measured EF for the activity hours occurring after the measurement date thru 12/31/2019.

Emission Factor: Pressurized Idle - Blowdown Valve (scf/hr)	Emission Factor: Pressurized Idle - Wet Seal Oil Degassing Vent (scf/hr)	Emission Factor: Pressurized Idle - Wet Seal (scf/hr)	Emission Factor: Pressurized Idle - Dry Seal (scf/hr)
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ent measurements
parts. The following

mple, if the
for each compressor
ch prior year reporting
xx. The activity hours

Emission Factor: Pressurized Idle - Isolation Valve (scf/hr)	Annual Emissions (Mscf)	Explanatory Notes / Comments
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232.18
226.26
26.86
76.50

562 Provided as an example.