Technical Support Document
for
Draft Air Emission Permit No. 09500004-105

This technical support document (TSD) is intended for all parties interested in the draft permit and to meet the requirements that have been set forth by the federal and state regulations (40 CFR § 70.7(a)(5) and Minn. R. 7007.0850, subp. 1). The purpose of this document is to provide legal and factual justification for each applicable requirement or policy decision considered in the preliminary determination to issue the draft permit.

1. General information

1.1 Applicant and stationary source location

Table 1. Applicant and source address

Applicant/Address	**Stationary source/Address** (SIC Code: 4922 - Natural Gas Transmission)
DT Midstream, Inc. 500 Woodward Ave Ste 2900 Detroit, Michigan 48226-3488	Viking Gas Transmission - Milaca Station 2217 13224 125th Ave Milaca, MN 56353-3723
Contact: Christopher Bender Phone: 330-420-5824	

1.2 Facility description

The Viking Gas Transmission facility in Milaca is a natural gas compressor station. The facility includes a lean premix combustion turbine compressor engine (EQUI 1), 3 two-stroke lean-burn reciprocating internal combustion compressor engines (EQUI 2, EQUI 3, and EQUI 4), a water jacket heater (EQUI 5), and a four-stroke rich-burn reciprocating internal combustion engine used as an emergency generator (EQUI 6). The compressors compress natural gas to maintain flow to downstream compressor stations, while the water jacket heater is used to warm lubricating oil and condition engine fluids prior to startup of the compressor engines. All units combust pipeline natural gas only, supplied directly from the pipeline.

Air emissions result primarily from the combustion of natural gas and consist mainly of carbon monoxide (CO), nitrogen oxides (NOx), and particulate matter (PM). The facility does not use add-on air pollution control equipment; emission reduction is achieved through the exclusive use of natural gas fuel and operating hour limitations.

1.3 Description of the activities allowed by this permit action

This permit action is Part 70 Reissuance. No construction is authorized by this permit.

1.4 Facility emissions

Table 2. Total facility potential to emit summary

	PM (tpy)	**PM_{10}** (tpy)	**$PM_{2.5}$** (tpy)	**SO_2** (tpy)	**NO_x** (tpy)	**CO** (tpy)	**CO_2e** (tpy)	**VOC** (tpy)	**Single HAP**** (tpy)	**All HAPs** (tpy)
Total facility limited potential emissions	9.60	9.60	9.60	0.773	578	94.3	42,400	27.5	9.59	13.8
Total facility actual emissions (2025)	3.25	3.25	0.965	0.055	267	32.7	*	10.1	*	

*Not reported in Minnesota emission inventory.
**Formaldehyde

Table 3. Facility classification

Classification	Major	Synthetic minor/area	Minor/Area
New Source Review	X		
Part 70	X		
Part 63			X

1.5 Changes to permit

The permit does not authorize any specific modifications, however, the MPCA has a combined operating and construction permitting program under Minnesota Rules Chapter 7007, and under Minn. R. 7007.0800, the MPCA has authority to include additional requirements in an operating permit. The following changes to the permit are made through this permit action:

- The permit has been updated to reflect current MPCA templates and standard citation formatting;
- Some requirements have been reordered or moved to help with clarity;
- The insignificant activities for the facility have been updated to reflect the current activities on site as well as to reflect changes to these rules since the last permit was issued;
- Updated the Facility Description to improve clarity and ensure consistency with current MPCA guidance.
- Modified existing 40 CFR pt. 60, subp. GG Replacement and Reconstruction Authorization to only include replacement authorization at EQUI 1. See Section 2.3 for more details.

2. Regulatory and/or statutory basis

2.1 New source review (NSR)

The facility is an existing major source under New Source Review regulations. No modifications are authorized by this permit.

2.2 Part 70 permit program

The facility is a major source under the Part 70 permit program.

2.3 New source performance standards (NSPS)

The Permittee has stated that New Source Performance Standards apply to operations at this facility.

EQUI 1 is a simple-cycle gas combustion turbine with a maximum design heat-input capacity of 45 MMBtu/hr. The unit was originally manufactured prior to 1982[1]. Therefore, as the applicable NSPS in effect at the time construction commenced, the unit is subject to 40 CFR pt. 60, subp. GG, NSPS for Stationary Gas Turbines.

The previous permit (Permit No. 09500004-104) included reconstruction applicability language under 40 CFR pt. 60, subp. KKKK, NSPS for Stationary Combustion Turbines. However, 40 CFR pt. 60, subp. KKKKa, which became effective January 15, 2026, now applies to stationary combustion turbines that commence construction, modification, or reconstruction after December 13, 2024. Because this permit action does not involve reconstruction of EQUI 1, the applicability provisions of 40 CFR pt. 60, subp. KKKKa are not triggered and have not been included in this permit. Replacement authorization for EQUI 1 has not been removed.

2.4 National emission standards for hazardous air pollutants (NESHAP)

The facility is an existing area source of hazardous air pollutants (HAPs).

EQUI 2, EQUI 3, and EQUI 4 are stationary, two-stroke lean-burn (2SLB) reciprocating internal combustion engines (RICE) that combust natural gas and have an engine displacement of 35 liters per cylinder. Construction of these units commenced on November 6, 1967. Therefore, as an existing stationary RICE located at an area source of HAP, these units are subject to 40 CFR pt. 63, subp. ZZZZ, NESHAP for Stationary Reciprocating Internal Combustion Engines.

[1] The Tempo construction and startup dates are based on the 1997 installation of the refurbished turbine at the Facility. The unit was originally manufactured prior to 1982, and that date governs applicability under this rule. Documentation supporting this determination is provided in the TSD for Permit No. 09500004-007 and the original Part 70 permit issued in 1997.

EQUI 6 is a four-stroke rich-burn (4SRB) RICE operating as an emergency generator. The unit combusts natural gas and has an engine displacement of 2 liters per cylinder. Construction of the unit commenced on January 1, 1967. Therefore, as an existing emergency stationary RICE located at an area source of HAP, EQUI 6 is subject to 40 CFR pt. 63, subp. ZZZZ, NESHAP for Stationary Reciprocating Internal Combustion Engines.

2.5 Regulatory Overview

Table 4. Regulatory overview of facility

Subject item*	Applicable regulations	Rationale
EQUI 1 Turbine	Minn. R. 7011.2300	Standards of Performance for Stationary Internal Combustion Engines. Fuel limited to pipeline natural gas only, by design.
	40 CFR pt. 60, subp. GG; Minn. R. 7011.2350	NSPS for Stationary Gas Turbines. Determination of applicable limits for rule: • Heat input at peak load ≥ 10 MMBtu/hr; and • Constructed/modified/reconstructed after Oct 3, 1977 but before Feb 18, 2005.
	Title I Condition: Avoid major modification under 40 CFR § 52.21(b)(2) and Minn. 7007.3000	Provision for replacement of combustion turbine components. The restrictions of the authorization allow replacement to avoid being a major modification under NSR. The potential to emit of this unit is less than the major modification threshold, so the NSR emissions increase analysis for component replacement will be less than the major modification thresholds.
EQUI 2, EQUI 3, & EQUI 4 RICE	Minn. R. 7011.2300	Standards of Performance for Stationary Internal Combustion Engines. Fuel limited to pipeline natural gas only, by design.
	40 CFR pt. 63, subp. ZZZZ; Minn. R. 7011.8150	NESHAP for Stationary Reciprocating Internal Combustion Engines. Applicability criteria include: • Area source; • Existing Engine (Constr. before 6/12/06); • Non-emergency; • Non-black start; • SI 2SLB; and • Unlimited Use.
EQUI 5 Water Jacket	Minn. R. 7011.0510	Standards of Performance for Existing Indirect Heating Equipment. Determination of applicable limit from rule: • the unit was constructed before January 31, 1977; • the unit burns natural gas; • the facility is located outside the cities in Table I of the rule; • the unit capacity is less than or equal to 100 MMBtu/hr; and • the facility has less than or equal to 250 MMBtu/hr of direct and indirect heating equipment.
	Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020 - Minn. R. 7009.0090, Minn. Stat. 116.07, subd. 4a(a)]	National Ambient Air Quality Standards. This Permit requires the Permittee to limit operating hours of EQUI 5 to demonstrate modeled compliance with NO_2 NAAQS. See TSD for Permit 06900015-103, Viking Gas Transmission – Humboldt, for additional information
EQUI 6 Emergency RICE	Minn. R. 7011.2300	Standards of Performance for Stationary Internal Combustion Engines. Fuel limited to pipeline natural gas only, by design.

Subject item*	Applicable regulations	Rationale
	Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020 - Minn. R. 7009.0090, Minn. Stat. 116.07, subd. 4a(a)]	National Ambient Air Quality Standards. This Permit requires the Permittee to limit operating hours of EQUI 6 to demonstrate modeled compliance with NO_2 NAAQS. See TSD for Permit 06900015-103, Viking Gas Transmission – Humboldt, for additional information.
	40 CFR pt. 63, subp. ZZZZ; Minn. R. 7011.8150	NESHAP for Stationary Reciprocating Internal Combustion Engines. Applicability criteria include: • Area source; • Existing Engine (Constr. before 6/12/06); • Emergency, black start engine; and • SI 4SRB;

*Location of the requirement in the permit (e.g., EQUI 1, STRU 2, etc.).

3. Technical information

3.1 Calculations of potential to emit (PTE)

Attachment 1 to this TSD contains a summary of the Facility's PTE, along with detailed spreadsheets and supporting information prepared by the MPCA and the Permittee.

Emission calculations for EQUI 1 criteria pollutants NO_x, CO, and VOC were based on manufacturer's data, as documented in Attachment 3. Emission factors for all other pollutants at EQUI 1, and all criteria and HAP pollutants at EQUI 2 through EQUI 6, were taken from AP-42 and are cited inline for each piece of equipment within the PTE calculations (Attachment 1).

HAP emission factors for all units include polycyclic aromatic hydrocarbons (PAH) as a component of particulate organic matter (POM). Individual pollutants that are included within POM are not separately quantified, to avoid double counting. The POM emission factor includes naphthalene, but because naphthalene is also classified as a HAP, it is identified separately in the HAP summary. To prevent double counting of naphthalene, the total HAP emissions exclude the portion of naphthalene already accounted for within the POM emission factor.

Emission factors for carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O) are from 40 CFR Part 98, subp. C, Tables C-1 and C-2, as applicable to stationary combustion units. Carbon dioxide equivalent (CO_2e) emissions were calculated by applying the global warming potential in 40 CFR Part 98, subp. A, Table A-1.

3.2 Monitoring

In accordance with the Clean Air Act, it is the responsibility of the owner or operator of a facility to have sufficient knowledge of the facility to certify that the facility is in compliance with all applicable requirements.

In evaluating the monitoring included in the permit, the MPCA considered the following:

- the likelihood of the facility violating the applicable requirements;
- whether add-on controls are necessary to meet the emission limits;
- the variability of emissions over time;
- the type of monitoring, process, maintenance, or control equipment data already available for the emission unit;
- the technical and economic feasibility of possible periodic monitoring methods; and
- the kind of monitoring found on similar units elsewhere.

The Table below summarizes the monitoring requirements.

Table 5. Monitoring

Subject Item*	Requirement (basis)	What is the monitoring?	Why is this monitoring adequate?

Subject Item*	Requirement (basis)	What is the monitoring?	Why is this monitoring adequate?
EQUI 1 Turbine	Opacity <= 20%** SO_2 <= 0.0015 lb/MMBtu heat input. [Minn. R. 7011.2300, subp. 1]	Monthly recordkeeping of the type of fuel used.	This unit uses pipeline natural gas only; therefore, the likelihood of violating either of the limits is very small. The Permittee can demonstrate that the unit will continue to operate such that emissions meet emission limits by only burning natural gas. PTE is 0.00061 lb of SO_2/MMBtu.
	SO_2 <= 0.015% by volume at 15% O_2 and on a dry basis. Fuel Type: Limited to pipeline natural gas [40 CFR pt. 60, subp. GG, Minn. R. 7011.2350]	Maintain current purchase contract, tariff sheet or transportation contract for the fuel or representative fuel sampling.	Monitoring required by the NSPS is adequate to demonstrate compliance with the requirements because this standard was promulgated after November 15, 1990, and post-November 15, 1990, NSPS contain adequate monitoring requirements.
EQUI 2, EQUI 3, & EQUI 4 RICE	Opacity <= 20%** SO_2 <= 0.0015 lb/MMBtu heat input. [Minn. R. 7011.2300, subp. 1]	Monthly recordkeeping of the type of fuel used.	All units use pipeline natural gas only; therefore, the likelihood of violating either of the limits is very small. The Permittee can demonstrate that these units will continue to operate such that emissions meet emission limits by only burning natural gas. PTE is 0.00059 lb of SO_2/MMBtu for each individual unit.
EQUI 5 Water Jacket	Filterable PM <= 0.60 lb/MMBtu heat input. Opacity <= 20%, except for one, 6-min. period per hr. of not more than 60%. [Minn. R. 7011.0510, subp. 1]	Recordkeeping: fuel records.	This unit uses natural gas; therefore, the likelihood of violating either of the emission limits is very small. The Permittee can demonstrate that this unit will continue to operate such that emissions are well below the emission limits by only burning natural gas. Design based PTE for each unit, using AP-42, is 0.0075 lb/MMBtu of PM compared to the rule limit of 0.6 lb/MMBtu of PM.
	Hours <= 2150 hr/yr, 12-month rolling sum under certain operating conditions. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020 - Minn. R. 7009.0090, Minn. Stat. 116.07, subd. 4a(a)]	Daily records and monthly calculation of hours for each day of operation.	The unit has a limit on the numbers of hours it can be operated at the same as either EQUI 1, 2, 3, or 4. For each operation of EQUI 5, the Permittee is able to record the hours of operation while other emission units are operating to provide the information needed to calculate the monthly hours and the 12-month rolling sum hours of operation. The Permittee is required to maintain a written or computerized log of this information as a record for the calculations.
EQUI 6	Opacity <= 20%** SO_2 <= 0.0015 lb/MMBtu heat input. [Minn. R. 7011.2300, subp. 1]	Monthly recordkeeping of the type of fuel used.	This unit uses pipeline natural gas only; therefore, the likelihood of violating either of the limits is very small. The Permittee can demonstrate that the unit will continue to operate such that emissions meet emission limits by only burning natural gas. PTE is 0.00059 lb of SO_2/MMBtu.

Subject Item*	Requirement (basis)	What is the monitoring?	Why is this monitoring adequate?
	Hours <= 720 hr/yr, 12-month rolling sum under certain operating conditions. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020 - Minn. R. 7009.0090, Minn. Stat. 116.07, subd. 4a(a)]	Daily records and monthly calculation of hours for each day of operation.	The unit has a limit on the numbers of hours it can be operated at the same as either EQUI 1, 2, 3, or 4. For each operation of EQUI 6, the Permittee is able to record the hours of operation while other emission units are operating to provide the information needed to calculate the monthly hours and the 12-month rolling sum hours of operation. The Permittee is required to maintain a written or computerized log of this information as a record for the calculations.

*Location of the requirement in the permit (e.g., EQUI 1, STRU 2, etc.).
** Once operating temperatures have been obtained.

3.3 Insignificant activities

Viking Gas Transmission - Milaca Station 2217 has several operations which are classified as insignificant activities under the MPCA's permitting rules. These are listed in Appendix A to the permit.

The permit is required to include periodic monitoring for all emissions units, including insignificant activities, per EPA guidance. The insignificant activities at this Facility are only subject to general applicable requirements. Using the criteria outlined earlier in this TSD, the following table documents the justification why no additional periodic monitoring is necessary for the current insignificant activities. See Attachment 1 of this TSD for PTE information for the insignificant activities.

Table 6. Insignificant activities

Insignificant activity	General applicable emission limit	Discussion
Brazing, soldering, torch-cutting, or welding equipment. *Two welders and two acetylene torches*	PM, variable depending on airflow. Opacity <= 20% (Minn. R. 7011.0715)	There are two welders, and two acetylene torches included in this activity. Based on EPA-published emission factors, emissions from these units are highly unlikely to violate applicable requirements. In addition, these units are typically operated indoors and vent within the building; therefore, testing for particulate matter or opacity is not feasible.
Individual units with potential emissions less than 2000 lb/year of certain pollutants. *1. Eight natural gas space heaters. One office furnace.* *2. Equipment Leaks of VOC*	1. PM, variable depending on airflow. Opacity <= 20%, with exceptions. (Minn. R. 7011.0610) 2. PM, variable depending on airflow. Opacity <= 20% (Minn. R. 7011.0715)	Eight natural gas-fired heaters, VOC equipment leaks, and one office furnace are included in this activity. The heating units combust natural gas and are unlikely to violate applicable requirements based on the fuel characteristics and the EPA-published emission factors. In addition, these units are located indoors and vent within the building; therefore, testing for particulate matter or opacity is not feasible. VOC equipment leaks are not reasonably expected to emit PM or generate opacity. See Attachment 1 for PTE calculations.

3.4 Permit organization and standard language

This permit meets MPCA TEMPO guidance for the organization and grouping of requirements, including the use of permit appendices. When amending or reissuing an air permit, MPCA staff evaluate standard permit language to ensure consistency with current TEMPO database language. For this reissuance, all applicable standard language was updated.

Appendix B (Stack Parameters Used in Modeling for Nitrogen Oxide) and Appendix C (40 CFR Part 60, Subpart KKKK) were removed because they are not applicable to this Part 70 permit reissuance. Subsequent appendices were reordered accordingly.

Modeling requirements were also removed because they are not applicable to the facility. Additional discussion of modeling is provided in the TSD for Permit No. 06900015-103, Viking Gas Transmission – Humboldt.

Removed all custom 40 CFR pt. 63, subp. ZZZZ requirements at EQUI 2, EQUI 3, EQUI 4, and EQUI 6, and loaded 40 CFR pt. 63, subp. ZZZZ profiles to each of these units, as applicable.

3.5 Comments received

This section will be completed after the referenced review periods.

Public Notice Period:
EPA Review Period:

4. Permit fee assessment

This permit action is the reissuance of an individual Part 70; therefore, no application fees apply under Minn. R. 7002.0016, subp. 1.

5. Conclusion

Based on the information provided by Viking Gas Transmission - Milaca Station 2217 the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 09500004-105 and this TSD, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff members on permit team:
Cavanaugh Soules (permit engineer)
Tarik Hanafy (peer reviewer)
Lucy Okerstrom (enforcement staff)
Marc Severin (STAMP staff)
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Laurie O'Brien (administrative support)

Tempo Activities: Part 70 Reissuance (IND20250002)

Attachments:
1. PTE summary and calculation spreadsheets
2. Subject item inventory and facility requirements
3. Solar Turbines Predicted Emission Performance Data. January 25, 2016.

Attachment 1

PTE Summary and Calculation Spreadsheet

Emissions by Source Table

3a) Tempo SI ID number:		EQUI 2		
Pollutant Name	**CAS #**	**Potential (lbs/hr)**	**Unrestricted (tpy)**	**Limited (tpy)**
Particulate Matter	N/A	6.28E-01	2.75E+00	2.75E+00
PM < 10 micron	N/A	6.28E-01	2.75E+00	2.75E+00
PM < 2.5 micron	N/A	6.28E-01	2.75E+00	2.75E+00
Nitrogen Oxides	10102-44-0	4.12E+01	1.80E+02	1.80E+02
Carbon Monoxide	630-08-0	5.02E+00	2.20E+01	2.20E+01
Sulfur Dioxide	7446-09-5	7.64E-03	3.35E-02	3.35E-02
Volatile Organic Compounds	N/A	1.56E+00	6.83E+00	6.83E+00
Carbon Dioxide	124-38-9	1.43E+03	6.26E+03	6.26E+03
Methane	74-82-8	2.87E-02	1.26E-01	1.26E-01
Nitrous Oxide	10024-97-2	2.87E-03	1.26E-02	1.26E-02
Carbon Dioxide Equivalent	N/A	1.43E+03	6.27E+03	6.27E+03
1,1,2,2-Tetrachloroethane	79-34-5	8.62E-04	3.78E-03	3.78E-03
1,1,2-Trichloroethane	79-00-5	6.85E-04	3.00E-03	3.00E-03
1,1-Dichloroethane	75-34-3	5.08E-04	2.23E-03	2.23E-03
1,2-Dibromoethane (Ethylene dibromide); EDB	106-93-4	9.54E-04	4.18E-03	4.18E-03
1,2-Dichloropropane	78-87-5	5.80E-04	2.54E-03	2.54E-03
1,3-Butadiene	106-99-0	1.07E-02	4.67E-02	4.67E-02
1,3-Dichloropropene	542-75-6	5.69E-04	2.49E-03	2.49E-03
2,2,4-trimethylpentane	540-84-1	1.10E-02	4.82E-02	4.82E-02
Acetaldehyde	75-07-0	1.01E-01	4.42E-01	4.42E-01
Acrolein	107-02-8	1.01E-01	4.43E-01	4.43E-01
Benzene	71-43-2	2.52E-02	1.10E-01	1.10E-01
Biphenyl	92-52-4	5.14E-05	2.25E-04	2.25E-04
Carbon tetrachloride	56-23-5	7.89E-04	3.46E-03	3.46E-03
Chlorobenzene (Monochlorobenzene)	108-90-7	5.77E-04	2.53E-03	2.53E-03
Chloroform	67-66-3	6.12E-04	2.68E-03	2.68E-03
Dichloromethane (Methylene chloride)	75-09-2	1.91E-03	8.37E-03	8.37E-03
Ethylbenzene	100-41-4	1.40E-03	6.15E-03	6.15E-03
Formaldehyde	50-00-0	7.18E-01	3.14E+00	3.14E+00
Hexane	110-54-3	5.79E-03	2.53E-02	2.53E-02
Methanol	67-56-1	3.22E-02	1.41E-01	1.41E-01
Naphthalene	91-20-3	1.25E-03	5.48E-03	5.48E-03
Phenol	108-95-2	5.47E-04	2.40E-03	2.40E-03
Polycyclic organic matter	N/A	3.43E-03	1.50E-02	1.50E-02
Styrene	100-42-5	7.12E-04	3.12E-03	3.12E-03
Toluene	108-88-3	1.25E-02	5.48E-02	5.48E-02
Vinyl chloride (chloroethene)	75-01-4	3.21E-04	1.41E-03	1.41E-03
Xylenes, Total	N/A	3.48E-03	1.53E-02	1.53E-02
Lead Compounds	N/A	0.00E+00	0.00E+00	0.00E+00
1,4-Dichlorobenzene (para-)	106-46-7	0.00E+00	0.00E+00	0.00E+00
Arsenic compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Beryllium compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Cadmium compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Chromium compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Cobalt compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Manganese compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Nickel compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Selenium compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Propylene Oxide	75-56-9	0.00E+00	0.00E+00	0.00E+00
HAPs - Single	N/A	7.18E-01	3.14E+00	3.14E+00
HAPs - Total	N/A	1.04E+00	4.53E+00	4.53E+00

HAP emission factors include PAH as part of POM. Pollutants included in POM are not included separately. POM emission factors included naphthalene. However, since naphthalene is a HAP, it is also listed separately. Total HAPs subtracts the separate naphthalene factor so it is not counted twice in the total.

Emissions by Source Table

3a) Tempo SI ID number:		EQUI 3		
Pollutant Name	**CAS #**	**Potential (lbs/hr)**	**Unrestricted (tpy)**	**Limited (tpy)**
Particulate Matter	N/A	6.28E-01	2.75E+00	2.75E+00
PM < 10 micron	N/A	6.28E-01	2.75E+00	2.75E+00
PM < 2.5 micron	N/A	6.28E-01	2.75E+00	2.75E+00
Nitrogen Oxides	10102-44-0	4.12E+01	1.80E+02	1.80E+02
Carbon Monoxide	630-08-0	5.02E+00	2.20E+01	2.20E+01
Sulfur Dioxide	7446-09-5	7.64E-03	3.35E-02	3.35E-02
Volatile Organic Compounds	N/A	1.56E+00	6.83E+00	6.83E+00
Carbon Dioxide	124-38-9	1.43E+03	6.26E+03	6.26E+03
Methane	74-82-8	2.87E-02	1.26E-01	1.26E-01
Nitrous Oxide	10024-97-2	2.87E-03	1.26E-02	1.26E-02
Carbon Dioxide Equivalent	N/A	1.43E+03	6.27E+03	6.27E+03
1,1,2,2-Tetrachloroethane	79-34-5	8.62E-04	3.78E-03	3.78E-03
1,1,2-Trichloroethane	79-00-5	6.85E-04	3.00E-03	3.00E-03
1,1-Dichloroethane	75-34-3	5.08E-04	2.23E-03	2.23E-03
1,2-Dibromoethane (Ethylene dibromide); EDB	106-93-4	9.54E-04	4.18E-03	4.18E-03
1,2-Dichloropropane	78-87-5	5.80E-04	2.54E-03	2.54E-03
1,3-Butadiene	106-99-0	1.07E-02	4.67E-02	4.67E-02
1,3-Dichloropropene	542-75-6	5.69E-04	2.49E-03	2.49E-03
2,2,4-trimethylpentane	540-84-1	1.10E-02	4.82E-02	4.82E-02
Acetaldehyde	75-07-0	1.01E-01	4.42E-01	4.42E-01
Acrolein	107-02-8	1.01E-01	4.43E-01	4.43E-01
Benzene	71-43-2	2.52E-02	1.10E-01	1.10E-01
Biphenyl	92-52-4	5.14E-05	2.25E-04	2.25E-04
Carbon tetrachloride	56-23-5	7.89E-04	3.46E-03	3.46E-03
Chlorobenzene (Monochlorobenzene)	108-90-7	5.77E-04	2.53E-03	2.53E-03
Chloroform	67-66-3	6.12E-04	2.68E-03	2.68E-03
Dichloromethane (Methylene chloride)	75-09-2	1.91E-03	8.37E-03	8.37E-03
Ethylbenzene	100-41-4	1.40E-03	6.15E-03	6.15E-03
Formaldehyde	50-00-0	7.18E-01	3.14E+00	3.14E+00
Hexane	110-54-3	5.79E-03	2.53E-02	2.53E-02
Methanol	67-56-1	3.22E-02	1.41E-01	1.41E-01
Naphthalene	91-20-3	1.25E-03	5.48E-03	5.48E-03
Phenol	108-95-2	5.47E-04	2.40E-03	2.40E-03
Polycyclic organic matter	N/A	3.43E-03	1.50E-02	1.50E-02
Styrene	100-42-5	7.12E-04	3.12E-03	3.12E-03
Toluene	108-88-3	1.25E-02	5.48E-02	5.48E-02
Vinyl chloride (chloroethene)	75-01-4	3.21E-04	1.41E-03	1.41E-03
Xylenes, Total	N/A	3.48E-03	1.53E-02	1.53E-02
Lead Compounds	N/A	0.00E+00	0.00E+00	0.00E+00
1,4-Dichlorobenzene (para-)	106-46-7	0.00E+00	0.00E+00	0.00E+00
Arsenic compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Beryllium compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Cadmium compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Chromium compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Cobalt compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Manganese compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Nickel compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Selenium compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Propylene Oxide	75-56-9	0.00E+00	0.00E+00	0.00E+00
HAPs - Single	N/A	7.18E-01	3.14E+00	3.14E+00
HAPs - Total	N/A	1.04E+00	4.53E+00	4.53E+00

HAP emission factors include PAH as part of POM. Pollutants included in POM are not included separately. POM emission factors included naphthalene. However, since naphthalene is a HAP, it is also listed separately. Total HAPs subtracts the separate naphthalene factor so it is not counted twice in the total.

Emissions by Source Table

3a) Tempo SI ID number:		EQUI 4		
Pollutant Name	**CAS #**	**Potential (lbs/hr)**	**Unrestricted (tpy)**	**Limited (tpy)**
Particulate Matter	N/A	6.28E-01	2.75E+00	2.75E+00
PM < 10 micron	N/A	6.28E-01	2.75E+00	2.75E+00
PM < 2.5 micron	N/A	6.28E-01	2.75E+00	2.75E+00
Nitrogen Oxides	10102-44-0	4.12E+01	1.80E+02	1.80E+02
Carbon Monoxide	630-08-0	5.02E+00	2.20E+01	2.20E+01
Sulfur Dioxide	7446-09-5	7.64E-03	3.35E-02	3.35E-02
Volatile Organic Compounds	N/A	1.56E+00	6.83E+00	6.83E+00
Carbon Dioxide	124-38-9	1.43E+03	6.26E+03	6.26E+03
Methane	74-82-8	2.87E-02	1.26E-01	1.26E-01
Nitrous Oxide	10024-97-2	2.87E-03	1.26E-02	1.26E-02
Carbon Dioxide Equivalent	N/A	1.43E+03	6.27E+03	6.27E+03
1,1,2,2-Tetrachloroethane	79-34-5	8.62E-04	3.78E-03	3.78E-03
1,1,2-Trichloroethane	79-00-5	6.85E-04	3.00E-03	3.00E-03
1,1-Dichloroethane	75-34-3	5.08E-04	2.23E-03	2.23E-03
1,2-Dibromoethane (Ethylene dibromide); EDB	106-93-4	9.54E-04	4.18E-03	4.18E-03
1,2-Dichloropropane	78-87-5	5.80E-04	2.54E-03	2.54E-03
1,3-Butadiene	106-99-0	1.07E-02	4.67E-02	4.67E-02
1,3-Dichloropropene	542-75-6	5.69E-04	2.49E-03	2.49E-03
2,2,4-trimethylpentane	540-84-1	1.10E-02	4.82E-02	4.82E-02
Acetaldehyde	75-07-0	1.01E-01	4.42E-01	4.42E-01
Acrolein	107-02-8	1.01E-01	4.43E-01	4.43E-01
Benzene	71-43-2	2.52E-02	1.10E-01	1.10E-01
Biphenyl	92-52-4	5.14E-05	2.25E-04	2.25E-04
Carbon tetrachloride	56-23-5	7.89E-04	3.46E-03	3.46E-03
Chlorobenzene (Monochlorobenzene)	108-90-7	5.77E-04	2.53E-03	2.53E-03
Chloroform	67-66-3	6.12E-04	2.68E-03	2.68E-03
Dichloromethane (Methylene chloride)	75-09-2	1.91E-03	8.37E-03	8.37E-03
Ethylbenzene	100-41-4	1.40E-03	6.15E-03	6.15E-03
Formaldehyde	50-00-0	7.18E-01	3.14E+00	3.14E+00
Hexane	110-54-3	5.79E-03	2.53E-02	2.53E-02
Methanol	67-56-1	3.22E-02	1.41E-01	1.41E-01
Naphthalene	91-20-3	1.25E-03	5.48E-03	5.48E-03
Phenol	108-95-2	5.47E-04	2.40E-03	2.40E-03
Polycyclic organic matter	N/A	3.43E-03	1.50E-02	1.50E-02
Styrene	100-42-5	7.12E-04	3.12E-03	3.12E-03
Toluene	108-88-3	1.25E-02	5.48E-02	5.48E-02
Vinyl chloride (chloroethene)	75-01-4	3.21E-04	1.41E-03	1.41E-03
Xylenes, Total	N/A	3.48E-03	1.53E-02	1.53E-02
Lead Compounds	N/A	0.00E+00	0.00E+00	0.00E+00
1,4-Dichlorobenzene (para-)	106-46-7	0.00E+00	0.00E+00	0.00E+00
Arsenic compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Beryllium compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Cadmium compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Chromium compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Cobalt compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Manganese compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Nickel compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Selenium compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Propylene Oxide	75-56-9	0.00E+00	0.00E+00	0.00E+00
HAPs - Single	N/A	7.18E-01	3.14E+00	3.14E+00
HAPs - Total	N/A	1.04E+00	4.53E+00	4.53E+00

HAP emission factors include PAH as part of POM. Pollutants included in POM are not included separately. POM emission factors included naphthalene. However, since naphthalene is a HAP, it is also listed separately. Total HAPs subtracts the separate naphthalene factor so it is not counted twice in the total.

Emissions by Source Table

3a) Tempo SI ID number:		EQUI 6		
Pollutant Name	**CAS #**	**Potential (lbs/hr)**	**Unrestricted (tpy)**	**Limited (tpy)**
Particulate Matter	N/A	5.82E-02	2.55E-01	2.10E-02
PM < 10 micron	N/A	5.82E-02	2.55E-01	2.10E-02
PM < 2.5 micron	N/A	5.82E-02	2.55E-01	2.10E-02
Nitrogen Oxides	10102-44-0	6.63E+00	2.90E+01	2.39E+00
Carbon Monoxide	630-08-0	1.12E+01	4.89E+01	4.02E+00
Sulfur Dioxide	7446-09-5	1.76E-03	7.73E-03	6.35E-04
Volatile Organic Compounds	N/A	8.88E-02	3.89E-01	3.20E-02
Carbon Dioxide	124-38-9	3.30E+02	1.45E+03	1.19E+02
Methane	74-82-8	6.61E-03	2.90E-02	2.38E-03
Nitrous Oxide	10024-97-2	6.61E-04	2.90E-03	2.38E-04
Carbon Dioxide Equivalent	N/A	3.30E+02	1.45E+03	1.19E+02
1,1,2,2-Tetrachloroethane	79-34-5	7.59E-05	3.32E-04	2.73E-05
1,1,2-Trichloroethane	79-00-5	7.59E-05	3.32E-04	2.73E-05
1,1-Dichloroethane	75-34-3	3.39E-05	1.48E-04	1.22E-05
1,2-Dibromoethane (Ethylene dibromide); EDB	106-93-4	6.39E-05	2.80E-04	2.30E-05
1,2-Dichloropropane	78-87-5	3.90E-05	1.71E-04	1.40E-05
1,3-Butadiene	106-99-0	1.99E-03	8.71E-03	7.16E-04
1,3-Dichloropropene	542-75-6	3.90E-05	1.71E-04	1.40E-05
2,2,4-trimethylpentane	540-84-1	0.00E+00	0.00E+00	0.00E+00
Acetaldehyde	75-07-0	8.37E-03	3.67E-02	3.01E-03
Acrolein	107-02-8	7.89E-03	3.46E-02	2.84E-03
Benzene	71-43-2	4.74E-03	2.08E-02	1.71E-03
Biphenyl	92-52-4	0.00E+00	0.00E+00	0.00E+00
Carbon tetrachloride	56-23-5	5.31E-05	2.33E-04	1.91E-05
Chlorobenzene (Monochlorobenzene)	108-90-7	3.87E-05	1.70E-04	1.39E-05
Chloroform	67-66-3	4.11E-05	1.80E-04	1.48E-05
Dichloromethane (Methylene chloride)	75-09-2	1.24E-04	5.41E-04	4.45E-05
Ethylbenzene	100-41-4	7.44E-05	3.26E-04	2.68E-05
Formaldehyde	50-00-0	6.15E-02	2.69E-01	2.21E-02
Hexane	110-54-3	0.00E+00	0.00E+00	0.00E+00
Methanol	67-56-1	9.18E-03	4.02E-02	3.30E-03
Naphthalene	91-20-3	2.91E-04	1.28E-03	1.05E-04
Phenol	108-95-2	0.00E+00	0.00E+00	0.00E+00
Polycyclic organic matter	N/A	7.14E-04	3.13E-03	2.57E-04
Styrene	100-42-5	3.57E-05	1.56E-04	1.29E-05
Toluene	108-88-3	1.67E-03	7.33E-03	6.03E-04
Vinyl chloride (chloroethene)	75-01-4	2.15E-05	9.43E-05	7.75E-06
Xylenes, Total	N/A	5.85E-04	2.56E-03	2.11E-04
Lead Compounds	N/A	0.00E+00	0.00E+00	0.00E+00
1,4-Dichlorobenzene (para-)	106-46-7	0.00E+00	0.00E+00	0.00E+00
Arsenic compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Beryllium compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Cadmium compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Chromium compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Cobalt compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Manganese compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Nickel compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Selenium compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Propylene Oxide	75-56-9	0.00E+00	0.00E+00	0.00E+00
HAPs - Single	N/A	6.15E-02	2.69E-01	2.21E-02
HAPs - Total	N/A	9.74E-02	4.26E-01	3.50E-02

HAP emission factors include PAH as part of POM. Pollutants included in POM are not included separately. POM emission factors included naphthalene. However, since naphthalene is a HAP, it is also listed separately. Total HAPs subtracts the separate naphthalene factor so it is not counted twice in the total.

Emissions by Source Table

3a) Tempo SI ID number:		EQUI 1		
Pollutant Name	**CAS #**	**Potential (lbs/hr)**	**Unrestricted (tpy)**	**Limited (tpy)**
Particulate Matter	N/A	2.97E-01	1.30E+00	1.30E+00
PM < 10 micron	N/A	2.97E-01	1.30E+00	1.30E+00
PM < 2.5 micron	N/A	2.97E-01	1.30E+00	1.30E+00
Nitrogen Oxides	10102-44-0	7.65E+00	3.35E+01	3.35E+01
Carbon Monoxide	630-08-0	5.49E+00	2.40E+01	2.40E+01
Sulfur Dioxide	7446-09-5	1.53E-01	6.70E-01	6.70E-01
Volatile Organic Compounds	N/A	1.58E+00	6.90E+00	6.90E+00
Carbon Dioxide	124-38-9	5.26E+03	2.30E+04	2.30E+04
Methane	74-82-8	9.92E-02	4.35E-01	4.35E-01
Nitrous Oxide	10024-97-2	9.92E-03	4.35E-02	4.35E-02
Carbon Dioxide Equivalent	N/A	5.27E+03	2.31E+04	2.31E+04
1,1,2,2-Tetrachloroethane	79-34-5	0.00E+00	0.00E+00	0.00E+00
1,1,2-Trichloroethane	79-00-5	0.00E+00	0.00E+00	0.00E+00
1,1-Dichloroethane	75-34-3	0.00E+00	0.00E+00	0.00E+00
1,2-Dibromoethane (Ethylene dibromide); EDB	106-93-4	0.00E+00	0.00E+00	0.00E+00
1,2-Dichloropropane	78-87-5	0.00E+00	0.00E+00	0.00E+00
1,3-Butadiene	106-99-0	1.94E-05	8.48E-05	8.48E-05
1,3-Dichloropropene	542-75-6	0.00E+00	0.00E+00	0.00E+00
2,2,4-trimethylpentane	540-84-1	0.00E+00	0.00E+00	0.00E+00
Acetaldehyde	75-07-0	1.80E-03	7.88E-03	7.88E-03
Acrolein	107-02-8	2.88E-04	1.26E-03	1.26E-03
Benzene	71-43-2	5.40E-04	2.37E-03	2.37E-03
Biphenyl	92-52-4	0.00E+00	0.00E+00	0.00E+00
Carbon tetrachloride	56-23-5	0.00E+00	0.00E+00	0.00E+00
Chlorobenzene (Monochlorobenzene)	108-90-7	0.00E+00	0.00E+00	0.00E+00
Chloroform	67-66-3	0.00E+00	0.00E+00	0.00E+00
Dichloromethane (Methylene chloride)	75-09-2	0.00E+00	0.00E+00	0.00E+00
Ethylbenzene	100-41-4	1.44E-03	6.31E-03	6.31E-03
Formaldehyde	50-00-0	3.20E-02	1.40E-01	1.40E-01
Hexane	110-54-3	0.00E+00	0.00E+00	0.00E+00
Methanol	67-56-1	0.00E+00	0.00E+00	0.00E+00
Naphthalene	91-20-3	5.85E-05	2.56E-04	2.56E-04
Phenol	108-95-2	0.00E+00	0.00E+00	0.00E+00
Polycyclic organic matter	N/A	9.90E-05	4.34E-04	4.34E-04
Styrene	100-42-5	0.00E+00	0.00E+00	0.00E+00
Toluene	108-88-3	5.85E-03	2.56E-02	2.56E-02
Vinyl chloride (chloroethene)	75-01-4	0.00E+00	0.00E+00	0.00E+00
Xylenes, Total	N/A	2.88E-03	1.26E-02	1.26E-02
Lead Compounds	N/A	0.00E+00	0.00E+00	0.00E+00
1,4-Dichlorobenzene (para-)	106-46-7	0.00E+00	0.00E+00	0.00E+00
Arsenic compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Beryllium compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Cadmium compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Chromium compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Cobalt compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Manganese compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Nickel compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Selenium compounds	N/A	0.00E+00	0.00E+00	0.00E+00
Propylene Oxide	75-56-9	1.31E-03	5.72E-03	5.72E-03
HAPs - Single	N/A	3.20E-02	1.40E-01	1.40E-01
HAPs - Total	N/A	4.62E-02	2.02E-01	2.02E-01

HAP emission factors include PAH as part of POM. Pollutants included in POM are not included separately. POM emission factors included naphthalene. However, since naphthalene is a HAP, it is also listed separately. Total HAPs subtracts the separate naphthalene factor so it is not counted twice in the total.

Emissions by Source Table

3a) Tempo SI ID number:		EQUI 5		
Pollutant Name	**CAS #**	**Potential (lbs/hr)**	**Unrestricted (tpy)**	**Limited (tpy)**
Particulate Matter	N/A	2.24E-02	9.79E-02	2.40E-02
PM < 10 micron	N/A	2.24E-02	9.79E-02	2.40E-02
PM < 2.5 micron	N/A	2.24E-02	9.79E-02	2.40E-02
Nitrogen Oxides	10102-44-0	2.94E-01	1.29E+00	3.16E-01
Carbon Monoxide	630-08-0	2.47E-01	1.08E+00	2.66E-01
Sulfur Dioxide	7446-09-5	1.76E-03	7.73E-03	1.90E-03
Volatile Organic Compounds	N/A	1.62E-02	7.09E-02	1.74E-02
Carbon Dioxide	124-38-9	1.59E+02	6.97E+02	1.71E+02
Methane	74-82-8	3.00E-03	1.31E-02	3.23E-03
Nitrous Oxide	10024-97-2	3.00E-04	1.31E-03	3.23E-04
Carbon Dioxide Equivalent	N/A	1.59E+02	6.98E+02	1.71E+02
1,1,2,2-Tetrachloroethane	79-34-5	0.00E+00	0.00E+00	0.00E+00
1,1,2-Trichloroethane	79-00-5	0.00E+00	0.00E+00	0.00E+00
1,1-Dichloroethane	75-34-3	0.00E+00	0.00E+00	0.00E+00
1,2-Dibromoethane (Ethylene dibromide); EDB	106-93-4	0.00E+00	0.00E+00	0.00E+00
1,2-Dichloropropane	78-87-5	0.00E+00	0.00E+00	0.00E+00
1,3-Butadiene	106-99-0	0.00E+00	0.00E+00	0.00E+00
1,3-Dichloropropene	542-75-6	0.00E+00	0.00E+00	0.00E+00
2,2,4-trimethylpentane	540-84-1	0.00E+00	0.00E+00	0.00E+00
Acetaldehyde	75-07-0	0.00E+00	0.00E+00	0.00E+00
Acrolein	107-02-8	0.00E+00	0.00E+00	0.00E+00
Benzene	71-43-2	6.18E-06	2.71E-05	6.64E-06
Biphenyl	92-52-4	0.00E+00	0.00E+00	0.00E+00
Carbon tetrachloride	56-23-5	0.00E+00	0.00E+00	0.00E+00
Chlorobenzene (Monochlorobenzene)	108-90-7	0.00E+00	0.00E+00	0.00E+00
Chloroform	67-66-3	0.00E+00	0.00E+00	0.00E+00
Dichloromethane (Methylene chloride)	75-09-2	0.00E+00	0.00E+00	0.00E+00
Ethylbenzene	100-41-4	0.00E+00	0.00E+00	0.00E+00
Formaldehyde	50-00-0	2.21E-04	9.66E-04	2.37E-04
Hexane	110-54-3	5.29E-03	2.32E-02	5.69E-03
Methanol	67-56-1	0.00E+00	0.00E+00	0.00E+00
Naphthalene	91-20-3	1.79E-06	7.86E-06	1.93E-06
Phenol	108-95-2	0.00E+00	0.00E+00	0.00E+00
Polycyclic organic matter	N/A	2.05E-06	8.99E-06	2.21E-06
Styrene	100-42-5	0.00E+00	0.00E+00	0.00E+00
Toluene	108-88-3	1.00E-05	4.38E-05	1.08E-05
Vinyl chloride (chloroethene)	75-01-4	0.00E+00	0.00E+00	0.00E+00
Xylenes, Total	N/A	0.00E+00	0.00E+00	0.00E+00
Lead Compounds	N/A	1.47E-06	6.44E-06	1.58E-06
1,4-Dichlorobenzene (para-)	106-46-7	3.53E-06	1.55E-05	3.79E-06
Arsenic compounds	N/A	5.88E-07	2.58E-06	6.32E-07
Beryllium compounds	N/A	3.53E-08	1.55E-07	3.79E-08
Cadmium compounds	N/A	3.24E-06	1.42E-05	3.48E-06
Chromium compounds	N/A	4.12E-06	1.80E-05	4.43E-06
Cobalt compounds	N/A	2.47E-07	1.08E-06	2.66E-07
Manganese compounds	N/A	1.12E-06	4.90E-06	1.20E-06
Nickel compounds	N/A	6.18E-06	2.71E-05	6.64E-06
Selenium compounds	N/A	7.06E-08	3.09E-07	7.59E-08
Propylene Oxide	75-56-9	0.00E+00	0.00E+00	0.00E+00
HAPs - Single	N/A	5.29E-03	2.32E-02	5.69E-03
HAPs - Total	N/A	5.55E-03	2.43E-02	5.97E-03

HAP emission factors include PAH as part of POM. Pollutants included in POM are not included separately. POM emission factors included naphthalene. However, since naphthalene is a HAP, it is also listed separately. Total HAPs subtracts the separate naphthalene factor so it is not counted twice in the total.

Emissions Summary Table

Pollutant Name	Potential (lbs/hr)	Unrestricted (tpy)	Limited (tpy)
Particulate Matter	2.26E+00	9.91E+00	9.60E+00
PM < 10 micron	2.26E+00	9.91E+00	9.60E+00
PM < 2.5 micron	2.26E+00	9.91E+00	9.60E+00
Nitrogen Oxides	1.38E+02	6.05E+02	5.78E+02
Carbon Monoxide	3.20E+01	1.40E+02	9.43E+01
Sulfur Dioxide	1.79E-01	7.86E-01	7.73E-01
Volatile Organic Compounds	6.36E+00	2.79E+01	2.74E+01
Carbon Dioxide	1.00E+04	4.40E+04	4.21E+04
Methane	1.95E-01	8.53E-01	8.17E-01
Nitrous Oxide	1.95E-02	8.53E-02	8.17E-02
Carbon Dioxide Equivalent	1.00E+04	4.40E+04	4.22E+04
1,1,2,2-Tetrachloroethane	2.66E-03	1.17E-02	1.14E-02
1,1,2-Trichloroethane	2.13E-03	9.33E-03	9.03E-03
1,1-Dichloroethane	1.56E-03	6.83E-03	6.69E-03
1,2-Dibromoethane (Ethylene dibromide); EDB	2.93E-03	1.28E-02	1.26E-02
1,2-Dichloropropane	1.78E-03	7.79E-03	7.63E-03
1,3-Butadiene	3.40E-02	1.49E-01	1.41E-01
1,3-Dichloropropene	1.75E-03	7.65E-03	7.50E-03
2,2,4-trimethylpentane	3.30E-02	1.45E-01	1.45E-01
Acetaldehyde	3.13E-01	1.37E+00	1.34E+00
Acrolein	3.12E-01	1.36E+00	1.33E+00
Benzene	8.09E-02	3.55E-01	3.35E-01
Biphenyl	1.54E-04	6.75E-04	6.75E-04
Carbon tetrachloride	2.42E-03	1.06E-02	1.04E-02
Chlorobenzene (Monochlorobenzene)	1.77E-03	7.75E-03	7.60E-03
Chloroform	1.88E-03	8.23E-03	8.06E-03
Dichloromethane (Methylene chloride)	5.86E-03	2.57E-02	2.52E-02
Ethylbenzene	5.73E-03	2.51E-02	2.48E-02
Formaldehyde	2.25E+00	9.84E+00	9.59E+00
Hexane	2.26E-02	9.92E-02	8.17E-02
Methanol	1.06E-01	4.64E-01	4.27E-01
Naphthalene	4.11E-03	1.80E-02	1.68E-02
Phenol	1.64E-03	7.19E-03	7.19E-03
Polycyclic organic matter	1.11E-02	4.87E-02	4.58E-02
Styrene	2.17E-03	9.52E-03	9.37E-03
Toluene	4.51E-02	1.97E-01	1.91E-01
Vinyl chloride (chloroethene)	9.85E-04	4.31E-03	4.23E-03
Xylenes, Total	1.39E-02	6.10E-02	5.86E-02
Lead Compounds	1.47E-06	6.44E-06	1.58E-06
1,4-Dichlorobenzene (para-)	3.53E-06	1.55E-05	3.79E-06
Arsenic compounds	5.88E-07	2.58E-06	6.32E-07
Beryllium compounds	3.53E-08	1.55E-07	3.79E-08
Cadmium compounds	3.24E-06	1.42E-05	3.48E-06
Chromium compounds	4.12E-06	1.80E-05	4.43E-06
Cobalt compounds	2.47E-07	1.08E-06	2.66E-07
Manganese compounds	1.12E-06	4.90E-06	1.20E-06
Nickel compounds	6.18E-06	2.71E-05	6.64E-06
Selenium compounds	7.06E-08	3.09E-07	7.59E-08
Propylene Oxide	1.31E-03	5.72E-03	5.72E-03
HAPs - Single	2.25E+00	9.84E+00	9.59E+00
HAPs - Total	3.25E+00	1.43E+01	1.38E+01

HAP emission factors include PAH as part of POM. Pollutants included in POM are not included separately. POM emission factors included naphthalene. However, since naphthalene is a HAP, it is also listed separately. Total HAPs subtracts the separate naphthalene factor so it is not counted twice in the total.

EQUI 1 - Turbine Engine

Manufacturer/Model:	Solar 40-T4700S
Firing Method:	Natural Gas
Construction Date:	09/01/1997
Size (MMBtu/hr)	45
Operational Hours (hrs):	8760

Pollutant	Emission Factor (lb/MMBtu)	Source	Control Efficiency	Unrestricted Emission Rate (lb/hr)	Controlled Emission Rate (lb/hr)	Unrestricted Emissions (tpy)	Limited Emissions (tpy)
Particulate Matter	6.60E-03	AP-42 3.1-2a	0%	2.97E-01	2.97E-01	1.30E+00	1.30E+00
PM < 10 micron	6.60E-03	AP-42 3.1-2a	0%	2.97E-01	2.97E-01	1.30E+00	1.30E+00
PM < 2.5 micron	6.60E-03	AP-42 3.1-2a	0%	2.97E-01	2.97E-01	1.30E+00	1.30E+00
Nitrogen Oxides	1.70E-01	Manufacturer Data	0%	7.65E+00	7.65E+00	3.35E+01	3.35E+01
Carbon Monoxide	1.22E-01	Manufacturer Data	0%	5.49E+00	5.49E+00	2.40E+01	2.40E+01
Sulfur Dioxide	3.40E-03	AP-42 3.1-2a	0%	1.53E-01	1.53E-01	6.70E-01	6.70E-01
Volatile Organic Compounds	3.50E-02	Manufacturer Data	0%	1.58E+00	1.58E+00	6.90E+00	6.90E+00
Carbon Dioxide	1.17E+02	40 CFR 98 Table A-1	0%	5.26E+03	5.26E+03	2.30E+04	2.30E+04
Methane	2.20E-03	41 CFR 98 Table A-1	0%	9.92E-02	9.92E-02	4.35E-01	4.35E-01
Nitrous Oxide	2.20E-04	42 CFR 98 Table A-1	0%	9.92E-03	9.92E-03	4.35E-02	4.35E-02
Carbon Dioxide Equivalent	1.17E+02	43 CFR 98 Table A-1	0%	5.27E+03	5.27E+03	2.31E+04	2.31E+04
1,3-Butadiene	4.30E-07	AP 42 3.1-3	0%	1.94E-05	1.94E-05	8.48E-05	8.48E-05
Acetaldehyde	4.00E-05	AP 42 3.1-3	0%	1.80E-03	1.80E-03	7.88E-03	7.88E-03
Acrolein	6.40E-06	AP 42 3.1-3	0%	2.88E-04	2.88E-04	1.26E-03	1.26E-03
Benzene	1.20E-05	AP 42 3.1-3	0%	5.40E-04	5.40E-04	2.37E-03	2.37E-03
Ethylbenzene	3.20E-05	AP 42 3.1-3	0%	1.44E-03	1.44E-03	6.31E-03	6.31E-03
Formaldehyde	7.10E-04	AP 42 3.1-3	0%	3.20E-02	3.20E-02	1.40E-01	1.40E-01
Naphthalene	1.30E-06	AP 42 3.1-3	0%	5.85E-05	5.85E-05	2.56E-04	2.56E-04
Polycyclic organic matter	2.20E-06	AP 42 3.1-3	0%	9.90E-05	9.90E-05	4.34E-04	4.34E-04
Toluene	1.30E-04	AP 42 3.1-3	0%	5.85E-03	5.85E-03	2.56E-02	2.56E-02
Xylenes, Total	6.40E-05	AP 42 3.1-3	0%	2.88E-03	2.88E-03	1.26E-02	1.26E-02
Propylene Oxide	2.90E-05	AP 42 3.1-3	0%	1.31E-03	1.31E-03	5.72E-03	5.72E-03
HAPs - Single	7.10E-04	-	-	3.20E-02	3.20E-02	1.40E-01	1.40E-01
HAPs - Total	1.03E-03	-	-	4.62E-02	4.62E-02	2.02E-01	2.02E-01

Notes

Manufacturer Data is attached as an Appendix to the TSD

Assuming PM=PM10=PM2.5

HAP emission factors include PAH as part of POM. Pollutants included in POM are not included separately. POM emission factors included naphthalene. However, since napththalene is a HAP, it is also listed separately. Total HAPs subtracts the separate naphthalene factor so it is not counted twice in the total.

Emission factors for CO2, CH4, and N2O are from 40 CFR Part 98, Subpart C, Table C-1 and C-2 (November 29, 2013). CO2e emissions are based on global warming potentials from 40 CFR Part 98, Subpart A, Table A-1.

Single Fuel Emission Units

EQUI ID	EQUI 2
Heat Input (MMBTU/hr)	13
Unlimited Hours (hr/yr)	8760
Limited Hours (hr/yr)	8760
Firing Type	2SLB 90-105% Load

Pollutant	AP-42 Emission Factor (lb/MMSCF)	Other Emission Factor (lb/MMscf)	Control Efficiency (%)	Unrestriced Emission Rate (lb/hr)	Controlled Emission Rate (lb/hr)	Unrestricted Emissions (tpy)	Limited Emissions (tpy)
Particulate Matter	4.83E-02			6.28E-01	6.28E-01	2.75E+00	2.75E+00
PM < 10 micron	4.83E-02			6.28E-01	6.28E-01	2.75E+00	2.75E+00
PM < 2.5 micron	4.83E-02			6.28E-01	6.28E-01	2.75E+00	2.75E+00
Nitrogen Oxides	3.17E+00			4.12E+01	4.12E+01	1.80E+02	1.80E+02
Carbon Monoxide	3.86E-01			5.02E+00	5.02E+00	2.20E+01	2.20E+01
Sulfur Dioxide	5.88E-04			7.64E-03	7.64E-03	3.35E-02	3.35E-02
Volatile Organic Compounds	1.20E-01			1.56E+00	1.56E+00	6.83E+00	6.83E+00
HAPs - Total	3.82E+00			4.97E+01	4.97E+01	2.18E+02	2.18E+02
Carbon Dioxide	1.10E+02			1.43E+03	1.43E+03	6.26E+03	6.26E+03
Methane	2.20E-03			2.87E-02	2.87E-02	1.26E-01	1.26E-01
Nitrous Oxide	2.20E-04			2.87E-03	2.87E-03	1.26E-02	1.26E-02
Carbon Dioxide Equivalent	1.10E+02			1.43E+03	1.43E+03	6.27E+03	6.27E+03
1,1,2,2-Tetrachloroethane	6.63E-05			8.62E-04	8.62E-04	3.78E-03	3.78E-03
1,1,2-Trichloroethane	5.27E-05			6.85E-04	6.85E-04	3.00E-03	3.00E-03
1,1-Dichloroethane	3.91E-05			5.08E-04	5.08E-04	2.23E-03	2.23E-03
1,2-Dibromoethane (Ethylene dibromide); EDB	7.34E-05			9.54E-04	9.54E-04	4.18E-03	4.18E-03
1,2-Dichloropropane	4.46E-05			5.80E-04	5.80E-04	2.54E-03	2.54E-03
1,3-Butadiene	8.20E-04			1.07E-02	1.07E-02	4.67E-02	4.67E-02
1,3-Dichloropropene	4.38E-05			5.69E-04	5.69E-04	2.49E-03	2.49E-03
2,2,4-trimethylpentane	8.46E-04			1.10E-02	1.10E-02	4.82E-02	4.82E-02
Acetaldehyde	7.76E-03			1.01E-01	1.01E-01	4.42E-01	4.42E-01
Acrolein	7.78E-03			1.01E-01	1.01E-01	4.43E-01	4.43E-01
Benzene	1.94E-03			2.52E-02	2.52E-02	1.10E-01	1.10E-01
Benzo(e)pyrene	2.34E-08			3.04E-07	3.04E-07	1.33E-06	1.33E-06
Biphenyl	3.95E-06			5.14E-05	5.14E-05	2.25E-04	2.25E-04
Carbon tetrachloride	6.07E-05			7.89E-04	7.89E-04	3.46E-03	3.46E-03
Chlorobenzene (Monochlorobenzene)	4.44E-05			5.77E-04	5.77E-04	2.53E-03	2.53E-03
Chloroform	4.71E-05			6.12E-04	6.12E-04	2.68E-03	2.68E-03
Dichloromethane (Methylene chloride)	1.47E-04			1.91E-03	1.91E-03	8.37E-03	8.37E-03
Ethylbenzene	1.08E-04			1.40E-03	1.40E-03	6.15E-03	6.15E-03
Formaldehyde	5.52E-02			7.18E-01	7.18E-01	3.14E+00	3.14E+00
Hexane	4.45E-04			5.79E-03	5.79E-03	2.53E-02	2.53E-02
Methanol	2.48E-03			3.22E-02	3.22E-02	1.41E-01	1.41E-01
Naphthalene	9.63E-05			1.25E-03	1.25E-03	5.48E-03	5.48E-03
Phenol	4.21E-05			5.47E-04	5.47E-04	2.40E-03	2.40E-03
Polycyclic organic matter	2.64E-04			3.43E-03	3.43E-03	1.50E-02	1.50E-02
Styrene	5.48E-05			7.12E-04	7.12E-04	3.12E-03	3.12E-03
Toluene	9.63E-04			1.25E-02	1.25E-02	5.48E-02	5.48E-02
Vinyl chloride (chloroethene)	2.47E-05			3.21E-04	3.21E-04	1.41E-03	1.41E-03
Xylenes, Total	2.68E-04			3.48E-03	3.48E-03	1.53E-02	1.53E-02

Other Emission Factor and/or Control Efficiency Factor Notes:

See 'Emission Factors' sheet for more information on emission factors.

Single Fuel Emission Units

EQUI ID	EQUI 3
Heat Input (BTU/hr)	13
Unlimited Hours (hr/yr)	8760
Limited Hours (hr/yr)	8760
Firing Type	2SLB 90-105% Load

Pollutant	AP-42 Emission Factor (lb/MMSCF)	Other Emission Factor (lb/MMscf)	Control Efficiency (%)	Unrestriced Emission Rate (lb/hr)	Controlled Emission Rate (lb/hr)	Unrestricted Emissions (tpy)	Limited Emissions (tpy)
Particulate Matter	4.83E-02			6.28E-01	6.28E-01	2.75E+00	2.75E+00
PM < 10 micron	4.83E-02			6.28E-01	6.28E-01	2.75E+00	2.75E+00
PM < 2.5 micron	4.83E-02			6.28E-01	6.28E-01	2.75E+00	2.75E+00
Nitrogen Oxides	3.17E+00			4.12E+01	4.12E+01	1.80E+02	1.80E+02
Carbon Monoxide	3.86E-01			5.02E+00	5.02E+00	2.20E+01	2.20E+01
Sulfur Dioxide	5.88E-04			7.64E-03	7.64E-03	3.35E-02	3.35E-02
Volatile Organic Compounds	1.20E-01			1.56E+00	1.56E+00	6.83E+00	6.83E+00
HAPs - Total	7.96E-02			1.04E+00	1.04E+00	4.53E+00	4.53E+00
Carbon Dioxide	1.10E+02			1.43E+03	1.43E+03	6.26E+03	6.26E+03
Methane	2.20E-03			2.87E-02	2.87E-02	1.26E-01	1.26E-01
Nitrous Oxide	2.20E-04			2.87E-03	2.87E-03	1.26E-02	1.26E-02
Carbon Dioxide Equivalent	1.10E+02			1.43E+03	1.43E+03	6.27E+03	6.27E+03
1,1,2,2-Tetrachloroethane	6.63E-05			8.62E-04	8.62E-04	3.78E-03	3.78E-03
1,1,2-Trichloroethane	5.27E-05			6.85E-04	6.85E-04	3.00E-03	3.00E-03
1,1-Dichloroethane	3.91E-05			5.08E-04	5.08E-04	2.23E-03	2.23E-03
1,2-Dibromoethane (Ethylene dibromide); EDB	7.34E-05			9.54E-04	9.54E-04	4.18E-03	4.18E-03
1,2-Dichloropropane	4.46E-05			5.80E-04	5.80E-04	2.54E-03	2.54E-03
1,3-Butadiene	8.20E-04			1.07E-02	1.07E-02	4.67E-02	4.67E-02
1,3-Dichloropropene	4.38E-05			5.69E-04	5.69E-04	2.49E-03	2.49E-03
2,2,4-trimethylpentane	8.46E-04			1.10E-02	1.10E-02	4.82E-02	4.82E-02
Acetaldehyde	7.76E-03			1.01E-01	1.01E-01	4.42E-01	4.42E-01
Acrolein	7.78E-03			1.01E-01	1.01E-01	4.43E-01	4.43E-01
Benzene	1.94E-03			2.52E-02	2.52E-02	1.10E-01	1.10E-01
Benzo(e)pyrene	2.34E-08			3.04E-07	3.04E-07	1.33E-06	1.33E-06
Biphenyl	3.95E-06			5.14E-05	5.14E-05	2.25E-04	2.25E-04
Carbon tetrachloride	6.07E-05			7.89E-04	7.89E-04	3.46E-03	3.46E-03
Chlorobenzene (Monochlorobenzene)	4.44E-05			5.77E-04	5.77E-04	2.53E-03	2.53E-03
Chloroform	4.71E-05			6.12E-04	6.12E-04	2.68E-03	2.68E-03
Dichloromethane (Methylene chloride)	1.47E-04			1.91E-03	1.91E-03	8.37E-03	8.37E-03
Ethylbenzene	1.08E-04			1.40E-03	1.40E-03	6.15E-03	6.15E-03
Formaldehyde	5.52E-02			7.18E-01	7.18E-01	3.14E+00	3.14E+00
Hexane	4.45E-04			5.79E-03	5.79E-03	2.53E-02	2.53E-02
Methanol	2.48E-03			3.22E-02	3.22E-02	1.41E-01	1.41E-01
Naphthalene	9.63E-05			1.25E-03	1.25E-03	5.48E-03	5.48E-03
Phenol	4.21E-05			5.47E-04	5.47E-04	2.40E-03	2.40E-03
Polycyclic organic matter	2.64E-04			3.43E-03	3.43E-03	1.50E-02	1.50E-02
Styrene	5.48E-05			7.12E-04	7.12E-04	3.12E-03	3.12E-03
Toluene	9.63E-04			1.25E-02	1.25E-02	5.48E-02	5.48E-02
Vinyl chloride (chloroethene)	2.47E-05			3.21E-04	3.21E-04	1.41E-03	1.41E-03
Xylenes, Total	2.68E-04			3.48E-03	3.48E-03	1.53E-02	1.53E-02

Other Emission Factor and/or Control Efficiency Factor Notes:

See 'Emission Factors' sheet for more information on emission factors.

Single Fuel Emission Units

EQUI ID	EQUI 4
Heat Input (BTU/hr)	13
Unlimited Hours (hr/yr)	8760
Limited Hours (hr/yr)	8760
Firing Type	2SLB 90-105% Load

Pollutant	AP-42 Emission Factor (lb/MMSCF)	Other Emission Factor (lb/MMscf)	Control Efficiency (%)	Unrestriced Emission Rate (lb/hr)	Controlled Emission Rate (lb/hr)	Unrestricted Emissions (tpy)	Limited Emissions (tpy)
Particulate Matter	4.83E-02			6.28E-01	6.28E-01	2.75E+00	2.75E+00
PM < 10 micron	4.83E-02			6.28E-01	6.28E-01	2.75E+00	2.75E+00
PM < 2.5 micron	4.83E-02			6.28E-01	6.28E-01	2.75E+00	2.75E+00
Nitrogen Oxides	3.17E+00			4.12E+01	4.12E+01	1.80E+02	1.80E+02
Carbon Monoxide	3.86E-01			5.02E+00	5.02E+00	2.20E+01	2.20E+01
Sulfur Dioxide	5.88E-04			7.64E-03	7.64E-03	3.35E-02	3.35E-02
Volatile Organic Compounds	1.20E-01			1.56E+00	1.56E+00	6.83E+00	6.83E+00
HAPs - Total	7.96E-02			1.04E+00	1.04E+00	4.53E+00	4.53E+00
Carbon Dioxide	1.10E+02			1.43E+03	1.43E+03	6.26E+03	6.26E+03
Methane	2.20E-03			2.87E-02	2.87E-02	1.26E-01	1.26E-01
Nitrous Oxide	2.20E-04			2.87E-03	2.87E-03	1.26E-02	1.26E-02
Carbon Dioxide Equivalent	1.10E+02			1.43E+03	1.43E+03	6.27E+03	6.27E+03
1,1,2,2-Tetrachloroethane	6.63E-05			8.62E-04	8.62E-04	3.78E-03	3.78E-03
1,1,2-Trichloroethane	5.27E-05			6.85E-04	6.85E-04	3.00E-03	3.00E-03
1,1-Dichloroethane	3.91E-05			5.08E-04	5.08E-04	2.23E-03	2.23E-03
1,2-Dibromoethane (Ethylene dibromide); EDB	7.34E-05			9.54E-04	9.54E-04	4.18E-03	4.18E-03
1,2-Dichloropropane	4.46E-05			5.80E-04	5.80E-04	2.54E-03	2.54E-03
1,3-Butadiene	8.20E-04			1.07E-02	1.07E-02	4.67E-02	4.67E-02
1,3-Dichloropropene	4.38E-05			5.69E-04	5.69E-04	2.49E-03	2.49E-03
2,2,4-trimethylpentane	8.46E-04			1.10E-02	1.10E-02	4.82E-02	4.82E-02
Acetaldehyde	7.76E-03			1.01E-01	1.01E-01	4.42E-01	4.42E-01
Acrolein	7.78E-03			1.01E-01	1.01E-01	4.43E-01	4.43E-01
Benzene	1.94E-03			2.52E-02	2.52E-02	1.10E-01	1.10E-01
Benzo(e)pyrene	2.34E-08			3.04E-07	3.04E-07	1.33E-06	1.33E-06
Biphenyl	3.95E-06			5.14E-05	5.14E-05	2.25E-04	2.25E-04
Carbon tetrachloride	6.07E-05			7.89E-04	7.89E-04	3.46E-03	3.46E-03
Chlorobenzene (Monochlorobenzene)	4.44E-05			5.77E-04	5.77E-04	2.53E-03	2.53E-03
Chloroform	4.71E-05			6.12E-04	6.12E-04	2.68E-03	2.68E-03
Dichloromethane (Methylene chloride)	1.47E-04			1.91E-03	1.91E-03	8.37E-03	8.37E-03
Ethylbenzene	1.08E-04			1.40E-03	1.40E-03	6.15E-03	6.15E-03
Formaldehyde	5.52E-02			7.18E-01	7.18E-01	3.14E+00	3.14E+00
Hexane	4.45E-04			5.79E-03	5.79E-03	2.53E-02	2.53E-02
Methanol	2.48E-03			3.22E-02	3.22E-02	1.41E-01	1.41E-01
Naphthalene	9.63E-05			1.25E-03	1.25E-03	5.48E-03	5.48E-03
Phenol	4.21E-05			5.47E-04	5.47E-04	2.40E-03	2.40E-03
Polycyclic organic matter	2.64E-04			3.43E-03	3.43E-03	1.50E-02	1.50E-02
Styrene	5.48E-05			7.12E-04	7.12E-04	3.12E-03	3.12E-03
Toluene	9.63E-04			1.25E-02	1.25E-02	5.48E-02	5.48E-02
Vinyl chloride (chloroethene)	2.47E-05			3.21E-04	3.21E-04	1.41E-03	1.41E-03
Xylenes, Total	2.68E-04			3.48E-03	3.48E-03	1.53E-02	1.53E-02

Other Emission Factor and/or Control Efficiency Factor Notes:

See 'Emission Factors' sheet for more information on emission factors.

Single Fuel Emission Units

EQUI ID	EQUI 6
Heat Input (BTU/hr)	3
Unlimited Hours (hr/yr)	8760
Limited Hours (hr/yr)	720
Firing Type	4SRB 90-105% Load

Pollutant	AP-42 Emission Factor (lb/MMSCF)	Other Emission Factor (lb/MMscf)	Control Efficiency (%)	Unrestriced Emission Rate (lb/hr)	Controlled Emission Rate (lb/hr)	Unrestricted Emissions (tpy)	Limited Emissions (tpy)
Particulate Matter	1.94E-02			5.82E-02	5.82E-02	2.55E-01	2.10E-02
PM < 10 micron	1.94E-02			5.82E-02	5.82E-02	2.55E-01	2.10E-02
PM < 2.5 micron	1.94E-02			5.82E-02	5.82E-02	2.55E-01	2.10E-02
Nitrogen Oxides	2.21E+00			6.63E+00	6.63E+00	2.90E+01	2.39E+00
Carbon Monoxide	3.72E+00			1.12E+01	1.12E+01	4.89E+01	4.02E+00
Sulfur Dioxide	5.88E-04			1.76E-03	1.76E-03	7.73E-03	6.35E-04
Volatile Organic Compounds	2.96E-02			8.88E-02	8.88E-02	3.89E-01	3.20E-02
HAPs - Total	3.25E-02			9.74E-02	9.74E-02	4.26E-01	3.50E-02
Carbon Dioxide	1.10E+02			3.30E+02	3.30E+02	1.45E+03	1.19E+02
Methane	2.20E-03			6.61E-03	6.61E-03	2.90E-02	2.38E-03
Nitrous Oxide	2.20E-04			6.61E-04	6.61E-04	2.90E-03	2.38E-04
Carbon Dioxide Equivalent	1.10E+02			3.30E+02	3.30E+02	1.45E+03	1.19E+02
1,1,2,2-Tetrachloroethane	2.53E-05			7.59E-05	7.59E-05	3.32E-04	2.73E-05
1,1,2-Trichloroethane	2.53E-05			7.59E-05	7.59E-05	3.32E-04	2.73E-05
1,1-Dichloroethane	1.13E-05			3.39E-05	3.39E-05	1.48E-04	1.22E-05
1,2-Dibromoethane (Ethylene dibromide); EDB	2.13E-05			6.39E-05	6.39E-05	2.80E-04	2.30E-05
1,2-Dichloropropane	1.30E-05			3.90E-05	3.90E-05	1.71E-04	1.40E-05
1,3-Butadiene	6.63E-04			1.99E-03	1.99E-03	8.71E-03	7.16E-04
1,3-Dichloropropene	1.30E-05			3.90E-05	3.90E-05	1.71E-04	1.40E-05
2,2,4-trimethylpentane	0.00E+00			0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acetaldehyde	2.79E-03			8.37E-03	8.37E-03	3.67E-02	3.01E-03
Acrolein	2.63E-03			7.89E-03	7.89E-03	3.46E-02	2.84E-03
Benzene	1.58E-03			4.74E-03	4.74E-03	2.08E-02	1.71E-03
Benzo(e)pyrene	0.00E+00			0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biphenyl	0.00E+00			0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbon tetrachloride	1.77E-05			5.31E-05	5.31E-05	2.33E-04	1.91E-05
Chlorobenzene (Monochlorobenzene)	1.29E-05			3.87E-05	3.87E-05	1.70E-04	1.39E-05
Chloroform	1.37E-05			4.11E-05	4.11E-05	1.80E-04	1.48E-05
Dichloromethane (Methylene chloride)	4.12E-05			1.24E-04	1.24E-04	5.41E-04	4.45E-05
Ethylbenzene	2.48E-05			7.44E-05	7.44E-05	3.26E-04	2.68E-05
Formaldehyde	2.05E-02			6.15E-02	6.15E-02	2.69E-01	2.21E-02
Hexane	0.00E+00			0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methanol	3.06E-03			9.18E-03	9.18E-03	4.02E-02	3.30E-03
Naphthalene	9.71E-05			2.91E-04	2.91E-04	1.28E-03	1.05E-04
Phenol	0.00E+00			0.00E+00	0.00E+00	0.00E+00	0.00E+00
Polycyclic organic matter	2.38E-04			7.14E-04	7.14E-04	3.13E-03	2.57E-04
Styrene	1.19E-05			3.57E-05	3.57E-05	1.56E-04	1.29E-05
Toluene	5.58E-04			1.67E-03	1.67E-03	7.33E-03	6.03E-04
Vinyl chloride (chloroethene)	7.18E-06			2.15E-05	2.15E-05	9.43E-05	7.75E-06
Xylenes, Total	1.95E-04			5.85E-04	5.85E-04	2.56E-03	2.11E-04

Other Emission Factor and/or Control Efficiency Factor Notes:
See 'Emission Factors' sheet for more information on emission factors.

Natural Gas

EQUI ID	EQUI 5
Heat Input (MMBtu/hr)	3
Fuel Usage (MMSCF/hr)	0.002941176
Unlimited Operating Hours	8760
Limited Operating Hours	2150
Firing Type	Small, Uncontrolled

Pollutant	AP-42 Emission Factor (lb/MMSCF)	Other Emission Factor (lb/MMscf)	Control Efficiency (%)	Unrestriced Emission Rate (lb/hr)	Controlled Emission Rate (lb/hr)	Unrestricted Emissions (tpy)	Limited Emissions (tpy)
Particulate Matter	7.60E+00			2.24E-02	2.24E-02	9.79E-02	2.40E-02
PM < 10 micron	7.60E+00			2.24E-02	2.24E-02	9.79E-02	2.40E-02
PM < 2.5 micron	7.60E+00			2.24E-02	2.24E-02	9.79E-02	2.40E-02
Nitrogen Oxides	1.00E+02			2.94E-01	2.94E-01	1.29E+00	3.16E-01
Carbon Monoxide	8.40E+01			2.47E-01	2.47E-01	1.08E+00	2.66E-01
Sulfur Dioxide	6.00E-01			1.76E-03	1.76E-03	7.73E-03	1.90E-03
Volatile Organic Compounds	5.50E+00			1.62E-02	1.62E-02	7.09E-02	1.74E-02
Lead Compounds	5.00E-04			1.47E-06	1.47E-06	6.44E-06	1.58E-06
HAPs - Total	1.89E+00			5.55E-03	5.55E-03	2.43E-02	5.97E-03
Carbon Dioxide	5.31E+01			1.59E+02	1.59E+02	6.97E+02	1.71E+02
Methane	1.00E-03			3.00E-03	3.00E-03	1.31E-02	3.23E-03
Nitrous Oxide	1.00E-04			3.00E-04	3.00E-04	1.31E-03	3.23E-04
Carbon Dioxide Equivalent	5.31E+01			1.59E+02	1.59E+02	6.98E+02	1.71E+02
1,4-Dichlorobenzene (para-)	1.20E-03			3.53E-06	3.53E-06	1.55E-05	3.79E-06
Arsenic compounds	2.00E-04			5.88E-07	5.88E-07	2.58E-06	6.32E-07
Benzene	2.10E-03			6.18E-06	6.18E-06	2.71E-05	6.64E-06
Beryllium compounds	1.20E-05			3.53E-08	3.53E-08	1.55E-07	3.79E-08
Cadmium compounds	1.10E-03			3.24E-06	3.24E-06	1.42E-05	3.48E-06
Chromium compounds	1.40E-03			4.12E-06	4.12E-06	1.80E-05	4.43E-06
Cobalt compounds	8.40E-05			2.47E-07	2.47E-07	1.08E-06	2.66E-07
Formaldehyde	7.50E-02			2.21E-04	2.21E-04	9.66E-04	2.37E-04
Hexane	1.80E+00			5.29E-03	5.29E-03	2.32E-02	5.69E-03
Manganese compounds	3.80E-04			1.12E-06	1.12E-06	4.90E-06	1.20E-06
Mercury	2.60E-04			7.65E-07	7.65E-07	3.35E-06	8.22E-07
Naphthalene	6.10E-04			1.79E-06	1.79E-06	7.86E-06	1.93E-06
Nickel compounds	2.10E-03			6.18E-06	6.18E-06	2.71E-05	6.64E-06
Polycyclic organic matter (POM)	6.98E-04			2.05E-06	2.05E-06	8.99E-06	2.21E-06
Selenium compounds	2.40E-05			7.06E-08	7.06E-08	3.09E-07	7.59E-08
Toluene	3.40E-03			1.00E-05	1.00E-05	4.38E-05	1.08E-05

Other Emission Factor and/or Control Efficiency Factor Notes:

See 'Emission Factors' sheet for more information on emission factors.

Natural Gas

EQUI ID	IA - Turbine Building Space Heater
Heat Input (MMBtu/hr)	0.324
Fuel Usage (MMSCF/hr)	3.18E-04
Unlimited Operating Hours	8760
Limited Operating Hours	8760
Firing Type	Small, Uncontrolled

Pollutant	AP-42 Emission Factor (lb/MMSCF)	Other Emission Factor (lb/MMscf)	Control Efficiency (%)	Unrestriced Emission Rate (lb/hr)	Controlled Emission Rate (lb/hr)	Unrestricted Emissions (tpy)	Limited Emissions (tpy)
Particulate Matter	7.60E+00			2.41E-03	2.41E-03	1.06E-02	1.06E-02
PM < 10 micron	7.60E+00			2.41E-03	2.41E-03	1.06E-02	1.06E-02
PM < 2.5 micron	7.60E+00			2.41E-03	2.41E-03	1.06E-02	1.06E-02
Nitrogen Oxides	1.00E+02			3.18E-02	3.18E-02	1.39E-01	1.39E-01
Carbon Monoxide	8.40E+01			2.67E-02	2.67E-02	1.17E-01	1.17E-01
Sulfur Dioxide	6.00E-01			1.91E-04	1.91E-04	8.35E-04	8.35E-04
Volatile Organic Compounds	5.50E+00			1.75E-03	1.75E-03	7.65E-03	7.65E-03
Lead Compounds	5.00E-04			1.59E-07	1.59E-07	6.96E-07	6.96E-07
HAPs - Total	1.89E+00			6.00E-04	6.00E-04	2.63E-03	2.63E-03
Carbon Dioxide	5.31E+01			1.72E+01	1.72E+01	7.53E+01	7.53E+01
Methane	1.00E-03			3.24E-04	3.24E-04	1.42E-03	1.42E-03
Nitrous Oxide	1.00E-04			3.24E-05	3.24E-05	1.42E-04	1.42E-04
Carbon Dioxide Equivalent	5.31E+01			1.72E+01	1.72E+01	7.53E+01	7.53E+01
1,4-Dichlorobenzene (para-)	1.20E-03			3.81E-07	3.81E-07	1.67E-06	1.67E-06
Arsenic compounds	2.00E-04			6.35E-08	6.35E-08	2.78E-07	2.78E-07
Benzene	2.10E-03			6.67E-07	6.67E-07	2.92E-06	2.92E-06
Beryllium compounds	1.20E-05			3.81E-09	3.81E-09	1.67E-08	1.67E-08
Cadmium compounds	1.10E-03			3.49E-07	3.49E-07	1.53E-06	1.53E-06
Chromium compounds	1.40E-03			4.45E-07	4.45E-07	1.95E-06	1.95E-06
Cobalt compounds	8.40E-05			2.67E-08	2.67E-08	1.17E-07	1.17E-07
Formaldehyde	7.50E-02			2.38E-05	2.38E-05	1.04E-04	1.04E-04
Hexane	1.80E+00			5.72E-04	5.72E-04	2.50E-03	2.50E-03
Manganese compounds	3.80E-04			1.21E-07	1.21E-07	5.29E-07	5.29E-07
Mercury	2.60E-04			8.26E-08	8.26E-08	3.62E-07	3.62E-07
Naphthalene	6.10E-04			1.94E-07	1.94E-07	8.49E-07	8.49E-07
Nickel compounds	2.10E-03			6.67E-07	6.67E-07	2.92E-06	2.92E-06
Polycyclic organic matter (POM)	6.98E-04			2.22E-07	2.22E-07	9.71E-07	9.71E-07
Selenium compounds	2.40E-05			7.62E-09	7.62E-09	3.34E-08	3.34E-08
Toluene	3.40E-03			1.08E-06	1.08E-06	4.73E-06	4.73E-06

Other Emission Factor and/or Control Efficiency Factor Notes:

See 'Emission Factors' sheet for more information on emission factors.

Natural Gas

EQUI ID	IA - Restroom Space Heater
Heat Input (MMBTU/hr)	0.025
Fuel Usage (MMSCF/hr)	2.45E-05
Unlimited Operating Hours	8760
Limited Operating Hours	8760
Firing Type	Small, Uncontrolled

Pollutant	AP-42 Emission Factor (lb/MMSCF)	Other Emission Factor (lb/MMscf)	Control Efficiency (%)	Unrestriced Emission Rate (lb/hr)	Controlled Emission Rate (lb/hr)	Unrestricted Emissions (tpy)	Limited Emissions (tpy)
Particulate Matter	7.60E+00			1.86E-04	1.86E-04	8.16E-04	8.16E-04
PM < 10 micron	7.60E+00			1.86E-04	1.86E-04	8.16E-04	8.16E-04
PM < 2.5 micron	7.60E+00			1.86E-04	1.86E-04	8.16E-04	8.16E-04
Nitrogen Oxides	1.00E+02			2.45E-03	2.45E-03	1.07E-02	1.07E-02
Carbon Monoxide	8.40E+01			2.06E-03	2.06E-03	9.02E-03	9.02E-03
Sulfur Dioxide	6.00E-01			1.47E-05	1.47E-05	6.44E-05	6.44E-05
Volatile Organic Compounds	5.50E+00			1.35E-04	1.35E-04	5.90E-04	5.90E-04
Lead Compounds	5.00E-04			1.23E-08	1.23E-08	5.37E-08	5.37E-08
HAPs - Total	1.89E+00			4.63E-05	4.63E-05	2.03E-04	2.03E-04
Carbon Dioxide	5.31E+01			1.33E+00	1.33E+00	5.81E+00	5.81E+00
Methane	1.00E-03			2.50E-05	2.50E-05	1.10E-04	1.10E-04
Nitrous Oxide	1.00E-04			2.50E-06	2.50E-06	1.10E-05	1.10E-05
Carbon Dioxide Equivalent	5.31E+01			1.33E+00	1.33E+00	5.81E+00	5.81E+00
1,4-Dichlorobenzene (para-)	1.20E-03			2.94E-08	2.94E-08	1.29E-07	1.29E-07
Arsenic compounds	2.00E-04			4.90E-09	4.90E-09	2.15E-08	2.15E-08
Benzene	2.10E-03			5.15E-08	5.15E-08	2.25E-07	2.25E-07
Beryllium compounds	1.20E-05			2.94E-10	2.94E-10	1.29E-09	1.29E-09
Cadmium compounds	1.10E-03			2.70E-08	2.70E-08	1.18E-07	1.18E-07
Chromium compounds	1.40E-03			3.43E-08	3.43E-08	1.50E-07	1.50E-07
Cobalt compounds	8.40E-05			2.06E-09	2.06E-09	9.02E-09	9.02E-09
Formaldehyde	7.50E-02			1.84E-06	1.84E-06	8.05E-06	8.05E-06
Hexane	1.80E+00			4.41E-05	4.41E-05	1.93E-04	1.93E-04
Manganese compounds	3.80E-04			9.31E-09	9.31E-09	4.08E-08	4.08E-08
Mercury	2.60E-04			6.37E-09	6.37E-09	2.79E-08	2.79E-08
Naphthalene	6.10E-04			1.50E-08	1.50E-08	6.55E-08	6.55E-08
Nickel compounds	2.10E-03			5.15E-08	5.15E-08	2.25E-07	2.25E-07
Polycyclic organic matter (POM)	6.98E-04			1.71E-08	1.71E-08	7.50E-08	7.50E-08
Selenium compounds	2.40E-05			5.88E-10	5.88E-10	2.58E-09	2.58E-09
Toluene	3.40E-03			8.33E-08	8.33E-08	3.65E-07	3.65E-07

Other Emission Factor and/or Control Efficiency Factor Notes:

See 'Emission Factors' sheet for more information on emission factors.

Natural Gas

EQUI ID	IA - Computer Room Space Heater
Heat Input (MMBtu/hr)	0.06
Fuel Usage (MMSCF/hr)	5.88E-05
Unlimited Operating Hours	8760
Limited Operating Hours	8760
Firing Type	Small, Uncontrolled

Pollutant	AP-42 Emission Factor (lb/MMSCF)	Other Emission Factor (lb/MMscf)	Control Efficiency (%)	Unrestriced Emission Rate (lb/hr)	Controlled Emission Rate (lb/hr)	Unrestricted Emissions (tpy)	Limited Emissions (tpy)
Particulate Matter	7.60E+00			4.47E-04	4.47E-04	1.96E-03	1.96E-03
PM < 10 micron	7.60E+00			4.47E-04	4.47E-04	1.96E-03	1.96E-03
PM < 2.5 micron	7.60E+00			4.47E-04	4.47E-04	1.96E-03	1.96E-03
Nitrogen Oxides	1.00E+02			5.88E-03	5.88E-03	2.58E-02	2.58E-02
Carbon Monoxide	8.40E+01			4.94E-03	4.94E-03	2.16E-02	2.16E-02
Sulfur Dioxide	6.00E-01			3.53E-05	3.53E-05	1.55E-04	1.55E-04
Volatile Organic Compounds	5.50E+00			3.24E-04	3.24E-04	1.42E-03	1.42E-03
Lead Compounds	5.00E-04			2.94E-08	2.94E-08	1.29E-07	1.29E-07
HAPs - Total	1.89E+00			1.11E-04	1.11E-04	4.86E-04	4.86E-04
Carbon Dioxide	5.31E+01			3.18E+00	3.18E+00	1.39E+01	1.39E+01
Methane	1.00E-03			6.00E-05	6.00E-05	2.63E-04	2.63E-04
Nitrous Oxide	1.00E-04			6.00E-06	6.00E-06	2.63E-05	2.63E-05
Carbon Dioxide Equivalent	5.31E+01			3.19E+00	3.19E+00	1.40E+01	1.40E+01
1,4-Dichlorobenzene (para-)	1.20E-03			7.06E-08	7.06E-08	3.09E-07	3.09E-07
Arsenic compounds	2.00E-04			1.18E-08	1.18E-08	5.15E-08	5.15E-08
Benzene	2.10E-03			1.24E-07	1.24E-07	5.41E-07	5.41E-07
Beryllium compounds	1.20E-05			7.06E-10	7.06E-10	3.09E-09	3.09E-09
Cadmium compounds	1.10E-03			6.47E-08	6.47E-08	2.83E-07	2.83E-07
Chromium compounds	1.40E-03			8.24E-08	8.24E-08	3.61E-07	3.61E-07
Cobalt compounds	8.40E-05			4.94E-09	4.94E-09	2.16E-08	2.16E-08
Formaldehyde	7.50E-02			4.41E-06	4.41E-06	1.93E-05	1.93E-05
Hexane	1.80E+00			1.06E-04	1.06E-04	4.64E-04	4.64E-04
Manganese compounds	3.80E-04			2.24E-08	2.24E-08	9.79E-08	9.79E-08
Mercury	2.60E-04			1.53E-08	1.53E-08	6.70E-08	6.70E-08
Naphthalene	6.10E-04			3.59E-08	3.59E-08	1.57E-07	1.57E-07
Nickel compounds	2.10E-03			1.24E-07	1.24E-07	5.41E-07	5.41E-07
Polycyclic organic matter (POM)	6.98E-04			4.11E-08	4.11E-08	1.80E-07	1.80E-07
Selenium compounds	2.40E-05			1.41E-09	1.41E-09	6.18E-09	6.18E-09
Toluene	3.40E-03			2.00E-07	2.00E-07	8.76E-07	8.76E-07

Other Emission Factor and/or Control Efficiency Factor Notes:

See 'Emission Factors' sheet for more information on emission factors.

Natural Gas

EQUI ID	IA - Pipeline Building space heater #1
Heat Input (MMBTU/hr)	0.2
Fuel Usage (MMSCF/hr)	1.96E-04
Unlimited Operating Hours	8760
Limited Operating Hours	8760
Firing Type	Small, Uncontrolled

Pollutant	AP-42 Emission Factor (lb/MMSCF)	Other Emission Factor (lb/MMscf)	Control Efficiency (%)	Unrestriced Emission Rate (lb/hr)	Controlled Emission Rate (lb/hr)	Unrestricted Emissions (tpy)	Limited Emissions (tpy)
Particulate Matter	7.60E+00			1.49E-03	1.49E-03	6.53E-03	6.53E-03
PM < 10 micron	7.60E+00			1.49E-03	1.49E-03	6.53E-03	6.53E-03
PM < 2.5 micron	7.60E+00			1.49E-03	1.49E-03	6.53E-03	6.53E-03
Nitrogen Oxides	1.00E+02			1.96E-02	1.96E-02	8.59E-02	8.59E-02
Carbon Monoxide	8.40E+01			1.65E-02	1.65E-02	7.21E-02	7.21E-02
Sulfur Dioxide	6.00E-01			1.18E-04	1.18E-04	5.15E-04	5.15E-04
Volatile Organic Compounds	5.50E+00			1.08E-03	1.08E-03	4.72E-03	4.72E-03
Lead Compounds	5.00E-04			9.80E-08	9.80E-08	4.29E-07	4.29E-07
HAPs - Total	1.89E+00			3.70E-04	3.70E-04	1.62E-03	1.62E-03
Carbon Dioxide	5.31E+01			1.06E+01	1.06E+01	4.65E+01	4.65E+01
Methane	1.00E-03			2.00E-04	2.00E-04	8.76E-04	8.76E-04
Nitrous Oxide	1.00E-04			2.00E-05	2.00E-05	8.76E-05	8.76E-05
Carbon Dioxide Equivalent	5.31E+01			1.06E+01	1.06E+01	4.65E+01	4.65E+01
1,4-Dichlorobenzene (para-)	1.20E-03			2.35E-07	2.35E-07	1.03E-06	1.03E-06
Arsenic compounds	2.00E-04			3.92E-08	3.92E-08	1.72E-07	1.72E-07
Benzene	2.10E-03			4.12E-07	4.12E-07	1.80E-06	1.80E-06
Beryllium compounds	1.20E-05			2.35E-09	2.35E-09	1.03E-08	1.03E-08
Cadmium compounds	1.10E-03			2.16E-07	2.16E-07	9.45E-07	9.45E-07
Chromium compounds	1.40E-03			2.75E-07	2.75E-07	1.20E-06	1.20E-06
Cobalt compounds	8.40E-05			1.65E-08	1.65E-08	7.21E-08	7.21E-08
Formaldehyde	7.50E-02			1.47E-05	1.47E-05	6.44E-05	6.44E-05
Hexane	1.80E+00			3.53E-04	3.53E-04	1.55E-03	1.55E-03
Manganese compounds	3.80E-04			7.45E-08	7.45E-08	3.26E-07	3.26E-07
Mercury	2.60E-04			5.10E-08	5.10E-08	2.23E-07	2.23E-07
Naphthalene	6.10E-04			1.20E-07	1.20E-07	5.24E-07	5.24E-07
Nickel compounds	2.10E-03			4.12E-07	4.12E-07	1.80E-06	1.80E-06
Polycyclic organic matter (POM)	6.98E-04			1.37E-07	1.37E-07	6.00E-07	6.00E-07
Selenium compounds	2.40E-05			4.71E-09	4.71E-09	2.06E-08	2.06E-08
Toluene	3.40E-03			6.67E-07	6.67E-07	2.92E-06	2.92E-06

Other Emission Factor and/or Control Efficiency Factor Notes:

See 'Emission Factors' sheet for more information on emission factors.

Natural Gas

EQUI ID	IA - Pipeline Building space heater #2
Heat Input (MMBtu/hr)	0.08
Fuel Usage (MMSCF/hr)	7.84E-05
Unlimited Operating Hours	8760
Limited Operating Hours	8760
Firing Type	Small, Uncontrolled

Pollutant	AP-42 Emission Factor (lb/MMSCF)	Other Emission Factor (lb/MMscf)	Control Efficiency (%)	Unrestriced Emission Rate (lb/hr)	Controlled Emission Rate (lb/hr)	Unrestricted Emissions (tpy)	Limited Emissions (tpy)
Particulate Matter	7.60E+00			5.96E-04	5.96E-04	2.61E-03	2.61E-03
PM < 10 micron	7.60E+00			5.96E-04	5.96E-04	2.61E-03	2.61E-03
PM < 2.5 micron	7.60E+00			5.96E-04	5.96E-04	2.61E-03	2.61E-03
Nitrogen Oxides	1.00E+02			7.84E-03	7.84E-03	3.44E-02	3.44E-02
Carbon Monoxide	8.40E+01			6.59E-03	6.59E-03	2.89E-02	2.89E-02
Sulfur Dioxide	6.00E-01			4.71E-05	4.71E-05	2.06E-04	2.06E-04
Volatile Organic Compounds	5.50E+00			4.31E-04	4.31E-04	1.89E-03	1.89E-03
Lead Compounds	5.00E-04			3.92E-08	3.92E-08	1.72E-07	1.72E-07
HAPs - Total	1.89E+00			1.48E-04	1.48E-04	6.49E-04	6.49E-04
Carbon Dioxide	5.31E+01			4.24E+00	4.24E+00	1.86E+01	1.86E+01
Methane	1.00E-03			8.00E-05	8.00E-05	3.50E-04	3.50E-04
Nitrous Oxide	1.00E-04			8.00E-06	8.00E-06	3.50E-05	3.50E-05
Carbon Dioxide Equivalent	5.31E+01			4.25E+00	4.25E+00	1.86E+01	1.86E+01
1,4-Dichlorobenzene (para-)	1.20E-03			9.41E-08	9.41E-08	4.12E-07	4.12E-07
Arsenic compounds	2.00E-04			1.57E-08	1.57E-08	6.87E-08	6.87E-08
Benzene	2.10E-03			1.65E-07	1.65E-07	7.21E-07	7.21E-07
Beryllium compounds	1.20E-05			9.41E-10	9.41E-10	4.12E-09	4.12E-09
Cadmium compounds	1.10E-03			8.63E-08	8.63E-08	3.78E-07	3.78E-07
Chromium compounds	1.40E-03			1.10E-07	1.10E-07	4.81E-07	4.81E-07
Cobalt compounds	8.40E-05			6.59E-09	6.59E-09	2.89E-08	2.89E-08
Formaldehyde	7.50E-02			5.88E-06	5.88E-06	2.58E-05	2.58E-05
Hexane	1.80E+00			1.41E-04	1.41E-04	6.18E-04	6.18E-04
Manganese compounds	3.80E-04			2.98E-08	2.98E-08	1.31E-07	1.31E-07
Mercury	2.60E-04			2.04E-08	2.04E-08	8.93E-08	8.93E-08
Naphthalene	6.10E-04			4.78E-08	4.78E-08	2.10E-07	2.10E-07
Nickel compounds	2.10E-03			1.65E-07	1.65E-07	7.21E-07	7.21E-07
Polycyclic organic matter (POM)	6.98E-04			5.48E-08	5.48E-08	2.40E-07	2.40E-07
Selenium compounds	2.40E-05			1.88E-09	1.88E-09	8.24E-09	8.24E-09
Toluene	3.40E-03			2.67E-07	2.67E-07	1.17E-06	1.17E-06

Other Emission Factor and/or Control Efficiency Factor Notes:

See 'Emission Factors' sheet for more information on emission factors.

Natural Gas

EQUI ID	IA - Office Furnace
Heat Input (MMBTU/hr)	0.098
Fuel Usage (MMSCF/hr)	9.61E-05
Unlimited Operating Hours	8760
Limited Operating Hours	8760
Firing Type	Small, Uncontrolled

Pollutant	AP-42 Emission Factor (lb/MMSCF)	Other Emission Factor (lb/MMscf)	Control Efficiency (%)	Unrestriced Emission Rate (lb/hr)	Controlled Emission Rate (lb/hr)	Unrestricted Emissions (tpy)	Limited Emissions (tpy)
Particulate Matter	7.60E+00			7.30E-04	7.30E-04	3.20E-03	3.20E-03
PM < 10 micron	7.60E+00			7.30E-04	7.30E-04	3.20E-03	3.20E-03
PM < 2.5 micron	7.60E+00			7.30E-04	7.30E-04	3.20E-03	3.20E-03
Nitrogen Oxides	1.00E+02			9.61E-03	9.61E-03	4.21E-02	4.21E-02
Carbon Monoxide	8.40E+01			8.07E-03	8.07E-03	3.53E-02	3.53E-02
Sulfur Dioxide	6.00E-01			5.76E-05	5.76E-05	2.52E-04	2.52E-04
Volatile Organic Compounds	5.50E+00			5.28E-04	5.28E-04	2.31E-03	2.31E-03
Lead Compounds	5.00E-04			4.80E-08	4.80E-08	2.10E-07	2.10E-07
HAPs - Total	1.89E+00			1.81E-04	1.81E-04	7.94E-04	7.94E-04
Carbon Dioxide	5.31E+01			5.20E+00	5.20E+00	2.28E+01	2.28E+01
Methane	1.00E-03			9.80E-05	9.80E-05	4.29E-04	4.29E-04
Nitrous Oxide	1.00E-04			9.80E-06	9.80E-06	4.29E-05	4.29E-05
Carbon Dioxide Equivalent	5.31E+01			5.20E+00	5.20E+00	2.28E+01	2.28E+01
1,4-Dichlorobenzene (para-)	1.20E-03			1.15E-07	1.15E-07	5.05E-07	5.05E-07
Arsenic compounds	2.00E-04			1.92E-08	1.92E-08	8.42E-08	8.42E-08
Benzene	2.10E-03			2.02E-07	2.02E-07	8.84E-07	8.84E-07
Beryllium compounds	1.20E-05			1.15E-09	1.15E-09	5.05E-09	5.05E-09
Cadmium compounds	1.10E-03			1.06E-07	1.06E-07	4.63E-07	4.63E-07
Chromium compounds	1.40E-03			1.35E-07	1.35E-07	5.89E-07	5.89E-07
Cobalt compounds	8.40E-05			8.07E-09	8.07E-09	3.53E-08	3.53E-08
Formaldehyde	7.50E-02			7.21E-06	7.21E-06	3.16E-05	3.16E-05
Hexane	1.80E+00			1.73E-04	1.73E-04	7.57E-04	7.57E-04
Manganese compounds	3.80E-04			3.65E-08	3.65E-08	1.60E-07	1.60E-07
Mercury	2.60E-04			2.50E-08	2.50E-08	1.09E-07	1.09E-07
Naphthalene	6.10E-04			5.86E-08	5.86E-08	2.57E-07	2.57E-07
Nickel compounds	2.10E-03			2.02E-07	2.02E-07	8.84E-07	8.84E-07
Polycyclic organic matter (POM)	6.98E-04			6.71E-08	6.71E-08	2.94E-07	2.94E-07
Selenium compounds	2.40E-05			2.31E-09	2.31E-09	1.01E-08	1.01E-08
Toluene	3.40E-03			3.27E-07	3.27E-07	1.43E-06	1.43E-06

Other Emission Factor and/or Control Efficiency Factor Notes:

See 'Emission Factors' sheet for more information on emission factors.

Natural Gas

EQUI ID	IA - Compressor Shop Space Heater #1
Heat Input (MMBtu/hr)	0.033
Fuel Usage (MMSCF/hr)	3.24E-05
Unlimited Operating Hours	8760
Limited Operating Hours	8760
Firing Type	Small, Uncontrolled

Pollutant	AP-42 Emission Factor (lb/MMSCF)	Other Emission Factor (lb/MMscf)	Control Efficiency (%)	Unrestriced Emission Rate (lb/hr)	Controlled Emission Rate (lb/hr)	Unrestricted Emissions (tpy)	Limited Emissions (tpy)
Particulate Matter	7.60E+00			2.46E-04	2.46E-04	1.08E-03	1.08E-03
PM < 10 micron	7.60E+00			2.46E-04	2.46E-04	1.08E-03	1.08E-03
PM < 2.5 micron	7.60E+00			2.46E-04	2.46E-04	1.08E-03	1.08E-03
Nitrogen Oxides	1.00E+02			3.24E-03	3.24E-03	1.42E-02	1.42E-02
Carbon Monoxide	8.40E+01			2.72E-03	2.72E-03	1.19E-02	1.19E-02
Sulfur Dioxide	6.00E-01			1.94E-05	1.94E-05	8.50E-05	8.50E-05
Volatile Organic Compounds	5.50E+00			1.78E-04	1.78E-04	7.79E-04	7.79E-04
Lead Compounds	5.00E-04			1.62E-08	1.62E-08	7.09E-08	7.09E-08
HAPs - Total	1.89E+00			6.11E-05	6.11E-05	2.68E-04	2.68E-04
Carbon Dioxide	5.31E+01			1.75E+00	1.75E+00	7.67E+00	7.67E+00
Methane	1.00E-03			3.30E-05	3.30E-05	1.45E-04	1.45E-04
Nitrous Oxide	1.00E-04			3.30E-06	3.30E-06	1.45E-05	1.45E-05
Carbon Dioxide Equivalent	5.31E+01			1.75E+00	1.75E+00	7.67E+00	7.67E+00
1,4-Dichlorobenzene (para-)	1.20E-03			3.88E-08	3.88E-08	1.70E-07	1.70E-07
Arsenic compounds	2.00E-04			6.47E-09	6.47E-09	2.83E-08	2.83E-08
Benzene	2.10E-03			6.79E-08	6.79E-08	2.98E-07	2.98E-07
Beryllium compounds	1.20E-05			3.88E-10	3.88E-10	1.70E-09	1.70E-09
Cadmium compounds	1.10E-03			3.56E-08	3.56E-08	1.56E-07	1.56E-07
Chromium compounds	1.40E-03			4.53E-08	4.53E-08	1.98E-07	1.98E-07
Cobalt compounds	8.40E-05			2.72E-09	2.72E-09	1.19E-08	1.19E-08
Formaldehyde	7.50E-02			2.43E-06	2.43E-06	1.06E-05	1.06E-05
Hexane	1.80E+00			5.82E-05	5.82E-05	2.55E-04	2.55E-04
Manganese compounds	3.80E-04			1.23E-08	1.23E-08	5.38E-08	5.38E-08
Mercury	2.60E-04			8.41E-09	8.41E-09	3.68E-08	3.68E-08
Naphthalene	6.10E-04			1.97E-08	1.97E-08	8.64E-08	8.64E-08
Nickel compounds	2.10E-03			6.79E-08	6.79E-08	2.98E-07	2.98E-07
Polycyclic organic matter (POM)	6.98E-04			2.26E-08	2.26E-08	9.89E-08	9.89E-08
Selenium compounds	2.40E-05			7.76E-10	7.76E-10	3.40E-09	3.40E-09
Toluene	3.40E-03			1.10E-07	1.10E-07	4.82E-07	4.82E-07

Other Emission Factor and/or Control Efficiency Factor Notes:

See 'Emission Factors' sheet for more information on emission factors.

Natural Gas

EQUI ID	IA - Compressor Shop Space Heater #2
Heat Input (MMBtu/hr)	0.155
Fuel Usage (MMSCF/hr)	1.52E-04
Unlimited Operating Hours	8760
Limited Operating Hours	8760
Firing Type	Small, Uncontrolled

Pollutant	AP-42 Emission Factor (lb/MMSCF)	Other Emission Factor (lb/MMscf)	Control Efficiency (%)	Unrestriced Emission Rate (lb/hr)	Controlled Emission Rate (lb/hr)	Unrestricted Emissions (tpy)	Limited Emissions (tpy)
Particulate Matter	7.60E+00			1.15E-03	1.15E-03	5.06E-03	5.06E-03
PM < 10 micron	7.60E+00			1.15E-03	1.15E-03	5.06E-03	5.06E-03
PM < 2.5 micron	7.60E+00			1.15E-03	1.15E-03	5.06E-03	5.06E-03
Nitrogen Oxides	1.00E+02			1.52E-02	1.52E-02	6.66E-02	6.66E-02
Carbon Monoxide	8.40E+01			1.28E-02	1.28E-02	5.59E-02	5.59E-02
Sulfur Dioxide	6.00E-01			9.12E-05	9.12E-05	3.99E-04	3.99E-04
Volatile Organic Compounds	5.50E+00			8.36E-04	8.36E-04	3.66E-03	3.66E-03
Lead Compounds	5.00E-04			7.60E-08	7.60E-08	3.33E-07	3.33E-07
HAPs - Total	1.89E+00			2.87E-04	2.87E-04	1.26E-03	1.26E-03
Carbon Dioxide	5.31E+01			8.22E+00	8.22E+00	3.60E+01	3.60E+01
Methane	1.00E-03			1.55E-04	1.55E-04	6.79E-04	6.79E-04
Nitrous Oxide	1.00E-04			1.55E-05	1.55E-05	6.79E-05	6.79E-05
Carbon Dioxide Equivalent	5.31E+01			8.23E+00	8.23E+00	3.60E+01	3.60E+01
1,4-Dichlorobenzene (para-)	1.20E-03			1.82E-07	1.82E-07	7.99E-07	7.99E-07
Arsenic compounds	2.00E-04			3.04E-08	3.04E-08	1.33E-07	1.33E-07
Benzene	2.10E-03			3.19E-07	3.19E-07	1.40E-06	1.40E-06
Beryllium compounds	1.20E-05			1.82E-09	1.82E-09	7.99E-09	7.99E-09
Cadmium compounds	1.10E-03			1.67E-07	1.67E-07	7.32E-07	7.32E-07
Chromium compounds	1.40E-03			2.13E-07	2.13E-07	9.32E-07	9.32E-07
Cobalt compounds	8.40E-05			1.28E-08	1.28E-08	5.59E-08	5.59E-08
Formaldehyde	7.50E-02			1.14E-05	1.14E-05	4.99E-05	4.99E-05
Hexane	1.80E+00			2.74E-04	2.74E-04	1.20E-03	1.20E-03
Manganese compounds	3.80E-04			5.77E-08	5.77E-08	2.53E-07	2.53E-07
Mercury	2.60E-04			3.95E-08	3.95E-08	1.73E-07	1.73E-07
Naphthalene	6.10E-04			9.27E-08	9.27E-08	4.06E-07	4.06E-07
Nickel compounds	2.10E-03			3.19E-07	3.19E-07	1.40E-06	1.40E-06
Polycyclic organic matter (POM)	6.98E-04			1.06E-07	1.06E-07	4.65E-07	4.65E-07
Selenium compounds	2.40E-05			3.65E-09	3.65E-09	1.60E-08	1.60E-08
Toluene	3.40E-03			5.17E-07	5.17E-07	2.26E-06	2.26E-06

Other Emission Factor and/or Control Efficiency Factor Notes:

See 'Emission Factors' sheet for more information on emission factors.

Natural Gas

EQUI ID	IA - Compressor Shop Space Heater #3
Heat Input (MMBTU/hr)	0.155
Fuel Usage (MMSCF/hr)	1.52E-04
Unlimited Operating Hours	8760
Limited Operating Hours	8760
Firing Type	Small, Uncontrolled

Pollutant	AP-42 Emission Factor (lb/MMSCF)	Other Emission Factor (lb/MMscf)	Control Efficiency (%)	Unrestriced Emission Rate (lb/hr)	Controlled Emission Rate (lb/hr)	Unrestricted Emissions (tpy)	Limited Emissions (tpy)
Particulate Matter	7.60E+00			1.15E-03	1.15E-03	5.06E-03	5.06E-03
PM < 10 micron	7.60E+00			1.15E-03	1.15E-03	5.06E-03	5.06E-03
PM < 2.5 micron	7.60E+00			1.15E-03	1.15E-03	5.06E-03	5.06E-03
Nitrogen Oxides	1.00E+02			1.52E-02	1.52E-02	6.66E-02	6.66E-02
Carbon Monoxide	8.40E+01			1.28E-02	1.28E-02	5.59E-02	5.59E-02
Sulfur Dioxide	6.00E-01			9.12E-05	9.12E-05	3.99E-04	3.99E-04
Volatile Organic Compounds	5.50E+00			8.36E-04	8.36E-04	3.66E-03	3.66E-03
Lead Compounds	5.00E-04			7.60E-08	7.60E-08	3.33E-07	3.33E-07
HAPs - Total	1.89E+00			2.87E-04	2.87E-04	1.26E-03	1.26E-03
Carbon Dioxide	5.31E+01			8.22E+00	8.22E+00	3.60E+01	3.60E+01
Methane	1.00E-03			1.55E-04	1.55E-04	6.79E-04	6.79E-04
Nitrous Oxide	1.00E-04			1.55E-05	1.55E-05	6.79E-05	6.79E-05
Carbon Dioxide Equivalent	5.31E+01			8.23E+00	8.23E+00	3.60E+01	3.60E+01
1,4-Dichlorobenzene (para-)	1.20E-03			1.82E-07	1.82E-07	7.99E-07	7.99E-07
Arsenic compounds	2.00E-04			3.04E-08	3.04E-08	1.33E-07	1.33E-07
Benzene	2.10E-03			3.19E-07	3.19E-07	1.40E-06	1.40E-06
Beryllium compounds	1.20E-05			1.82E-09	1.82E-09	7.99E-09	7.99E-09
Cadmium compounds	1.10E-03			1.67E-07	1.67E-07	7.32E-07	7.32E-07
Chromium compounds	1.40E-03			2.13E-07	2.13E-07	9.32E-07	9.32E-07
Cobalt compounds	8.40E-05			1.28E-08	1.28E-08	5.59E-08	5.59E-08
Formaldehyde	7.50E-02			1.14E-05	1.14E-05	4.99E-05	4.99E-05
Hexane	1.80E+00			2.74E-04	2.74E-04	1.20E-03	1.20E-03
Manganese compounds	3.80E-04			5.77E-08	5.77E-08	2.53E-07	2.53E-07
Mercury	2.60E-04			3.95E-08	3.95E-08	1.73E-07	1.73E-07
Naphthalene	6.10E-04			9.27E-08	9.27E-08	4.06E-07	4.06E-07
Nickel compounds	2.10E-03			3.19E-07	3.19E-07	1.40E-06	1.40E-06
Polycyclic organic matter (POM)	6.98E-04			1.06E-07	1.06E-07	4.65E-07	4.65E-07
Selenium compounds	2.40E-05			3.65E-09	3.65E-09	1.60E-08	1.60E-08
Toluene	3.40E-03			5.17E-07	5.17E-07	2.26E-06	2.26E-06

Other Emission Factor and/or Control Efficiency Factor Notes:

See 'Emission Factors' sheet for more information on emission factors.

AP-42, Section 1.4 - EF for NG

Pollutants	Large, Uncontrolled, Pre-NSPS	Large, Uncontrolled, Post-NSPS
Parameter Code	(lb/MMscf)	
Particulate Matter	7.60E+00	7.60E+00
PM < 10 micron	7.60E+00	7.60E+00
PM < 2.5 micron	7.60E+00	7.60E+00
Nitrogen Oxides	2.80E+02	1.90E+02
Carbon Monoxide	8.40E+01	8.40E+01
Sulfur Dioxide	6.00E-01	6.00E-01
Volatile Organic Compounds	5.50E+00	5.50E+00
Lead Compounds	5.00E-04	5.00E-04
Parameter Code	kg/MMBtu	
Carbon Dioxide	5.31E+01	5.31E+01
Methane	1.00E-03	1.00E-03
Nitrous Oxide	1.00E-04	1.00E-04
Carbon Dioxide Equivalent	5.31E+01	5.31E+01
Parameter Code	(lb/MMscf)	
HAPs - Total	1.89E+00	1.89E+00
1,4-Dichlorobenzene (para-)	1.20E-03	1.20E-03
Arsenic compounds	2.00E-04	2.00E-04
Benzene	2.10E-03	2.10E-03
Beryllium Compounds	1.20E-05	1.20E-05
Cadmium compounds	1.10E-03	1.10E-03
Chromium compounds	1.40E-03	1.40E-03
Cobalt compounds	8.40E-05	8.40E-05
Formaldehyde	7.50E-02	7.50E-02
Hexane	1.80E+00	1.80E+00
Manganese compounds	3.80E-04	3.80E-04
Mercury	2.60E-04	2.60E-04
Nickel compounds	2.10E-03	2.10E-03
Polycyclic organic matter (POM)	6.98E-04	6.98E-04
Selenium compounds	2.40E-05	2.40E-05
Toluene	3.40E-03	3.40E-03
2-Methylnaphthalene	2.40E-05	2.40E-05
5-Methylchrysene	1.80E-06	1.80E-06
7,12-Dimethylbenz[a]anthracene	1.60E-05	1.60E-05
Acenaphthene	1.80E-06	1.80E-06
Acenaphthylene	1.80E-06	1.80E-06
Anthracene	2.40E-06	2.40E-06
Benzo(a)anthracene	1.80E-06	1.80E-06
Benzo(ghi)perylene	1.20E-06	1.20E-06
Benzo(b)fluoranthene	1.80E-06	1.80E-06
Benzo(k)fluoranthene	1.80E-06	1.80E-06
Benzo[a]pyrene	1.20E-06	1.20E-06
Chrysene	1.80E-06	1.80E-06
Dibenz[a,h]anthracene	1.20E-06	1.20E-06
Fluoranthene	3.00E-06	3.00E-06
Fluorene	2.80E-06	2.80E-06
Indeno(1,2,3-cd)pyrene	1.80E-06	1.80E-06
Naphthalene	6.10E-04	6.10E-04
Phenanthrene	1.70E-05	1.70E-05
Pyrene	5.00E-06	5.00E-06
Total POM	6.98E-04	6.98E-04

Notes:

HAP emission factors include PAH as part of POM. Individual POM pollutants aren't included separately.

POM emission factors include naphthalene. However, since naphthalene is a HAP, it is also listed separately. Total HAPS subtracts the separate naphthalene factor so it is not counted twice in the total.

Emission factors for CO2, CH4, and N2O are from 40 CFR Part 98, Subpart C, Table C-1 and C-2. CO2e emissions are based on global warming potentials from 40 CFR Part 98, Subpart A, Table A-1.

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Pollutants	Large, Controlled, Low Nox	Large, Controlled, Flue Gas Recirculation
Parameter Code		
Particulate Matter	7.60E+00	7.60E+00
PM < 10 micron	7.60E+00	7.60E+00
PM < 2.5 micron	7.60E+00	7.60E+00
Nitrogen Oxides	1.40E+02	1.00E+02
Carbon Monoxide	8.40E+01	8.40E+01
Sulfur Dioxide	6.00E-01	6.00E-01
Volatile Organic Compounds	5.50E+00	5.50E+00
Lead Compounds	5.00E-04	5.00E-04
Parameter Code		
Carbon Dioxide	5.31E+01	5.31E+01
Methane	1.00E-03	1.00E-03
Nitrous Oxide	1.00E-04	1.00E-04
Carbon Dioxide Equivalent	5.31E+01	5.31E+01
Parameter Code		
HAPs - Total	1.89E+00	1.89E+00
1,4-Dichlorobenzene (para-)	1.20E-03	1.20E-03
Arsenic compounds	2.00E-04	2.00E-04
Benzene	2.10E-03	2.10E-03
Beryllium Compounds	1.20E-05	1.20E-05
Cadmium compounds	1.10E-03	1.10E-03
Chromium compounds	1.40E-03	1.40E-03
Cobalt compounds	8.40E-05	8.40E-05
Formaldehyde	7.50E-02	7.50E-02
Hexane	1.80E+00	1.80E+00
Manganese compounds	3.80E-04	3.80E-04
Mercury	2.60E-04	2.60E-04
Nickel compounds	2.10E-03	2.10E-03
Polycyclic organic matter (POM)	6.98E-04	6.98E-04
Selenium compounds	2.40E-05	2.40E-05
Toluene	3.40E-03	3.40E-03
2-Methylnaphthalene	2.40E-05	2.40E-05
5-Methylchrysene	1.80E-06	1.80E-06
7,12-Dimethylbenz[a]anthracene	1.60E-05	1.60E-05
Acenaphthene	1.80E-06	1.80E-06
Acenaphthylene	1.80E-06	1.80E-06
Anthracene	2.40E-06	2.40E-06
Benzo(a)anthracene	1.80E-06	1.80E-06
Benzo(ghi)perylene	1.20E-06	1.20E-06
Benzo(b)fluoranthene	1.80E-06	1.80E-06
Benzo(k)fluoranthene	1.80E-06	1.80E-06
Benzo[a]pyrene	1.20E-06	1.20E-06
Chrysene	1.80E-06	1.80E-06
Dibenz[a,h]anthracene	1.20E-06	1.20E-06
Fluoranthene	3.00E-06	3.00E-06
Fluorene	2.80E-06	2.80E-06
Indeno(1,2,3-cd)pyrene	1.80E-06	1.80E-06
Naphthalene	6.10E-04	6.10E-04
Phenanthrene	1.70E-05	1.70E-05
Pyrene	5.00E-06	5.00E-06
Total POM	6.98E-04	6.98E-04

Notes:

HAP emission factors include PAH as part of POM. Individual POM
POM emission factors include naphthalene. However, since naph
subtracts the separate naphthalene factor so it is not counted tw
Emission factors for CO2, CH4, and N2O are from 40 CFR Part 98,
based on global warming potentials from 40 CFR Part 98, Subpart

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Pollutants	Small, Uncontrolled	Small, Controlled, Low NOx burners
Parameter Code		
Particulate Matter	7.60E+00	7.60E+00
PM < 10 micron	7.60E+00	7.60E+00
PM < 2.5 micron	7.60E+00	7.60E+00
Nitrogen Oxides	1.00E+02	5.00E+01
Carbon Monoxide	8.40E+01	8.40E+01
Sulfur Dioxide	6.00E-01	6.00E-01
Volatile Organic Compounds	5.50E+00	5.50E+00
Lead Compounds	5.00E-04	5.00E-04
Parameter Code		
Carbon Dioxide	5.31E+01	5.31E+01
Methane	1.00E-03	1.00E-03
Nitrous Oxide	1.00E-04	1.00E-04
Carbon Dioxide Equivalent	5.31E+01	5.31E+01
Parameter Code		
HAPs - Total	1.89E+00	1.89E+00
1,4-Dichlorobenzene (para-)	1.20E-03	1.20E-03
Arsenic compounds	2.00E-04	2.00E-04
Benzene	2.10E-03	2.10E-03
Beryllium Compounds	1.20E-05	1.20E-05
Cadmium compounds	1.10E-03	1.10E-03
Chromium compounds	1.40E-03	1.40E-03
Cobalt compounds	8.40E-05	8.40E-05
Formaldehyde	7.50E-02	7.50E-02
Hexane	1.80E+00	1.80E+00
Manganese compounds	3.80E-04	3.80E-04
Mercury	2.60E-04	2.60E-04
Nickel compounds	2.10E-03	2.10E-03
Polycyclic organic matter (POM)	6.98E-04	6.98E-04
Selenium compounds	2.40E-05	2.40E-05
Toluene	3.40E-03	3.40E-03
2-Methylnaphthalene	2.40E-05	2.40E-05
5-Methylchrysene	1.80E-06	1.80E-06
7,12-Dimethylbenz[a]anthracene	1.60E-05	1.60E-05
Acenaphthene	1.80E-06	1.80E-06
Acenaphthylene	1.80E-06	1.80E-06
Anthracene	2.40E-06	2.40E-06
Benzo(a)anthracene	1.80E-06	1.80E-06
Benzo(ghi)perylene	1.20E-06	1.20E-06
Benzo(b)fluoranthene	1.80E-06	1.80E-06
Benzo(k)fluoranthene	1.80E-06	1.80E-06
Benzo[a]pyrene	1.20E-06	1.20E-06
Chrysene	1.80E-06	1.80E-06
Dibenz[a,h]anthracene	1.20E-06	1.20E-06
Fluoranthene	3.00E-06	3.00E-06
Fluorene	2.80E-06	2.80E-06
Indeno(1,2,3-cd)pyrene	1.80E-06	1.80E-06
Naphthalene	6.10E-04	6.10E-04
Phenanthrene	1.70E-05	1.70E-05
Pyrene	5.00E-06	5.00E-06
Total POM	6.98E-04	6.98E-04

Notes:

HAP emission factors include PAH as part of POM. Individual POM
POM emission factors include naphthalene. However, since naph
subtracts the separate naphthalene factor so it is not counted tw
Emission factors for CO2, CH4, and N2O are from 40 CFR Part 98,
based on global warming potentials from 40 CFR Part 98, Subpart

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Pollutants	Small, Controlled, Flue Gas Recirculation	Tangential Fired, Uncontrolled
Parameter Code		
Particulate Matter	7.60E+00	7.60E+00
PM < 10 micron	7.60E+00	7.60E+00
PM < 2.5 micron	7.60E+00	7.60E+00
Nitrogen Oxides	3.20E+01	1.70E+02
Carbon Monoxide	8.40E+01	2.40E+01
Sulfur Dioxide	6.00E-01	6.00E-01
Volatile Organic Compounds	5.50E+00	5.50E+00
Lead Compounds	5.00E-04	5.00E-04
Parameter Code		
Carbon Dioxide	5.31E+01	5.31E+01
Methane	1.00E-03	1.00E-03
Nitrous Oxide	1.00E-04	1.00E-04
Carbon Dioxide Equivalent	5.31E+01	5.31E+01
Parameter Code		
HAPs - Total	1.89E+00	1.89E+00
1,4-Dichlorobenzene (para-)	1.20E-03	1.20E-03
Arsenic compounds	2.00E-04	2.00E-04
Benzene	2.10E-03	2.10E-03
Beryllium Compounds	1.20E-05	1.20E-05
Cadmium compounds	1.10E-03	1.10E-03
Chromium compounds	1.40E-03	1.40E-03
Cobalt compounds	8.40E-05	8.40E-05
Formaldehyde	7.50E-02	7.50E-02
Hexane	1.80E+00	1.80E+00
Manganese compounds	3.80E-04	3.80E-04
Mercury	2.60E-04	2.60E-04
Nickel compounds	2.10E-03	2.10E-03
Polycyclic organic matter (POM)	6.98E-04	6.98E-04
Selenium compounds	2.40E-05	2.40E-05
Toluene	3.40E-03	3.40E-03
2-Methylnaphthalene	2.40E-05	2.40E-05
5-Methylchrysene	1.80E-06	1.80E-06
7,12-Dimethylbenz[a]anthracene	1.60E-05	1.60E-05
Acenaphthene	1.80E-06	1.80E-06
Acenaphthylene	1.80E-06	1.80E-06
Anthracene	2.40E-06	2.40E-06
Benzo(a)anthracene	1.80E-06	1.80E-06
Benzo(ghi)perylene	1.20E-06	1.20E-06
Benzo(b)fluoranthene	1.80E-06	1.80E-06
Benzo(k)fluoranthene	1.80E-06	1.80E-06
Benzo[a]pyrene	1.20E-06	1.20E-06
Chrysene	1.80E-06	1.80E-06
Dibenz[a,h]anthracene	1.20E-06	1.20E-06
Fluoranthene	3.00E-06	3.00E-06
Fluorene	2.80E-06	2.80E-06
Indeno(1,2,3-cd)pyrene	1.80E-06	1.80E-06
Naphthalene	6.10E-04	6.10E-04
Phenanthrene	1.70E-05	1.70E-05
Pyrene	5.00E-06	5.00E-06
Total POM	6.98E-04	6.98E-04

Notes:

HAP emission factors include PAH as part of POM. Individual POM
POM emission factors include naphthalene. However, since naph
subtracts the separate naphthalene factor so it is not counted tw
Emission factors for CO2, CH4, and N2O are from 40 CFR Part 98,
based on global warming potentials from 40 CFR Part 98, Subpart

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Pollutants	Tangential Fired, Controlled, Flue Gas Recirculation	Residential, Uncontrolled
Parameter Code		
Particulate Matter	7.6	7.6
PM < 10 micron	7.6	7.6
PM < 2.5 micron	7.6	7.6
Nitrogen Oxides	76	94
Carbon Monoxide	98	40
Sulfur Dioxide	0.6	0.6
Volatile Organic Compounds	5.5	5.5
Lead Compounds	0.0005	0.0005
Parameter Code		
Carbon Dioxide	53.06	53.06
Methane	0.001	0.001
Nitrous Oxide	0.0001	0.0001
Carbon Dioxide Equivalent	5.31E+01	5.31E+01
Parameter Code		
HAPs - Total	1.89E+00	1.89E+00
1,4-Dichlorobenzene (para-)	1.20E-03	1.20E-03
Arsenic compounds	2.00E-04	2.00E-04
Benzene	2.10E-03	2.10E-03
Beryllium Compounds	1.20E-05	1.20E-05
Cadmium compounds	1.10E-03	1.10E-03
Chromium compounds	1.40E-03	1.40E-03
Cobalt compounds	8.40E-05	8.40E-05
Formaldehyde	7.50E-02	7.50E-02
Hexane	1.80E+00	1.80E+00
Manganese compounds	3.80E-04	3.80E-04
Mercury	2.60E-04	2.60E-04
Nickel compounds	2.10E-03	2.10E-03
Polycyclic organic matter (POM)	6.98E-04	6.98E-04
Selenium compounds	2.40E-05	2.40E-05
Toluene	3.40E-03	3.40E-03
2-Methylnaphthalene	2.40E-05	2.40E-05
5-Methylchrysene	1.80E-06	1.80E-06
7,12-Dimethylbenz[a]anthracene	1.60E-05	1.60E-05
Acenaphthene	1.80E-06	1.80E-06
Acenaphthylene	1.80E-06	1.80E-06
Anthracene	2.40E-06	2.40E-06
Benzo(a)anthracene	1.80E-06	1.80E-06
Benzo(ghi)perylene	1.20E-06	1.20E-06
Benzo(b)fluoranthene	1.80E-06	1.80E-06
Benzo(k)fluoranthene	1.80E-06	1.80E-06
Benzo[a]pyrene	1.20E-06	1.20E-06
Chrysene	1.80E-06	1.80E-06
Dibenz[a,h]anthracene	1.20E-06	1.20E-06
Fluoranthene	3.00E-06	3.00E-06
Fluorene	2.80E-06	2.80E-06
Indeno(1,2,3-cd)pyrene	1.80E-06	1.80E-06
Naphthalene	6.10E-04	6.10E-04
Phenanthrene	1.70E-05	1.70E-05
Pyrene	5.00E-06	5.00E-06
Total POM	6.98E-04	6.98E-04

Notes:

HAP emission factors include PAH as part of POM. Individual POM
POM emission factors include naphthalene. However, since naph
subtracts the separate naphthalene factor so it is not counted tw
Emission factors for CO2, CH4, and N2O are from 40 CFR Part 98,
based on global warming potentials from 40 CFR Part 98, Subpart

AP-42 Emission Factors - Engines

Pollutants	2SLB 90-105% Load	2SLB <90% Load	4SLB 90-105% Load	4SLB <90% Load	4SRB 90-105% Load	4SRB <90% Load	Gasoline	Diesel
Particulate Matter	4.83E-02	4.83E-02	9.99E-03	9.99E-03	1.94E-02	1.94E-02	1.00E-01	3.10E-01
PM < 10 micron	4.83E-02	4.83E-02	9.99E-03	9.99E-03	1.94E-02	1.94E-02	1.00E-01	3.10E-01
PM < 2.5 micron	4.83E-02	4.83E-02	9.99E-03	9.99E-03	1.94E-02	1.94E-02	1.00E-01	3.10E-01
Nitrogen Oxides	3.17E+00	1.94E+00	4.08E+00	8.47E-01	2.21E+00	2.27E+00	1.63E+00	4.41E+00
Carbon Monoxide	3.86E-01	3.53E-01	3.17E-01	5.57E-01	3.72E+00	3.51E+00	9.90E-01	9.50E-01
Sulfur Dioxide	5.88E-04	5.88E-04	5.88E-04	5.88E-04	5.88E-04	5.88E-04	8.40E-02	2.90E-01
Volatile Organic Compounds	1.20E-01	1.20E-01	1.18E-01	1.18E-01	2.96E-02	2.96E-02	3.03E+00	3.60E-01
Carbon Dioxide	1.10E+02	1.10E+02	1.10E+02	1.10E+02	1.10E+02	1.10E+02	1.54E+02	1.64E+02
Methane	2.20E-03	2.20E-03	2.20E-03	2.20E-03	2.20E-03	2.20E-03	6.61E-03	6.61E-03
Nitrous Oxide	2.20E-04	2.20E-04	2.20E-04	2.20E-04	2.20E-04	2.20E-04	1.32E-03	1.32E-03
1,1,2,2-Tetrachloroethane	6.63E-05	6.63E-05	4.00E-05	4.00E-05	2.53E-05	2.53E-05		
1,1,2-Trichloroethane	5.27E-05	5.27E-05	3.18E-05	3.18E-05	2.53E-05	2.53E-05		
1,1-Dichloroethane	3.91E-05	3.91E-05			1.13E-05	1.13E-05		
1,2-Dibromoethane (Ethylene dibromide); EDB	7.34E-05	7.34E-05	4.43E-05	4.43E-05	2.13E-05	2.13E-05		
1,2-Dichloropropane	4.46E-05	4.46E-05			1.30E-05	1.30E-05		
1,3-Butadiene	8.20E-04	8.20E-04	2.67E-04	2.67E-04	6.63E-04	6.63E-04		3.91E-05
1,3-Dichloropropene	4.38E-05	4.38E-05	2.64E-05	2.64E-05	1.30E-05	1.30E-05		
2,2,4-trimethylpentane	8.46E-04	8.46E-04	2.50E-04	2.50E-04				
Acetaldehyde	7.76E-03	7.76E-03	8.36E-03	8.36E-03	2.79E-03	2.79E-03		7.67E-04
Acrolein	7.78E-03	7.78E-03	5.14E-03	5.14E-03	2.63E-03	2.63E-03		9.25E-05
Benzene	1.94E-03	1.94E-03	4.40E-04	4.40E-04	1.58E-03	1.58E-03		9.33E-04
Benzo(e)pyrene	2.34E-08	2.34E-08						
Biphenyl	3.95E-06	3.95E-06	2.12E-04	3.91E-05				
Carbon tetrachloride	6.07E-05	6.07E-05	3.67E-05	3.67E-05	1.77E-05	1.77E-05		
Chlorobenzene (Monochlorobenzene)	4.44E-05	4.44E-05	3.04E-05	3.04E-05	1.29E-05	1.29E-05		
Chloroform	4.71E-05	4.71E-05	2.85E-05	2.85E-05	1.37E-05	1.37E-05		
Dichloromethane (Methylene chloride)	1.47E-04	1.47E-04	2.00E-05	2.00E-05	4.12E-05	4.12E-05		
Ethylbenzene	1.08E-04	1.08E-04	3.97E-05	3.97E-05	2.48E-05	2.48E-05		
Formaldehyde	5.52E-02	5.52E-02	5.28E-02	5.28E-02	2.05E-02	2.05E-02		1.18E-03
Hexane	4.45E-04	4.45E-04	1.11E-03	1.11E-03				
Methanol	2.48E-03	2.48E-03	2.50E-03	2.50E-03	3.06E-03	3.06E-03		
Naphthalene	9.63E-05	9.63E-05	7.44E-05	7.44E-05	9.71E-05	9.71E-05		8.48E-05
Phenol	4.21E-05	4.21E-05	2.40E-05	2.40E-05				
Polycyclic organic matter	2.64E-04	2.64E-04	1.62E-04	1.62E-04	2.38E-04	2.38E-04		1.68E-04
Styrene	5.48E-05	5.48E-05	2.36E-05	2.36E-05	1.19E-05	1.19E-05		
Toluene	9.63E-04	9.63E-04	4.08E-04	4.08E-04	5.58E-04	5.58E-04		4.09E-04
Vinyl chloride (chloroethene)	2.47E-05	2.47E-05	1.49E-05	1.49E-05	7.18E-06	7.18E-06		
Xylenes, Total	2.68E-04	2.68E-04	1.84E-04	1.84E-04	1.95E-04	1.95E-04		2.85E-04

Notes:

Diesel and Gasoline VOC emission factors (AP-42 Chapter 3.3) include all of the components of TOC (Table 3.3-1)

Where AP-42 emission factors are "< X", X is used as the emission factor.

From Table 3.2-1, 3.2-2, and 3.2-3, the VOC emission factor was used instead of the TOC emission factor

HAP emission factors include PAH as part of POM. Pollutants included in POM are not included separately.

POM emission factors include naphthalene.However, since naphthalene is a HAP, it is also listed separately. Total HAPS subtracts the separate naphthalene factor so it is not counted twice in the total.

Emission factors for CO2, CH4, and N2O are from 40 CFR Part 98, Subpart C, Table C-1 and C-2 (November 29, 2013). CO2e emissions are based on global warming potentials from 40 CFR Part 98, Subpart A, Table A-1.

Attachment 2

Subject Item Inventory and Facility Requirements

SI List

AI ID (Name): 597 (Viking Gas Transmission - Milaca Station 2217)
Activity: IND20250002

SI Category	SI Type	Subject Item ID	Delta Designation	Description	
Activity	Insignificant Air Emissions Activity	ACTV 1	Null	All IA's	
Agency Interest	Conventional Site	AISI 597	Null	Null	
Equipment	Process Heater	EQUI 5	EU004	Water Jacket Heater	
	Reciprocating IC Engine	EQUI 2	EU001	#1A 2SLB 13 mmBtu/hr	
		EQUI 3	EU002	#2A 2SLB 13 mmBtu/hr	
		EQUI 4	EU003	#3A 2SLB 13 mmBtu/hr	
		EQUI 6	EU005	Emergency Generator 4SRB 3 mmBtu/hr	
	Turbine	EQUI 1	EU006	Turbine Engine #1 lean pre-mix 45 mmBtu/hr	
Structure	Building	STRU 1	BG002	Equipment Garage	
		STRU 2	BG001	Compressor Bldg A	
		STRU 3	BG003	Office and Shop	
		STRU 4	BG004	Office	
		STRU 5	BG005	Compressor Bldg B	
	Stack/Vent	STRU 6	SV001	Reciprocating Engine #1A	
		STRU 7	SV002	Reciprocating Engine #2A	
		STRU 8	SV003	Reciprocating Engine #3A	
		STRU 9	SV004	Water Jacket Heater	
		STRU 10	SV005	Reciprocating Engine - Emergency Generator	
		STRU 11	SV006	Turbine Engine #1	
Total Facility	Air Quality Total Facility	TFAC 1	09500004	Viking Gas Transmission - Milaca Station 2217	

Insignificant Activities

AI ID (Name): 597 (Viking Gas Transmission - Milaca Station 2217)
Activity: IND20250002

SI Category	SI Type	Status Description	Sub Attribute Description	
Activity	Insignificant Air Emissions Activity	Active / Existing	Minn. R. 7007.1300, subp. 3(E)	
			Minn. R. 7007.1300, subp. 3(F)	

Emission Units 1

AI ID (Name): 597 (Viking Gas Transmission - Milaca Station 2217)
Activity: IND20250002

SI Type	Subject Item ID	Delta Designation	Description	Manufacturer	Model	Max Design Capacity	Max Design Capacity Units	Material	Firing Method	Subject to CSAPR?	Electric Generating Capacity (MW)	Construction Start Date	Operation Start Date	Modification Date	
Turbine	EQUI 1	EU006	Turbine Engine #1 lean pre-mix 45 mmBtu/hr	Solar	40-T4700S	4,719	horsepower/hours	Energy	Null	N	Null	9/1/1997	10/1/1997	Null	

Emission Units 2

AI ID (Name): 597 (Viking Gas Transmission - Milaca Station 2217)
Activity: IND20250002

SI Type	Subject Item ID	Delta Designation	Description	Manufacturer	Model	Max Design Capacity	Max Design Capacity Units	Material	Engine Use	Firing Method	Engine Displacement	Engine Displacement Units	Construction Start Date	Operation Start Date	Modification Date	
Reciprocating IC Engine	EQUI 2	EU001	#1A 2SLB 13 mmBtu/hr	Cooper Bessemer	GMVH-8	1,600	horsepower/hours	Energy	Unlimited use	SI-2SLB	35.32	liters per cylinder	11/6/1967	11/6/1967	Null	
	EQUI 3	EU002	#2A 2SLB 13 mmBtu/hr	Cooper Bessemer	GMVH-8	1,600	horsepower/hours	Energy	Unlimited use	SI-2SLB	35.32	liters per cylinder	11/6/1967	11/6/1967	Null	
	EQUI 4	EU003	#3A 2SLB 13 mmBtu/hr	Cooper Bessemer	GMVH-8	1,600	horsepower/hours	Energy	Unlimited use	SI-2SLB	35.32	liters per cylinder	11/13/1967	11/13/1967	Null	
	EQUI 6	EU005	Emergency Generator 4SRB 3 mmBtu/hr	Waukesha Motor Co	F817GU	100	horsepower/hours	Energy	Emergency/blacks..	SI-4SRB	2.23	liters per cylinder	1/1/1967	1/1/1967	Null	

Emission Units 3

AI ID (Name): 597 (Viking Gas Transmission - Milaca Station 2217)
Activity: IND20250002

SI Type	Subject Item ID	Delta Designation	Description	Manufacturer	Model	Max Design Capacity	Max Design Capacity Units	Material	Construction Start Date	Operation Start Date	Modification Date	
Process Heater	EQUI 5	EU004	Water Jacket Heater	Peerless	210-15-WT	3	million British thermal units/hours	Heat	1/1/1967	1/1/1967	Null	

PTE by SI

AI ID (Name): 597 (Viking Gas Transmission - Milaca Station 2217)
Activity: IND20250002

SI Category	SI Type	Subject Item ID	Delta Designation	Description	Pollutant	Potential (lbs/hr)	Unrestricted Potential (tons/yr)	Potential Limited (tons/yr)	Actual Emissions (tons/yr)
Equipment	Process Heater	EQUI 5	EU004	Water Jacket Heater	1,4-Dichlorobenzene (para-)	3.5294e-06	1.54588e-05	3.794e-06	
					Arsenic compounds	5.882e-07	2.5765e-06	6.324e-07	
					Benzene	6.1765e-06	2.70529e-05	6.637e-06	
					Beryllium	3.53e-08	1.55e-07	3.79e-08	
					Cadmium compounds	3.2353e-06	1.41706e-05	3.4779e-06	
					Carbon Dioxide	351	1,540	377	
					Carbon Dioxide Equivalent	351	1,539	378	
					Carbon Monoxide	0.25	1.08	0.27	
					Chromium compounds	4.12e-06	1.8e-05	4.43e-06	
					Cobalt compounds	2.47e-07	1.08e-06	2.66e-07	
					Formaldehyde	0.00022058	0.000966176	0.00023713	
					HAPs - Single	0.000221	0.000966	0.000237	
					HAPs - Total	0.005554	0.024328	0.005971	
					Hexane	0.005294	0.023188	0.00569	
					Lead	1.47e-06	6.44e-06	1.58e-06	
					Manganese compounds	1.12e-06	4.9e-06	1.2e-06	
					Methane	0.00661	0.029	0.00711	
					Naphthalene	1.79e-06	7.86e-06	1.93e-06	
					Nickel compounds	6.18e-06	2.71e-05	6.64e-06	
					Nitrogen Oxides	0.2941	1.2882	0.3162	
					Nitrous Oxide	0.000661	0.0029	0.000711	
					Particulate Matter	0.0224	0.0979	0.024	
					PM < 2.5 micron	0.022353	0.097906	0.024029	
					PM < 10 micron	0.022353	0.0979	0.024029	
					Polycyclic organic matter	2.05e-06	8.99e-06	2.21e-06	
					Selenium compounds	7.06e-08	3.09e-07	7.59e-08	
					Sulfur Dioxide	0.0018	0.0077	0.0019	
					Toluene	1e-05	4.38e-05	1.08e-05	
					Volatile Organic Compounds	0.0162	0.0709	0.0174	
	Reciprocating IC Engine	EQUI 2	EU001	#1A 2SLB 13 mmBtu/hr	1,1-Dichloroethane	0.0005083	0.002226	0.002226	
					1,1,2-Trichloroethane	0.000685	0.003	0.003	
					1,1,2,2-Tetrachloroethane	0.0008619	0.003775122	0.003775	
					1,2-Dibromoethane (Ethylene dibromide); EDB	0.0009542	0.004179	0.004179	
					1,2-Dichloropropane	0.0005798	0.0025395	0.0025395	
					1,3-Butadiene	0.01066	0.04669	0.04669	
					1,3-Dichloropropene	0.0005694	0.002494	0.002494	
					2,2,4-trimethylpentane	0.010998	0.04817	0.04817	
					Acetaldehyde	0.10088	0.44185	0.44185	
					Acrolein	0.10114	0.44299	0.44299	
					Benzene	0.0252	0.11046	0.11046	
					Biphenyl	5.135e-05	0.0002249	0.0002249	
					Carbon Dioxide	1,430	6,260	6,260	
					Carbon Dioxide Equivalent	1,430	6,270	6,270	
					Carbon Monoxide	5.02	22	22	
					Carbon tetrachloride	0.000789	0.003456	0.003456	
					Chlorobenzene (Monochlorobenzene)	0.000577	0.002528	0.002528	
					Chloroform	0.0006123	0.002682	0.002682	
					Dichloromethane (Methylene chloride)	0.001911	0.00837	0.00837	
					Ethylbenzene	0.0014	0.00615	0.00615	
					Formaldehyde	0.7176	3.1431	3.1431	
					HAPs - Single	0.7176	3.1431	3.1431	
					HAPs - Total	1.0353	4.5347	4.5347	
					Hexane	0.005785	0.02534	0.02534	
					Methane	0.0287	0.126	0.126	
					Methanol	0.0322	0.1412	0.1412	
					Naphthalene	0.001252	0.005483	0.005483	
					Nitrogen Oxides	41.21	180.4998	180.4998	
					Nitrous Oxide	0.00287	0.0126	0.0126	
					Particulate Matter	0.628	2.7508	2.7508	
					Phenol	0.0005473	0.002397	0.002397	
					PM < 2.5 micron	0.628	2.7508	2.7508	
					PM < 10 micron	0.628	2.7508	2.7508	
					Polycyclic organic matter	0.00343	0.015	0.015	
					Styrene	0.0007124	0.0031203	0.0031203	
					Sulfur Dioxide	0.007644	0.03348	0.03348	
					Toluene	0.0125	0.0548	0.0548	
					Vinyl chloride (chloroethene)	0.0003211	0.001406	0.001406	
					Volatile Organic Compounds	1.56	6.83	6.83	
					Xylenes, Total	0.003484	0.01526	0.01526	
		EQUI 3	EU002	#2A 2SLB 13	1,1-Dichloroethane	0.000508	0.002226	0.002226	

PTE by SI

AI ID (Name): 597 (Viking Gas Transmission - Milaca Station 2217)
Activity: IND20250002

SI Category	SI Type	Subject Item ID	Delta Designation	Description	Pollutant	Potential (lbs/hr)	Unrestricted Potential (tons/yr)	Potential Limited (tons/yr)	Actual Emissions (tons/yr)
Equipment	Reciprocating IC Engine	EQUI 3	EU002	#2A 2SLB 13 mmBtu/hr	1,1,2-Trichloroethane	0.000685	0.003	0.003	
					1,1,2,2-Tetrachloroethane	0.0008619	0.003775	0.003775	
					1,2-Dibromoethane (Ethylene dibromide); EDB	0.0009542	0.004179	0.004179	
					1,2-Dichloropropane	0.0005798	0.0025395	0.0025395	
					1,3-Butadiene	0.01066	0.04669	0.04669	
					1,3-Dichloropropene	0.0005694	0.002494	0.002494	
					2,2,4-trimethylpentane	0.010998	0.04817	0.04817	
					Acetaldehyde	0.10088	0.44185	0.44185	
					Acrolein	0.10114	0.44299	0.44299	
					Benzene	0.0252	0.11046	0.110546	
					Biphenyl	5.135e-05	0.0002249	0.0002249	
					Carbon Dioxide	1,430	6,260	6,260	
					Carbon Dioxide Equivalent	1,430	6,270	6,270	
					Carbon Monoxide	5.018	21.9788	21.9788	
					Carbon tetrachloride	0.000789	0.003456	0.003456	
					Chlorobenzene (Monochlorobenzene)	0.000577	0.002528	0.002528	
					Chloroform	0.0006123	0.002682	0.002682	
					Dichloromethane (Methylene chloride)	0.001911	0.00837	0.00837	
					Ethylbenzene	0.0014	0.00615	0.00615	
					Formaldehyde	0.7176	3.1431	3.1431	
					HAPs - Single	0.7176	3.1431	3.1431	
					HAPs - Total	1.0353	4.5347	4.5347	
					Hexane	0.005785	0.02534	0.02534	
					Methane	0.0287	0.126	0.126	
					Methanol	0.0322	0.1412	0.1412	
					Naphthalene	0.001252	0.005483	0.005483	
					Nitrogen Oxides	41.21	180.4998	180.4998	
					Nitrous Oxide	0.00287	0.0126	0.0126	
					Particulate Matter	0.628	2.7508	2.7508	
					Phenol	0.0005473	0.002397	0.002397	
					PM < 2.5 micron	0.628	2.7508	2.7508	
					PM < 10 micron	0.628	2.7508	2.7508	
					Polycyclic organic matter	0.00343	0.015	0.015	
					Styrene	0.0007124	0.0031203	0.0031203	
					Sulfur Dioxide	0.007644	0.03348	0.03348	
					Toluene	0.0125	0.0548	0.0548	
					Vinyl chloride (chloroethene)	0.0003211	0.001406	0.001406	
					Volatile Organic Compounds	1.56	6.83	6.83	
					Xylenes, Total	0.003484	0.01526	0.01526	
		EQUI 4	EU003	#3A 2SLB 13 mmBtu/hr	1,1-Dichloroethane	0.0005083	0.002226	0.002226	
					1,1,2-Trichloroethane	0.000685	0.003	0.003	
					1,1,2,2-Tetrachloroethane	0.0008619	0.003775	0.003775	
					1,2-Dibromoethane (Ethylene dibromide); EDB	0.0009542	0.004179	0.004179	
					1,2-Dichloropropane	0.0005798	0.0025395	0.0025395	
					1,3-Butadiene	0.01066	0.04669	0.04669	
					1,3-Dichloropropene	0.0005694	0.002494	0.002494	
					2,2,4-trimethylpentane	0.010998	0.04817	0.04817	
					Acetaldehyde	0.10088	0.44185	0.44185	
					Acrolein	0.10114	0.44299	0.44299	
					Benzene	0.0252	0.11046	0.11046	
					Biphenyl	5.135e-05	0.0002249	0.0002249	
					Carbon Dioxide	1,430	6,260	6,260	
					Carbon Dioxide Equivalent	1,430	6,270	6,270	
					Carbon Monoxide	5.02	22	22	
					Carbon tetrachloride	0.000789	0.003456	0.003456	
					Chlorobenzene (Monochlorobenzene)	0.000577	0.002528	0.002528	
					Chloroform	0.0006123	0.002682	0.002682	
					Dichloromethane (Methylene chloride)	0.001911	0.00837	0.00837	
					Ethylbenzene	0.0014	0.00615	0.00615	
					Formaldehyde	0.7176	3.1431	3.1431	
					HAPs - Single	0.7176	3.1431	3.1431	
					HAPs - Total	1.0353	4.5347	4.5347	
					Hexane	0.005785	0.02534	0.02534	
					Methane	0.0287	0.126	0.126	
					Methanol	0.0322	0.1412	0.1412	
					Naphthalene	0.001252	0.005483	0.005483	
					Nitrogen Oxides	41.21	180.4998	180.4998	
					Nitrous Oxide	0.00287	0.0126	0.0126	
					Particulate Matter	0.628	2.7508	2.7508	
					Phenol	0.0005473	0.002397	0.002397	

PTE by SI

AI ID (Name): 597 (Viking Gas Transmission - Milaca Station 2217)
Activity: IND20250002

SI Category	SI Type	Subject Item ID	Delta Designation	Description	Pollutant	Potential (lbs/hr)	Unrestricted Potential (tons/yr)	Potential Limited (tons/yr)	Actual Emissions (tons/yr)
Equipment	Reciprocating IC Engine	EQUI 4	EU003	#3A 2SLB 13 mmBtu/hr	PM < 2.5 micron	0.628	2.7508	2.7508	
					PM < 10 micron	0.628	2.7508	2.7508	
					Polycyclic organic matter	0.00343	0.015	0.015	
					Styrene	0.0007124	0.0031203	0.0031203	
					Sulfur Dioxide	0.007644	0.03348	0.03348	
					Toluene	0.0125	0.0548	0.0548	
					Vinyl chloride (chloroethene)	0.0003211	0.001406	0.001406	
					Volatile Organic Compounds	1.56	6.83	6.83	
					Xylenes, Total	0.003484	0.01526	0.01526	
		EQUI 6	EU005	Emergency Generator 4SRB 3 mmBtu/hr	1,1-Dichloroethane	3.39e-05	0.00014848	1.2204e-05	
					1,1,2-Trichloroethane	7.59e-05	0.000332	2.73e-05	
					1,1,2,2-Tetrachloroethane	7.59e-05	0.00033244	2.7324e-05	
					1,2-Dibromoethane (Ethylene dibromide); EDB	6.39e-05	0.00027988	2.3e-05	
					1,2-Dichloropropane	3.9e-05	0.00017082	1.404e-05	
					1,3-Butadiene	0.0019889	0.0087118	0.000716	
					1,3-Dichloropropene	3.81e-05	0.0001668	1.3716e-05	
					Acetaldehyde	0.00837	0.03666	0.003013	
					Acrolein	0.00789	0.034558	0.00284	
					Benzene	0.00474	0.02076	0.001706	
					Carbon Dioxide	330	1,450	119	
					Carbon Dioxide Equivalent	33	1,450	119	
					Carbon Monoxide	11.16	48.8808	4.0176	
					Carbon tetrachloride	5.31e-05	0.00023257	1.9116e-05	
					Chlorobenzene (Monochlorobenzene)	3.87e-05	0.0001695	1.393e-05	
					Chloroform	4.11e-05	0.00018	1.4796e-05	
					Dichloromethane (Methylene chloride)	0.0001236	0.000541368	4.4496e-05	
					Ethylbenzene	7.44e-05	0.00032587	2.6784e-05	
					Formaldehyde	0.0615	0.26937	0.02214	
					HAPs - Single	0.0615	0.269	0.0221	
					HAPs - Total	0.097361	0.42644	0.03504	
					Methane	0.00661	0.029	0.00238	
					Methanol	0.00918	0.040208	0.0033048	
					Naphthalene	0.0002913	0.0012759	0.00010487	
					Nitrogen Oxides	6.63	29.039	2.3868	
					Nitrous Oxide	0.000661	0.0029	0.000238	
					Particulate Matter	0.0582	0.255	0.021	
					PM < 2.5 micron	0.0582	0.255	0.021	
					PM < 10 micron	0.0582	0.255	0.021	
					Polycyclic organic matter	0.000714	0.00313	0.000257	
					Styrene	3.57e-05	0.000156366	1.2852e-05	
					Sulfur Dioxide	0.001764	0.007726	0.000635	
					Toluene	0.001674	0.007332	0.00060264	
					Vinyl chloride (chloroethene)	2.154e-05	9.43452e-05	7.754e-06	
					Volatile Organic Compounds	0.0888	0.3889	0.031968	
					Xylenes, Total	0.000585	0.0025623	0.0002106	
	Turbine	EQUI 1	EU006	Turbine Engine #1 lean pre-mix 45 mmBtu/hr	1,3-Butadiene	1.935e-05	8.475e-05	8.475e-05	
					Acetaldehyde	0.0018	0.007884	0.007884	
					Acrolein	0.000288	0.0012614	0.0012614	
					Benzene	0.00054	0.002365	0.002365	
					Carbon Dioxide	5,260	23,000	23,000	
					Carbon Dioxide Equivalent	5,269	23,080	23,080	
					Carbon Monoxide	5.49	24.0462	24.0462	
					Ethylbenzene	0.00144	0.006307	0.006307	
					Formaldehyde	0.032	0.1398	0.1398	
					HAPs - Single	0.032	0.13994	0.13994	
					HAPs - Total	0.046229	0.20248	0.20248	
					Methane	0.0992	0.4353	0.435	
					Naphthalene	5.85e-05	0.0002562	0.0002562	
					Nitrogen Oxides	7.56	33.11	33.11	
					Nitrous Oxide	0.00992	0.0435	0.0435	
					Particulate Matter	0.297	1.3	1.3	
					PM < 2.5 micron	0.297	1.3	1.3	
					PM < 10 micron	0.297	1.3	1.3	
					Polycyclic organic matter	9.9e-05	0.0004336	0.0004336	
					Propylene oxide	0.001305	0.0057159	0.0057159	
					Sulfur Dioxide	0.153	0.67	0.67	
					Toluene	0.00585	0.02562	0.02562	
					Volatile Organic Compounds	1.575	6.898	6.898	
					Xylenes, Total	0.00288	0.01261	0.01261	

Relationships

AI ID (Name): 597 (Viking Gas Transmission - Milaca Station 2217)
Activity: IND20250002

SI Category	SI Type	Subject Item ID	Delta Designation	Description	Relationship	Related SI ID	% Flow	Related SI Type	Related Delta Designation	Relationship Start Date	Relationship End Date	
Equipment	Process Heater	EQUI 5	EU004	Water Jacket Heater	sends to	STRU 9	100	Stack/Vent	SV004	10/8/1997	Null	
	Reciprocating IC Engine	EQUI 2	EU001	#1A 2SLB 13 mmBtu/hr	sends to	STRU 6	100	Stack/Vent	SV001	10/8/1997	Null	
		EQUI 3	EU002	#2A 2SLB 13 mmBtu/hr	sends to	STRU 7	100	Stack/Vent	SV002	10/8/1997	Null	
		EQUI 4	EU003	#3A 2SLB 13 mmBtu/hr	sends to	STRU 8	100	Stack/Vent	SV003	10/8/1997	Null	
		EQUI 6	EU005	Emergency Generator 4SRB 3 mmBtu/hr	sends to	STRU 10	100	Stack/Vent	SV005	10/8/1997	Null	
	Turbine	EQUI 1	EU006	Turbine Engine #1 lean pre-mix 45 mmBtu/hr	sends to	STRU 11	100	Stack/Vent	SV006	10/8/1997	Null	

Building

AI ID (Name): 597 (Viking Gas Transmission - Milaca Station 2217)
Activity: IND20250002

Subject Item ID	Delta Designation	Description	Height	Units (height)	Length	Units (length)	Width	Units (width)	
STRU 1	BG002	Equipment Garage	15	feet	60	feet	40	feet	
STRU 2	BG001	Compressor Bldg A	33	feet	112	feet	40	feet	
STRU 3	BG003	Office and Shop	24	feet	66	feet	40	feet	
STRU 4	BG004	Office	19.5	feet	36	feet	26	feet	
STRU 5	BG005	Compressor Bldg B	25.5	feet	30	feet	45	feet	

Stack/Vents

AI ID (Name): 597 (Viking Gas Transmission - Milaca Station 2217)
Activity: IND20250002

Subject Item ID	Delta Designation	Description	Stack Height (feet)	Stack Diameter (feet)	Stack Length (feet)	Stack Width (feet)	Stack Flow Rate (cubic ft/min)	Discharge Temperature (°F)	Flow Rate/Temp Information Source	Discharge Direction	
STRU 6	SV001	Reciprocating Engine #1A	22	1.8	Null	Null	12,972	611	Test data	Upwards with no cap on stack/vent	
STRU 7	SV002	Reciprocating Engine #2A	22	1.8	Null	Null	12,972	611	Test data	Upwards with no cap on stack/vent	
STRU 8	SV003	Reciprocating Engine #3A	22	1.8	Null	Null	12,972	611	Test data	Upwards with no cap on stack/vent	
STRU 9	SV004	Water Jacket Heater	22	1.7	Null	Null	875	250	Test data	Upwards with no cap on stack/vent	
STRU 10	SV005	Reciprocating Engine - Emergency Generator	14	0.3	Null	Null	1,172	700	Test data	Horizontally	
STRU 11	SV006	Turbine Engine #1	44	3.3	Null	Null	84,000	820	Test data	Upwards with no cap on stack/vent	

SI Id	Sequence	Requirement
TFAC 1	1240	Permit Appendices: This permit contains appendices as listed in the permit Table of Contents. The Permittee shall comply with all requirements contained in Appendices: A. Insignificant Activities and General Applicable Requirements B. 40 CFR Part 60, Subpart GG - Standards of Performance for Stationary Gas Turbines C. 40 CFR Part 60, Subpart A - General Provisions D. 40 CFR Part 63, Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines E. 40 CFR Part 63, Subpart A - General Provisions. [Minn. R. 7007.0800, subp. 2(A) & (B)]
	7400	The Permittee must comply with Minn. Stat. 116.385. The Permittee may not use trichloroethylene at its permitted facility including in any manufacturing, processing, or cleaning processes, except as described in Minn. Stat. 116.385, subd. 2(b) and 4. This is a state-only requirement and is not enforceable by the U.S. Environmental Protection Agency (EPA) Administrator and citizens under the Clean Air Act. [Minn. R. 7007.0100, subp. 7(X), Minn. Stat. 116.385]
	7420	PERMIT SHIELD: Subject to the limitations in Minn. R. 7007.1800, compliance with the conditions of this permit shall be deemed compliance with the specific provision of the applicable requirement identified in the permit as the basis of each condition. Subject to the limitations of Minn. R. 7007.1800 and 7017.0100, subp. 2, notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements. This permit shall not alter or affect the liability of the Permittee for any violation of applicable requirements prior to or at the time of permit issuance. [Minn. R. 7007.1800(A)(2)]
	7450	The Permittee must comply with National Primary and Secondary Ambient Air Quality Standards, 40 CFR pt. 50, and the Minnesota Ambient Air Quality Standards, Minn. R. 7009.0010 to 7009.0090. Compliance must be demonstrated upon written request by the MPCA. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
	7540	Circumvention: Do not install or use a device or means that conceals or dilutes emissions, which would otherwise violate a federal or state air pollution control rule, without reducing the total amount of pollutant emitted. [Minn. R. 7011.0020]
	7550	The Permittee must at all times properly operate and maintain the facilities and systems of treatment and control and the appurtenances related to them that are installed or used by the Permittee to achieve compliance with the conditions of the permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. [Minn. R. 7007.0800, subp. 16(J)]
	7560	Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment. At a minimum, the O & M plan shall identify all air pollution control equipment and control practices and shall include a preventative maintenance program for the equipment and practices, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment and practices to proper operation to meet applicable permit conditions, a description of the employee training program for proper operation and maintenance of the control equipment and practices, and the records kept to demonstrate plan implementation. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 16(J)]
	7570	Operation Changes: In any shutdown, breakdown, or deviation the Permittee must immediately or as soon as possible considering plant and personnel safety take all practical steps to modify operations to reduce the emission of any regulated air pollutant. No emissions units that have an unreasonable shutdown or breakdown frequency of process or control equipment are permitted to operate. [Minn. R. 7019.1000, subp. 4]
	7580	Fugitive Emissions: Do not cause or permit the handling, use, transporting, or storage of any material in a manner which may allow avoidable amounts of particulate matter to become airborne. Comply with all other requirements listed in Minn. R. 7011.0150. [Minn. R. 7011.0150]

SI Id	Sequence	Requirement
	7590	Noise: The Permittee shall comply with the noise standards set forth in Minn. R. 7030.0010 to 7030.0080 at all times during the operation of any emission units. This is a state only requirement and is not enforceable by the U.S. Environmental Protection Agency (EPA) Administrator and citizens under the Clean Air Act. [Minn. R. 7030.0010-7030.0080]
	7600	Inspections: The Permittee shall comply with the inspection procedures and requirements as found in Minn. R. 7007.0800, subp. 9(A). [Minn. R. 7007.0800, subp. 9(A)]
	7610	The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16. [Minn. R. 7007.0800, subp. 16]
	7650	Monitoring Equipment Calibration - The Permittee shall either: 1. Calibrate or replace required monitoring equipment every 12 months; or 2. Calibrate at the frequency stated in the manufacturer's specifications. For each monitor, the Permittee shall maintain a record of all calibrations, including the date conducted, and any corrective action that resulted. The Permittee shall include the calibration frequencies, procedures, and manufacturer's specifications (if applicable) in the Operations and Maintenance Plan. Any requirements applying to continuous emission monitors are listed separately in this permit. [Minn. R. 7007.0800, subp. 4(D)]
	7660	Operation of Monitoring Equipment: Unless noted elsewhere in this permit, monitoring a process or control equipment connected to that process is not necessary during periods when the process is shutdown, or during checks of the monitoring systems, such as calibration checks and zero and span adjustments. If monitoring records are required, they should reflect any such periods of process shutdown or checks of the monitoring system. [Minn. R. 7007.0800, subp. 4(D)]
	7670	Recordkeeping: Retain all records at the stationary source, unless otherwise specified within this permit, for five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records, all original recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A). [Minn. R. 7007.0800, subp. 5(C)]
	7680	Recordkeeping: Maintain records describing any insignificant modifications (as required by Minn. R. 7007.1250, subp. 3) or changes contravening permit terms (as required by Minn. R. 7007.1350, subp. 2), including records of the emissions resulting from those changes. [Minn. R. 7007.0800, subp. 5(B)]
	7690	If the Permittee determines that no permit amendment or notification is required prior to making a change, the Permittee must retain records of all calculations required under Minn. R. 7007.1200. For expiring permits, these records shall be kept for a period of five years from the date the change was made or until permit reissuance, whichever is longer. The records shall be kept at the stationary source for the current calendar year of operation and may be kept at the stationary source or office of the stationary source for all other years. The records may be maintained in either electronic or paper format. [Minn. R. 7007.1200, subp. 4]
	7700	These following 40 CFR 52.21(r)(6) requirements apply if a reasonable possibility (RP) as defined in 40 CFR 52.21(r)(6)(vi) exists that a proposed project, analyzed using the actual-to-projected-actual (ATPA) test (either by itself or as part of the hybrid test at 40 CFR 52.21(a)(2)(iv)(f)) and found to not be part of a major modification, may result in a significant emissions increase (SEI). If the ATPA test is not used for the project, or if there is no RP that the proposed project could result in a SEI, these requirements do not apply to that project. The Permittee is only subject to the Preconstruction Documentation requirement for a project where a RP occurs only within the meaning of 40 CFR 52.21(r)(6)(vi)(b). Even though a particular modification is not subject to New Source Review (NSR), or where there isn't a RP that a proposed project could result in a SEI, a permit amendment, recordkeeping, or notification may still be required by Minn. R. 7007.1150 - 7007.1500. [Minn. R. 7007.0800, subp. 2(A), Title I Condition: 40 CFR 52.21(r)(6) and Minn. R. 7007.3000]

SI Id	Sequence	Requirement
	7710	Preconstruction Documentation -- Before beginning actual construction on a project, the Permittee shall document the following: 1. Project description 2. Identification of any emission unit whose emissions of an NSR pollutant could be affected 3. Pre-change potential emissions of any affected existing emission unit, and the projected post-change potential emissions of any affected existing or new emission unit. 4. A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions, the projected actual emissions, the amount of emissions excluded due to increases not associated with the modification and that the emission unit could have accommodated during the baseline period, an explanation of why the amounts were excluded, and any creditable contemporaneous increases and decreases that were considered in the determination. The Permittee shall maintain records of this documentation. [Minn. R. 7007.0800, subps. 4-5, Minn. R. 7007.1200, subp. 4, Title I Condition: 40 CFR 52.21(r)(6) and Minn. R. 7007.3000]
	7720	Post-change Emissions - The Permittee shall monitor the actual emissions of any regulated NSR pollutant that could increase as a result of the project and that were analyzed using the ATPA test, and the potential emissions of any regulated NSR pollutant that could increase as a result of the project and that were analyzed using potential emissions in the hybrid test. The Permittee shall calculate and maintain a record of the sum of the actual and potential (if the hybrid test was used in the analysis) emissions of the regulated pollutant, in tons per year on a calendar year basis, for a period of five years following resumption of regular operations after the change, or for a period of 10 years following resumption of regular operations after the change if the project increases the design capacity of or potential to emit of any unit associated with the project. [Minn. R. 7007.0800, subps. 4-5, Title I Condition: 40 CFR 52.21(r)(6) and Minn. R. 7007.3000]
	7730	The Permittee must submit a report to the Agency if the annual summed (actual, plus potential if used in hybrid test) emissions differ from the preconstruction projection and exceed the baseline actual emissions by a significant amount as listed at 40 CFR 52.21(b)(23). Such report shall be submitted to the Agency within 60 days after the end of the year in which the exceedances occur. The report shall contain: a. The name and ID number of the Facility, and the name and telephone number of the Facility contact person; b. The annual emissions identified in the Post-change Emissions requirement (above); and c. Any other information, such as an explanation as to why the summed emissions differ from the preconstruction projection. [Minn. R. 7007.0800, subps. 4-5, Title I Condition: 40 CFR 52.21(r)(6) and Minn. R. 7007.3000]
	7770	Shutdown Notifications: Notify the commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the Permittee does not have advance knowledge of the shutdown, the Permittee must notify the commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in items A, B, and C of Minn. R. 7019.1000, subp. 3. At the time of notification, the owner or operator must inform the commissioner of the cause of the shutdown and the estimated duration. The owner or operator must notify the commissioner when the shutdown is over. [Minn. R. 7019.1000, subp. 3]

SI Id	Sequence	Requirement
	7780	Breakdown Notifications: Notify the commissioner within 24 hours of a breakdown of more than one hour of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in items A, B, and C of Minn. R. 7019.1000, subp. 2. At the time of notification or as soon as possible thereafter, the Permittee must inform the commissioner of the cause of the breakdown and the estimated duration. The Permittee must notify the commissioner when the breakdown is over. [Minn. R. 7019.1000, subp. 2]
	7790	Notification of Deviations Endangering Human Health or the Environment: Immediately after discovery of the deviation or immediately after when the deviation reasonably should have been discovered, notify the commissioner either orally or by e-mail, or telephone the state duty officer at 800-422-0798 or 651-649-5451, of any deviation from permit conditions that could endanger human health or the environment. [Minn. R. 7019.1000, subp. 1]
	7800	Notification of Deviations Endangering Human Health or the Environment Report: Within two working days of discovery, notify the commissioner in writing of any deviation from permit conditions that could endanger human health or the environment. Include the following information in this written description: 1. the cause of the deviation; 2. the exact dates of the period of the deviation, if the deviation has been corrected; 3. whether or not the deviation has been corrected; 4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and 5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation. [Minn. R. 7019.1000, subp. 1]
	7810	The Permittee must submit a semiannual deviations report : Due semiannually, by the 30th of January and July. The first semiannual report submitted by the Permittee must cover the calendar half-year in which the permit is issued. The first report of each calendar year covers January 1 - June 30. The second report of each calendar year covers July 1 - December 31. Submit this on form DRF-2 (Deviation Reporting Form). If no deviations have occurred, submit the signed report certifying that there were no deviations. [Minn. R. 7007.0800, subp. 6(B)(2)]
	7830	Application for Permit Amendment: If a permit amendment is needed, submit an application in accordance with the requirements of Minn. R. 7007.1150 through Minn. R. 7007.1500. Submittal dates vary, depending on the type of amendment needed. Upon adoption of a new or amended federal applicable requirement, and if there are three or more years remaining in the permit term, the Permittee shall file an application for an amendment within nine months of promulgation of the applicable requirement, pursuant to Minn. R. 7007.0400, subp. 3. [Minn. R. 7007.0400, subp. 3, Minn. R. 7007.1150 - 7007.1500]
	7840	Extension Requests: The Permittee may apply for an Administrative Amendment to extend a deadline in a permit by no more than 120 days, provided the proposed deadline extension meets the requirements of Minn. R. 7007.1400, subp. 1(H). Performance testing deadlines from the General Provisions of 40 CFR pt. 60 and pt. 63 are examples of deadlines for which the MPCA does not have authority to grant extensions and therefore do not meet the requirements of Minn. R. 7007.1400, subp. 1(H). [Minn. R. 7007.1400, subp. 1(H)]
	7860	The Permittee must submit a compliance certification : Due annually, by the 31st of January (for the previous calendar year). Submit this on form CR-04 (Annual Compliance Certification Report). This report covers all deviations experienced during the calendar year. If no deviations have occurred, submit the signed report certifying that there were no deviations. [Minn. R. 7007.0800, subp. 6(D)]
	7880	The Permittee shall submit an application for permit reissuance : Due 180 calendar days before Permit Expiration Date. [Minn. R. 7007.0400, subp. 2]
	7900	Emission Inventory Report: due on or before April 1 of each calendar year following permit issuance. Submit in a format specified by the Commissioner. [Minn. R. 7019.3000-7019.3100]
	7910	Emission Fees: due 30 days after receipt of an MPCA bill. [Minn. R. 7002.0005-7002.0085]

SI Id	Sequence	Requirement
EQUI 1	3520	Opacity <= 20 percent opacity once operating temperatures have been attained. [Minn. R. 7011.2300, subp. 1]
	3535	Sulfur Dioxide <= 0.0015 pounds per million Btu heat input. The potential to emit from the unit is 0.00061 lb/MMBtu due to equipment design and allowable fuels. [Minn. R. 7011.2300, subp. 2(B)]
	3540	Sulfur Dioxide <= 0.015 percent by volume at 15 percent oxygen and on a dry basis. [40 CFR 60.333, Minn. R. 7011.2350]
	6320	Fuel Type: Limited to pipeline natural gas meeting the definition in 40 CFR 60.331(u). [40 CFR 60.334(h)(3), Minn. R. 7005.0100, subp. 35a, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7011.2300, Minn. R. 7011.2350]
	6330	The Permittee shall keep records of fuel type and usage on a monthly basis. [Minn. R. 7007.0800, subp. 5]
	6340	Turbine Component Replacement Authorization: EQUI 1 is composed of two main components: (1) a gas generator including a mechanically coupled axial compressor, combustor, and the high-pressure turbine, and (2) a power turbine. EQUI 1 is a 40-T4700S stationary combustion turbine manufactured by Solar. The Permittee is authorized to replace the gas generator system and/or the power turbine with like-kind components including replacement with the same model and ISO-rated horsepower, without a permit amendment, provided that: (1) The replacement does not increase the hourly or annual emission rate of any pollutant; (2) The replacement does not constitute a modification under 40 CFR 60.14 or reconstruction under 40 CFR 60.15; (3) The replacement does not trigger any new applicable requirements, including applicability under 40 CFR 52.21 or 40 CFR pt. 60; and (4) The Permittee remains in compliance with all existing applicable permit conditions. This authorization does not allow the installation of an additional gas turbine or the operation of more than one turbine at the facility. For any changes that do not meet the above conditions, the Permittee must apply for and obtain the appropriate permit amendment as needed prior to reconstructing EQUI 1. EQUI 1 must remain the designated unit regardless of any authorized component replacement and must remain subject to all applicable permit conditions. [Minn. R. 7007.0800, subp. 2(A), Title I Condition: Avoid major modification under 40 CFR 52.21(b)(2) and Minn. R. 7007.3000]
	6341	Turbine Component Replacement Recordkeeping: The Permittee must record the date and nature of each component replacement no later than five business days after completion of each replacement. The Permittee must also record the total cost of the component replacement compared to the cost of an entirely new stationary gas turbine (as defined at 40 CFR 60.4420a). [Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subps. 4&5]
	6342	The Permittee must comply with all applicable requirements of 40 CFR pt. 60, subp. GG as follows: 40 CFR 60.330(a); 40 CFR 60.331; 40 CFR 60.332(e); 40 CFR 60.333(a); 40 CFR 60.334(h)(3); 40 CFR 60.334(j)(2); and 40 CFR 60.334(j)(5). A copy of 40 CFR pt. 60, subp. GG is included in Appendix B. If the standard changes or upon adoption of a new or amended federal applicable requirement, and if there are more than three years remaining in the permit term, the Permittee shall file an application for an amendment within nine months of promulgation of the applicable requirement, pursuant to Minn. R. 7007.0400, subp. 3. [40 CFR pt. 60, subp. GG, Minn. R. 7007.0400, subp. 3, Minn. R. 7007.1150-7007.1500, Minn. R. 7011.2350]

SI Id	Sequence	Requirement
	6343	The Permittee must comply with all applicable requirements of 40 CFR pt. 60, subp. A as follows: 40 CFR 60.1; 40 CFR 60.2; 40 CFR 60.3; 40 CFR 60.4(a); 40 CFR 60.4(b)(25); 40 CFR 60.5; 40 CFR 60.6; 40 CFR 60.7(a)(1); 40 CFR 60.7(a)(3)-(4); 40 CFR 60.7(b); 40 CFR 60.7(c); 40 CFR 60.7(f); 40 CFR 60.8; 40 CFR 60.9; 40 CFR 60.10; 40 CFR 60.11(a); 40 CFR 60.12; 40 CFR 60.14; 40 CFR 60.15; 40 CFR 60.17; 40 CFR 60.18; and 40 CFR 60.19. A copy of 40 CFR pt. 60, subp. A is included in Appendix C. If the standard changes or upon adoption of a new or amended federal applicable requirement, and if there are more than three years remaining in the permit term, the Permittee shall file an application for an amendment within nine months of promulgation of the applicable requirement, pursuant to Minn. R. 7007.0400, subp. 3. [40 CFR pt. 60, subp. A, 40 CFR pt. 60, subp. GG, Minn. R. 7007.0400, subp. 3, Minn. R. 7007.1150-7007.1500, Minn. R. 7011.0500, subp. 1(A), Minn. R. 7011.2350, Minn. R. 7017.101 & 7017.2015, subp. 2, Minn. R. 7019.0100]
EQUI 2	2210	Opacity <= 20 percent opacity once operating temperatures have been attained. [Minn. R. 7011.2300, subp. 1]
	3520	Sulfur Dioxide <= 0.0015 pounds per million Btu heat input. The potential to emit from the unit is 0.00059 lb/MMBtu due to equipment design and allowable fuels. [Minn. R. 7011.2300, subp. 2(B)]
	3535	Fuel type: Natural gas only, by design. [Minn. R. 7005.0100, subp. 35a]
	3540	The Permittee shall keep records of fuel type and usage on a monthly basis. [Minn. R. 7007.0800, subp. 5]
	3560	The Permittee must comply with all applicable requirements of 40 CFR pt. 63, subp. ZZZZ, as follows: 40 CFR 63.6580; 40 CFR 63.6585(a); 40 CFR 63.6585(c); 40 CFR 63.6590(a)(1)(iii); 40 CFR 63.6595(a)(6); 40 CFR 63.6603(a); 40 CFR 63.6605; 40 CFR 63.6625(e)(5); 40 CFR 63.6625(h); 40 CFR 63.6625(j); 40 CFR 63.6640(a); 40 CFR 63.6640(b); 40 CFR 63.6645(a)(2); 40 CFR 63.6650(a); 40 CFR 63.6650(b); (introductory paragraph only); 40 CFR 63.6650(f); 40 CFR 63.6655(a); 40 CFR 63.6655(d); 40 CFR 63.6655(e)(3); 40 CFR 63.6660; 40 CFR 63.6665; 40 CFR 63.6670; 40 CFR 63.6675; 40 CFR pt. 63, subp. ZZZZ, Table 2d, item 6; 40 CFR pt. 63, subp. ZZZZ, Table 6, item 9; and 40 CFR pt. 63, subp. ZZZZ, Table 8. A copy of 40 CFR pt. 63, subp. ZZZZ is included in Appendix D. If the standard changes or upon adoption of a new or amended federal applicable requirement, and if there are more than three years remaining in the permit term, the Permittee shall file an application for an amendment within nine months of promulgation of the applicable requirement, pursuant to Minn. R. 7007.0400, subp. 3. [40 CFR pt. 63, subp. ZZZZ, Minn. R. 7007.0400, subp. 3, Minn. R. 7007.1150-7007.1500, Minn. R. 7011.8150]
	35690	The Permittee must comply with all applicable requirements of 40 CFR pt. 63, subp. A as follows: 40 CFR 63.1; 40 CFR 63.2; 40 CFR 63.3; 40 CFR 63.4; 40 CFR 63.5; 40 CFR 63.6(a); 40 CFR 63.6(b)(1)-(5); 40 CFR 63.6(b)(7); 40 CFR 63.6(c)(1)-(2); 40 CFR 63.6(c)(5); 40 CFR 63.6(f)(2)-(3); 40 CFR 63.6(g)(1)-(3); 40 CFR 63.6(i)-(j); 40 CFR 63.9(a); 40 CFR 63.9(b)(1)-(2); 40 CFR 63.9(b)(4)-(5); 40 CFR 63.9(c)-(d); 40 CFR 63.9(h)(1)-(3); 40 CFR 63.9(h)(5)-(6); 40 CFR 63.9(i)-(k); 40 CFR 63.10(a); 40 CFR 63.10(b)(1); 40 CFR 63.10(b)(2)(xiv); 40 CFR 63.10(d)(1); 40 CFR 63.12; 40 CFR 63.13; 40 CFR 63.14; and 40 CFR 63.15. A copy of 40 CFR pt. 63, subp. A is included in Appendix E. If the standard changes or upon adoption of a new or amended federal applicable requirement, and if there are more than three years remaining in the permit term, the Permittee shall file an application for an amendment within nine months of promulgation of the applicable requirement, pursuant to Minn. R. 7007.0400, subp. 3. [40 CFR 63.6665, 40 CFR pt. 63, subp. A, 40 CFR pt. 63, subp. ZZZZ (Table 8), Minn. R. 7007.0400, subp. 3, Minn. R. 7007.1150-7007.1500, Minn. R. 7011.0050, subp. 1(B), Minn. R. 7011.8150, Minn. R. 7017.1010 & 7017.2015, subp. 3, Minn. R. 7019.0100]

SI Id	Sequence	Requirement
EQUI 3	2210	Opacity <= 20 percent opacity once operating temperatures have been attained. [Minn. R. 7011.2300, subp. 1]
	3520	Sulfur Dioxide <= 0.0015 pounds per million Btu heat input. The potential to emit from the unit is 0.00059 lb/MMBtu due to equipment design and allowable fuels. [Minn. R. 7011.2300, subp. 2(B)]
	3535	Fuel type: Natural gas only, by design. [Minn. R. 7005.0100, subp. 35a]
	3540	The Permittee shall keep records of fuel type and usage on a monthly basis. [Minn. R. 7007.0800, subp. 5]
	3560	The Permittee must comply with all applicable requirements of 40 CFR pt. 63, subp. ZZZZ, as follows: 40 CFR 63.6580; 40 CFR 63.6585(a); 40 CFR 63.6585(c); 40 CFR 63.6590(a)(1)(iii); 40 CFR 63.6595(a)(6); 40 CFR 63.6603(a); 40 CFR 63.6605; 40 CFR 63.6625(e)(5); 40 CFR 63.6625(h); 40 CFR 63.6625(j); 40 CFR 63.6640(a); 40 CFR 63.6640(b); 40 CFR 63.6645(a)(2); 40 CFR 63.6650(a); (introductory paragraph only); 40 CFR 63.6650(b); 40 CFR 63.6650(f); 40 CFR 63.6655(a); 40 CFR 63.6655(d); 40 CFR 63.6655(e)(3); 40 CFR 63.6660; 40 CFR 63.6665; 40 CFR 63.6670; 40 CFR 63.6675; 40 CFR pt. 63, subp. ZZZZ, Table 2d, item 6; 40 CFR pt. 63, subp. ZZZZ, Table 6, item 9; and 40 CFR pt. 63, subp. ZZZZ, Table 8. A copy of 40 CFR pt. 63, subp. ZZZZ is included in Appendix D. If the standard changes or upon adoption of a new or amended federal applicable requirement, and if there are more than three years remaining in the permit term, the Permittee shall file an application for an amendment within nine months of promulgation of the applicable requirement, pursuant to Minn. R. 7007.0400, subp. 3. [40 CFR pt. 63, subp. ZZZZ, Minn. R. 7007.0400, subp. 3, Minn. R. 7007.1150-7007.1500, Minn. R. 7011.8150]
	35690	The Permittee must comply with all applicable requirements of 40 CFR pt. 63, subp. A as follows: 40 CFR 63.1; 40 CFR 63.2; 40 CFR 63.3; 40 CFR 63.4; 40 CFR 63.5; 40 CFR 63.6(a); 40 CFR 63.6(b)(1)-(5); 40 CFR 63.6(b)(7); 40 CFR 63.6(c)(1)-(2); 40 CFR 63.6(c)(5); 40 CFR 63.6(f)(2)-(3); 40 CFR 63.6(g)(1)-(3); 40 CFR 63.6(i)-(j); 40 CFR 63.9(a); 40 CFR 63.9(b)(1)-(2); 40 CFR 63.9(b)(4)-(5); 40 CFR 63.9(c)-(d); 40 CFR 63.9(h)(1)-(3); 40 CFR 63.9(h)(5)-(6); 40 CFR 63.9(i)-(k); 40 CFR 63.10(a); 40 CFR 63.10(b)(1); 40 CFR 63.10(b)(2)(xiv); 40 CFR 63.10(d)(1); 40 CFR 63.12; 40 CFR 63.13; 40 CFR 63.14; and 40 CFR 63.15. A copy of 40 CFR pt. 63, subp. A is included in Appendix E. If the standard changes or upon adoption of a new or amended federal applicable requirement, and if there are more than three years remaining in the permit term, the Permittee shall file an application for an amendment within nine months of promulgation of the applicable requirement, pursuant to Minn. R. 7007.0400, subp. 3. [40 CFR 63.6665, 40 CFR pt. 63, subp. A, 40 CFR pt. 63, subp. ZZZZ (Table 8), Minn. R. 7007.0400, subp. 3, Minn. R. 7007.1150-7007.1500, Minn. R. 7011.0050, subp. 1(B), Minn. R. 7011.8150, Minn. R. 7017.1010 & 7017.2015, subp. 3, Minn. R. 7019.0100]
EQUI 4	2210	Opacity <= 20 percent opacity once operating temperatures have been attained. [Minn. R. 7011.2300, subp. 1]
	3520	Sulfur Dioxide <= 0.0015 pounds per million Btu heat input. The potential to emit from the unit is 0.00059 lb/MMBtu due to equipment design and allowable fuels. [Minn. R. 7011.2300, subp. 2(B)]
	3535	Fuel type: Natural gas only, by design. [Minn. R. 7005.0100, subp. 35a]
	3540	The Permittee shall keep records of fuel type and usage on a monthly basis. [Minn. R. 7007.0800, subp. 5]

SI Id	Sequence	Requirement
	3560	The Permittee must comply with all applicable requirements of 40 CFR pt. 63, subp. ZZZZ, as follows: 40 CFR 63.6580; 40 CFR 63.6585(a); 40 CFR 63.6585(c); 40 CFR 63.6590(a)(1)(iii); 40 CFR 63.6595(a)(6); 40 CFR 63.6603(a); 40 CFR 63.6605; 40 CFR 63.6625(e)(5); 40 CFR 63.6625(h); 40 CFR 63.6625(j); 40 CFR 63.6640(a); 40 CFR 63.6640(b); 40 CFR 63.6645(a)(2); 40 CFR 63.6650(a); 40 CFR 63.6650(b); (introductory paragraph only); 40 CFR 63.6650(f); 40 CFR 63.6655(a); 40 CFR 63.6655(d); 40 CFR 63.6655(e)(3); 40 CFR 63.6660; 40 CFR 63.6665; 40 CFR 63.6670; 40 CFR 63.6675; 40 CFR pt. 63, subp. ZZZZ, Table 2d, item 6; 40 CFR pt. 63, subp. ZZZZ, Table 6, item 9; and 40 CFR pt. 63, subp. ZZZZ, Table 8. A copy of 40 CFR pt. 63, subp. ZZZZ is included in Appendix D. If the standard changes or upon adoption of a new or amended federal applicable requirement, and if there are more than three years remaining in the permit term, the Permittee shall file an application for an amendment within nine months of promulgation of the applicable requirement, pursuant to Minn. R. 7007.0400, subp. 3. [40 CFR pt. 63, subp. ZZZZ, Minn. R. 7007.0400, subp. 3, Minn. R. 7007.1150-7007.1500, Minn. R. 7011.8150]
	35690	The Permittee must comply with all applicable requirements of 40 CFR pt. 63, subp. A as follows: 40 CFR 63.1; 40 CFR 63.2; 40 CFR 63.3; 40 CFR 63.4; 40 CFR 63.5; 40 CFR 63.6(a); 40 CFR 63.6(b)(1)-(5); 40 CFR 63.6(b)(7); 40 CFR 63.6(c)(1)-(2); 40 CFR 63.6(c)(5); 40 CFR 63.6(f)(2)-(3); 40 CFR 63.6(g)(1)-(3); 40 CFR 63.6(i)-(j); 40 CFR 63.9(a); 40 CFR 63.9(b)(1)-(2); 40 CFR 63.9(b)(4)-(5); 40 CFR 63.9(c)-(d); 40 CFR 63.9(h)(1)-(3); 40 CFR 63.9(h)(5)-(6); 40 CFR 63.9(i)-(k); 40 CFR 63.10(a); 40 CFR 63.10(b)(1); 40 CFR 63.10(b)(2)(xiv); 40 CFR 63.10(d)(1); 40 CFR 63.12; 40 CFR 63.13; 40 CFR 63.14; and 40 CFR 63.15. A copy of 40 CFR pt. 63, subp. A is included in Appendix E. If the standard changes or upon adoption of a new or amended federal applicable requirement, and if there are more than three years remaining in the permit term, the Permittee shall file an application for an amendment within nine months of promulgation of the applicable requirement, pursuant to Minn. R. 7007.0400, subp. 3. [40 CFR 63.6665, 40 CFR pt. 63, subp. A, 40 CFR pt. 63, subp. ZZZZ (Table 8), Minn. R. 7007.0400, subp. 3, Minn. R. 7007.1150-7007.1500, Minn. R. 7011.0050, subp. 1(B), Minn. R. 7011.8150, Minn. R. 7017.1010 & 7017.2015, subp. 3, Minn. R. 7019.0100]
EQUI 5	3610	Filterable Particulate Matter <= 0.60 pounds per million Btu heat input. The potential to emit from the unit is 0.0075 lb/MMBtu due to equipment design and allowable fuels. [Minn. R. 7011.0510, subp. 1]
	3620	Opacity <= 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity. [Minn. R. 7011.0510, subp. 2]
	3632	Hours <= 2150 hours per year 12-month rolling sum for EQUI 5 when EQUI 1, EQUI 2, EQUI 3, or EQUI 4 are also in operation to be calculated by the 15th day of each month for the previous 12-month period as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
	3637	Fuel type: Natural gas only, by design. [Minn. R. 7005.0100, subp. 35a]
	3830	The Permittee shall keep records of fuel purchases showing fuel types. [Minn. R. 7007.0800, subp. 5]

SI Id	Sequence	Requirement
	3840	Hours: Daily Recordkeeping of Hours of Operation: For each operation of EQUI 1, EQUI 2, EQUI 3, EQUI 4, and EQUI 5, the Permittee must record and maintain the following information: 1) The date; 2) The start time for EQUI 5 if EQUI 1, EQUI 2, EQUI 3, or EQUI 4 is operating; 3) The start time for EQUI 1, EQUI 2, EQUI 3, or EQUI 4 if EQUI 5 is operating; 4) The stop time for EQUI 5 if EQUI 1, EQUI 2, EQUI 3, or EQUI 4 is operating; 5) The stop time for EQUI 1, EQUI 2, EQUI 3, or EQUI 4 if EQUI 5 is operating. The Permittee must retain these records on a written or computerized log. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4-5, Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
	3850	Hours: Monthly Recordkeeping. By the 15th of the month, the Permittee must calculate and record the following: 1) The total hours of operation for EQUI 5 while EQUI 1, EQUI 2, EQUI 3, or EQUI 4 were operating for the previous calendar month using the daily records; and 2) The 12-month rolling sum hours of operation for the previous 12-month period by summing the monthly hours of operation for the previous 12 months. [Minn. R. 7007.0800, subps. 4-5]
EQUI 6	3520	Opacity <= 20 percent opacity once operating temperatures have been attained. [Minn. R. 7011.2300, subp. 1]
	3535	Sulfur Dioxide <= 0.0015 pounds per million Btu heat input. The potential to emit from the unit is 0.00059 lb/MMBtu due to equipment design and allowable fuels. [Minn. R. 7011.2300, subp. 2(B)]
	3540	Hours <= 720 hours per year 12-month rolling sum for EQUI 6 when EQUI 1, EQUI 2, EQUI 3, or EQUI 4 are also in operation to be calculated by the 15th day of each month for the previous 12-month period as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
	3560	Fuel type: Natural gas only, by design. [Minn. R. 7005.0100, subp. 35a]
	3830	The Permittee shall keep records of fuel type and usage on a monthly basis. [Minn. R. 7007.0800, subp. 5]
	3840	Hours: Daily Recordkeeping of Hours of Operation. For each day of operation of EQUI 1, EQUI 2, EQUI 3, EQUI 4, or EQUI 6, the Permittee must calculate, record, and maintain a record of the following, as applicable: 1. The date of operation. 2. The start time of EQUI 6. 3. The stop time of EQUI 6. 4. The start time of EQUI 1, EQUI 2, EQUI 3, and/or EQUI 4; 5. The stop time of EQUI 1, EQUI 2, EQUI 3, and/or EQUI 4 This must be based on hours of operation logs. The Permittee must retain these records on a written or computerized log. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4-5, Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
	3850	Hours: Monthly Recordkeeping. By the 15th of the month, the Permittee must calculate and record the following: 1) The total hours of operation for EQUI 6 while operating concurrently with EQUI 1, EQUI 2, EQUI 3, or EQUI 4 of the previous calendar month using the daily records; and 2) The 12-month rolling sum hours of operation for the previous 12-month period by summing the monthly hours of operation for the previous 12 months. [Minn. R. 7007.0800, subps. 4-5]

SI Id	Sequence	Requirement
	4550	The Permittee must comply with all applicable requirements of 40 CFR pt. 63, subp. ZZZZ, as follows: 40 CFR 63.6580; 40 CFR 63.6585(a); 40 CFR 63.6585(c); 40 CFR 63.6590(a)(1)(iii); 40 CFR 63.6595(a)(6); 40 CFR 63.6603(a); 40 CFR 63.6605; 40 CFR 63.6625(e)(3); 40 CFR 63.6625(h); 40 CFR 63.6625(j); 40 CFR 63.6640(a)-(b); 40 CFR 63.6640(f)(1); 40 CFR 63.6640(f)(2)(i); 40 CFR 63.6640(f)(4)(i); 40 CFR 63.6645(a)(2); 40 CFR 63.6650(a); 40 CFR 63.6650(b); (introductory paragraph only); 40 CFR 63.6650(f); 40 CFR 63.6655(a); 40 CFR 63.6655(e)(2); 40 CFR 66.6655(f)(2); 40 CFR 63.6660; 40 CFR 63.6665; 40 CFR 63.6670; 40 CFR 63.6675; 40 CFR pt. 63, subp. ZZZZ, Table 2d, item 5; 40 CFR pt. 63, subp. ZZZZ Table 6, item 9; and 40 CFR pt. 63, subp. ZZZZ Table 8. A copy of 40 CFR pt. 63, subp. ZZZZ is included in Appendix D. If the standard changes or upon adoption of a new or amended federal applicable requirement, and if there are more than three years remaining in the permit term, the Permittee shall file an application for an amendment within nine months of promulgation of the applicable requirement, pursuant to Minn. R. 7007.0400, subp. 3.AA1. [40 CFR pt. 63, subp. ZZZZ, Minn. R. 7007.0400, subp. 3, Minn. R. 7007.1150-7007.1500, Minn. R. 7011.8150]
	4560	The Permittee must comply with all applicable requirements of 40 CFR pt. 63, subp. A as follows: 40 CFR 63.1; 40 CFR 63.2; 40 CFR 63.3; 40 CFR 63.4; 40 CFR 63.5; 40 CFR 63.6(a); 40 CFR 63.6(b)(1)-(5); 40 CFR 63.6(b)(7); 40 CFR 63.6(c)(1)-(2); 40 CFR 63.6(c)(5); 40 CFR 63.6(f)(2)-(3); 40 CFR 63.6(g)(1)-(3); 40 CFR 63.6(i)-(j); 40 CFR 63.9(a); 40 CFR 63.9(b)(1)-(2); 40 CFR 63.9(b)(4)-(5); 40 CFR 63.9(c)-(d); 40 CFR 63.9(h)(1)-(3); 40 CFR 63.9(h)(5)-(6); 40 CFR 63.9(i)-(k); 40 CFR 63.10(a); 40 CFR 63.10(b)(1); 40 CFR 63.10(b)(2)(xiv); 40 CFR 63.10(d)(1); 40 CFR 63.12; 40 CFR 63.13; 40 CFR 63.14; and 40 CFR 63.15. A copy of 40 CFR pt. 63, subp. A is included in Appendix E. If the standard changes or upon adoption of a new or amended federal applicable requirement, and if there are more than three years remaining in the permit term, the Permittee shall file an application for an amendment within nine months of promulgation of the applicable requirement, pursuant to Minn. R. 7007.0400, subp. 3. [40 CFR 63.6665, 40 CFR pt. 63, subp. A, 40 CFR pt. 63, subp. ZZZZ (Table 8), Minn. R. 7007.0400, subp. 3, Minn. R. 7007.1150-7007.1500, Minn. R. 7011.0050, subp. 1(B), Minn. R. 7011.8150, Minn. R. 7017.1010 & 7017.2015, subp. 3, Minn. R. 7019.0100]

Attachment 3

Solar Turbines Predicted Emission Performance Data. January 25, 2016.

Solar Turbines
A Caterpillar Company

PREDICTED EMISSION PERFORMANCE

Customer: **OneOk**	Engine Model: **CENTAUR 40-4700S CS/MD 59F MATCH**
Job ID: **16-020**	
Inquiry Number:	Fuel Type: **SD NATURAL GAS** / Water Injection: **NO**
Run By: **Leslie Witherspoon** / Date Run: **25-Jan-16**	Engine Emissions Data: **REV. 0.1**

	NOx EMISSIONS	CO EMISSIONS	UHC EMISSIONS
1 — 4825 HP, 100.0% Load, Elev. 1088 ft, Rel. Humidity 60.0%, Temperature 0 Deg. F			
PPMvd at 15% O2	42.00	50.00	25.00
ton/yr	32.88	23.83	6.82
lbm/MMBtu (Fuel LHV)	0.168	0.122	0.035
lbm/(MW-hr)	2.09	1.51	0.43
(gas turbine shaft pwr) lbm/hr	7.51	5.44	1.56
2 — 4632 HP, 100.0% Load, Elev. 1088 ft, Rel. Humidity 60.0%, Temperature 32.0 Deg. F			
PPMvd at 15% O2	42.00	50.00	25.00
ton/yr	31.51	22.84	6.54
lbm/MMBtu (Fuel LHV)	0.168	0.122	0.035
lbm/(MW-hr)	2.08	1.51	0.43
(gas turbine shaft pwr) lbm/hr	7.20	5.21	1.49
3 — 4375 HP, 100.0% Load, Elev. 1088 ft, Rel. Humidity 60.0%, Temperature 59.0 Deg. F			
PPMvd at 15% O2	42.00	50.00	25.00
ton/yr	29.78	21.58	6.18
lbm/MMBtu (Fuel LHV)	0.167	0.121	0.035
lbm/(MW-hr)	2.08	1.51	0.43
(gas turbine shaft pwr) lbm/hr	6.80	4.93	1.41

Notes

1. For short-term emission limits such as lbs/hr., Solar recommends using "worst case" anticipated operating conditions specific to the application and the site conditions. Worst case for one pollutant is not necessarily the same for another.
2. Solar's typical SoLoNOx warranty, for ppm values, is available for greater than 0 deg F or -20 deg C, and between 50% and 100% load for gas, fuel, and between 65% and 100% load for liquid fuel (except f or the Centaur 40). An emission warranty for non-SoLoNOx equipment is available for greater than 0 deg F or -20 deg C and betwee
3. Fuel must meet Solar standard fuel specification ES 9-98. Emissions are based on the attached fuel composition, or, San Diego natural gas or equivalent.
4. If needed, Solar can provide Product Information Letters to address turbine operation outside typical warranty ranges, as well as non-warranted emissions of SO2, PM10/2.5, VOC, and formaldehyde.
5. Solar can provide factory testing in San Diego to ensure the actual unit(s) meet the above values within the tolerances quoted. Pricing and schedule impact will be provided upon request.
6. Any emissions warranty is applicable only for steady-state conditions and does not apply during start-up, shut-down, malfunction, or transient event.

Solar Turbines
A Caterpillar Company

PREDICTED EMISSION PERFORMANCE

Customer: **OneOk**	Engine Model: **CENTAUR 40-4700S CS/MD 59F MATCH**
Job ID: **16-020**	
Inquiry Number:	Fuel Type: **SD NATURAL GAS** / Water Injection: **NO**
Run By: **Leslie Witherspoon** / Date Run: **25-Jan-16**	Engine Emissions Data: **REV. 0.1**

	NOx EMISSIONS	CO EMISSIONS	UHC EMISSIONS
4 — **3868 HP 100.0% Load** — **Elev. 1088 ft** — **Rel. Humidity 60.0%** — **Temperature 80.0 Deg. F**			
PPMvd at 15% O2	**42.00**	**50.00**	**25.00**
ton/yr	**27.11**	**19.65**	**5.63**
lbm/MMBtu (Fuel LHV)	**0.166**	**0.120**	**0.034**
lbm/(MW-hr)	**2.15**	**1.56**	**0.45**
(gas turbine shaft pwr) lbm/hr	**6.19**	**4.49**	**1.28**

Notes

1. For short-term emission limits such as lbs/hr., Solar recommends using "worst case" anticipated operating conditions specific to the application and the site conditions. Worst case for one pollutant is not necessarily the same for another.
2. Solar's typical SoLoNOx warranty, for ppm values, is available for greater than 0 deg F or -20 deg C, and between 50% and 100% load for gas, fuel, and between 65% and 100% load for liquid fuel (except f or the Centaur 40). An emission warranty for non-SoLoNOx equipment is available for greater than 0 deg F or -20 deg C and betwee
3. Fuel must meet Solar standard fuel specification ES 9-98. Emissions are based on the attached fuel composition, or, San Diego natural gas or equivalent.
4. If needed, Solar can provide Product Information Letters to address turbine operation outside typical warranty ranges, as well as non-warranted emissions of SO2, PM10/2.5, VOC, and formaldehyde.
5. Solar can provide factory testing in San Diego to ensure the actual unit(s) meet the above values within the tolerances quoted. Pricing and schedule impact will be provided upon request.
6. Any emissions warranty is applicable only for steady-state conditions and does not apply during start-up, shut-down, malfunction, or transient event.

Solar Turbines
A Caterpillar Company

PREDICTED ENGINE PERFORMANCE

Customer: *OneOk*	Model: **CENTAUR 40-4700S**
Job ID: **16-020**	Package Type: **CS/MD**
Run By: **Leslie Witherspoon** / Date Run: **25-Jan-16**	Match: **59F MATCH**
Engine Performance Code: **REV. 4.16.1.18.10** / Engine Performance Data: **REV. 2.3**	Fuel System: **GAS**
	Fuel Type: **SD NATURAL GAS**

DATA FOR NOMINAL PERFORMANCE

Elevation	feet	1088
Inlet Loss	in H2O	4.0
Exhaust Loss	in H2O	4.0
Accessory on GP Shaft	HP	15.5

		1	2	3	4
Engine Inlet Temperature	deg F	0	32.0	59.0	80.0
Relative Humidity	%	60.0	60.0	60.0	60.0
Driven Equipment Speed	RPM	15500	15500	15500	15500
Specified Load	HP	FULL	FULL	FULL	FULL
Net Output Power	HP	4825	4632	4375	3868
Fuel Flow	mmBtu/hr	44.59	42.81	40.62	37.25
Heat Rate	Btu/HP-hr	9242	9242	9285	9631
Therm Eff	%	27.533	27.532	27.404	26.420
Engine Exhaust Flow	lbm/hr	158554	150818	142958	132975
PT Exit Temperature	deg F	780	809	840	856
Exhaust Temperature	deg F	780	809	840	856

Fuel Gas Composition (Volume Percent)

Methane (CH4)	92.79
Ethane (C2H6)	4.16
Propane (C3H8)	0.84
N-Butane (C4H10)	0.18
N-Pentane (C5H12)	0.04
Hexane (C6H14)	0.04
Carbon Dioxide (CO2)	0.44
Hydrogen Sulfide (H2S)	0.0001
Nitrogen (N2)	1.51

Fuel Gas Properties

LHV (Btu/Scf)	939.2	Specific Gravity	0.5970	Wobbe Index at 60F	1215.6

This performance was calculated with a basic inlet and exhaust system. Special equipment such as low noise silencers, special filters, heat recovery systems or cooling devices will affect engine performance. Performance shown is "Expected" performance at the pressure drops stated, not guaranteed.