Technical Support Document
for
Draft Air Emission Permit No. 13100058-104

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 the legal and factual justification for each applicable requirement or policy decision considered in the 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)
Northern Natural Gas Co 1120 Centre Pointe Dr Ste 400 Mendota Heights, Minnesota 55120-1275	Northern Natural Gas Co - Faribault 21903 Canby Ave Faribault, MN 55021-8805
Contact: Kelly Henry Phone: 651-456-1712	

1.2 Facility description

Northern Natural Gas Company - Faribault (NNG or facility) is a natural gas compressor station located in Faribault, Minnesota. Compressor stations compress natural gas to a specified pressure along natural gas pipelines allowing the gas to continue moving through the pipeline to an intended recipient. The main sources of air pollution are three existing natural gas-fired gas turbines. Nitrogen oxides (NO_X) and carbon monoxide (CO) are the primary pollutants of concern.

1.3 Description of the activities allowed by this permit action

This permit action is Part 70 Reissuance.

This permit action does not authorize construction.

1.4 Description of notifications and applications included in this action

Table 2. Notifications and applications included in this action

Date received	**Application/Notification type and description**
08/28/2023	Part 70 Reissuance (IND20230001), Supplemental Information received on 03/02/2026.

1.5 Facility emissions

Table 3. 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	**All HAPs** tpy
Total facility limited potential emissions	24.7	24.7	24.7	2.46	135	155	198,000	62.4	1.77
Total facility actual emissions (2024)	0.092	0.092	0.057	1.04	11.7	24.7	*	0.959	*

*Not reported in Minnesota emission inventory.

Table 4. Facility classification

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

1.6 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;
- Completed requirements have been removed;
- Added Minnesota Industrial Process Equipment Rule (Minn. Rules 7011.0715) requirements to FUGI 1, FUGI 2, and FUGI 3 as applicable;
- Added 40 CFR pt. 60, subp. OOOOa: 40 CFR Part 60, Subpart OOOOa - Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification or Reconstruction Commenced After September 18, 2015 and On or Before December 6, 2022 requirements and submittals to FUGI 1, FUGI 2, and FUGI 3;
- Corrected EQUI 2 requirement 5.2.11 to include only the applicable list of requirements under 40 CFR pt. 60, subp. A;
- Removed individual requirements at EQUI 2 that are now covered under requirement 5.2.9, the list of applicable 40 CFR pt. 60, subp. GG requirements;
- Removed individual requirements at EQUI 4 that are now covered under requirement 5.3.10, the list of applicable 40 CFR pt. 60, subp. KKKK requirements;
- Removed requirements for Excess Emissions reporting due to custom fuel-monitoring schedule making them not required;
- The emergency generator (EQUI 11) is equipped with a catalytic converter (formerly TREA 3); however, TREA 3's control values were not utilized in the calculations; therefore, it was removed from the permit;
- Some requirements have been reordered or moved to help with clarity (i.e., similar requirements are grouped);
- Citations have been updated and/or corrected.
- The insignificant activities for the facility have been updated and/or corrected;

- Performance testing due dates have been updated;
- A requirement for triggering 40 CFR pt. 60, subp. KKKKa was added to each of EQUI 2, EQUI 4, and EQUI 9 in the event that reconstruction occurs; and
- Appendices were reordered after removal and addition of the following:
    - Added Appendix C: 40 CFR Part 60, Subpart GG - Standards of Performance for Stationary Gas Turbines to the permit since it applies to EQUI 2.
    - Removed former Appendix B: Emission Calculation Equations for EQUI 4 since equations are provided in new Appendix E: 40 CFR Part 60, Subpart KKKK - Standards of Performance for Stationary Combustion Turbines;
    - Removed former Appendix C: Emission Calculation Equation for EQUI 2 since equations are provided in new Appendix C: 40 CFR Part 60, Subpart GG - Standards of Performance for Stationary Gas Turbines;
    - Removed former Appendix E: 40 CFR Part 63, Subpart A - General Provisions because it is not applicable and was erroneously included in previous permits.
    - Corrected the name of Appendix D: 40 CFR Part 60, Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines; it was previously labeled "[…] part 63 […]."
    - Added Appendix E: 40 CFR Part 60, Subpart KKKK - Standards of Performance for Stationary Combustion Turbines to the permit since it applies to EQUI 4 and EQUI 9.
    - Added Appendix F: 40 CFR Part 60, Subpart OOOOa - Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification or Reconstruction Commenced After September 18, 2015 and On or Before December 6, 2022.
    - Renamed Appendix G: TREA 3 Operation and Maintenance Plan to EQUI 11 Operation and Maintenance Plan due to removal of TREA 3 from permit.

2. Regulatory and/or statutory basis

2.1 New source review (NSR)

The facility is an existing minor source under New Source Review regulations. No changes are authorized by this permit and the facility will remain a minor source.

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 the operations at this facility.

EQUI 2 is subject to 40 CFR pt. 60, subp. GG - Standards of Performance for Stationary Gas Turbines as noted in Table 5. EQUI 2 commenced construction on or after June 1, 1996 and was initially started on or after July 1, 1996. The manufacturer's rated base load at ISO conditions is approximately 12.3 MW at normal operating temperature (≥ 0 °F). The heat input at peak load is 123 MMBtu/hr at normal operating temperature (≥ 0 °F).

EQUI 4 and EQUI 9 are subject to 40 CFR pt. 60, subp. KKKK - Standards of Performance for Stationary Combustion Turbines as noted in Table 5. EQUI 4 construction commenced on April 22, 2017, and its initial start-up date is November 1, 2017. EQUI 9 construction commenced on April 26, 2019, and its initial start-up date is September 16, 2019. EQUIs 4 & 9 each have a heat input at peak load of 125 MMBtu/hr at normal operating temperature (≥ 0 °F). EQUIs 4 & 9 each have a capacity of approximately 12.3 MW at normal operating temperature (≥ 0 °F).

If reconstruction occurs at any of the gas turbines, the applicable unit may become subject to 40 CFR pt. 60, subp. KKKKa - Standards of Performance for Stationary Combustion Turbines.

EQUI 11 is subject to 40 CFR pt. 60, subp. JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines as noted in Table 5. EQUI 11 was manufactured on or after December 18, 2018, construction commenced on March 19, 2020, and had initial start-up date of March 25, 2020. EQUI 11 is a four-stroke rich burn (4SRB) with a maximum power rating of 1,135 hp. EQUI 11 is manufacturer-certified to non-emergency engine emissions standards with an EPA Certificate of Conformity for the 2019 Model Year. The manufacturer's exhaust emissions data sheet and EPA Certificate of Conformity for EQUI 11 are provided in Attachment 3.

The facility is an affected facility under 40 CFR pt. 60, subp. OOOOa - Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification or Reconstruction Commenced After September 18, 2015 and On or Before December 6, 2022. The collection of fugitive emissions components at a compressor station, became an affected facility after the construction of an additional compressor station (EQUI 4) in 1997 (40 CFR § 60.5365a(j)(1)). FUGI 1, FUGI 2, and FUGI 3 are subject to this standard as noted in Table 5. The Permittee states that the two centrifugal compressors (EQUIs 4, & 9) constructed during the applicable date range of this standard use a dry seal system; therefore, these compressors are not subject to subp. OOOOa.

If modification, defined under 40 CFR § 60.5365b(i)(3), occurs to the affected facility after December 6, 2022, FUGI 1, FUGI 2, and FUGI 3 will no longer be subject to 40 CFR pt. 60, subp. OOOOa and will then become subject to 40 CFR pt. 60, subp. OOOOb - Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification or Reconstruction Commenced After December 6, 2022.

2.4 National emission standards for hazardous air pollutants (NESHAP)

The Permittee has stated that area source NESHAPs apply to the operations at this facility.

EQUI 11 is subject to 40 CFR pt. 63, subp. ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines as noted in Table 5. Since EQUI 11 is subject to 40 CFR pt. 60, subp. JJJJ and meets one or more criteria under 40 CFR § 63.6590(c), EQUI 11 meets the criteria of 40 CFR pt. 63, subp. ZZZZ by meeting the requirements of 40 CFR pt. 60, subp. JJJJ. No further requirements apply under this part.

2.5 Regulatory Overview

Table 5. Regulatory overview of facility

Subject item*	Applicable regulations	Rationale
EQUI 2 – Solar Mars Turbine 100-T15000S	Minn. R. 7011.2300	Standards of Performance for Stationary Internal Combustion Engines • Fuel limited to natural gas only, by design. Sulfur content of fuel limited to 0.0015 percent by weight.

Subject item*	Applicable regulations	Rationale
	40 CFR pt. 60, subp. GG Minn. R. 7011.2350	NSPS for Stationary Gas Turbines • Stationary gas turbine; • Not an electric utility stationary gas turbine; • Manufacturer's rated base load at ISO conditions is 30 MW or less; • Heat input at peak load equal to or greater than 100 MMBtu/hr; • Fires pipeline natural gas; • Does not use water or steam injection or CEMS; and • Constructed after October 3, 1977, after October 3, 1982, before July 8, 2004, and before February 18, 2005.
EQUI 4 – Solar Mars Turbine 100-1600S	Minn. R. 7011.2300	Standards of Performance for Stationary Internal Combustion Engines • Fuel limited to natural gas only, by design. Sulfur content of fuel limited to 0.0015 percent by weight.
	40 CFR pt. 60, subp. KKKK Minn. R. 7011.2375	NSPS for Stationary Combustion Turbines • owner or operator of stationary combustion turbine; • construction of the unit was after February 18, 2005 and on or before December 13, 2024; • the unit is in a continental area south of the arctic circle; • the unit has a heat input at peak load of greater than 50 MMBtu/hr but less than or equal to 850 MMBtu/hr; • Turbine capacity ≤ 30 MW output at peak load; • the unit combusts gaseous fuels; • the unit is not a combined heat and power and does not use a duct burner; • the unit is not using continuous parameter monitoring or water/steam injection; • the unit does not use a NO_X CEMS; and • the unit uses NO_X and SO_2 performance testing and/or fuel records compliance options.
EQUI 6 - Process Heater	Minn. R. 7011.0515	Standards of Performance for New Indirect Heating Equipment. • Construction of the unit was on or after January 31, 1977; • The unit burns gaseous fuels; • The facility is located outside the cities in Table II of the rule; • The unit capacity is less than 250 MMBtu/hr; and • The facility has less than 250 MMBtu/hr of direct and indirect heating equipment.

Subject item*	Applicable regulations	Rationale
EQUI 7 - Process Heater	Minn. R. 7011.0515	Standards of Performance for New Indirect Heating Equipment. • Construction of the unit was on or after January 31, 1977; • The unit burns gaseous fuels; • The facility is located outside the cities in Table II of the rule; • The unit capacity is less than 250 MMBtu/hr; and • The facility has less than 250 MMBtu/hr of direct and indirect heating equipment.
EQUI 9 – Solar Mars Turbine 100-16000S	Minn. R. 7011.2300	Standards of Performance for Stationary Internal Combustion Engines • Fuel limited to natural gas only, by design. Sulfur content of fuel limited to 0.0015 percent by weight.
	40 CFR pt. 60, subp. KKKK Minn. R. 7011.2375	NSPS for Stationary Combustion Turbines • owner or operator of stationary combustion turbine; • construction of the unit was after February 18, 2005 and on or before December 13, 2024; • the unit is in a continental area south of the arctic circle; • the unit has a heat input at peak load of greater than 50 MMBtu/hr but less than or equal to 850 MMBtu/hr; • Turbine capacity ≤ 30 MW output at peak load; • the unit combusts gaseous fuels; • the unit is not a combined heat and power and does not use a duct burner; • the unit is not using continuous parameter monitoring or water/steam injection; • the unit does not use a NO_X CEMS; and • the unit uses NO_X and SO_2 performance testing and/or fuel records compliance options.
EQUI 10 - Process Heater	Minn. R. 7011.0515	Standards of Performance for New Indirect Heating Equipment. • Construction of the unit was on or after January 31, 1977; • The unit burns gaseous fuels; • The facility is located outside the cities in Table II of the rule; • The unit capacity is less than 250 MMBtu/hr; and • The facility has less than 250 MMBtu/hr of direct and indirect heating equipment.
EQUI 11 – Cummins GTA50E Emergency Generator	Minn. R. 7011.2300	Standards of Performance for Stationary Internal Combustion Engines • Fuel limited to natural gas only. Sulfur content of fuel limited to 0.0015 percent by weight.

Subject item*	Applicable regulations	Rationale
	40 CFR pt. 60, subp. JJJJ Minn. R. 7011.2310	NSPS for Stationary Spark Ignition Internal Combustion Engines. Applicability criteria include: • Engines manufactured on or after January 1, 2009 and constructed after June 12, 2006; • Certified engines; and • Emergency, natural gas engine with maximum engine power greater than or equal to 500 hp.
	40 CFR pt. 63, subp. ZZZZ Minn. R. 7011.8150	NESHAP for Stationary Reciprocating Internal Combustion Engines. EQUI 11 is a new affected source subject to 40 CFR pt. 63, subp. ZZZZ. Under 40 CFR § 63.6590(c) the engine complies with the requirements 40 CFR pt. 63, subp. ZZZZ by complying with the requirements of 40 CFR pt. 60, subp. JJJJ, and no further requirements apply under 40 CFR pt. 63, subp. ZZZZ.
FUGI 1 – 115 Flanges	Minn. R. 7011.0715	Standards of Performance for post-1969 Industrial Process Equipment. Equipment for which there is no other promulgated performance standard is subject to the opacity and PM limits in this rule. Construction of the unit was on or after July 9, 1969. • have neither a process rate nor airflow necessary for IPER calculations
	40 CFR pt. 60, subp. OOOOa Minn. R. 7011.3325	NSPS for Crude Oil and Natural Gas Facilities, 09/15/2015-12/06/2022 • owner or operator of onshore Natural Gas source category which has a collection of fugitive equipment at a compressor station; • modification by installation of additional compressor(s) after 09/15/2015 and on or before 12/06/2022;
FUGI 2 – 1 Compressor	Minn. R. 7011.0715	Standards of Performance for post-1969 Industrial Process Equipment. Equipment for which there is no other promulgated performance standard is subject to the opacity and PM limits in this rule. Construction of the unit was on or after July 9, 1969. • have neither a process rate nor airflow necessary for IPER calculations
	40 CFR pt. 60, subp. OOOOa Minn. R. 7011.3325	NSPS for Crude Oil and Natural Gas Facilities, 09/15/2015-12/06/2022 • owner or operator of onshore Natural Gas source category which has a collection of fugitive equipment at a compressor station; • modification by installation of additional compressor(s) after 09/15/2015 and on or before 12/06/2022;
FUGI 3 – 60 Valves	Minn. R. 7011.0715	Standards of Performance for post-1969 Industrial Process Equipment. Equipment for which there is no other promulgated performance standard is subject to the opacity and PM limits in this rule. Construction of the unit was on or after July 9, 1969. • have neither a process rate nor airflow necessary for IPER calculations

Subject item*	Applicable regulations	Rationale
	40 CFR pt. 60, subp. OOOOa Minn. R. 7011.3325	NSPS for Crude Oil and Natural Gas Facilities, 09/15/2015-12/06/2022 • owner or operator of onshore Natural Gas source category which has a collection of fugitive equipment at a compressor station; • modification by installation of additional compressor(s) after 09/15/2015 and on or before 12/06/2022;

*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 PTE of the Facility, detailed PTE at each subject item, and supporting information prepared by the MPCA and the Permittee. Additionally, all emission factors are documented in Attachment 1. Emission factors from sources other than EPA's AP-42 are described below.

For the three stationary gas combustion turbines (EQUIs 2, 4, & 9), the emission factors for NO_X, CO, and VOCs are from the manufacturer as provided during previous permit actions.

The emergency generator (EQUI 11) emission factors for NO_X, CO, and VOCs are based on the manufacturer's certification. EQUI 11's emissions certifications are included as Attachment 3.

Potential emissions from fugitives (FUGI 1, 2, & 3) are based on emission factors from EPA's *Protocol for Equipment Leak Emission Estimates*, EPA-453/R-95-017, Table 2-2 (November 1995). Analysis of natural gas shows VOC content in fuel at approximately 1.04%. VOC emissions are calculated based on a conservative estimate of 5.00% VOC content in fuel.

3.2 Performance testing history

EQUIs 2, 4, and 9 are subject to recurring performance testing under 40 CFR pt. 60.

Since the last permit reissuance, four performance testing events were conducted. All equipment were operating within the parameters' required ranges, as defined in the approved test plans, during their respective performance tests. All equipment performance tests' results were compliant.

The Table below summarizes the performance testing results since the last permit reissuance.

Table 6. Summary of performance test results since last permit reissuance

Emission unit tested	Testing date(s)	Limitation basis Pollutant and emission limit	Test result	Compliance status
EQUI 2 – Solar Mars Turbine 100-T15000S	12/20/2021 – 12/22/2021	Nitrogen Oxides (NO_X): ≤ 0.0157% by volume at 15% O_2 and on a dry basis. [40 CFR 60.332(d), Minn. R. 7011.2350]	0.00121%	Compliant
		Sulfur Content of Fuel (S): ≤ 0.8% by weight. [40 CFR 60.333(b), Minn. R. 7011.2350]	0.0001%	Compliant
EQUI 4 – Solar Mars Turbine 100-16000S	12/17/2019 – 01/20/2020	Nitrogen Oxides (NO_X): ≤ 25 ppm at 15 % O_2, or 150 ng/J of useful output (1.2 lb/MWh). [40 CFR 60.4320(a), 40 CFR pt. 60, subp. KKKK(Table 1), Minn. R. 7011.2375]	9.31 ppm	Compliant

Emission unit tested	Testing date(s)	Limitation basis Pollutant and emission limit	Test result	Compliance status
	12/20/2021 – 12/22/2021	Nitrogen Oxides (NO_X): ≤ 25 ppm at 15 % O_2, or 150 ng/J of useful output (1.2 lb/MWh). [40 CFR 60.4320(a), 40 CFR pt. 60, subp. KKKK(Table 1), Minn. R. 7011.2375]	4.24 ppm	Compliant
		Sulfur Dioxide (SO_2): ≤ 0.0015 lb/MMBtu heat input. [Minn. R. 7011.2300, subp. 2(B)]	0.0000444 lb/MMBtu	Compliant
		Sulfur Dioxide (SO_2): ≤ 110 ng/J (0.90 lb/MWh) gross output. [40 CFR 60.4330(a)(1), Minn. R. 7011.2375]	0.01908 ng/J	Compliant
	12/05/2023 – 12/06/2023	Nitrogen Oxides (NO_X): ≤ 25 ppm at 15% O_2, or 150 ng/J of useful output (1.2 lb/MWh). [40 CFR 60.4320(a), 40 CFR pt. 60, subp. KKKK(Table 1), Minn. R. 7011.2375]	4.3 ppm	Compliant
		Sulfur Dioxide (SO_2): ≤ 0.0015 lb/MMBtu heat input. [Minn. R. 7011.2300, subp. 2(B)]	0.0000103 lb/MMBtu	Compliant
		Sulfur Dioxide (SO_2): ≤ 110 ng/J (0.90 lb/MWh) gross output. [40 CFR 60.4330(a)(1), Minn. R. 7011.2375]	0.00442 ng/J	Compliant
			0.000117 lb/MWh	Compliant
	11/18/2025	Nitrogen Oxides (NO_X): ≤ 25 ppm at 15% O_2, or 150 ng/J of useful output (1.2 lb/MWh). [40 CFR 60.4320(a), 40 CFR pt. 60, subp. KKKK(Table 1), Minn. R. 7011.2375]	17.1 ppm	Compliant
		Sulfur Dioxide (SO_2): ≤ 0.0015 lb/MMBtu heat input. [Minn. R. 7011.2300, subp. 2(B)]	0.00004 lb/MMBtu	Compliant
		Sulfur Dioxide (SO_2): ≤ 110 ng/J (0.90 lb/MWh) gross output. [40 CFR 60.4330(a)(1), Minn. R. 7011.2375]	0.017197 ng/J	Compliant
EQUI 9 – Solar Mars Turbine 100-16000S	12/17/2019 – 01/20/2020	Nitrogen Oxides (NO_X): ≤ 25 ppm at 15 % O_2, or 150 ng/J of useful output (1.2 lb/MWh). [40 CFR 60.4320(a), 40 CFR pt. 60, subp. KKKK(Table 1), Minn. R. 7011.2375]	9.23 ppm	Compliant
	12/20/2021 – 12/22/2021	Nitrogen Oxides (NO_X): ≤ 25 ppm at 15 percent oxygen, or 150 ng/J of useful output (1.2 lb/MWh). [40 CFR 60.4320(a), 40 CFR pt. 60, subp. KKKK(Table 1), Minn. R. 7011.2375]	7.82 ppm	Compliant
		Sulfur Dioxide (SO_2): ≤ 0.0015 lb/MMBtu heat input. [Minn. R. 7011.2300, subp. 2(B)]	0.0000444 lbs/MMBtu	Compliant
	12/05/2023 – 12/06/2023	Nitrogen Oxides (NO_X): ≤ 25 ppm at 15% O_2, or 150 ng/J of useful output (1.2 lb/MWh). [40 CFR 60.4320(a), 40 CFR pt. 60, subp. KKKK(Table 1), Minn. R. 7011.2375]	8.8 ppm	Compliant
		Sulfur Dioxide (SO_2): ≤ 0.0015 lb/MMBtu heat input. [Minn. R. 7011.2300, subp. 2(B)]	0.000135 lb/MMBtu	Compliant
		Sulfur Dioxide (SO_2): ≤ 110 ng/J (0.90 lb/MWh) gross output. [40 CFR 60.4330(a)(1), Minn. R. 7011.2375]	0.0579 ng/J	Compliant
			0.00157 lb/MWh	Compliant
	11/18/2025	Nitrogen Oxides (NO_X): ≤ 25 ppm at 15% O_2, or 150 ng/J of useful output (1.2 lb/MWh). [40 CFR 60.4320(a), 40 CFR pt. 60, subp. KKKK(Table 1), Minn. R. 7011.2375]	9.4 ppm	Compliant
		Sulfur Dioxide (SO_2): ≤ 0.0015 lb/MMBtu heat input. [Minn. R. 7011.2300, subp. 2(B)]	0.00009 lb/MMBtu	Compliant
		Sulfur Dioxide (SO_2): ≤ 110 ng/J (0.90 lb/MWh) gross output. [40 CFR 60.4330(a)(1), Minn. R. 7011.2375]	0.038694 ng/J	Compliant

Based on the performance testing requirements in 40 CFR pt. 60, subp. GG, the permit requires testing at EQUI 2, every 60 months for NO_X. Based on the performance testing requirements in 40 CFR pt. 60, subp. KKKK, the permit requires testing at EQUIs 4 & 9, annually, but no more than 14 months after the previous performance test for NO_X and SO_2; however, if the NO_X testing results are less than or equal to 75 % of the NO_X emission limit, the permittee may reduce the performance testing frequency for NO_X to once every two years, but no more than 26 months after the previous performance test for NO_X.

3.3 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 7. Monitoring

Subject Item*	Requirement (basis)	What is the monitoring?	Why is this monitoring adequate?
EQUI 2 - Solar Mars Turbine 100-T15000S	$NO_X \leq 0.0157$ ppm 4-hour rolling avg. and/or at 15 % O_2 on a dry basis. [40 CFR 60.332(d), Minn. R. 7011.2350]	Performance testing.	Testing frequencies are typically set at 12, 36, or 60-month increments. Past test results, applicable rules, potential emissions, location of source, and past compliance history play a factor in setting the testing frequency for emission factors. This permit requires NO_X performance testing every 60 months.
	$SO_2 \leq 0.015$ % by vol. (dry) at 15 % O_2. [40 CFR 60.333, Minn. R. 7011.2350]	Recordkeeping, fuel analysis, fuel supplier certification.	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.
	$SO_2 \leq 0.0015$ lb/MMBtu. [Minn. R. 7011.2300, subp. 2(B)]	Monthly recordkeeping of the type of fuel used, sulfur monitoring analysis, fuel supplier certification, performance testing.	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 the emission limits by only burning natural gas. PTE is 1.50E-03 lb of SO_2/MMBtu.

Subject Item*	Requirement (basis)	What is the monitoring?	Why is this monitoring adequate?
	Opacity ≤ 20 % once operating temperatures have been attained. [Minn. R. 7011.2300, subp. 1]	None.	The opacity requirement applies when the engine is warmed up. The use of very low sulfur fuel ensures compliance with the opacity limit.
EQUI 4 - Solar Mars Turbine 100-16000S	NO_X ≤ 42 ppm at 15 % O_2 or 150 ng/J of useful output (1.2 lb/MWh) when ≥ 75 % peak load and ≥ 0 °F. NO_X ≤ 96 ppm at 15 % O_2 or 590 ng/J of useful output (4.70 lb/MWh) when < 75 % peak load or < 0 °F. [40 CFR 60.4320(a), Minn. R. 7011.2375]	Initial and annual NO_X and SO_2 performance testing, semi-annual excess emissions/downtime reporting. Records for sulfur content: maintain current purchase contract, tariff sheet or transportation contract for the fuel.	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. NO_X PTE is 0.621 compared to rule limit of 1.2 lb/MWh, or 1.69 compared to rule limit of 4.70 lb/MWh. SO_2 PTE is 1.57E-02 compared to rule limit of 0.90 lb/MWh, or 1.50E-03 compared to rule limit of 0.060 lb/MMBtu. See Attachment 1 for detailed calculations.
	SO_2 ≤ 110 ng/J (0.90 lb/MWh) gross output; OR Fuel SO_2 PTE ≤ 26 ng SO_2/J (0.060 lb SO2/MMBtu) heat input. [40 CFR 60.4330(a)(1)-(2), Minn. R. 7011.2375]		
	SO_2 ≤ 0.0015 lb/MMBtu. [Minn. R. 7011.2300, subp. 2(B)]	Monthly recordkeeping of the type of fuel used, sulfur monitoring analysis, fuel supplier certification, performance testing.	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 the emission limits by only burning natural gas. PTE is 1.50E-03 lb of SO_2/MMBtu.
	Opacity ≤ 20 % once operating temperatures have been attained. [Minn. R. 7011.2300, subp. 1]	None	The opacity requirement applies when the engine is warmed up. The use of very low sulfur fuel ensures compliance with the opacity limit.
EQUI 6 – Heater 1	PM ≤ 0.4 lb/MMBtu Opacity ≤ 20 % except for one six-minute period per hour of not more than 60 %. [Minn. R. 7011.0515]	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 these units 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: 7.45E-03 lbs/MMBtu of PM compared to the rule limit of 0.4 lbs/MMBtu of PM.

Subject Item*	Requirement (basis)	What is the monitoring?	Why is this monitoring adequate?
EQUI 7 – Heater 2	PM ≤ 0.4 lb/MMBtu Opacity ≤ 20 % except for one six-minute period per hour of not more than 60 %. [Minn. R. 7011.0515]	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 these units 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: 7.45E-03 lbs/MMBtu of PM compared to the rule limit of 0.4 lbs/MMBtu of PM.
EQUI 9 - Solar Mars Turbine 100-16000S	NO_X ≤ 42 ppm at 15 % O_2 or 150 ng/J of useful output (1.2 lb/MWh) when ≥ 75 % peak load and ≥ 0 °F. NO_X ≤ 96 ppm at 15 % O_2 or 590 ng/J of useful output (4.70 lb/MWh) when < 75 % peak load or < 0 °F. [40 CFR 60.4320(a), Minn. R. 7011.2375]	Initial and annual NO_X and SO_2 performance testing, semi-annual excess emissions/downtime reporting. Records for sulfur content: maintain current purchase contract, tariff sheet or transportation contract for the fuel.	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. NO_X PTE is 0.621 compared to rule limit of 1.2 lb/MWh, or 1.69 compared to rule limit of 4.70 lb/MWh. SO_2 PTE is 1.57E-02 compared to rule limit of 0.90 lb/MWh, or 1.50E-03 compared to rule limit of 0.060 lb/MMBtu. See Attachment 1 for detailed calculations.
	SO_2 ≤ 110 ng/J (0.90 lb/MWh) gross output; OR Fuel SO_2 PTE ≤ 26 ng SO_2/J (0.060 lb SO2/MMBtu) heat input. [40 CFR 60.4330(a)(1)-(2), Minn. R. 7011.2375]		
	SO_2 <= 0.0015 lb/MMBtu. [Minn. R. 7011.2300, subp. 2(B)]	Monthly recordkeeping of the type of fuel used, sulfur monitoring analysis, fuel supplier certification, performance testing.	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 the emission limits by only burning natural gas. PTE is 1.50E-03 lb of SO_2/MMBtu.
	Opacity <= 20 % once operating temperatures have been attained. [Minn. R. 7011.2300, subp. 1]	None.	The opacity requirement applies when the engine is warmed up. The use of very low sulfur fuel ensures compliance with the opacity limit.

Subject Item*	Requirement (basis)	What is the monitoring?	Why is this monitoring adequate?
EQUI 10 – Heater 3	PM ≤ 0.4 lb/MMBtu Opacity <= 20 % except for one six-minute period per hour of not more than 60 %. [Minn. R. 7011.0515]	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 these units 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: 7.45E-03 lbs/MMBtu of PM compared to the rule limit of 0.4 lbs/MMBtu of PM.
EQUI 11 - Emergency Generator	NO_X ≤ 2.0 g/Hp-hr. CO ≤ 4.0 g/Hp-hr. VOCs ≤ 1.0 g/Hp-hr. [40 CFR 60.4233(e), 40 CFR 63.6590(c), 40 CFR pt. 60, subp. JJJJ(Table 1), Minn. R. 7011.2310, Minn. R. 7011.8150]	Purchase of a certified engine, operation according to the manufacturer's emissions-related instructions, annual CEDRI reporting, and records of maintenance	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 and NESHAPs contain adequate monitoring requirements.
	SO_2 <= 0.0015 lb/MMBtu. [Minn. R. 7011.2300, subp. 2(B)]	Monthly recordkeeping of the type of fuel used, sulfur monitoring analysis, fuel supplier certification, performance testing.	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 the emission limits by only burning natural gas. The potential to emit from the unit is 1.50E-03 lb of SO_2/MMBtu due to equipment design and allowable fuel compared to the rule limit of 1.50E-03 lb of SO_2/MMBtu.
	Opacity <= 20 % once operating temperatures have been attained. [Minn. R. 7011.2300, subp. 1]	None.	The opacity requirement applies when the engine is warmed up. The use of very low sulfur fuel ensures compliance with the opacity limit.
FUGI 1 – 115 Flanges	PM <= 0.30 gr/dscf Opacity <= 20 %. [Minn. R. 7011.0715, subp. 1]	None.	Fugitive leaks are only likely to result in VOC emissions; therefore, the likelihood of violating either of the limits is very small.
FUGI 2 – 1 Compressor	PM <= 0.30 gr/dscf Opacity <= 20 %. [Minn. R. 7011.0715, subp. 1]	None.	Fugitive leaks are only likely to result in VOC emissions; therefore, the likelihood of violating either of the limits is very small.
FUGI 3 – 60 Valves	PM <= 0.30 gr/dscf Opacity <= 20 %. [Minn. R. 7011.0715, subp. 1]	None.	Fugitive leaks are only likely to result in VOC emissions; therefore, the likelihood of violating either of the limits is very small.

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

3.4 Insignificant activities

Northern Natural Gas Co - Faribault 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 8. Insignificant activities

Insignificant activity	General applicable emission limit	Discussion
Brazing, soldering, torch-cutting, or welding equipment	PM, variable depending on airflow Opacity <= 20% (Minn. R. 7011.0715)	This facility has soldering and/or welding equipment. For these units, based on EPA published emissions factors, it is highly unlikely that they could violate the applicable requirement. In addition, these units are typically operated and vented inside a building, so testing for PM or opacity is not feasible.
Individual units with potential emissions less than 2,000 lb/year of NO_X, VOC, PM, PM_{10}, and SO_2, each, and less than 4,000 lb/year of CO.	PM <= 0.4 lb/MMBtu, Opacity <= 20% with exceptions (Minn. R. 7011.0515)	This facility has nine 60,000 BTU/hr space heaters fueled by natural gas. The facility is located outside the Minneapolis-St. Paul Air Quality Control Region and outside of the City of Duluth. The combined rated heat input of all direct and indirect heating equipment at the facility is less than 250 MMBtu/hr. For the natural gas units, based on the fuels used and EPA published emissions factors, it is highly unlikely that they could violate the applicable requirement. In addition, all of these units are operated and vented inside a building, so testing for PM or opacity is not feasible.
Fugitive dust emissions from unpaved roads and parking lots	Requirement to take reasonable measures to prevent PM from becoming airborne (Minn. R. 7011.0150)	The Facility has an unpaved parking lot. The permit contains a general requirement that this standard must be met.

3.5 Permit organization

This permit meets the MPCA Tempo Guidance for ordering and grouping of requirements as well as the use of permit appendices.

When amending or reissuing an air permit, MPCA staff evaluate standard permit language in the permit. If the standard language has been changed in the Tempo database since the last permit was issued, staff need to decide how to proceed for each revised condition. For this permit action, all standard language was updated in the permit.

At this time, there are not standard requirement profiles in the Tempo database that fit the regulations scenarios that apply to some of the subject items at this facility. There are similar requirement profiles that

were used as an initial template and were then modified to fit the applicable requirements scenarios for the subject items at this facility.

For EQUIs 4 and 9, the requirements profile "Air; Permitting; Individual Permits; Federal Requirements; NSPS; KKKK; New/modified or reconstructed; CEMS; Not using water/steam injection" was used as a starting template. These units do not use CEMS; therefore, the requirements were edited accordingly.

3.6 Comments received

This section will be completed after the referenced review periods.

Public Notice Period: [start date] – [end date]
EPA Review Period: [start date] – [end date]

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 Northern Natural Gas Co - Faribault the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 13100058-104 and this TSD, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff members on permit team: Steven Roste (permit engineer)
Megan Dalbec (peer reviewer)
Marc Severin (performance testing)
Tim Schwarz (enforcement)
Leah Waller (data coordinator)
Beckie Olson (permit writing assistant)
Laurie O'Brien (administrative support)

Tempo Activities: Part 70 Reissuance (IND20230001)

Attachments:
1. PTE summary calculation spreadsheets
2. Subject item inventory and facility requirements
3. EQUI 11 Exhaust Emissions Data Sheet & EPA Certificate of Conformity

MINNESOTA POLLUTION CONTROL AGENCY
520 Lafayette Road North
St. Paul, MN 55155-4194

GI-07 Spreadsheet

Facility Emissions Summary
Air Quality Permit Program
Doc Type: Permit Application

1a) AQ Facility ID number: 13100058
1b) Agency Interest ID number: 1293
2) Facility name: Northern Natural Gas Company - Faribault

Follow the instructions to complete this spreadsheet. This spreadsheet can be copied into a tab for your emissions spreadsheet and must be submitted on a CD with your application. If you need to provide emissions information for more emissions units, add more sets of columns (3a through 3f) to the right as needed in the Emissions by Source table. If you need to provide information for more pollutants, add rows as needed.

Emissions by Source Table

3a) Tempo SI ID number:		EQUI 2				**3a)** Tempo SI ID number:		EQUI 4				**3a)** Tempo SI ID number:		EQUI 6			
3b) Delta ID No.:						**3b)** Delta ID No.:						**3b)** Delta ID No.:					
3c) Pollutant Name	**3d)** CAS #	**3e)** Potential Pounds (lbs) per hour	tons per year un-restricted	tons per year limited	**3f)** Actual tons per year	**3c)** Pollutant Name	**3d)** CAS #	**3e)** Potential Pounds (lbs) per hour	tons per year un-restricted	tons per year limited	**3f)** Actual tons per year	**3c)** Pollutant Name	**3d)** CAS #	**3e)** Potential Pounds (lbs) per hour	tons per year un-restricted	tons per year limited	**3f)** Actual tons per year
NO_X	--	21.3	57.4	57.4		NO_X	--	21.0	38.1	38.1		NO_X	--	3.51E-02	0.154	0.154	
VOC	--	8.60	20.6	20.6		VOC	--	8.47	20.5	20.5		VOC	--	1.93E-03	8.46E-03	8.46E-03	
CO	630-08-0	30.7	71.0	71.0		CO	630-08-0	30.2	41.4	41.4		CO	630-08-0	2.95E-02	0.129	0.129	
PM	--	1.91	8.11	8.11		PM	--	1.92	8.23	8.23		PM	--	2.67E-03	1.17E-02	1.17E-02	
PM_{10}	--	1.91	8.11	8.11		PM_{10}	--	1.92	8.23	8.23		PM_{10}	--	2.67E-03	1.17E-02	1.17E-02	
$PM_{2.5}$	--	1.91	8.11	8.11		$PM_{2.5}$	--	1.92	8.23	8.23		$PM_{2.5}$	--	2.67E-03	1.17E-02	1.17E-02	
SO_2	7446-09-05	0.191	0.811	0.811		SO_2	7446-09-05	0.192	0.823	0.823		SO_2	7446-09-05	2.11E-04	9.23E-04	9.23E-04	
Lead	7439-92-1	--	--	--		Lead	7439-92-1	--	--	--		Lead	7439-92-1	1.76E-07	7.69E-07	7.69E-07	
Acetaldehyde	75-07-0	5.10E-03	2.16E-02	2.16E-02		Acetaldehyde	75-07-0	5.13E-03	2.19E-02	2.19E-02		Acetaldehyde	75-07-0	--	--	--	
Acrolein	107-02-8	8.16E-04	3.46E-03	3.46E-03		Acrolein	107-02-8	8.21E-04	3.51E-03	3.51E-03		Acrolein	107-02-8	--	--	--	
Benzene	71-43-2	1.53E-03	6.49E-03	6.49E-03		Benzene	71-43-2	1.54E-03	6.58E-03	6.58E-03		Benzene	71-43-2	7.38E-07	3.23E-06	3.23E-06	
1,3-Butadiene	106-99-0	5.48E-05	2.33E-04	2.33E-04		1,3-Butadiene	106-99-0	5.51E-05	2.36E-04	2.36E-04		1,3-Butadiene	106-99-0	--	--	--	
Carbon Tetrachloride	56-23-5	--	--	--		Carbon Tetrachloride	56-23-5	--	--	--		Carbon Tetrachloride	56-23-5	--	--	--	
Chlorobenzene	108-90-7	--	--	--		Chlorobenzene	108-90-7	--	--	--		Chlorobenzene	108-90-7	--	--	--	
Chloroform	67-66-3	--	--	--		Chloroform	67-66-3	--	--	--		Chloroform	67-66-3	--	--	--	
1,4-Dichlorobenzene	106-46-7	--	--	--		1,4-Dichlorobenzene	106-46-7	--	--	--		1,4-Dichlorobenzene	106-46-7	4.22E-07	1.85E-06	1.85E-06	
1,1-Dichloroethane	75-34-3	--	--	--		1,1-Dichloroethane	75-34-3	--	--	--		1,1-Dichloroethane	75-34-3	--	--	--	
1,2-Dichloroethane	107-06-2	--	--	--		1,2-Dichloroethane	107-06-2	--	--	--		1,2-Dichloroethane	107-06-2	--	--	--	
1,2-Dichloropropane	78-87-5	--	--	--		1,2-Dichloropropane	78-87-5	--	--	--		1,2-Dichloropropane	78-87-5	--	--	--	
1,3-Dichloropropene	54-27-56	--	--	--		1,3-Dichloropropene	54-27-56	--	--	--		1,3-Dichloropropene	54-27-56	--	--	--	
Ethylbenzene	100-41-4	4.08E-03	1.73E-02	1.73E-02		Ethylbenzene	100-41-4	4.10E-03	1.76E-02	1.76E-02		Ethylbenzene	100-41-4	--	--	--	
Ethylene Dibromide	106-93-4	--	--	--		Ethylene Dibromide	106-93-4	--	--	--		Ethylene Dibromide	106-93-4	--	--	--	
Formaldehyde	50-00-0	9.05E-02	0.384	0.384		Formaldehyde	50-00-0	9.10E-02	0.390	0.390		Formaldehyde	50-00-0	2.63E-05	1.15E-04	1.15E-04	
n-Hexane	110-54-3	--	--	--		*n*-Hexane	110-54-3	--	--	--		*n*-Hexane	110-54-3	6.32E-04	2.77E-03	2.77E-03	
Methanol	67-56-1	--	--	--		Methanol	67-56-1	--	--	--		Methanol	67-56-1	--	--	--	
Methylene Chloride	74-87-3	--	--	--		Methylene Chloride	74-87-3	--	--	--		Methylene Chloride	74-87-3	--	--	--	
Naphthalene	91-20-3	1.66E-04	7.03E-04	7.03E-04		Naphthalene	91-20-3	1.67E-04	7.13E-04	7.13E-04		Naphthalene	91-20-3	2.14E-07	9.39E-07	9.39E-07	
Propylene Oxide	75-56-9	3.70E-03	1.57E-02	1.57E-02		Propylene Oxide	75-56-9	3.72E-03	1.59E-02	1.59E-02		Propylene Oxide	75-56-9	--	--	--	
Styrene	100-42-5	--	--	--		Styrene	100-42-5	--	--	--		Styrene	100-42-5	--	--	--	
Toluene	108-88-3	1.66E-02	7.03E-02	7.03E-02		Toluene	108-88-3	1.67E-02	7.13E-02	7.13E-02		Toluene	108-88-3	1.19E-06	5.23E-06	5.23E-06	
1,1,2,2-Tetrachloroethane	79-34-5	--	--	--		1,1,2,2-Tetrachloroethane	79-34-5	--	--	--		1,1,2,2-Tetrachloroethane	79-34-5	--	--	--	
1,1,2-Trichloroethane	79-00-5	--	--	--		1,1,2-Trichloroethane	79-00-5	--	--	--		1,1,2-Trichloroethane	79-00-5	--	--	--	

MINNESOTA POLLUTION CONTROL AGENCY
520 Lafayette Road North
St. Paul, MN 55155-4194

GI-07 Spreadsheet

Facility Emissions Summary
Air Quality Permit Program
Doc Type: Permit Application

1a) AQ Facility ID number: 13100058
1b) Agency Interest ID number: 1293
2) Facility name: Northern Natural Gas Company - Faribault

Follow the instructions to complete this spreadsheet. This spreadsheet can be copied into a tab for your emissions spreadsheet and must be submitted on a CD with your application. If you need to provide emissions information for more emissions units, add more sets of columns (3a through 3f) to the right as needed in the Emissions by Source table. If you need to provide information for more pollutants, add rows as needed.

Emissions by Source Table

3a) Tempo SI ID number:		EQUI 2				**3a)** Tempo SI ID number:		EQUI 4				**3a)** Tempo SI ID number:		EQUI 6			
3b) Delta ID No.:						**3b)** Delta ID No.:						**3b)** Delta ID No.:					
3c)	**3d)**	**3e)** Potential			**3f)**	**3c)**	**3d)**	**3e)** Potential			**3f)**	**3c)**	**3d)**	**3e)** Potential			**3f)**
Pollutant Name	CAS #	Pounds (lbs) per hour	tons per year un-restricted	tons per year limited	Actual tons per year	Pollutant Name	CAS #	Pounds (lbs) per hour	tons per year un-restricted	tons per year limited	Actual tons per year	Pollutant Name	CAS #	Pounds (lbs) per hour	tons per year un-restricted	tons per year limited	Actual tons per year
Vinyl Chloride	75-01-4	--	--	--		Vinyl Chloride	75-01-4	--	--	--		Vinyl Chloride	75-01-4	--	--	--	
Xylenes	1330-20-7	8.16E-03	3.46E-02	3.46E-02		Xylenes	1330-20-7	8.21E-03	3.51E-02	3.51E-02		Xylenes	1330-20-7	--	--	--	
POM	--	2.80E-04	1.19E-03	1.19E-03		POM	--	2.82E-04	1.21E-03	1.21E-03		POM	--	2.45E-07	1.07E-06	1.07E-06	
Arsenic	7440-38-2	--	--	--		Arsenic	7440-38-2	--	--	--		Arsenic	7440-38-2	7.03E-08	3.08E-07	3.08E-07	
Beryllium	7440-41-7	--	--	--		Beryllium	7440-41-7	--	--	--		Beryllium	7440-41-7	4.22E-09	1.85E-08	1.85E-08	
Cadmium	7440-43-9	--	--	--		Cadmium	7440-43-9	--	--	--		Cadmium	7440-43-9	3.86E-07	1.69E-06	1.69E-06	
Chromium	7440-47-3	--	--	--		Chromium	7440-47-3	--	--	--		Chromium	7440-47-3	4.92E-07	2.15E-06	2.15E-06	
Cobalt	7440-48-4	--	--	--		Cobalt	7440-48-4	--	--	--		Cobalt	7440-48-4	2.95E-08	1.29E-07	1.29E-07	
Manganese	7439-96-5	--	--	--		Manganese	7439-96-5	--	--	--		Manganese	7439-96-5	1.33E-07	5.85E-07	5.85E-07	
Mercury	7439-97-6	--	--	--		Mercury	7439-97-6	--	--	--		Mercury	7439-97-6	9.13E-08	4.00E-07	4.00E-07	
Nickel	7440-02-0	--	--	--		Nickel	7440-02-0	--	--	--		Nickel	7440-02-0	7.38E-07	3.23E-06	3.23E-06	
Selenium	7782-49-2	--	--	--		Selenium	7782-49-2	--	--	--		Selenium	7782-49-2	8.43E-09	3.69E-08	3.69E-08	
Single HAP	--	9.05E-02	0.384	0.384		Single HAP	--	9.10E-02	0.390	0.390		Single HAP	--	6.32E-04	2.77E-03	2.77E-03	
Total HAPs	--	0.131	0.556	0.556		Total HAPs	--	0.132	0.564	0.564		Total HAPs	--	6.63E-04	2.91E-03	2.91E-03	
CO_2	124-38-9	14,908	65,295	65,295		CO_2	124-38-9	15,000	65,701	65,701		CO_2	124-38-9	41.9	184	184	
Methane	74-82-8	0.281	1.23	1.23		Methane	74-82-8	0.283	1.24	1.24		Methane	74-82-8	7.90E-04	3.46E-03	3.46E-03	
N_2O	10024-97-2	2.81E-02	0.123	0.123		N_2O	10024-97-2	2.83E-02	0.124	0.124		N_2O	10024-97-2	7.90E-05	3.46E-04	3.46E-04	
CO_2e	--	14,923	65,363	65,363		CO_2e	--	15,016	65,769	65,769		CO_2e	--	42.0	184	184	

MINNESOTA POLLUTION CONTROL AGENCY
520 Lafayette Road North
St. Paul, MN 55155-4194

GI-07 Spreadsheet

Facility Emissions Summary
Air Quality Permit Program
Doc Type: Permit Application

1a) AQ Facility ID number: 13100058
1b) Agency Interest ID number: 1293
2) Facility name: Northern Natural Gas Company - Faribault

Follow the instructions to complete this spreadsheet. This spreadsheet can be copied into a tab for your emissions spreadsheet and must be submitted on a CD with your application. If you need to provide emissions information for more emissions units, add more sets of columns (3a through 3f) to the right as needed in the Emissions by Source table. If you need to provide information for more pollutants, add rows as needed.

Emissions by Source Table

3a) Tempo SI ID number:		EQUI 7				**3a)** Tempo SI ID number:		EQUI 9				**3a)** Tempo SI ID number:		EQUI 10			
3b) Delta ID No.:						**3b)** Delta ID No.:						**3b)** Delta ID No.:					
3c)	**3d)**	**3e)** Potential			**3f)**	**3c)**	**3d)**	**3e)** Potential			**3f)**	**3c)**	**3d)**	**3e)** Potential			**3f)**
Pollutant Name	CAS #	Pounds (lbs) per hour	tons per year un-restricted	tons per year limited	Actual tons per year	Pollutant Name	CAS #	Pounds (lbs) per hour	tons per year un-restricted	tons per year limited	Actual tons per year	Pollutant Name	CAS #	Pounds (lbs) per hour	tons per year un-restricted	tons per year limited	Actual tons per year
NO_X	--	3.51E-02	0.154	0.154		NO_X	--	21.0	38.1	38.1		NO_X	--	3.51E-02	0.154	0.154	
VOC	--	1.93E-03	8.46E-03	8.46E-03		VOC	--	8.47	20.5	20.5		VOC	--	1.93E-03	8.46E-03	8.46E-03	
CO	630-08-0	2.95E-02	0.129	0.129		CO	630-08-0	30.2	41.4	41.4		CO	630-08-0	2.95E-02	0.129	0.129	
PM	--	2.67E-03	1.17E-02	1.17E-02		PM	--	1.92	8.23	8.23		PM	--	2.67E-03	1.17E-02	1.17E-02	
PM_{10}	--	2.67E-03	1.17E-02	1.17E-02		PM_{10}	--	1.92	8.23	8.23		PM_{10}	--	2.67E-03	1.17E-02	1.17E-02	
$PM_{2.5}$	--	2.67E-03	1.17E-02	1.17E-02		$PM_{2.5}$	--	1.92	8.23	8.23		$PM_{2.5}$	--	2.67E-03	1.17E-02	1.17E-02	
SO_2	7446-09-05	2.11E-04	9.23E-04	9.23E-04		SO_2	7446-09-05	0.192	0.823	0.823		SO_2	7446-09-05	2.11E-04	9.23E-04	9.23E-04	
Lead	7439-92-1	1.76E-07	7.69E-07	7.69E-07		Lead	7439-92-1	--	--	--		Lead	7439-92-1	1.76E-07	7.69E-07	7.69E-07	
Acetaldehyde	75-07-0	--	--	--		Acetaldehyde	75-07-0	5.13E-03	2.19E-02	2.19E-02		Acetaldehyde	75-07-0	--	--	--	
Acrolein	107-02-8	--	--	--		Acrolein	107-02-8	8.21E-04	3.51E-03	3.51E-03		Acrolein	107-02-8	--	--	--	
Benzene	71-43-2	7.38E-07	3.23E-06	3.23E-06		Benzene	71-43-2	1.54E-03	6.58E-03	6.58E-03		Benzene	71-43-2	7.38E-07	3.23E-06	3.23E-06	
1,3-Butadiene	106-99-0	--	--	--		1,3-Butadiene	106-99-0	5.51E-05	2.36E-04	2.36E-04		1,3-Butadiene	106-99-0	--	--	--	
Carbon Tetrachloride	56-23-5	--	--	--		Carbon Tetrachloride	56-23-5	--	--	--		Carbon Tetrachloride	56-23-5	--	--	--	
Chlorobenzene	108-90-7	--	--	--		Chlorobenzene	108-90-7	--	--	--		Chlorobenzene	108-90-7	--	--	--	
Chloroform	67-66-3	--	--	--		Chloroform	67-66-3	--	--	--		Chloroform	67-66-3	--	--	--	
1,4-Dichlorobenzene	106-46-7	4.22E-07	1.85E-06	1.85E-06		1,4-Dichlorobenzene	106-46-7	--	--	--		1,4-Dichlorobenzene	106-46-7	4.22E-07	1.85E-06	1.85E-06	
1,1-Dichloroethane	75-34-3	--	--	--		1,1-Dichloroethane	75-34-3	--	--	--		1,1-Dichloroethane	75-34-3	--	--	--	
1,2-Dichloroethane	107-06-2	--	--	--		1,2-Dichloroethane	107-06-2	--	--	--		1,2-Dichloroethane	107-06-2	--	--	--	
1,2-Dichloropropane	78-87-5	--	--	--		1,2-Dichloropropane	78-87-5	--	--	--		1,2-Dichloropropane	78-87-5	--	--	--	
1,3-Dichloropropene	54-27-56	--	--	--		1,3-Dichloropropene	54-27-56	--	--	--		1,3-Dichloropropene	54-27-56	--	--	--	
Ethylbenzene	100-41-4	--	--	--		Ethylbenzene	100-41-4	4.10E-03	1.76E-02	1.76E-02		Ethylbenzene	100-41-4	--	--	--	
Ethylene Dibromide	106-93-4	--	--	--		Ethylene Dibromide	106-93-4	--	--	--		Ethylene Dibromide	106-93-4	--	--	--	
Formaldehyde	50-00-0	2.63E-05	1.15E-04	1.15E-04		Formaldehyde	50-00-0	9.10E-02	0.390	0.390		Formaldehyde	50-00-0	2.63E-05	1.15E-04	1.15E-04	
n-Hexane	110-54-3	6.32E-04	2.77E-03	2.77E-03		*n*-Hexane	110-54-3	--	--	--		*n*-Hexane	110-54-3	6.32E-04	2.77E-03	2.77E-03	
Methanol	67-56-1	--	--	--		Methanol	67-56-1	--	--	--		Methanol	67-56-1	--	--	--	
Methylene Chloride	74-87-3	--	--	--		Methylene Chloride	74-87-3	--	--	--		Methylene Chloride	74-87-3	--	--	--	
Naphthalene	91-20-3	2.14E-07	9.39E-07	9.39E-07		Naphthalene	91-20-3	1.67E-04	7.13E-04	7.13E-04		Naphthalene	91-20-3	2.14E-07	9.39E-07	9.39E-07	
Propylene Oxide	75-56-9	--	--	--		Propylene Oxide	75-56-9	3.72E-03	1.59E-02	1.59E-02		Propylene Oxide	75-56-9	--	--	--	
Styrene	100-42-5	--	--	--		Styrene	100-42-5	--	--	--		Styrene	100-42-5	--	--	--	
Toluene	108-88-3	1.19E-06	5.23E-06	5.23E-06		Toluene	108-88-3	1.67E-02	7.13E-02	7.13E-02		Toluene	108-88-3	1.19E-06	5.23E-06	5.23E-06	
1,1,2,2-Tetrachloroethane	79-34-5	--	--	--		1,1,2,2-Tetrachloroethane	79-34-5	--	--	--		1,1,2,2-Tetrachloroethane	79-34-5	--	--	--	
1,1,2-Trichloroethane	79-00-5	--	--	--		1,1,2-Trichloroethane	79-00-5	--	--	--		1,1,2-Trichloroethane	79-00-5	--	--	--	

MINNESOTA POLLUTION CONTROL AGENCY
520 Lafayette Road North
St. Paul, MN 55155-4194

GI-07 Spreadsheet

Facility Emissions Summary
Air Quality Permit Program
Doc Type: Permit Application

1a) AQ Facility ID number: 13100058
1b) Agency Interest ID number: 1293
2) Facility name: Northern Natural Gas Company - Faribault

Follow the instructions to complete this spreadsheet. This spreadsheet can be copied into a tab for your emissions spreadsheet and must be submitted on a CD with your application. If you need to provide emissions information for more emissions units, add more sets of columns (3a through 3f) to the right as needed in the Emissions by Source table. If you need to provide information for more pollutants, add rows as needed.

Emissions by Source Table

3a) Tempo SI ID number:		EQUI 7				**3a)** Tempo SI ID number:		EQUI 9				**3a)** Tempo SI ID number:		EQUI 10			
3b) Delta ID No.:						**3b)** Delta ID No.:						**3b)** Delta ID No.:					
3c) Pollutant Name	**3d)** CAS #	**3e)** Potential: Pounds (lbs) per hour	tons per year un-restricted	tons per year limited	**3f)** Actual tons per year	**3c)** Pollutant Name	**3d)** CAS #	**3e)** Potential: Pounds (lbs) per hour	tons per year un-restricted	tons per year limited	**3f)** Actual tons per year	**3c)** Pollutant Name	**3d)** CAS #	**3e)** Potential: Pounds (lbs) per hour	tons per year un-restricted	tons per year limited	**3f)** Actual tons per year
Vinyl Chloride	75-01-4	--	--	--		Vinyl Chloride	75-01-4	--	--	--		Vinyl Chloride	75-01-4	--	--	--	
Xylenes	1330-20-7	--	--	--		Xylenes	1330-20-7	8.21E-03	3.51E-02	3.51E-02		Xylenes	1330-20-7	--	--	--	
POM	--	2.45E-07	1.07E-06	1.07E-06		POM	--	2.82E-04	1.21E-03	1.21E-03		POM	--	2.45E-07	1.07E-06	1.07E-06	
Arsenic	7440-38-2	7.03E-08	3.08E-07	3.08E-07		Arsenic	7440-38-2	--	--	--		Arsenic	7440-38-2	7.03E-08	3.08E-07	3.08E-07	
Beryllium	7440-41-7	4.22E-09	1.85E-08	1.85E-08		Beryllium	7440-41-7	--	--	--		Beryllium	7440-41-7	4.22E-09	1.85E-08	1.85E-08	
Cadmium	7440-43-9	3.86E-07	1.69E-06	1.69E-06		Cadmium	7440-43-9	--	--	--		Cadmium	7440-43-9	3.86E-07	1.69E-06	1.69E-06	
Chromium	7440-47-3	4.92E-07	2.15E-06	2.15E-06		Chromium	7440-47-3	--	--	--		Chromium	7440-47-3	4.92E-07	2.15E-06	2.15E-06	
Cobalt	7440-48-4	2.95E-08	1.29E-07	1.29E-07		Cobalt	7440-48-4	--	--	--		Cobalt	7440-48-4	2.95E-08	1.29E-07	1.29E-07	
Manganese	7439-96-5	1.33E-07	5.85E-07	5.85E-07		Manganese	7439-96-5	--	--	--		Manganese	7439-96-5	1.33E-07	5.85E-07	5.85E-07	
Mercury	7439-97-6	9.13E-08	4.00E-07	4.00E-07		Mercury	7439-97-6	--	--	--		Mercury	7439-97-6	9.13E-08	4.00E-07	4.00E-07	
Nickel	7440-02-0	7.38E-07	3.23E-06	3.23E-06		Nickel	7440-02-0	--	--	--		Nickel	7440-02-0	7.38E-07	3.23E-06	3.23E-06	
Selenium	7782-49-2	8.43E-09	3.69E-08	3.69E-08		Selenium	7782-49-2	--	--	--		Selenium	7782-49-2	8.43E-09	3.69E-08	3.69E-08	
Single HAP	--	6.32E-04	2.77E-03	2.77E-03		Single HAP	--	9.10E-02	0.390	0.390		Single HAP	--	6.32E-04	2.77E-03	2.77E-03	
Total HAPs	--	6.63E-04	2.91E-03	2.91E-03		Total HAPs	--	0.132	0.564	0.564		Total HAPs	--	6.63E-04	2.91E-03	2.91E-03	
CO_2	124-38-9	41.9	184	184		CO_2	124-38-9	15,000	65,701	65,701		CO_2	124-38-9	41.9	184	184	
Methane	74-82-8	7.90E-04	3.46E-03	3.46E-03		Methane	74-82-8	0.283	1.24	1.24		Methane	74-82-8	7.90E-04	3.46E-03	3.46E-03	
N_2O	10024-97-2	7.90E-05	3.46E-04	3.46E-04		N_2O	10024-97-2	2.83E-02	0.124	0.124		N_2O	10024-97-2	7.90E-05	3.46E-04	3.46E-04	
CO_2e	--	42.0	183.8	183.8		CO_2e	--	15,016	65,769	65,769		CO_2e	--	42.0	183.77	183.77	

MINNESOTA POLLUTION CONTROL AGENCY
520 Lafayette Road North
St. Paul, MN 55155-4194

GI-07 Spreadsheet

Facility Emissions Summary
Air Quality Permit Program
Doc Type: Permit Application

1a) AQ Facility ID number: 13100058
1b) Agency Interest ID number: 1293
2) Facility name: Northern Natural Gas Company - Faribault

Follow the instructions to complete this spreadsheet. This spreadsheet can be copied into a tab for your emissions spreadsheet and must be submitted on a CD with your application. If you need to provide emissions information for more emissions units, add more sets of columns (3a through 3f) to the right as needed in the Emissions by Source table. If you need to provide information for more pollutants, add rows as needed.

Emissions by Source Table

3a) Tempo SI ID number:		EQUI 11				**3a)** Tempo SI ID number:		FUGI 1				**3a)** Tempo SI ID number:		FUGI 2			
3b) Delta ID No.:						**3b)** Delta ID No.:						**3b)** Delta ID No.:					
3c)	**3d)**	**3e)** Potential			**3f)**	**3c)**	**3d)**	**3e)** Potential			**3f)**	**3c)**	**3d)**	**3e)** Potential			**3f)**
Pollutant Name	CAS #	Pounds (lbs) per hour	tons per year un-restricted	tons per year limited	Actual tons per year	Pollutant Name	CAS #	Pounds (lbs) per hour	tons per year un-restricted	tons per year limited	Actual tons per year	Pollutant Name	CAS #	Pounds (lbs) per hour	tons per year un-restricted	tons per year limited	Actual tons per year
NO_X	--	2.50	0.626	0.626		NO_X	--	--	--	--		NO_X	--	--	--	--	
VOC	--	1.75	0.438	0.438		VOC	--	6.52E-04	2.86E-03	2.86E-03		VOC	--	1.44E-02	6.32E-02	6.32E-02	
CO	630-08-0	5.00	1.25	1.25		CO	630-08-0	--	--	--		CO	630-08-0	--	--	--	
PM	--	0.192	4.80E-02	4.80E-02		PM	--	--	--	--		PM	--	--	--	--	
PM_{10}	--	0.192	4.80E-02	4.80E-02		PM_{10}	--	--	--	--		PM_{10}	--	--	--	--	
$PM_{2.5}$	--	0.192	4.80E-02	4.80E-02		$PM_{2.5}$	--	--	--	--		$PM_{2.5}$	--	--	--	--	
SO_2	7446-09-05	1.48E-02	3.71E-03	3.71E-03		SO_2	7446-09-05	--	--	--		SO_2	7446-09-05	--	--	--	
Lead	7439-92-1	--	--	--		Lead	7439-92-1	--	--	--		Lead	7439-92-1	--	--	--	
Acetaldehyde	75-07-0	2.76E-02	6.90E-03	6.90E-03		Acetaldehyde	75-07-0	--	--	--		Acetaldehyde	75-07-0	--	--	--	
Acrolein	107-02-8	2.60E-02	6.50E-03	6.50E-03		Acrolein	107-02-8	--	--	--		Acrolein	107-02-8	--	--	--	
Benzene	71-43-2	1.56E-02	3.91E-03	3.91E-03		Benzene	71-43-2	--	--	--		Benzene	71-43-2	--	--	--	
1,3-Butadiene	106-99-0	6.56E-03	1.64E-03	1.64E-03		1,3-Butadiene	106-99-0	--	--	--		1,3-Butadiene	106-99-0	--	--	--	
Carbon Tetrachloride	56-23-5	1.75E-04	4.38E-05	4.38E-05		Carbon Tetrachloride	56-23-5	--	--	--		Carbon Tetrachloride	56-23-5	--	--	--	
Chlorobenzene	108-90-7	1.28E-04	3.19E-05	3.19E-05		Chlorobenzene	108-90-7	--	--	--		Chlorobenzene	108-90-7	--	--	--	
Chloroform	67-66-3	1.36E-04	3.39E-05	3.39E-05		Chloroform	67-66-3	--	--	--		Chloroform	67-66-3	--	--	--	
1,4-Dichlorobenzene	106-46-7	--	--	--		1,4-Dichlorobenzene	106-46-7	--	--	--		1,4-Dichlorobenzene	106-46-7	--	--	--	
1,1-Dichloroethane	75-34-3	1.12E-04	2.79E-05	2.79E-05		1,1-Dichloroethane	75-34-3	--	--	--		1,1-Dichloroethane	75-34-3	--	--	--	
1,2-Dichloroethane	107-06-2	1.12E-04	2.79E-05	2.79E-05		1,2-Dichloroethane	107-06-2	--	--	--		1,2-Dichloroethane	107-06-2	--	--	--	
1,2-Dichloropropane	78-87-5	1.29E-04	3.22E-05	3.22E-05		1,2-Dichloropropane	78-87-5	--	--	--		1,2-Dichloropropane	78-87-5	--	--	--	
1,3-Dichloropropene	54-27-56	1.26E-04	3.14E-05	3.14E-05		1,3-Dichloropropene	54-27-56	--	--	--		1,3-Dichloropropene	54-27-56	--	--	--	
Ethylbenzene	100-41-4	2.45E-04	6.13E-05	6.13E-05		Ethylbenzene	100-41-4	--	--	--		Ethylbenzene	100-41-4	--	--	--	
Ethylene Dibromide	106-93-4	2.11E-04	5.27E-05	5.27E-05		Ethylene Dibromide	106-93-4	--	--	--		Ethylene Dibromide	106-93-4	--	--	--	
Formaldehyde	50-00-0	0.203	5.07E-02	5.07E-02		Formaldehyde	50-00-0	--	--	--		Formaldehyde	50-00-0	--	--	--	
n-Hexane	110-54-3	--	--	--		*n*-Hexane	110-54-3	--	--	--		*n*-Hexane	110-54-3	--	--	--	
Methanol	67-56-1	3.03E-02	7.57E-03	7.57E-03		Methanol	67-56-1	--	--	--		Methanol	67-56-1	--	--	--	
Methylene Chloride	74-87-3	4.08E-04	1.02E-04	1.02E-04		Methylene Chloride	74-87-3	--	--	--		Methylene Chloride	74-87-3	--	--	--	
Naphthalene	91-20-3	9.61E-04	2.40E-04	2.40E-04		Naphthalene	91-20-3	--	--	--		Naphthalene	91-20-3	--	--	--	
Propylene Oxide	75-56-9	--	--	--		Propylene Oxide	75-56-9	--	--	--		Propylene Oxide	75-56-9	--	--	--	
Styrene	100-42-5	1.18E-04	2.94E-05	2.94E-05		Styrene	100-42-5	--	--	--		Styrene	100-42-5	--	--	--	
Toluene	108-88-3	5.52E-03	1.38E-03	1.38E-03		Toluene	108-88-3	--	--	--		Toluene	108-88-3	--	--	--	
1,1,2,2-Tetrachloroethane	79-34-5	2.50E-04	6.26E-05	6.26E-05		1,1,2,2-Tetrachloroethane	79-34-5	--	--	--		1,1,2,2-Tetrachloroethane	79-34-5	--	--	--	
1,1,2-Trichloroethane	79-00-5	1.51E-04	3.78E-05	3.78E-05		1,1,2-Trichloroethane	79-00-5	--	--	--		1,1,2-Trichloroethane	79-00-5	--	--	--	

MINNESOTA POLLUTION CONTROL AGENCY
520 Lafayette Road North
St. Paul, MN 55155-4194

GI-07 Spreadsheet

Facility Emissions Summary
Air Quality Permit Program
Doc Type: Permit Application

1a) AQ Facility ID number: 13100058
1b) Agency Interest ID number: 1293
2) Facility name: Northern Natural Gas Company - Faribault

Follow the instructions to complete this spreadsheet. This spreadsheet can be copied into a tab for your emissions spreadsheet and must be submitted on a CD with your application. If you need to provide emissions information for more emissions units, add more sets of columns (3a through 3f) to the right as needed in the Emissions by Source table. If you need to provide information for more pollutants, add rows as needed.

Emissions by Source Table

3a) Tempo SI ID number:		EQUI 11				**3a)** Tempo SI ID number:		FUGI 1				**3a)** Tempo SI ID number:		FUGI 2			
3b) Delta ID No.:						**3b)** Delta ID No.:						**3b)** Delta ID No.:					
3c)	**3d)**	**3e)** Potential			**3f)**	**3c)**	**3d)**	**3e)** Potential			**3f)**	**3c)**	**3d)**	**3e)** Potential			**3f)**
Pollutant Name	CAS #	Pounds (lbs) per hour	tons per year un-restricted	tons per year limited	Actual tons per year	Pollutant Name	CAS #	Pounds (lbs) per hour	tons per year un-restricted	tons per year limited	Actual tons per year	Pollutant Name	CAS #	Pounds (lbs) per hour	tons per year un-restricted	tons per year limited	Actual tons per year
Vinyl Chloride	75-01-4	7.10E-05	1.78E-05	1.78E-05		Vinyl Chloride	75-01-4	--	--	--		Vinyl Chloride	75-01-4	--	--	--	
Xylenes	1330-20-7	1.93E-03	4.82E-04	4.82E-04		Xylenes	1330-20-7	--	--	--		Xylenes	1330-20-7	--	--	--	
POM	--	1.39E-03	3.49E-04	3.49E-04		POM	--	--	--	--		POM	--	--	--	--	
Arsenic	7440-38-2	--	--	--		Arsenic	7440-38-2	--	--	--		Arsenic	7440-38-2	--	--	--	
Beryllium	7440-41-7	--	--	--		Beryllium	7440-41-7	--	--	--		Beryllium	7440-41-7	--	--	--	
Cadmium	7440-43-9	--	--	--		Cadmium	7440-43-9	--	--	--		Cadmium	7440-43-9	--	--	--	
Chromium	7440-47-3	--	--	--		Chromium	7440-47-3	--	--	--		Chromium	7440-47-3	--	--	--	
Cobalt	7440-48-4	--	--	--		Cobalt	7440-48-4	--	--	--		Cobalt	7440-48-4	--	--	--	
Manganese	7439-96-5	--	--	--		Manganese	7439-96-5	--	--	--		Manganese	7439-96-5	--	--	--	
Mercury	7439-97-6	--	--	--		Mercury	7439-97-6	--	--	--		Mercury	7439-97-6	--	--	--	
Nickel	7440-02-0	--	--	--		Nickel	7440-02-0	--	--	--		Nickel	7440-02-0	--	--	--	
Selenium	7782-49-2	--	--	--		Selenium	7782-49-2	--	--	--		Selenium	7782-49-2	--	--	--	
Single HAP	--	0.203	5.07E-02	5.07E-02		Single HAP	--	--	--	--		Single HAP	--	--	--	--	
Total HAPs	--	0.321	8.03E-02	8.03E-02		Total HAPs	--	--	--	--		Total HAPs	--	--	--	--	
CO_2	124-38-9	1,157	289	289		CO_2	124-38-9	--	--	--		CO_2	124-38-9	--	--	--	
Methane	74-82-8	2.18E-02	5.45E-03	5.45E-03		Methane	74-82-8	--	--	--		Methane	74-82-8	--	--	--	
N_2O	10024-97-2	2.18E-03	5.45E-04	5.45E-04		N_2O	10024-97-2	--	--	--		N_2O	10024-97-2	--	--	--	
CO_2e	--	1,158	290	290		CO_2e	--	--	--	--		CO_2e	--	--	--	--	

MINNESOTA POLLUTION CONTROL AGENCY
520 Lafayette Road North
St. Paul, MN 55155-4194

GI-07 Spreadsheet

Facility Emissions Summary

Air Quality Permit Program

Doc Type: Permit Application

1a) AQ Facility ID number: 13100058

1b) Agency Interest ID number: 1293

2) Facility name: Northern Natural Gas Company - Faribault

Emissions by Source Table

3a) Tempo SI ID number:		FUGI 3				**3a)** Tempo SI ID number:					
3b) Delta ID No.:						**3b)** Delta ID No.:					
3c)	**3d)**	**3e)** Potential			**3f)**	**3c)**	**3d)**	**3e)** Potential			**3f)**
Pollutant Name	CAS #	Pounds (lbs) per hour	tons per year un-restricted	tons per year limited	Actual tons per year	Pollutant Name	CAS #	Pounds (lbs) per hour	tons per year un-restricted	tons per year limited	Actual tons per year
NO_X	--	--	--	--							
VOC	--	3.65E-02	0.160	0.160							
CO	630-08-0	--	--	--							
PM	--	--	--	--							
PM_{10}	--	--	--	--							
$PM_{2.5}$	--	--	--	--							
SO_2	7446-09-05	--	--	--							
Lead	7439-92-1	--	--	--							
Acetaldehyde	75-07-0	--	--	--							
Acrolein	107-02-8	--	--	--							
Benzene	71-43-2	--	--	--							
1,3-Butadiene	106-99-0	--	--	--							
Carbon Tetrachloride	56-23-5	--	--	--							
Chlorobenzene	108-90-7	--	--	--							
Chloroform	67-66-3	--	--	--							
1,4-Dichlorobenzene	106-46-7	--	--	--							
1,1-Dichloroethane	75-34-3	--	--	--							
1,2-Dichloroethane	107-06-2	--	--	--							
1,2-Dichloropropane	78-87-5	--	--	--							
1,3-Dichloropropene	54-27-56	--	--	--							
Ethylbenzene	100-41-4	--	--	--							
Ethylene Dibromide	106-93-4	--	--	--							
Formaldehyde	50-00-0	--	--	--							
n-Hexane	110-54-3	--	--	--							
Methanol	67-56-1	--	--	--							
Methylene Chloride	74-87-3	--	--	--							
Naphthalene	91-20-3	--	--	--							
Propylene Oxide	75-56-9	--	--	--							
Styrene	100-42-5	--	--	--							
Toluene	108-88-3	--	--	--							
1,1,2,2-Tetrachloroethane	79-34-5	--	--	--							
1,1,2-Trichloroethane	79-00-5	--	--	--							

Emissions Summary Table

4a)	**4b)**	**4c)** Potential (tons/year)		**4d)** Actual
Pollutant Name	Potential (lbs/hr)	Unrestricted	Limited	tons/year
NO_X	65.9	135	135	
VOC	27.3	62.4	62.4	
CO	96.1	155	155	
PM	5.96	24.7	24.7	
PM_{10}	5.96	24.7	24.7	
$PM_{2.5}$	5.96	24.7	24.7	
SO_2	0.59	2.46	2.46	
Lead	5.27E-07	2.31E-06	2.31E-06	
Acetaldehyde	4.30E-02	7.24E-02	7.24E-02	
Acrolein	2.85E-02	1.70E-02	1.70E-02	
Benzene	2.02E-02	2.36E-02	2.36E-02	
1,3-Butadiene	6.72E-03	2.34E-03	2.34E-03	
Carbon Tetrachloride	1.75E-04	4.38E-05	4.38E-05	
Chlorobenzene	1.28E-04	3.19E-05	3.19E-05	
Chloroform	1.36E-04	3.39E-05	3.39E-05	
1,4-Dichlorobenzene	1.26E-06	5.54E-06	5.54E-06	
1,1-Dichloroethane	1.12E-04	2.79E-05	2.79E-05	
1,2-Dichloroethane	1.12E-04	2.79E-05	2.79E-05	
1,2-Dichloropropane	1.29E-04	3.22E-05	3.22E-05	
1,3-Dichloropropene	1.26E-04	3.14E-05	3.14E-05	
Ethylbenzene	1.25E-02	5.25E-02	5.25E-02	
Ethylene Dibromide	2.11E-04	5.27E-05	5.27E-05	
Formaldehyde	0.475	1.21	1.21	
n-Hexane	1.90E-03	8.31E-03	8.31E-03	
Methanol	3.03E-02	7.57E-03	7.57E-03	
Methylene Chloride	4.08E-04	1.02E-04	1.02E-04	
Naphthalene	1.46E-03	2.37E-03	2.37E-03	
Propylene Oxide	1.11E-02	4.75E-02	4.75E-02	
Styrene	1.18E-04	2.94E-05	2.94E-05	
Toluene	5.54E-02	0.214	0.214	
1,1,2,2-Tetrachloroethane	2.50E-04	6.26E-05	6.26E-05	
1,1,2-Trichloroethane	1.51E-04	3.78E-05	3.78E-05	

MINNESOTA POLLUTION CONTROL AGENCY
520 Lafayette Road North
St. Paul, MN 55155-4194

GI-07 Spreadsheet

Facility Emissions Summary

Air Quality Permit Program

Doc Type: Permit Application

1a) AQ Facility ID number: 13100058

1b) Agency Interest ID number: 1293

2) Facility name: Northern Natural Gas Company - Faribault

Emissions by Source Table

3a) Tempo SI ID number:		FUGI 3				**3a)** Tempo SI ID number:					
3b) Delta ID No.:						**3b)** Delta ID No.:					
3c)	**3d)**	**3e)** Potential			**3f)**	**3c)**	**3d)**	**3e)** Potential			**3f)**
Pollutant Name	CAS #	Pounds (lbs) per hour	tons per year un-restricted	tons per year limited	Actual tons per year	Pollutant Name	CAS #	Pounds (lbs) per hour	tons per year un-restricted	tons per year limited	Actual tons per year
Vinyl Chloride	75-01-4	--	--	--							
Xylenes	1330-20-7	--	--	--							
POM	--	--	--	--							
Arsenic	7440-38-2	--	--	--							
Beryllium	7440-41-7	--	--	--							
Cadmium	7440-43-9	--	--	--							
Chromium	7440-47-3	--	--	--							
Cobalt	7440-48-4	--	--	--							
Manganese	7439-96-5	--	--	--							
Mercury	7439-97-6	--	--	--							
Nickel	7440-02-0	--	--	--							
Selenium	7782-49-2	--	--	--							
Single HAP	--	--	--	--							
Total HAPs	--	--	--	--							
CO_2	124-38-9	--	--	--							
Methane	74-82-8	--	--	--							
N_2O	10024-97-2	--	--	--							
CO_2e	--	--	--	--							

Emissions Summary Table

4a)	**4b)**	**4c)** Potential (tons/year)		**4d)** Actual
Pollutant Name	Potential (lbs/hr)	Unrestricted	Limited	tons/year
Vinyl Chloride	7.10E-05	1.78E-05	1.78E-05	
Xylenes	2.65E-02	0.105	0.105	
POM	2.24E-03	3.96E-03	3.96E-03	
Arsenic	2.11E-07	9.23E-07	9.23E-07	
Beryllium	1.26E-08	5.54E-08	5.54E-08	
Cadmium	1.16E-06	5.08E-06	5.08E-06	
Chromium	1.48E-06	6.46E-06	6.46E-06	
Cobalt	8.85E-08	3.88E-07	3.88E-07	
Manganese	4.00E-07	1.75E-06	1.75E-06	
Mercury	2.74E-07	1.20E-06	1.20E-06	
Nickel	2.21E-06	9.69E-06	9.69E-06	
Selenium	2.53E-08	1.11E-07	1.11E-07	
Single HAP	0.477	1.22	1.22	
Total HAPs	0.717	1.77	1.77	
CO_2	46,191	197,538	197,538	
Methane	0.871	3.72	3.72	
N_2O	8.71E-02	0.372	0.372	
CO_2e	46,239	197,742	197,742	

EQUI 2, STRU 1

POTENTIAL EMISSIONS SUMMARY

SOLAR MARS 100-T15000S TURBINE

FARIBAULT COMPRESSOR STATION

NORTHERN NATURAL GAS COMPANY

AQ Facility ID Number: 13100058
Agency Interest ID No.: 1293

Capacities						
Temperature	hp		MMBtu/hr	Btu/scf	scfm exhaust	hr/yr
≥ 0° F	16,490		123	939.2	2,185	8,040
< 0° F	16,966		127	939.2	2,262	720

Criteria Pollutant & HAP PTE							
Pollutant	Emission Factors [1,2]				Potential Emission Rate [3,4]		Limited PTE
	< 0° F (g/hp·h)	≥ 0° F (g/hp·h)	(lb/MMBtu)		(lb/hr)	(tpy)	(tpy)
NO_x	0.570	0.340	--	--	21.3	57.4	57.4
VOC	0.230	0.120	--	--	8.60	20.6	20.6
CO	0.820	0.410	--	--	30.7	71.0	71.0
$PM/PM_{10}/PM_{2.5}$ [5]	--	--	1.50E-02	--	1.91	8.11	8.11
SO_2 [6]	--	--	1.50E-03	--	0.191	0.811	0.811
Acetaldehyde	--	--	4.0E-05	--	5.10E-03	2.16E-02	2.16E-02
Acrolein	--	--	6.4E-06	--	8.16E-04	3.46E-03	3.46E-03
Benzene	--	--	1.2E-05	--	1.53E-03	6.49E-03	6.49E-03
1,3-Butadiene	--	--	4.3E-07	--	5.48E-05	2.33E-04	2.33E-04
Ethylbenzene	--	--	3.2E-05	--	4.08E-03	1.73E-02	1.73E-02
Formaldehyde	--	--	7.1E-04	--	9.05E-02	0.384	0.384
Naphthalene	--	--	1.3E-06	--	1.66E-04	7.03E-04	7.03E-04
Propylene Oxide	--	--	2.9E-05	--	3.70E-03	1.57E-02	1.57E-02
Toluene	--	--	1.3E-04	--	1.66E-02	7.03E-02	7.03E-02
Xylenes	--	--	6.4E-05	--	8.16E-03	3.46E-02	3.46E-02
PAH	--	--	2.2E-06	--	2.80E-04	1.19E-03	1.19E-03
POM [7]	--	--	2.2E-06		2.80E-04	1.19E-03	1.19E-03
Single HAP	--	--	--	--	9.05E-02	0.384	0.384
Total HAPs	--	--	--	--	0.131	0.556	0.556

GHG PTE						
Pollutant	Emission Factor (kg/MMBtu)	Emission Factor (lb/MMBtu)	GWP	GHG Emissions (lb/hr)	GHG Emissions (tpy)	Limited PTE
CO_2 [8]	53.06	117	1	14,908	65,295	65,295
Methane [9]	1.00E-03	2.20E-03	25	0.281	1.23	1.23
N_2O [9]	1.00E-04	2.20E-04	298	2.81E-02	0.123	0.123
CO_2e [10]				14,923	65,363	65,363

Notes:

[8] Emission factor from 40 CFR 98, Subpart C, Table C-1.

[9] Emission factor from 40 CFR 98, Subpart C, Table C-2.

[10] CO_2e emissions are the sum-product of the GWP and GHG Emissions of the GHG pollutants.

Conversion Factors		
Mass	453.6	g/lb
	2,000	lb/ton
Power	1,341	hp/MW

Notes:

[1] Emission factors for NO_X, CO, and VOC obtained from manufacturer data.
- Emission factors in g/hp·h are for emissions when temperatures are less than 0° F, these emission factors are worst case and are used to calculate hourly emissions
- Annual average temperatures are above 0° F, therefore annual emissions are calcuated using both the emissions factors for when temperatures are above 0° F and below 0° F.
- NO_X emission factor in lb/MMBtu back-calculated from Potential Emission Rate (lb/hr) using unit capacity of 123 MMBtu/hr.

[2] Emission factors for total PAH, Naphthalene, and non-polycyclic organic HAPs from EPA's AP-42 Chapter 3.1 - Stationary Gas Turbines, Table 3.1-3 (April 2000).

[3] Potential emissions based on worst case emission factors, maximum horsepower or maximum MMBtu/hr rating

[4] The turbine is equipped with SoLoNOx to minimize emissions, and PACO logic emissions controls minimize emissions when ambient temperatures are less than 0° F.

[5] Emission factor for PM from manufacturer recommendations. $PM = PM_{10} = PM_{2.5}$ is assumed.

[6] SO_2 Potential Emission Rate is calculated from the most restrictive EF from EPA's AP-42 Chapter 3.1 - Stationary Gas Turbines, Table 3.1-2a (April 2000) and the calculated EFs from the limits specified in Minn. R. 7011.2300, subp. 2(B), 40 CFR 60.333(a), and 40 CFR 60.333(b).

[7] POM assumed to be equal to PAH

EQUI 4, STRU 3

POTENTIAL EMISSIONS SUMMARY

SOLAR MARS 100-16000S TURBINE

FARIBAULT COMPRESSOR STATION

NORTHERN NATURAL GAS COMPANY

AQ Facility ID Number: 13100058
Agency Interest ID No.: 1293

Capacities						
Temperature	hp		MMBtu/hr	Btu/scf	scfm exhaust	hr/yr
≥ 0° F	16,431		125	939.2	2,218	8,040
< 0° F	16,696		128	939.2	2,276	720

Criteria Pollutant & HAP PTE

Pollutant	Emission Factors [1,2]				Potential Emission Rate [3,4]		Limited PTE
	< 0° F (g/hp·h)	≥ 0° F (g/hp·h)	(lb/MMBtu)		(lb/hr)	(tpy)	(tpy)
NO_x	0.570	0.210	--	--	21.0	38.1	38.1
VOC	0.230	0.120	--	--	8.47	20.5	20.5
CO	0.820	0.210	--	--	30.2	41.4	41.4
$PM/PM_{10}/PM_{2.5}$ [5]	--	--	1.50E-02	--	1.92	8.23	8.23
SO_2 [6]	--	--	1.50E-03	--	0.192	0.823	0.823
Acetaldehyde	--	--	4.0E-05	--	5.13E-03	2.19E-02	2.19E-02
Acrolein	--	--	6.4E-06	--	8.21E-04	3.51E-03	3.51E-03
Benzene	--	--	1.2E-05	--	1.54E-03	6.58E-03	6.58E-03
1,3-Butadiene	--	--	4.3E-07	--	5.51E-05	2.36E-04	2.36E-04
Ethylbenzene	--	--	3.2E-05	--	4.10E-03	1.76E-02	1.76E-02
Formaldehyde	--	--	7.1E-04	--	9.10E-02	0.390	0.390
Naphthalene	--	--	1.3E-06	--	1.67E-04	7.13E-04	7.13E-04
Propylene Oxide	--	--	2.9E-05	--	3.72E-03	1.59E-02	1.59E-02
Toluene	--	--	1.3E-04	--	1.67E-02	7.13E-02	7.13E-02
Xylenes	--	--	6.4E-05	--	8.21E-03	3.51E-02	3.51E-02
PAH	--	--	2.2E-06	--	2.82E-04	1.21E-03	1.21E-03
POM [7]	--	--	2.2E-06		2.82E-04	1.21E-03	1.21E-03
Single HAP	--	--	--	--	9.10E-02	0.390	0.390
Total HAPs	--	--	--	--	0.132	0.564	0.564

GHG PTE

Pollutant	Emission Factor		GWP	GHG Emissions		Limited PTE
	(kg/MMBtu)	(lb/MMBtu)		(lb/hr)	(tpy)	
CO_2 [8]	53.06	117	1	15,000	65,701	65,701
Methane [9]	1.00E-03	2.20E-03	25	0.283	1.24	1.24
N_2O [9]	1.00E-04	2.20E-04	298	2.83E-02	0.124	0.124
CO_2e [10]				15,016	65,769	65,769

Notes:

[8] Emission factor from 40 CFR 98, Subpart C, Table C-1.

[9] Emission factor from 40 CFR 98, Subpart C, Table C-2.

[10] CO_2e emissions are the sum-product of the GWP and GHG Emissions of the GHG pollutants.

Conversion Factors		
Mass	453.60	g/lb
	2,000	lb/ton
Power	1,341	hp/MW

NO_X Emissions compared to Limits in 40 CFR 60.4320(a)		
Emission Rate	Limit	Units
0.621	1.2	lb/MWh, ≥ 0° F
1.69	4.70	lb/MWh, < 0° F

SO_2 Emissions compared to Limits in 40 CFR 60.4330(a)		
Emission Rate, ≥ 0° F	Limit [11]	Units
1.57E-02	0.90	lb/MWh
1.50E-03	0.060	lb/MMBtu

[11] Only required to meet one of the applicable limits.

Notes:

[1] Emission factors for NO_X, CO, and VOC obtained from manufacturer data.

- Emission factors in g/hp·h are for emissions when temperatures are less than 0° F, these emission factors are worst case and are used to calculate hourly emissions

- Annual average temperatures are above 0° F, therefore annual emissions are calcuated using both the emissions factors for when temperatures are above 0° F and below 0° F.

[2] Emission factors for total PAH, Naphthalene, and non-polycyclic organic HAPs from EPA's AP-42 Chapter 3.1 - Stationary Gas Turbines, Table 3.1-3 (April 2000).

[3] Potential emissions based on worst case emission factors, maximum horsepower or maximum MMBtu/hr rating

[4] The turbine is equipped with SoLoNOx to minimize emissions, and PACO logic emissions controls minimize emissions when ambient temperatures are less than 0° F.

[5] Emission factor for PM from manufacturer recommendations. PM = PM_{10} = $PM_{2.5}$ is assumed.

[6] SO_2 Potential Emission Rate is calculated from the most restrictive EF from EPA's AP-42 Chapter 3.1 - Stationary Gas Turbines, Table 3.1-2a (April 2000) and the calculated EFs from the limits specified in Minn. R. 7011.2300, subp. 2(B), 40 CFR 60.333(a), and 40 CFR 60.333(b).

[7] POM assumed to be equal to PAH

EQUI 6, STRU 5

POTENTIAL EMISSIONS SUMMARY

PROCESS HEATER

FARIBAULT COMPRESSOR STATION

NORTHERN NATURAL GAS COMPANY

AQ Facility ID Number: 13100058
Agency Interest ID No.: 1293

Capacities						
			MMBtu/hr	Btu/scf		hr/yr
			0.3583	1,020		8,760

Criteria Pollutant & HAP PTE

Pollutant [1]	Emission Factors				Potential Emission Rates [2]		Limited PTE
			(lb/MMBtu)	(lb/MMscf) [1]	(lb/hr)	(tpy)	(tpy)
NO_x	--	--	9.80E-02	100	3.51E-02	0.154	0.154
VOC	--	--	--	5.50	1.93E-03	8.46E-03	8.46E-03
CO	--	--	--	84.0	2.95E-02	0.129	0.129
$PM/PM_{10}/PM_{2.5}$	--	--	7.45E-03	7.60	2.67E-03	1.17E-02	1.17E-02
SO_2	--	--	--	0.600	2.11E-04	9.23E-04	9.23E-04
Lead	--	--	--	5.00E-04	1.76E-07	7.69E-07	7.69E-07
Benzene	--	--	--	2.1E-03	7.38E-07	3.23E-06	3.23E-06
1,4-Dichlorobenzene	--	--	--	1.2E-03	4.22E-07	1.85E-06	1.85E-06
Formaldehyde	--	--	--	7.5E-02	2.63E-05	1.15E-04	1.15E-04
n-Hexane	--	--	--	1.8	6.32E-04	2.77E-03	2.77E-03
Naphthalene	--	--	--	6.1E-04	2.14E-07	9.39E-07	9.39E-07
Toluene	--	--	--	3.4E-03	1.19E-06	5.23E-06	5.23E-06
Acenaphthene	--	--	--	1.8E-06	6.32E-10	2.77E-09	2.77E-09
Acenaphthylene	--	--	--	1.8E-06	6.32E-10	2.77E-09	2.77E-09
Anthracene	--	--	--	2.4E-06	8.43E-10	3.69E-09	3.69E-09
Benz(a)anthracene	--	--	--	1.8E-06	6.32E-10	2.77E-09	2.77E-09
Benzo(a)pyrene	--	--	--	1.2E-06	4.22E-10	1.85E-09	1.85E-09
Benzo(b)fluoranthene	--	--	--	1.8E-06	6.32E-10	2.77E-09	2.77E-09
Benzo(g,h,i)perylene	--	--	--	1.2E-06	4.22E-10	1.85E-09	1.85E-09
Benzo(k)fluoranthene	--	--	--	1.8E-06	6.32E-10	2.77E-09	2.77E-09
Chrysene	--	--	--	1.8E-06	6.32E-10	2.77E-09	2.77E-09
Dibenzo(a,h)anthracene	--	--	--	1.2E-06	4.22E-10	1.85E-09	1.85E-09
7,12-Dimethylbenz(a)anthracene	--	--	--	1.6E-05	5.62E-09	2.46E-08	2.46E-08
Fluoranthene	--	--	--	3.0E-06	1.05E-09	4.62E-09	4.62E-09
Fluorene	--	--	--	2.8E-06	9.84E-10	4.31E-09	4.31E-09
Indeno(1,2,3-cd)pyrene	--	--	--	1.8E-06	6.32E-10	2.77E-09	2.77E-09
3-Methylcholanthrene	--	--	--	1.8E-06	6.32E-10	2.77E-09	2.77E-09
2-Methylnaphthalene	--	--	--	2.4E-05	8.43E-09	3.69E-08	3.69E-08
Phenanathrene	--	--	--	1.7E-05	5.97E-09	2.62E-08	2.62E-08
Pyrene	--	--	--	5.0E-06	1.76E-09	7.69E-09	7.69E-09
PAH	--	--	--	6.98E-04	2.45E-07	1.07E-06	1.07E-06
POM [3]	--	--	--	6.98E-04	2.45E-07	1.07E-06	1.07E-06
Arsenic	--	--	--	2.00E-04	7.03E-08	3.08E-07	3.08E-07
Beryllium	--	--	--	1.20E-05	4.22E-09	1.85E-08	1.85E-08
Cadmium	--	--	--	1.10E-03	3.86E-07	1.69E-06	1.69E-06
Chromium	--	--	--	1.40E-03	4.92E-07	2.15E-06	2.15E-06
Cobalt	--	--	--	8.40E-05	2.95E-08	1.29E-07	1.29E-07
Manganese	--	--	--	3.80E-04	1.33E-07	5.85E-07	5.85E-07
Mercury	--	--	--	2.60E-04	9.13E-08	4.00E-07	4.00E-07
Nickel	--	--	--	2.10E-03	7.38E-07	3.23E-06	3.23E-06
Selenium	--	--	--	2.40E-05	8.43E-09	3.69E-08	3.69E-08
Single HAP	--	--	--	--	6.32E-04	2.77E-03	2.77E-03
Total HAPs	--	--	--	--	6.63E-04	2.91E-03	2.91E-03

Notes:

[1] Emission factors obtained from EPA's AP-42, Chapter 1.4 - Natural Gas Combustion, Table 1.4-1 through 1.4-4 (July 1998).

[2] Potential emissions based on maximum firing rate of 0.3583 MMBtu/hr,

- 1,020 Btu/scf fuel heating value, and 8,760 hours of operation per year.

[3] POM (polycyclic organic matter) is the summation of the emission factors marked by footnote "c" plus Naphthalene in EPA's AP-42, Chapter 1.4 - Natural Gas Combustion, Table 1.4-3 (July 1998)

GHG PTE

Pollutant	Emission Factor		GWP	GHG Emissions		Limited PTE
	(kg/MMBtu)	(lb/MMBtu)		(lb/hr)	(tpy)	
CO_2 [4]	53.06	117	1	41.9	184	184
Methane [5]	1.00E-03	2.20E-03	25	7.90E-04	3.46E-03	3.46E-03
N_2O [5]	1.00E-04	2.20E-04	298	7.90E-05	3.46E-04	3.46E-04
CO_2e [6]				42.0	184	184

Notes:

[4] Emission factor based on 40 CFR 98, Subpart C, Table C-1.

[5] Emission factor based on 40 CFR 98, Subpart C, Table C-2.

[6] CO_2e emissions are the sum-product of the GWP and GHG Emissions of the GHG pollutants.

Conversion Factors		
Mass	453.6	g/lb
	2,000	lb/ton

EQUI 7, STRU 6

POTENTIAL EMISSIONS SUMMARY

PROCESS HEATER

FARIBAULT COMPRESSOR STATION

NORTHERN NATURAL GAS COMPANY

AQ Facility ID Number: 13100058
Agency Interest ID No.: 1293

Capacities						
			MMBtu/hr	Btu/scf		hr/yr
			0.3583	1,020		8,760

Criteria Pollutant & HAP PTE

Pollutant [1]	Emission Factors				Potential Emission Rates [2]		Limited PTE
			(lb/MMBtu)	(lb/MMscf) [1]	(lb/hr)	(tpy)	(tpy)
NO_x	--	--	9.80E-02	100	3.51E-02	0.154	0.154
VOC	--	--	--	5.50	1.93E-03	8.46E-03	8.46E-03
CO	--	--	--	84.0	2.95E-02	0.129	0.129
$PM/PM_{10}/PM_{2.5}$	--	--	7.45E-03	7.60	2.67E-03	1.17E-02	1.17E-02
SO_2	--	--	--	0.600	2.11E-04	9.23E-04	9.23E-04
Lead	--	--	--	5.00E-04	1.76E-07	7.69E-07	7.69E-07
Benzene	--	--	--	2.1E-03	7.38E-07	3.23E-06	3.23E-06
1,4-Dichlorobenzene	--	--	--	1.2E-03	4.22E-07	1.85E-06	1.85E-06
Formaldehyde	--	--	--	7.5E-02	2.63E-05	1.15E-04	1.15E-04
n-Hexane	--	--	--	1.8	6.32E-04	2.77E-03	2.77E-03
Naphthalene	--	--	--	6.1E-04	2.14E-07	9.39E-07	9.39E-07
Toluene	--	--	--	3.4E-03	1.19E-06	5.23E-06	5.23E-06
Acenaphthene	--	--	--	1.8E-06	6.32E-10	2.77E-09	2.77E-09
Acenaphthylene	--	--	--	1.8E-06	6.32E-10	2.77E-09	2.77E-09
Anthracene	--	--	--	2.4E-06	8.43E-10	3.69E-09	3.69E-09
Benz(a)anthracene	--	--	--	1.8E-06	6.32E-10	2.77E-09	2.77E-09
Benzo(a)pyrene	--	--	--	1.2E-06	4.22E-10	1.85E-09	1.85E-09
Benzo(b)fluoranthene	--	--	--	1.8E-06	6.32E-10	2.77E-09	2.77E-09
Benzo(g,h,i)perylene	--	--	--	1.2E-06	4.22E-10	1.85E-09	1.85E-09
Benzo(k)fluoranthene	--	--	--	1.8E-06	6.32E-10	2.77E-09	2.77E-09
Chrysene	--	--	--	1.8E-06	6.32E-10	2.77E-09	2.77E-09
Dibenzo(a,h)anthracene	--	--	--	1.2E-06	4.22E-10	1.85E-09	1.85E-09
7,12-Dimethylbenz(a)anthracene	--	--	--	1.6E-05	5.62E-09	2.46E-08	2.46E-08
Fluoranthene	--	--	--	3.0E-06	1.05E-09	4.62E-09	4.62E-09
Fluorene	--	--	--	2.8E-06	9.84E-10	4.31E-09	4.31E-09
Indeno(1,2,3-cd)pyrene	--	--	--	1.8E-06	6.32E-10	2.77E-09	2.77E-09
3-Methylcholanthrene	--	--	--	1.8E-06	6.32E-10	2.77E-09	2.77E-09
2-Methylnaphthalene	--	--	--	2.4E-05	8.43E-09	3.69E-08	3.69E-08
Phenanathrene	--	--	--	1.7E-05	5.97E-09	2.62E-08	2.62E-08
Pyrene	--	--	--	5.0E-06	1.76E-09	7.69E-09	7.69E-09
PAH	--	--	--	6.98E-04	2.45E-07	1.07E-06	1.07E-06
POM [3]	--	--	--	6.98E-04	2.45E-07	1.07E-06	1.07E-06
Arsenic	--	--	--	2.00E-04	7.03E-08	3.08E-07	3.08E-07
Beryllium	--	--	--	1.20E-05	4.22E-09	1.85E-08	1.85E-08
Cadmium	--	--	--	1.10E-03	3.86E-07	1.69E-06	1.69E-06
Chromium	--	--	--	1.40E-03	4.92E-07	2.15E-06	2.15E-06
Cobalt	--	--	--	8.40E-05	2.95E-08	1.29E-07	1.29E-07
Manganese	--	--	--	3.80E-04	1.33E-07	5.85E-07	5.85E-07
Mercury	--	--	--	2.60E-04	9.13E-08	4.00E-07	4.00E-07
Nickel	--	--	--	2.10E-03	7.38E-07	3.23E-06	3.23E-06
Selenium	--	--	--	2.40E-05	8.43E-09	3.69E-08	3.69E-08
Single HAP	--	--	--	--	6.32E-04	2.77E-03	2.77E-03
Total HAPs	--	--	--	--	6.63E-04	2.91E-03	2.91E-03

Notes:

[1] Emission factors obtained from EPA's AP-42, Chapter 1.4 - Natural Gas Combustion, Table 1.4-1 through 1.4-4 (July 1998).

[2] Potential emissions based on maximum firing rate of 0.3583 MMBtu/hr,

- 1,020 Btu/scf fuel heating value, and 8,760 hours of operation per year.

[3] POM (polycyclic organic matter) is the summation of the emission factors marked by footnote "c" plus Naphthalene in EPA's AP-42, Chapter 1.4 - Natural Gas Combustion, Table 1.4-3 (July 1998)

GHG PTE

Pollutant	Emission Factor		GWP	GHG Emissions		Limited PTE
	(kg/MMBtu)	(lb/MMBtu)		(lb/hr)	(tpy)	
CO_2 [4]	53.06	117	1	41.9	184	184
Methane [5]	1.00E-03	2.20E-03	25	7.90E-04	3.46E-03	3.46E-03
N_2O [5]	1.00E-04	2.20E-04	298	7.90E-05	3.46E-04	3.46E-04
CO_2e [6]				42.0	184	184

Notes:

[4] Emission factor based on 40 CFR 98, Subpart C, Table C-1.

[5] Emission factor based on 40 CFR 98, Subpart C, Table C-2.

[6] CO_2e emissions are the sum-product of the GWP and GHG Emissions of the GHG pollutants.

Conversion Factors		
Mass	453.6	g/lb
	2,000	lb/ton

EQUI 9, STRU 9

POTENTIAL EMISSIONS SUMMARY

SOLAR MARS 100-16000S TURBINE

FARIBAULT COMPRESSOR STATION

NORTHERN NATURAL GAS COMPANY

AQ Facility ID Number: 13100058
Agency Interest ID No.: 1293

Capacities						
Temperature	hp		MMBtu/hr	Btu/scf	scfm exhaust	hr/yr
≥ 0° F	16,427		125	939.2	2,218	8,040
< 0° F	16,696		128	939.2	2,276	720

Criteria Pollutant & HAP PTE

Pollutant	Emission Factors [1,2]				Potential Emission Rate [3,4]		Limited PTE
	< 0° F (g/hp·h)	≥ 0° F (g/hp·h)	(lb/MMBtu)		(lb/hr)	(tpy)	(tpy)
NO_x	0.570	0.210	--	--	21.0	38.1	38.1
VOC	0.230	0.120	--	--	8.47	20.5	20.5
CO	0.820	0.210	--	--	30.2	41.4	41.4
$PM/PM_{10}/PM_{2.5}$ [5]	--	--	1.50E-02	--	1.92	8.23	8.23
SO_2 [6]	--	--	1.50E-03	--	0.192	0.823	0.823
Acetaldehyde	--	--	4.0E-05	--	5.13E-03	2.19E-02	2.19E-02
Acrolein	--	--	6.4E-06	--	8.21E-04	3.51E-03	3.51E-03
Benzene	--	--	1.2E-05	--	1.54E-03	6.58E-03	6.58E-03
1,3-Butadiene	--	--	4.3E-07	--	5.51E-05	2.36E-04	2.36E-04
Ethylbenzene	--	--	3.2E-05	--	4.10E-03	1.76E-02	1.76E-02
Formaldehyde	--	--	7.1E-04	--	9.10E-02	0.390	0.390
Naphthalene	--	--	1.3E-06	--	1.67E-04	7.13E-04	7.13E-04
Propylene Oxide	--	--	2.9E-05	--	3.72E-03	1.59E-02	1.59E-02
Toluene	--	--	1.3E-04	--	1.67E-02	7.13E-02	7.13E-02
Xylenes	--	--	6.4E-05	--	8.21E-03	3.51E-02	3.51E-02
PAH	--	--	2.2E-06	--	2.82E-04	1.21E-03	1.21E-03
POM [7]	--	--	2.2E-06	--	2.82E-04	1.21E-03	1.21E-03
Single HAP	--	--	--	--	9.10E-02	0.390	0.390
Total HAPs	--	--	--	--	0.132	0.564	0.564

GHG PTE

Pollutant	Emission Factor (kg/MMBtu)	Emission Factor (lb/MMBtu)	GWP	GHG Emissions (lb/hr)	GHG Emissions (tpy)	Limited PTE
CO_2 [8]	53.06	117	1	15,000	65,701	65,701
Methane [9]	1.00E-03	2.20E-03	25	0.283	1.24	1.24
N_2O [9]	1.00E-04	2.20E-04	298	2.83E-02	0.124	0.124
CO_2e [10]				15,016	65,769	65,769

Notes:

[8] Emission factor from 40 CFR 98, Subpart C, Table C-1.

[9] Emission factor from 40 CFR 98, Subpart C, Table C-2.

[10] CO_2e emissions are the sum-product of the GWP and GHG Emissions of the GHG pollutants.

Conversion Factors		
Mass	453.60	g/lb
	2,000	lb/ton
Power	1,341	hp/MW

NO_X Emissions compared to Limits in 40 CFR 60.4320(a)		
Emission Rate	Limit	Units
0.621	1.2	lb/MWh, ≥ 0° F
1.69	4.70	lb/MWh, < 0° F

SO_2 Emissions compared to Limits in 40 CFR 60.4330(a)		
Emission Rate, ≥ 0° F	Limit [11]	Units
1.57E-02	0.90	lb/MWh
1.50E-03	0.060	lb/MMBtu

[11] Only required to meet one of the applicable limits.

Notes:

[1] Emission factors for NO_X, CO, and VOC obtained from manufacturer data.

- Emission factors in g/hp·h are for emissions when temperatures are less than 0° F, these emission factors are worst case and are used to calculate hourly emissions

- Annual average temperatures are above 0° F, therefore annual emissions are calcuated using both the emissions factors for when temperatures are above 0° F and below 0° F.

[2] Emission factors for total PAH, Naphthalene, and non-polycyclic organic HAPs from EPA's AP-42 Chapter 3.1 - Stationary Gas Turbines, Table 3.1-3 (April 2000).

[3] Potential emissions based on worst case emission factors, maximum horsepower or maximum MMBtu/hr rating

[4] The turbine is equipped with SoLoNOx to minimize emissions, and PACO logic emissions controls minimize emissions when ambient temperatures are less than 0° F.

[5] Emission factor for PM from manufacturer recommendations. PM = PM_{10} = $PM_{2.5}$ is assumed.

[6] SO_2 Potential Emission Rate is calculated from the most restrictive EF from EPA's AP-42 Chapter 3.1 - Stationary Gas Turbines, Table 3.1-2a (April 2000) and the calculated EFs from the limits specified in Minn. R. 7011.2300, subp. 2(B), 40 CFR 60.333(a), and 40 CFR 60.333(b).

[7] POM assumed to be equal to PAH

EQUI 10, STRU 10

POTENTIAL EMISSIONS SUMMARY

PROCESS HEATER

FARIBAULT COMPRESSOR STATION

NORTHERN NATURAL GAS COMPANY

Capacities						
			MMBtu/hr	Btu/scf		hr/yr
			0.3583	1,020		8,760

AQ Facility ID Number: 13100058
Agency Interest ID No.: 1293

Criteria Pollutant & HAP PTE

Pollutant [1]	Emission Factors				Potential Emission Rates [2]		Limited PTE
			(lb/MMBtu)	(lb/MMscf) [1]	(lb/hr)	(tpy)	(tpy)
NO_x	--	--	9.80E-02	100	3.51E-02	1.54E-01	1.54E-01
VOC	--	--	--	5.50	1.93E-03	8.46E-03	8.46E-03
CO	--	--	--	84.0	2.95E-02	1.29E-01	1.29E-01
$PM/PM_{10}/PM_{2.5}$	--	--	7.45E-03	7.60	2.67E-03	1.17E-02	1.17E-02
SO_2	--	--	--	0.600	2.11E-04	9.23E-04	9.23E-04
Lead	--	--	--	5.00E-04	1.76E-07	7.69E-07	7.69E-07
Benzene	--	--	--	2.1E-03	7.38E-07	3.23E-06	3.23E-06
1,4-Dichlorobenzene	--	--	--	1.2E-03	4.22E-07	1.85E-06	1.85E-06
Formaldehyde	--	--	--	7.5E-02	2.63E-05	1.15E-04	1.15E-04
n-Hexane	--	--	--	1.80	6.32E-04	2.77E-03	2.77E-03
Naphthalene	--	--	--	6.1E-04	2.14E-07	9.39E-07	9.39E-07
Toluene	--	--	--	3.40E-03	1.19E-06	5.23E-06	5.23E-06
Acenaphthene	--	--	--	1.8E-06	6.32E-10	2.77E-09	2.77E-09
Acenaphthylene	--	--	--	1.8E-06	6.32E-10	2.77E-09	2.77E-09
Anthracene	--	--	--	2.4E-06	8.43E-10	3.69E-09	3.69E-09
Benz(a)anthracene	--	--	--	1.8E-06	6.32E-10	2.77E-09	2.77E-09
Benzo(a)pyrene	--	--	--	1.2E-06	4.22E-10	1.85E-09	1.85E-09
Benzo(b)fluoranthene	--	--	--	1.8E-06	6.32E-10	2.77E-09	2.77E-09
Benzo(g,h,i)perylene	--	--	--	1.2E-06	4.22E-10	1.85E-09	1.85E-09
Benzo(k)fluoranthene	--	--	--	1.8E-06	6.32E-10	2.77E-09	2.77E-09
Chrysene	--	--	--	1.8E-06	6.32E-10	2.77E-09	2.77E-09
Dibenzo(a,h)anthracene	--	--	--	1.2E-06	4.22E-10	1.85E-09	1.85E-09
7,12-Dimethylbenz(a)anthracene	--	--	--	1.6E-05	5.62E-09	2.46E-08	2.46E-08
Fluoranthene	--	--	--	3.0E-06	1.05E-09	4.62E-09	4.62E-09
Fluorene	--	--	--	2.8E-06	9.84E-10	4.31E-09	4.31E-09
Indeno(1,2,3-cd)pyrene	--	--	--	1.8E-06	6.32E-10	2.77E-09	2.77E-09
3-Methylcholanthrene	--	--	--	1.8E-06	6.32E-10	2.77E-09	2.77E-09
2-Methylnaphthalene	--	--	--	2.4E-05	8.43E-09	3.69E-08	3.69E-08
Phenanathrene	--	--	--	1.7E-05	5.97E-09	2.62E-08	2.62E-08
Pyrene	--	--	--	5.0E-06	1.76E-09	7.69E-09	7.69E-09
PAH	--	--	--	6.98E-04	2.45E-07	1.07E-06	1.07E-06
POM [3]	--	--	--	6.98E-04	2.45E-07	1.07E-06	1.07E-06
Arsenic	--	--	--	2.00E-04	7.03E-08	3.08E-07	3.08E-07
Beryllium	--	--	--	1.20E-05	4.22E-09	1.85E-08	1.85E-08
Cadmium	--	--	--	1.10E-03	3.86E-07	1.69E-06	1.69E-06
Chromium	--	--	--	1.40E-03	4.92E-07	2.15E-06	2.15E-06
Cobalt	--	--	--	8.40E-05	2.95E-08	1.29E-07	1.29E-07
Manganese	--	--	--	3.80E-04	1.33E-07	5.85E-07	5.85E-07
Mercury	--	--	--	2.60E-04	9.13E-08	4.00E-07	4.00E-07
Nickel	--	--	--	2.10E-03	7.38E-07	3.23E-06	3.23E-06
Selenium	--	--	--	2.40E-05	8.43E-09	3.69E-08	3.69E-08
Single HAP	--	--	--	--	6.32E-04	2.77E-03	2.77E-03
Total HAPs	--	--	--	--	6.63E-04	2.91E-03	2.91E-03

Notes:

[1] Emission factors obtained from EPA's AP-42, Chapter 1.4 - Natural Gas Combustion, Table 1.4-1 through 1.4-4 (July 1998).

[2] Potential emissions based on maximum firing rate of 0.3583 MMBtu/hr,
- 1,020 Btu/scf fuel heating value, and 8,760 hours of operation per year.

[3] POM (polycyclic organic matter) is the summation of the emission factors marked by footnote "c" plus Naphthalene in EPA's AP-42, Chapter 1.4 - Natural Gas Combustion, Table 1.4-3 (July 1998)

GHG PTE

Pollutant	Emission Factor		GWP	GHG Emissions		Limited PTE
	(kg/MMBtu)	(lb/MMBtu)		(lb/hr)	(tpy)	
CO_2 [4]	53.06	117	1	41.9	184	184
Methane [5]	1.00E-03	2.20E-03	25	7.90E-04	3.46E-03	3.46E-03
N_2O [5]	1.00E-04	2.20E-04	298	7.90E-05	3.46E-04	3.46E-04
CO_2e [6]				42.0	184	184

Notes:

[4] Emission factor based on 40 CFR 98, Subpart C, Table C-1.

[5] Emission factor based on 40 CFR 98, Subpart C, Table C-2.

[6] CO_2e emissions are the sum-product of the GWP and GHG Emissions of the GHG pollutants.

Conversion Factors		
Mass	453.6	g/lb
	2,000	lb/ton

EQUI 11, STRU 18

POTENTIAL EMISSIONS SUMMARY

CUMMINS GTA50E EMERGENCY GENERATOR

FARIBAULT COMPRESSOR STATION

NORTHERN NATURAL GAS COMPANY

AQ Facility ID Number: 13100058
Agency Interest ID No.: 1293

Capacities						
	hp	Btu/hp·h	MMBtu/hr	Btu/scf	exhaust scfm	hr/yr
	1,135	8,716	9.89	905	182	500

Criteria Pollutant & HAP PTE							
Pollutant	Emission Factors				Potential Emission Rate[3]		Limited PTE
	(g/hp·h)[1]		(lb/MMBtu)[2]		(lb/hr)	(tpy)	(tpy)
NO_x	1.0	--	--	--	2.50	0.626	0.626
VOC	0.7	--	--	--	1.75	0.438	0.438
CO	2.0	--	--	--	5.00	1.25	1.25
$PM/PM_{10}/PM_{2.5}$[4]	--	--	1.94E-02	--	0.192	4.80E-02	4.80E-02
SO_2[5]	--	--	1.50E-03	--	1.48E-02	3.71E-03	3.71E-03
Acetaldehyde	--	--	2.79E-03	--	2.76E-02	6.90E-03	6.90E-03
Acrolein	--	--	2.63E-03	--	2.60E-02	6.50E-03	6.50E-03
Benzene	--	--	1.58E-03	--	1.56E-02	3.91E-03	3.91E-03
1,3-Butadiene	--	--	6.63E-04	--	6.56E-03	1.64E-03	1.64E-03
Carbon Tetrachloride	--	--	1.77E-05	--	1.75E-04	4.38E-05	4.38E-05
Chlorobenzene	--	--	1.29E-05	--	1.28E-04	3.19E-05	3.19E-05
Chloroform	--	--	1.37E-05	--	1.36E-04	3.39E-05	3.39E-05
1,1-Dichloroethane	--	--	1.13E-05	--	1.12E-04	2.79E-05	2.79E-05
1,2-Dichloroethane	--	--	1.13E-05	--	1.12E-04	2.79E-05	2.79E-05
1,2-Dichloropropane	--	--	1.30E-05	--	1.29E-04	3.22E-05	3.22E-05
1,3-Dichloropropene	--	--	1.27E-05	--	1.26E-04	3.14E-05	3.14E-05
Ethylbenzene	--	--	2.48E-05	--	2.45E-04	6.13E-05	6.13E-05
Ethylene Dibromide	--	--	2.13E-05	--	2.11E-04	5.27E-05	5.27E-05
Formaldehyde	--	--	2.05E-02	--	0.203	5.07E-02	5.07E-02
Methanol	--	--	3.06E-03	--	3.03E-02	7.57E-03	7.57E-03
Methylene Chloride	--	--	4.12E-05	--	4.08E-04	1.02E-04	1.02E-04
Naphthalene	--	--	9.71E-05	--	9.61E-04	2.40E-04	2.40E-04
Styrene	--	--	1.19E-05	--	1.18E-04	2.94E-05	2.94E-05
Toluene	--	--	5.58E-04	--	5.52E-03	1.38E-03	1.38E-03
1,1,2,2-Tetrachloroethane	--	--	2.53E-05	--	2.50E-04	6.26E-05	6.26E-05
1,1,2-Trichloroethane	--	--	1.53E-05	--	1.51E-04	3.78E-05	3.78E-05
Vinyl Chloride	--	--	7.18E-06	--	7.10E-05	1.78E-05	1.78E-05
Xylenes	--	--	1.95E-04	--	1.93E-03	4.82E-04	4.82E-04
PAH	--	--	1.41E-04	--	1.39E-03	3.49E-04	3.49E-04
POM[6]	--	--	1.41E-04	--	1.39E-03	3.49E-04	3.49E-04
Single HAP	--	--	--	--	0.203	5.07E-02	5.07E-02
Total HAPs	--	--	--	--	0.321	8.03E-02	8.03E-02

GHG PTE						
Pollutant	Emission Factor		GWP	GHG Emissions		Limited PTE
	(kg/MMBtu)	(lb/MMBtu)		(lb/hr)	(tpy)	
CO_2[7]	53.06	117	1	1,157	289	289
Methane[8]	1.00E-03	2.20E-03	25	2.18E-02	5.45E-03	5.45E-03
N_2O[8]	1.00E-04	2.20E-04	298	2.18E-03	5.45E-04	5.45E-04
CO_2e[9]				1,158	290	290

Notes:

[7] Emission factor from 40 CFR 98, Subpart C, Table C-1.

[8] Emission factor from 40 CFR 98, Subpart C, Table C-2.

[9] CO_2e emissions are the sum-product of the GWP and GHG Emissions of the GHG pollutants.

Conversion Factors		
Mass	453.6	g/lb
	2,000	lb/ton

Notes:

[1] Emission factors for NO_x, CO and VOC from manufacturer certification meeting the requirements of 40 CFR pt. 60, subp. JJJJ (Table 1) for a Non-Emergency SI Natural Gas engine, HP≥ 500, manufactured on or after 7/1/2010. These emission standards are more strict than the required emission standards for an Emergency engine, HP >= 130, manufactured on or after 1/1/2009.

[2] Emissions factors for PM, HAPs, and formaldehyde from EPA's AP-42, Chapter 3.2 - Natural Gas Reciprocating Engines, Table 3.2-3 (July 1998).

[3] Potential emissions based on emission factors, maximum horsepower, and 500 hours per year for emergency engines.

[4] Emission factor shown is for PM. It is conservatively assumed that $PM = PM_{10} = PM_{2.5}$.

[5] SO_2 Emission Factor from fuel SO_2 emissions limit of 0.0015 lb/MMBtu acutal heat input (Minn. R. 7011.2300, subp. 2(B)).

[6] POM assumed to be equal to PAH

FUGI 1, FUGI 2, FUGI 3

POTENTIAL EMISSIONS SUMMARY

PROCESS PIPING FUGITIVES

FARIBAULT COMPRESSOR STATION

NORTHERN NATURAL GAS COMPANY

AQ Facility ID Number: 13100058
Agency Interest ID No.: 1293

Component Type	Emission Unit ID	Type of Service [1]	Number of Components [1]	Emission Factors		Percent VOC [3]	Potential VOC Emission Rates [4]	
				(kg/hr·component) [2]	(lb/hr·component)		(lb/hr)	(tpy)
Flanges[5]	FUGI 1	Gas/Vapor	**115**	2.50E-04	1.13E-04	5.00%	6.52E-04	2.86E-03
Compressor Seals	FUGI 2	Gas/Vapor	**1**	0.636	0.288	5.00%	1.44E-02	6.32E-02
Valves	FUGI 3	Gas/Vapor	**60**	2.68E-02	1.22E-02	5.00%	3.65E-02	0.160
Totals:	--	--	**176**	--	--	--	**5.15E-02**	**0.226**

Conversion Factors		
Time	8,760	hr/yr
Mass	2.2046	kg/lb
	2,000	lb/ton

Notes:

[1] Number of each component and type of service from original permit application for site.

[2] Emission factors from EPA's *Protocol for Equipment Leak Emission Estimates* , EPA-453/R-95-017, Table 2-2 (November 1995).

[3] Percent VOC from representative gas analysis (refer to Table 7) is 1.04%. To estimate emissions conservatively, the VOC content is assumed to be 5%.

[4] Emission rates based on 8,760 of operation hours per year.

[5] Same as *Connectors* in Table 2-2[2].

Attachment 2 – Subject item inventory and facility requirements

SI List

AI ID (Name): 1293 (Northern Natural Gas Co - Faribault)
Activity: IND20230001

SI Category	SI Type	Subject Item ID	Delta Designation	Description	
Activity	Insignificant Air Emissions Activity	ACTV 1	Null	All IAs	
Agency Interest	Conventional Site	AISI 1293	Null	Null	
Equipment	Process Heater	EQUI 6	Null	Heater 1	
		EQUI 7	Null	Heater 2	
		EQUI 10	Null	Heater 3	
	Reciprocating IC Engine	EQUI 11	Null	Emergency Generator	
	Turbine	EQUI 2	EU001	Solar Mars Turbine 100-T15000S	
		EQUI 4	Null	Solar Mars Turbine 100-16000S	
		EQUI 9	Null	Solar Mars Turbine 100-16000S	
Fugitive	Equipment Leaks	FUGI 1	FS003	115 Flanges	
		FUGI 2	FS002	1 Compressor Seal	
		FUGI 3	FS001	60 Valves	
Structure	Building	STRU 11	Null	Turbine #3 building	
		STRU 12	Null	Turbine #3 control room	
		STRU 13	Null	Turbine #1 & #2 control room	
		STRU 14	Null	Turbine #2 building	
		STRU 15	Null	Shop and storage	
		STRU 16	Null	Turbine #1 building	
		STRU 17	Null	Electrical	
	Stack/Vent	STRU 1	SV001	Solar Mars Turbine 100 – T15000S Stack	
		STRU 3	Null	Solar Mars Turbine 100 – 16000S Stack	
		STRU 5	Null	Process Heater	
		STRU 6	Null	Process Heater	
		STRU 9	Null	Solar Mars Turbine 100-16000S Stack	
		STRU 10	Null	Process Heater	
		STRU 18	Null	Cummins GTA50E Emergency..	
Total Facility	Air Quality Total Facility	TFAC 1	13100058	Northern Natural Gas Co - Faribault	

Insignificant Activities

AI ID (Name): 1293 (Northern Natural Gas Co - Faribault)
Activity: IND20230001

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)	
			Minn. R. 7007.1300, subp. 3(G)	

Emission Units 1

AI ID (Name): 1293 (Northern Natural Gas Co - Faribault)
Activity: IND20230001

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 2	EU001	Solar Mars Turbine 100-T15000S	Solar	100-T15000S	16,490	brake horsepower/each	Power	Null	N	Null	6/1/1996	7/1/1996	Null	
	EQUI 4	Null	Solar Mars Turbine 100-16000S	Solar	100-16000S	16,431	brake horsepower/each	Power	Null	N	Null	4/22/2017	11/1/2017	Null	
	EQUI 9	Null	Solar Mars Turbine 100-16000S	Solar	100-16000S	16,427	brake horsepower/each	Power	Null	N	Null	4/26/2019	9/16/2019	Null	

Emission Units 2

AI ID (Name): 1293 (Northern Natural Gas Co - Faribault)
Activity: IND20230001

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 11	Null	Emergency Generator	Cummins	GTA50E	1,135	brake horsepower/each	Power	Emergency/blacks..	SI-4SRB	50	liters per cylinder	3/19/2020	3/25/2020	Null	

Emission Units 3

AI ID (Name): 1293 (Northern Natural Gas Co - Faribault)
Activity: IND20230001

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 6	Null	Heater 1	OGI Process Equipment, Inc.	T170126H	0.36	million British thermal units/hours	Heat	6/1/1996	7/1/1996	Null	
	EQUI 7	Null	Heater 2	OGI Process Equipment, Inc.	T170126H	0.36	million British thermal units/hours	Heat	4/22/2017	11/1/2017	Null	
	EQUI 10	Null	Heater 3	OGI Process Equipment, Inc.	T170126H	0.36	million British thermal units/hours	Heat	6/11/2019	10/1/2019	Null	

PTE by SI

AI ID (Name): 1293 (Northern Natural Gas Co - Faribault)
Activity: IND20230001

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 6	Null	Heater 1	1,4-Dichlorobenzene (para-)	4.22e-07	1.85e-06	1.85e-06	
					Arsenic compounds	7.03e-08	3.08e-07	3.08e-07	
					Benzene	7.38e-07	3.23e-06	3.23e-06	
					Beryllium Compounds	4.22e-09	1.85e-08	1.85e-08	
					Cadmium compounds	3.86e-07	1.69e-06	1.69e-06	
					Carbon Dioxide	41.9	184	184	
					Carbon Dioxide Equivalent	42	183.7	183.7	
					Carbon Monoxide	0.0295	0.129	0.129	
					Chromium compounds	4.92e-07	2.15e-06	2.15e-06	
					Cobalt compounds	2.95e-08	1.29e-07	1.29e-07	
					Formaldehyde	2.63e-05	0.000115	0.000115	
					HAPs - Total	0.000663	0.00291	0.00291	
					Hexane	0.000632	0.00277	0.00277	
					Lead Compounds	1.76e-07	7.69e-07	7.69e-07	
					Manganese compounds	1.33e-07	5.85e-07	5.85e-07	
					Mercury Compounds	9.13e-08	4e-07	4e-07	
					Methane	0.00079	0.00346	0.00346	
					Naphthalene	2.14e-07	9.39e-07	9.39e-07	
					Nickel compounds	7.38e-07	3.23e-06	3.23e-06	
					Nitrogen Oxides	0.0351	0.154	0.154	
					Nitrous Oxide	7.9e-05	0.000346	0.000346	
					Particulate Matter	0.00267	0.0117	0.0117	
					PM < 2.5 micron	0.00267	0.0117	0.0117	
					PM < 10 micron	0.00267	0.0117	0.0117	
					Polycyclic organic matter	2.45e-07	1.07e-06	1.07e-06	
					Selenium compounds	8.43e-09	3.69e-08	3.69e-08	
					Sulfur Dioxide	0.000211	0.000923	0.000923	
					Toluene	1.19e-06	5.23e-06	5.23e-06	
					Volatile Organic Compounds	0.00193	0.00846	0.00846	
		EQUI 7	Null	Heater 2	1,4-Dichlorobenzene (para-)	4.22e-07	1.85e-06	1.85e-06	
					Arsenic compounds	7.03e-08	3.08e-07	3.08e-07	
					Benzene	7.38e-07	3.23e-06	3.23e-06	
					Beryllium Compounds	4.22e-09	1.85e-08	1.85e-08	
					Cadmium compounds	3.86e-07	1.69e-06	1.69e-06	
					Carbon Dioxide	41.9	184	184	
					Carbon Dioxide Equivalent	42	183.8	183.8	
					Carbon Monoxide	0.0295	0.129	0.129	
					Chromium compounds	4.92e-07	2.15e-06	2.15e-06	
					Cobalt compounds	2.95e-08	1.29e-07	1.29e-07	
					Formaldehyde	2.63e-05	0.000115	0.000115	
					HAPs - Total	0.000663	0.00291	0.00291	
					Hexane	0.000632	0.00277	0.00277	
					Lead Compounds	1.76e-07	7.69e-07	7.69e-07	
					Manganese compounds	1.33e-07	5.85e-07	5.85e-07	
					Mercury Compounds	9.13e-08	4e-07	4e-07	
					Methane	0.00079	0.00346	0.00346	
					Naphthalene	2.14e-07	9.39e-07	9.39e-07	
					Nickel compounds	7.38e-07	3.23e-06	3.23e-06	
					Nitrogen Oxides	0.0351	0.154	0.154	
					Nitrous Oxide	7.9e-05	0.000346	0.000346	
					Particulate Matter	0.00267	0.0117	0.0117	
					PM < 2.5 micron	0.00267	0.0117	0.0117	
					PM < 10 micron	0.00267	0.0117	0.0117	
					Polycyclic organic matter	2.45e-07	1.07e-06	1.07e-06	
					Selenium compounds	8.43e-09	3.69e-08	3.69e-08	
					Sulfur Dioxide	0.000211	0.000923	0.000923	
					Toluene	1.19e-06	5.23e-06	5.23e-06	
					Volatile Organic Compounds	0.00193	0.00846	0.00846	
		EQUI 10	Null	Heater 3	1,4-Dichlorobenzene (para-)	4.22e-07	1.85e-06	1.85e-06	
					Arsenic compounds	7.03e-08	3.08e-07	3.08e-07	
					Benzene	7.38e-07	3.23e-06	3.23e-06	
					Beryllium Compounds	4.22e-09	1.85e-08	1.85e-08	
					Cadmium compounds	3.86e-07	1.69e-06	1.69e-06	
					Carbon Dioxide	41.9	184	184	
					Carbon Dioxide Equivalent	42	183.8	183.8	
					Carbon Monoxide	0.0295	0.129	0.129	
					Chromium compounds	4.92e-07	2.15e-06	2.15e-06	
					Cobalt compounds	2.95e-08	1.29e-07	1.29e-07	
					Formaldehyde	2.63e-05	0.000115	0.000115	
					HAPs - Total	0.000663	0.00291	0.00291	
					Hexane	0.000632	0.00277	0.00277	
					Lead Compounds	1.76e-07	7.69e-07	7.69e-07	

PTE by SI

AI ID (Name): 1293 (Northern Natural Gas Co - Faribault)
Activity: IND20230001

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 10	Null	Heater 3	Manganese compounds	1.33e-07	5.85e-07	5.85e-07	
					Mercury Compounds	9.13e-08	4e-07	4e-07	
					Methane	0.00079	0.00346	0.00346	
					Naphthalene	2.14e-07	9.39e-07	9.39e-07	
					Nickel compounds	7.38e-07	3.23e-06	3.23e-06	
					Nitrogen Oxides	0.0351	0.154	0.154	
					Nitrous Oxide	7.9e-05	0.000346	0.000346	
					Particulate Matter	0.00267	0.0117	0.0117	
					PM < 2.5 micron	0.00267	0.0117	0.0117	
					PM < 10 micron	0.00267	0.0117	0.0117	
					Polycyclic organic matter	2.45e-07	1.07e-06	1.07e-06	
					Selenium compounds	8.43e-09	3.69e-08	3.69e-08	
					Sulfur Dioxide	0.000211	0.000923	0.000923	
					Toluene	1.19e-06	5.23e-06	5.23e-06	
					Volatile Organic Compounds	0.00193	0.00846	0.00846	
	Reciprocating IC Engine	EQUI 11	Null	Emergency Generator	1,1-Dichloroethane	0.000112	2.79e-05	2.79e-05	
					1,1,2-Trichloroethane	0.000151	3.78e-05	3.78e-05	
					1,1,2,2-Tetrachloroethane	0.00025	6.26e-05	6.26e-05	
					1,2-Dibromoethane (Ethylene dibromide); EDB	0.000211	5.27e-05	5.27e-05	
					1,2-Dichloroethane	0.000112	2.79e-05	2.79e-05	
					1,2-Dichloropropane	0.000129	3.22e-05	3.22e-05	
					1,3-Butadiene	0.00656	0.00164	0.00164	
					1,3-Dichloropropene	0.000126	3.14e-05	3.14e-05	
					Acetaldehyde	0.0276	0.0069	0.0069	
					Acrolein	0.026	0.0065	0.0065	
					Benzene	0.0156	0.00391	0.00391	
					Carbon Dioxide	1,157	289	289	
					Carbon Dioxide Equivalent	1,158	289.6	289.6	
					Carbon Monoxide	5	1.25	1.25	
					Carbon tetrachloride	0.000175	4.38e-05	4.38e-05	
					Chlorobenzene (Monochlorobenzene)	0.000128	3.19e-05	3.19e-05	
					Chloroform	0.000136	3.39e-05	3.39e-05	
					Dichloromethane (Methylene chloride)	0.000408	0.000102	0.000102	
					Ethylbenzene	0.000245	6.13e-05	6.13e-05	
					Formaldehyde	0.203	0.0507	0.0507	
					HAPs - Total	0.319	0.0797	0.0797	
					Methane	0.0218	0.00545	0.00545	
					Methanol	0.0303	0.00757	0.00757	
					Naphthalene	0.000961	0.00024	0.00024	
					Nitrogen Oxides	2.5	0.626	0.626	
					Nitrous Oxide	0.00218	0.000545	0.000545	
					Particulate Matter	0.192	0.048	0.048	
					PM < 2.5 micron	0.192	0.048	0.048	
					PM < 10 micron	0.192	0.048	0.048	
					Polycyclic organic matter	0.00139	0.000349	0.000349	
					Styrene	0.000118	2.94e-05	2.94e-05	
					Sulfur Dioxide	0.0148	0.00371	0.00371	
					Toluene	0.00552	0.00138	0.00138	
					Vinyl chloride (chloroethene)	7.1e-05	1.78e-05	1.78e-05	
					Volatile Organic Compounds	1.75	0.438	0.438	
					Xylenes, Total	0.00193	0.000482	0.000482	
	Turbine	EQUI 2	EU001	Solar Mars Turbine 100-T15000S	1,3-Butadiene	5.48e-05	0.000233	0.000233	
					Acetaldehyde	0.0051	0.0216	0.0216	
					Acrolein	0.000816	0.00346	0.00346	
					Benzene	0.00153	0.00649	0.00649	
					Carbon Dioxide	14,908	65,295	65,295	
					Carbon Dioxide Equivalent	14,923	65,362.7	65,362.7	
					Carbon Monoxide	30.67	70.96	70.96	
					Ethylbenzene	0.00408	0.0173	0.0173	
					Formaldehyde	0.0905	0.384	0.384	
					HAPs - Total	0.131	0.556	0.556	
					Methane	0.281	1.23	1.23	
					Naphthalene	0.000166	0.000703	0.000703	
					Nitrogen Oxides	21.32	57.36	57.36	
					Nitrous Oxide	0.0281	0.123	0.123	
					Particulate Matter	1.91	8.11	8.11	
					PM < 2.5 micron	1.91	8.11	8.11	
					PM < 10 micron	1.91	8.11	8.11	
					Polycyclic organic matter	0.00028	0.00119	0.00119	
					Propylene oxide	0.0037	0.0157	0.0157	
					Sulfur Dioxide	0.191	0.811	0.811	
					Toluene	0.0166	0.0703	0.0703	

PTE by SI

AI ID (Name): 1293 (Northern Natural Gas Co - Faribault)
Activity: IND20230001

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	Turbine	EQUI 2	EU001	Solar Mars Turbine 100-T15000S	Volatile Organic Compounds	8.6	20.63	20.63	
					Xylenes, Total	0.00816	0.0346	0.0346	
		EQUI 4	Null	Solar Mars Turbine 100-16000S	1,3-Butadiene	5.51e-05	0.000236	0.000236	
					Acetaldehyde	0.00513	0.0219	0.0219	
					Acrolein	0.000821	0.00351	0.00351	
					Benzene	0.00154	0.00658	0.00658	
					Carbon Dioxide	15,000	65,701	65,701	
					Carbon Dioxide Equivalent	15,016	65,769.1	65,769.1	
					Carbon Monoxide	30.2	41.4	41.4	
					Ethylbenzene	0.0041	0.0176	0.0176	
					Formaldehyde	0.091	0.39	0.39	
					HAPs - Total	0.132	0.564	0.564	
					Methane	0.283	1.24	1.24	
					Naphthalene	0.000167	0.000713	0.000713	
					Nitrogen Oxides	20.98	38.13	38.13	
					Nitrous Oxide	0.0283	0.124	0.124	
					Particulate Matter	1.92	8.23	8.23	
					PM < 2.5 micron	1.92	8.23	8.23	
					PM < 10 micron	1.92	8.23	8.23	
					Polycyclic organic matter	0.000282	0.00121	0.00121	
					Propylene oxide	0.00372	0.0159	0.0159	
					Sulfur Dioxide	0.192	0.823	0.823	
					Toluene	0.0167	0.0713	0.0713	
					Volatile Organic Compounds	8.47	20.52	20.52	
					Xylenes, Total	0.00821	0.0351	0.0351	
		EQUI 9	Null	Solar Mars Turbine 100-16000S	1,3-Butadiene	5.51e-05	0.000236	0.000236	
					Acetaldehyde	0.00513	0.0219	0.0219	
					Acrolein	0.000821	0.00351	0.00351	
					Benzene	0.00154	0.00658	0.00658	
					Carbon Dioxide	15,000	65,701	65,701	
					Carbon Dioxide Equivalent	15,016	65,769.1	65,769.1	
					Carbon Monoxide	30.18	41.44	41.44	
					Ethylbenzene	0.0041	0.0176	0.0176	
					Formaldehyde	0.091	0.39	0.39	
					HAPs - Total	0.132	0.564	0.564	
					Methane	0.283	1.24	1.24	
					Naphthalene	0.000167	0.000713	0.000713	
					Nitrogen Oxides	20.98	38.13	38.13	
					Nitrous Oxide	0.0283	0.124	0.124	
					Particulate Matter	1.92	8.23	8.23	
					PM < 2.5 micron	1.92	8.23	8.23	
					PM < 10 micron	1.92	8.23	8.23	
					Polycyclic organic matter	0.000282	0.00121	0.00121	
					Propylene oxide	0.00372	0.0159	0.0159	
					Sulfur Dioxide	0.192	0.823	0.823	
					Toluene	0.0167	0.0713	0.0713	
					Volatile Organic Compounds	8.47	20.52	20.52	
					Xylenes, Total	0.00821	0.0351	0.0351	
Fugitive	Equipment Leaks	FUGI 1	FS003	115 Flanges	Volatile Organic Compounds	0.000652	0.00286	0.00286	
		FUGI 2	FS002	1 Compressor Seal	Volatile Organic Compounds	0.0144	0.0632	0.0632	
		FUGI 3	FS001	60 Valves	Volatile Organic Compounds	0.0365	0.16	0.16	

Relationships

AI ID (Name): 1293 (Northern Natural Gas Co - Faribault)
Activity: IND20230001

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 6	Null	Heater 1	sends to	STRU 5	100	Stack/Vent	Null	7/1/1996	Null	
		EQUI 7	Null	Heater 2	sends to	STRU 6	100	Stack/Vent	Null	11/1/2017	Null	
		EQUI 10	Null	Heater 3	sends to	STRU 10	100	Stack/Vent	Null	8/30/2018	Null	
	Reciprocating IC Engine	EQUI 11	Null	Emergency Generator	sends to	STRU 18	100	Stack/Vent	Null	9/6/2019	Null	
	Turbine	EQUI 2	EU001	Solar Mars Turbine 100-T15000S	sends to	STRU 1	100	Stack/Vent	SV001	7/1/1996	Null	
		EQUI 4	Null	Solar Mars Turbine 100-16000S	sends to	STRU 3	100	Stack/Vent	Null	11/1/2017	Null	
		EQUI 9	Null	Solar Mars Turbine 100-16000S	sends to	STRU 9	100	Stack/Vent	Null	8/30/2018	Null	

FUGI

AI ID (Name): 1293 (Northern Natural Gas Co - Faribault)
Activity: IND20230001

Subject Item Type	Subject Item ID	Delta Designation	Description	Install Year	Pollutants Emitted	
Equipment Leaks	FUGI 1	FS003	115 Flanges	1996	Volatile Organic Compounds	
	FUGI 2	FS002	1 Compressor Seal	1996	Volatile Organic Compounds	
	FUGI 3	FS001	60 Valves	1996	Volatile Organic Compounds	

Building

AI ID (Name): 1293 (Northern Natural Gas Co - Faribault)
Activity: IND20230001

Subject Item ID	Delta Designation	Description	Height	Units (height)	Length	Units (length)	Width	Units (width)	
STRU 11	Null	Turbine #3 building	30	feet	80	feet	42	feet	
STRU 12	Null	Turbine #3 control room	15	feet	60	feet	40	feet	
STRU 13	Null	Turbine #1 & #2 control room	12	feet	57	feet	22	feet	
STRU 14	Null	Turbine #2 building	30	feet	80	feet	42	feet	
STRU 15	Null	Shop and storage	12	feet	30	feet	21	feet	
STRU 16	Null	Turbine #1 building	25	feet	78.5	feet	40	feet	
STRU 17	Null	Electrical	10	feet	33	feet	13	feet	

Stack/Vents

AI ID (Name): 1293 (Northern Natural Gas Co - Faribault)
Activity: IND20230001

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 1	SV001	Solar Mars Turbine 100 – T15000S Stack	62.5	8.2	Null	Null	78,250	910	Manufacturer	Upwards with no cap on stack/vent	
STRU 3	Null	Solar Mars Turbine 100 – 16000S Stack	63	7.9	Null	Null	81,955	863	Manufacturer	Upwards with no cap on stack/vent	
STRU 5	Null	Process Heater	16	0.72	Null	Null	300	375	Estimate	Upwards with no cap on stack/vent	
STRU 6	Null	Process Heater	16	0.72	Null	Null	300	375	Estimate	Upwards with no cap on stack/vent	
STRU 9	Null	Solar Mars Turbine 100-16000S Stack	63	7.9	Null	Null	81,955	863	Manufacturer	Upwards with no cap on stack/vent	
STRU 10	Null	Process Heater	16	0.72	Null	Null	300	375	Estimate	Upwards with no cap on stack/vent	
STRU 18	Null	Cummins GTA50E Emergency..	15	1.75	Null	Null	6,959	900	Manufacturer	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: Appendix A: Insignificant Activities and General Applicable Requirements; Appendix B: 40 CFR Part 60, Subpart A - General Provisions; Appendix C: 40 CFR Part 60, Subpart GG - Standards of Performance for Stationary Gas Turbines; Appendix D: 40 CFR Part 60, Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines; Appendix E: 40 CFR Part 60, Subpart KKKK - Standards of Performance for Stationary Combustion Turbines; Appendix F: 40 CFR Part 60, Subpart OOOOa - Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification or Reconstruction Commenced After September 18, 2015 and On or Before December 6, 2022; and Appendix G: EQUI 11 Operation and Maintenance Plan. [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]

	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]
	7620	Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in this permit. [Minn. R. ch. 7017]
	7630	Performance Test Notifications and Submittals: Performance Test Notification and Plan: due 30 days before each Performance Test Performance Test Pre-test Meeting: due seven days before each Performance Test Performance Test Report: due 45 days after each Performance Test The Notification, Test Plan, and Test Report must be submitted in a format specified by the commissioner. [Minn. R. 7017.2017, Minn. R. 7017.2030, subps. 1-4, Minn. R. 7017.2035, subps. 1-2]
	7640	Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as stated in the MPCA's Notice of Compliance letter granting preliminary approval. Preliminary approval is based on formal review of a subsequent performance test on the same unit as specified by Minn. R. 7017.2025, subp. 3. The limit is final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025, subp. 3]
	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]

	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]
	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)]
	7870	Within 15 days of a request from the Commissioner, the Permittee must provide a complete summary of all performance tests required at the facility including the subject item, pollutant, most recent test date (if applicable), and the date of the next test in an approved format. [Minn. R. 7007.0800, subp. 16(L)]
	7890	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]
EQUI 2	1	Nitrogen Oxides <= 0.0157 parts per million at 15 percent oxygen and on a dry basis when combusting natural gas. [40 CFR 60.332(d), Minn. R. 7011.2350]
	7	Sulfur Dioxide <= 0.015 percent by volume at 15 percent oxygen and on a dry basis. [40 CFR 60.333, Minn. R. 7011.2350]
	14	Sulfur Dioxide <= 0.0015 pounds per million Btu heat input. The potential to emit from the unit is 0.0015 lb/MMBtu due to equipment design and allowable fuels. [Minn. R. 7011.2300, subp. 2(B)]
	16	Opacity <= 20 percent opacity once operating temperatures have been attained. [Minn. R. 7011.2300, subp. 1]
	30	Fuel type: Natural gas only, by design. [Minn. R. 7005.0100, subp. 35a]
	31	Fuel Type: Limited to pipeline natural gas meeting the definition in 40 CFR 60.331(u). [Minn. R. 7007.0800, subp. 2(A)]
	38	The Permittee shall keep records of fuel type and usage on a monthly basis. [Minn. R. 7007.0800, subp. 5]
	40	The Permittee must comply with the requirements from 40 CFR pt. 60, subp. GG as required by this permit. If EQUI 2 undergoes modification and/or reconstruction as defined under 40 CFR 60.15, it triggers the requirements of 40 CFR pt. 60, subp. KKKKa for modification and/or reconstruction. If 40 CFR pt. 60, subp. KKKKa requirements are triggered due to modification and/or reconstruction, then EQUI 2 is no longer subject to 40 CFR pt. 60, subp. GG and becomes subject to 40 CFR pt. 60, subp. KKKKa. [40 CFR 60.15, 40 CFR 60.4305a, Minn. R. 7007.0800, 2(A) & (B)]
	4580	Nitrogen Oxides: The Permittee shall conduct a performance test due before December 20, 2026, and every 60 months thereafter to measure emissions. The first test is due by the date specified above and all subsequent tests shall be completed every 60 months thereafter by the due date (month and day) and as described below. The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 7E, or other method approved by MPCA in the performance test plan approval. Testing conducted during the 60 days prior to the performance test due date will not reset the test due date for future testing as required by this permit or within a Notice of Compliance letter. Testing conducted more than 60 days prior to the performance test due date satisfies this test due date requirement but will reset future performance test due dates based on the performance test date. [40 CFR 60.332(d), 40 CFR 60.8(a), Minn. R. 7011.2350, Minn. R. 7017.2020, subp. 1]
	4601	Sulfur Content of Fuel: The Permittee shall submit an annual report: Due annually, by the 31st of January. The report shall document the sulfur monitoring analysis results for the previous calendar year. The report shall be submitted with the annual Compliance Certification required by this permit. [Minn. R. 7007.0800, subp. 2(A)]

	19060	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). This record must be made at least 30 days before a NOx test is conducted on the gas turbine (as a result of the component replacement), but no later than 180 days after each component replacement. [Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
	19120	Performance Test (NOx): due no later than 180 days after replacement of any or all of the EQUI 2 four gas turbine components. Testing shall be performed in accordance with 40 CFR 60.8 and following the procedures specified in 40 CFR 60.335. [40 CFR 60.335, 40 CFR 60.8(a), Minn. R. 7011.2350, Minn. R. 7017.2020, subp. 1]
	35000	The Permittee must comply with all applicable requirements of 40 CFR pt. 60, subp. GG as follows: 40 CFR 60.330; 40 CFR 60.331; 40 CFR 60.332(a)(2)-(4); 40 CFR 60.332(d); 40 CFR 60.332(i); 40 CFR 60.333(a); 40 CFR 60.334(c); 40 CFR 60.334(h)(1); 40 CFR 60.334(h)(3)(ii); 40 CFR 60.334(i)(2); 40 CFR 60.334(i)(3)(i); 40 CFR 60.335(a); 40 CFR 60.335(b)(1)-(2); 40 CFR 60.335(b)(10)(ii); 40 CFR 60.335(b)(11); and 40 CFR 60.335(c). A copy of 40 CFR pt. 60, subp. GG 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. GG, Minn. R. 7007.0400, subp. 3, Minn. R. 7007.1150-7007.1500, Minn. R. 7011.2350]

	35700	The Permittee must comply with all applicable requirements of 40 CFR pt. 60, subp. A as follows: 40 CFR 60.1(a)-(c); 40 CFR 60.2; 40 CFR 60.3; 40 CFR 60.4; 40 CFR 60.5; 40 CFR 60.6; 40 CFR 60.7(a)(1)-(4); 40 CFR 60.7(a)(6); 40 CFR 60.7(b)-(c); 40 CFR 60.7(e); 40 CFR 60.7(f)(3); 40 CFR 60.7(g)-(h); 40 CFR 60.8; 40 CFR 60.9; 40 CFR 60.11(a)-(d); 40 CFR 60.11(e)(1)-(3); 40 CFR 60.11(e)(6)-(8); 40 CFR 60.11(f)-(g); 40 CFR 60.12; 40 CFR 60.14(a)-(h); 40 CFR 60.15; 40 CFR 60.17; and 40 CFR 60.19. A copy of 40 CFR pt. 60, subp. A 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. A, 40 CFR pt. 60, subp. GG, Minn. R. 7007.0400, subp. 3, Minn. R. 7007.1150-7007.1500, Minn. R. 7011.0050, subp. 1(A), Minn. R. 7011.2350, Minn. R. 7017.1010 & 7017.2015, subp. 2, Minn. R. 7019.0100]
EQUI 4	2	The Permittee must limit emissions of Nitrogen Oxides <= 25 parts per million at 15 percent O2 or 150 ng/J of useful output (1.2 lb/MWh) when turbine is operating at or above 75 percent of peak load and when operating at 0 deg F or above. [40 CFR 60.4320(a), Minn. R. 7011.2375]
	10	The Permittee must limit emissions of Sulfur Dioxide <= 110 nanograms per joule (0.90 lb/MWh) gross output; OR The Permittee must not burn any fuel in EQUI 4 which contains total potential sulfur emissions in excess of 26 ng SO2/J (0.060 lb SO2/MMBtu) heat input. [40 CFR 60.4330(a)(1)-(2), Minn. R. 7011.2375]
	13	Sulfur Dioxide <= 0.0015 pounds per million Btu heat input. The potential to emit from the unit is 0.0015 lb/MMBtu due to equipment design and allowable fuels. [Minn. R. 7011.2300, subp. 2(B)]
	17	Opacity <= 20 percent opacity once operating temperatures have been attained. [Minn. R. 7011.2300, subp. 1]
	18	Fuel type: Natural gas only, by design. [Minn. R. 7005.0100, subp. 35a]
	21	The Permittee shall keep records of fuel type and usage on a monthly basis. [Minn. R. 7007.0800, subp. 5]
	22	The Permittee must operate and maintain EQUI 4, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction. [40 CFR 60.4333(a), Minn. R. 7011.2375]

	40	The Permittee must comply with the requirements from 40 CFR pt. 60, subp. KKKK as required by this permit. If EQUI 4 undergoes modification and/or reconstruction as defined under 40 CFR 60.15, it triggers the requirements of 40 CFR pt. 60, subp. KKKKa for modification and/or reconstruction. If 40 CFR pt. 60, subp. KKKKa requirements are triggered due to modification and/or reconstruction, then EQUI 4 is no longer subject to 40 CFR pt. 60, subp. KKKK and becomes subject to 40 CFR pt. 60, subp. KKKKa. [40 CFR 60.15, 40 CFR 60.4305a, Minn. R. 7007.0800, 2(A) & (B)]
	46	Sulfur Content of Fuel: The Permittee shall submit an annual report: Due annually, by the 31st of January. The report shall document the sulfur monitoring analysis results for the previous calendar year. The report shall be submitted with the annual Compliance Certification required by this permit. [Minn. R. 7007.0800, subp. 2(A)]
	6260	The Permittee must comply with all applicable requirements of 40 CFR pt. 60, subp. KKKK as follows: 40 CFR 60.4300; 40 CFR 60.4305; 40 CFR 60.4315; 40 CFR 60.4320(a); 40 CFR 60.4330(a)(1)-(2); 40 CFR 60.4333(a); 40 CFR 60.4340(a); 40 CFR 60.4350(f); 40 CFR 60.4360; 40 CFR 60.4365; 40 CFR 60.4370(b); 40 CFR 60.4370(c)(1); 40 CFR 60.4375(b); 40 CFR 60.4375(f)-(J); 40 CFR 60.4380(c); 40 CFR 60.4385(a)-(c); 40 CFR 60.4395; 40 CFR 30.4400(a); 40 CFR 30.4400(b)(4); 40 CFR 30.4400(b)(6); 40 CFR 30.4415(a)(1); 40 CFR 60.4420; and 40 CFR pt. 60, subp. KKKK, Table 1. A copy of 40 CFR pt. 60, subp. KKKK 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 pt. 60, subp. KKKK, Minn. R. 7007.0400, subp. 3, Minn. R. 7007.1150-7007.1500, Minn. R. 7011.2375]

	20060	Nitrogen Oxides: The Permittee shall conduct a performance test to measure emissions due annually, but no more than 14 months following the previous performance test. The next performance test is due by November 18, 2027. The Permittee must submit a written report of the results of each performance test before the close of business on the 60th day following the completion of the performance test. The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Method 20, or other method approved by MPCA in the performance test plan approval. The Permittee is not using water or steam injection to control NOx emissions. If the NOx emission result from the performance test is less than or equal to 75 percent of the NOx emission limit for the turbine, the Permittee may reduce the frequency of subsequent performance tests to once every 2 years (no more than 26 calendar months following the previous performance test). If the results of any subsequent performance test exceed 75 percent of the NOx emission limit for the turbine, the Permittee must resume annual performance tests. [40 CFR 60.4340(a), 40 CFR 60.4375(b), 40 CFR 60.4400(a), 40 CFR 60.8(a), Minn. R. 7011.2375, Minn. R. 7017.2020, subp. 1]
	20070	Sulfur Dioxide: The Permittee shall conduct a performance test: Due annually, but no more than 14 months following the previous performance test. The next performance test is due by November 18, 2026. The Permittee must submit a written report of the results of each performance test before the close of business on the 60th day following the completion of the performance test. The performance test shall be conducted at worst case conditions as defined at Minn. R. 7017.2025, subp. 2, using EPA Reference Method 20, or other method approved by MPCA in the performance test plan approval. [40 CFR 60.4375(b), 40 CFR 60.4415(a), 40 CFR 60.8(a), Minn. R. 7011.2375, Minn. R. 7017.2020, subp. 1]

	35800	The Permittee must comply with all applicable requirements of 40 CFR pt. 60, subp. A as follows: 40 CFR 60.1(a)-(c); 40 CFR 60.2; 40 CFR 60.3; 40 CFR 60.4; 40 CFR 60.5; 40 CFR 60.6; 40 CFR 60.7(a)(1)-(4); 40 CFR 60.7(a)(6); 40 CFR 60.7(b)-(c); 40 CFR 60.7(e); 40 CFR 60.7(f)(3); 40 CFR 60.7(g)-(h); 40 CFR 60.8; 40 CFR 60.9; 40 CFR 60.11(a)-(d); 40 CFR 60.11(e)(1)-(3); 40 CFR 60.11(e)(6)-(8); 40 CFR 60.11(f)-(g); 40 CFR 60.12; 40 CFR 60.14(a)-(h); 40 CFR 60.15; 40 CFR 60.17; and 40 CFR 60.19. A copy of 40 CFR pt. 60, subp. A 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. A, 40 CFR pt. 60, subp. KKKK, Minn. R. 7007.0400, subp. 3, Minn. R. 7007.1150-7007.1500, Minn. R. 7011.0050, subp. 1(A), Minn. R. 7011.2375, Minn. R. 7017.1010 & 7017.2015, subp. 2, Minn. R. 7019.0100]
EQUI 6	3570	Filterable Particulate Matter <= 0.4 pounds per million Btu heat input. The potential to emit from the unit is 0.00745 lb/MMBtu due to equipment design and allowable fuels. [Minn. R. 7011.0515, subp. 1]
	3580	Opacity <= 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity. [Minn. R. 7011.0515, subp. 2]
	3632	Fuel type: Natural gas only, by design. [Minn. R. 7005.0100, subp. 35a]
	3637	The Permittee shall keep records of fuel type and usage on a monthly basis. [Minn. R. 7007.0800, subp. 5]
EQUI 7	3570	Filterable Particulate Matter <= 0.4 pounds per million Btu heat input. The potential to emit from the unit is 0.00745 lb/MMBtu due to equipment design and allowable fuels. [Minn. R. 7011.0515, subp. 1]
	3581	Opacity <= 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity. [Minn. R. 7011.0515, subp. 2]
	3632	Fuel type: Natural gas only, by design. [Minn. R. 7005.0100, subp. 35a]
	3637	The Permittee shall keep records of fuel type and usage on a monthly basis. [Minn. R. 7007.0800, subp. 5]
EQUI 9	2	The Permittee must limit emissions of Nitrogen Oxides <= 25 parts per million at 15 percent O2 or 150 ng/J of useful output (1.2 lb/MWh) when turbine is operating at or above 75 percent of peak load and when operating at 0 deg F or above. [40 CFR 60.4320(a), Minn. R. 7011.2375]

	5	The Permittee must limit emissions of Sulfur Dioxide <= 110 nanograms per joule (0.90 lb/MWh) gross output; OR The Permittee must not burn any fuel in EQUI 9 which contains total potential sulfur emissions in excess of 26 ng SO2/J (0.060 lb SO2/MMBtu) heat input. [40 CFR 60.4330(a)(1)-(2), Minn. R. 7011.2375]
	6	Sulfur Dioxide <= 0.0015 pounds per million Btu heat input. The potential to emit from the unit is 0.0015 lb/MMBtu due to equipment design and allowable fuels. [Minn. R. 7011.2300, subp. 2(B)]
	9	Opacity <= 20 percent opacity once operating temperatures have been attained. [Minn. R. 7011.2300, subp. 1]
	11	Fuel type: Natural gas only, by design. [Minn. R. 7005.0100, subp. 35a]
	12	The Permittee shall keep records of fuel type and usage on a monthly basis. [Minn. R. 7007.0800, subp. 5]
	13	The Permittee must operate and maintain EQUI 9, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including startup, shutdown, and malfunction. [40 CFR 60.4333(a), Minn. R. 7011.2375]
	40	The Permittee must comply with the requirements from 40 CFR pt. 60, subp. KKKK as required by this permit. If EQUI 9 undergoes modification and/or reconstruction as defined under 40 CFR 60.15, it triggers the requirements of 40 CFR pt. 60, subp. KKKKa for modification and/or reconstruction. If 40 CFR pt. 60, subp. KKKKa requirements are triggered due to modification and/or reconstruction, then EQUI 9 is no longer subject to 40 CFR pt. 60, subp. KKKK and becomes subject to 40 CFR pt. 60, subp. KKKKa. [40 CFR 60.15, 40 CFR 60.4305a, Minn. R. 7007.0800, 2(A) & (B)]
	3566	Sulfur Content of Fuel: The Permittee shall submit an annual report: Due annually, by the 31st of January. The report shall document the sulfur monitoring analysis results for the previous calendar year. The report shall be submitted with the annual Compliance Certification required by this permit. [Minn. R. 7007.0800, subp. 2(A)]
	6260	The Permittee must comply with all applicable requirements of 40 CFR pt. 60, subp. KKKK as follows: 40 CFR 60.4300; 40 CFR 60.4305; 40 CFR 60.4315; 40 CFR 60.4320(a); 40 CFR 60.4330(a)(1)-(2); 40 CFR 60.4333(a); 40 CFR 60.4340(a); 40 CFR 60.4350(f); 40 CFR 60.4360; 40 CFR 60.4365; 40 CFR 60.4370(b); 40 CFR 60.4370(c)(1); 40 CFR 60.4375(b); 40 CFR 60.4375(f)-(J); 40 CFR 60.4380(c); 40 CFR 60.4385(a)-(c); 40 CFR 60.4395; 40 CFR 30.4400(a); 40 CFR 30.4400(b)(4); 40 CFR 30.4400(b)(6); 40 CFR 30.4415(a)(1); 40 CFR 60.4420; and 40 CFR pt. 60, subp. KKKK, Table 1. A copy of 40 CFR pt. 60, subp. KKKK 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 pt. 60, subp. KKKK, Minn. R. 7007.0400, subp. 3, Minn. R. 7007.1150-7007.1500, Minn. R. 7011.2375]
	20060	Nitrogen Oxides: The Permittee shall conduct a performance test to measure emissions due annually, but no more than 14 months following the previous performance test. The next performance test is due by November 18, 2027. The Permittee must submit a written report of the results of each performance test before the close of business on the 60th day following the completion of the performance test. The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Method 20, or other method approved by MPCA in the performance test plan approval. The Permittee is not using water or steam injection to control NOx emissions. If the NOx emission result from the performance test is less than or equal to 75 percent of the NOx emission limit for the turbine, the Permittee may reduce the frequency of subsequent performance tests to once every 2 years (no more than 26 calendar months following the previous performance test). If the results of any subsequent performance test exceed 75 percent of the NOx emission limit for the turbine, the Permittee must resume annual performance tests. [40 CFR 60.4340(a), 40 CFR 60.4375(b), 40 CFR 60.4400(a), 40 CFR 60.8(a), Minn. R. 7011.2375, Minn. R. 7017.2020, subp. 1]
	20070	Sulfur Dioxide: The Permittee shall conduct a performance test to measure emissions due annually, but no more than 14 months following the previous performance test. The next performance test is due by November 18, 2026. The Permittee must submit a written report of the results of each performance test before the close of business on the 60th day following the completion of the performance test. The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Method 20, or other method approved by MPCA in the performance test plan approval. [40 CFR 60.4375(b), 40 CFR 60.4415(a), 40 CFR 60.8(a), Minn. R. 7011.2375, Minn. R. 7017.2020, subp. 1]

	35800	The Permittee must comply with all applicable requirements of 40 CFR pt. 60, subp. A as follows: 40 CFR 60.1(a)-(c); 40 CFR 60.2; 40 CFR 60.3; 40 CFR 60.4; 40 CFR 60.5; 40 CFR 60.6; 40 CFR 60.7(a)(1)-(4); 40 CFR 60.7(a)(6); 40 CFR 60.7(b)-(c); 40 CFR 60.7(e); 40 CFR 60.7(f)(3); 40 CFR 60.7(g)-(h); 40 CFR 60.8; 40 CFR 60.9; 40 CFR 60.11(a)-(d); 40 CFR 60.11(e)(1)-(3); 40 CFR 60.11(e)(6)-(8); 40 CFR 60.11(f)-(g); 40 CFR 60.12; 40 CFR 60.14(a)-(h); 40 CFR 60.15; 40 CFR 60.17; and 40 CFR 60.19. A copy of 40 CFR pt. 60, subp. A 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. A, 40 CFR pt. 60, subp. KKKK, Minn. R. 7007.0400, subp. 3, Minn. R. 7007.1150-7007.1500, Minn. R. 7011.0050, subp. 1(A), Minn. R. 7011.2375, Minn. R. 7017.1010 & 7017.2015, subp. 2, Minn. R. 7019.0100]
EQUI 10	3570	Filterable Particulate Matter <= 0.4 pounds per million Btu heat input. The potential to emit from the unit is 0.00745 lb/MMBtu due to equipment design and allowable fuels. [Minn. R. 7011.0515, subp. 1]
	3580	Opacity <= 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity. [Minn. R. 7011.0515, subp. 2]
	3632	Fuel type: Natural gas only, by design. [Minn. R. 7005.0100, subp. 35a]
	3637	The Permittee shall keep records of fuel type and usage on a monthly basis. [Minn. R. 7007.0800, subp. 5]
EQUI 11	3010	The Permittee must limit Nitrogen Oxides <= 2.0 grams per horsepower-hour. [40 CFR 60.4233(e), 40 CFR 63.6590(c), 40 CFR pt. 60, subp. JJJJ(Table 1), Minn. R. 7011.2310, Minn. R. 7011.8150]
	3020	The Permittee must limit Carbon Monoxide <= 4.0 grams per horsepower-hour. [40 CFR 60.4233(e), 40 CFR 63.6590(c), 40 CFR pt. 60, subp. JJJJ(Table 1), Minn. R. 7011.2310, Minn. R. 7011.8150]
	3030	The Permittee must limit Volatile Organic Compounds <= 1.0 grams per horsepower-hour. [40 CFR 60.4233(e), 40 CFR 63.6590(c), 40 CFR pt. 60, subp. JJJJ(Table 1), Minn. R. 7011.2310, Minn. R. 7011.8150]
	3040	Opacity <= 20 percent opacity once operating temperatures have been attained. [Minn. R. 7011.2300, subp. 1]
	3050	Sulfur Dioxide <= 0.0015 pounds per million Btu heat input. The potential to emit from the unit is 0.0015 lb/MMBtu due to equipment design and allowable fuels. [Minn. R. 7011.2300, subp. 2(B)]
	3540	Fuel type(s) allowed: Natural gas only. [Minn. R. 7005.0100, subp. 35a]
	3570	The Permittee shall keep records of fuel type and usage on a monthly basis. [Minn. R. 7007.0800, subp. 5]

	3575	Hours of Operation: The Permittee shall maintain documentation on site that the unit is an emergency generator by design that qualifies under the U.S. EPA memorandum entitled "Calculating Potential to Emit (PTE) for Emergency Generators" dated September 6, 1995, that allows calculation of potential emissions based on 500 operating hours per year. [Minn. R. 7007.0800, subps. 4-5]
	19530	EQUI 11 is a new affected source as defined under 40 CFR pt. 63, subp. ZZZZ, and the facility is an area source as defined at 40 CFR 63.2. The Permittee shall meet the requirements of 40 CFR pt. 63, subp. ZZZZ by meeting the requirements of 40 CFR pt. 60, subp. JJJJ. No further requirements of 40 CFR pt. 63, subp. ZZZZ apply to EQUI 11. [40 CFR 63.6590(c), Minn. R. 7011.8150]
	28220	If the emergency stationary engine operates for the purposes specified in 40 CFR 60.4243(d)(3)(i), the Permittee must submit an annual report for each calendar year no later than March 31 of the following calendar year. The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emission Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange CDX) (https://cdx.epa.gov/). However, if the reporting form is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in 40 CFR 60.4 and emailed to the MPCA as directed in Section 2 of this permit for other compliance submittals. Beginning on February 26, 2025, submit the annual report electronically according to 40 CFR 60.4214(g). [40 CFR 60.4245(e)(2), 40 CFR 60.4245(e)(3), 40 CFR 60.4245(g), Minn. R. 7011.2310, g]
	35710	The Permittee must comply with all applicable requirements of 40 CFR pt. 60, subp. JJJJ as follows: 40 CFR 60.4230(a)(4)(iv); 40 CFR 60.4230(a)(6); 40 CFR 60.4233(e), as it pertains to stationary SI ICE meeting the criteria in the first sentence of this paragraph; 40 CFR 60.4234; 40 CFR 60.4236(c); 40 CFR 60.4237(a); 40 CFR 60.4243(a)(1), as it pertains to paragraph (b)(1); 40 CFR 60.4243(b)(1); 40 CFR 60.4243(d)-(e); 40 CFR 60.4243(g); 40 CFR 60.4245(a)(1)-(3); 40 CFR 60.4245(b); 40 CFR 60.4245(e); 40 CFR 60.4245(g)-(j); 40 CFR 60.4246; 40 CFR 60.4248; and 40 CFR pt. 60, subp JJJJ, Table 1; and 40 CFR pt. 60, subp JJJJ, Table 3. A copy of 40 CFR pt. 60, subp. JJJJ 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 60.6590(c), 40 CFR pt. 60, subp. JJJJ, Minn. R. 7007.0400, subp. 3, Minn. R. 7007.1150-7007.1500, Minn. R. 7011.2310, Minn. R. 7011.8150]

	35800	The Permittee must comply with all applicable requirements of 40 CFR pt. 60, subp. A as follows: 40 CFR 60.1(a)-(c); 40 CFR 60.2; 40 CFR 60.3; 40 CFR 60.4; 40 CFR 60.5; 40 CFR 60.6; 40 CFR 60.7(a)(1)-(4); 40 CFR 60.7(a)(6); 40 CFR 60.7(b); 40 CFR 60.7(f)(3); 40 CFR 60.7(g)-(h); 40 CFR 60.9; 40 CFR 60.11(a)-(d); 40 CFR 60.11(e)(1); 40 CFR 60.11(f)-(g); 40 CFR 60.12; 40 CFR 60.14(a)-(h); 40 CFR 60.15; 40 CFR 60.17; and 40 CFR 60.19; A copy of 40 CFR pt. 60, subp. A 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 60.6590(c), 40 CFR pt. 60, subp. A, 40 CFR pt. 60, subp. JJJJ(Table 3), Minn. R. 7007.0400, subp. 3, Minn. R. 7007.1150-7007.1500, Minn. R. 7011.0050, subp. 1(A), Minn. R. 7011.2310, Minn. R. 7017.1010 & 7017.2015, subp. 2, Minn. R. 7019.0100]
FUGI 1	3680	Opacity <= 20 percent opacity. [Minn. R. 7011.0715, subp. 1(B)]
	3690	Particulate Matter <= 0.30 grains per dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. [Minn. R. 7011.0715, subp. 1(A)]
	9999	The Permittee must comply with the requirements from 40 CFR pt. 60, subp. OOOOa as required by this permit. If the affected facility, which is each collection of fugitive emissions components at a compressor station, undergoes modification as defined under 40 CFR 60.5365b(j)(3), it triggers the requirements of 40 CFR pt. 60, subp. OOOOb for modification. If 40 CFR pt. 60, subp. OOOOb requirements are triggered due to modification, the affected facility is no longer subject to 40 CFR pt. 60, subp. OOOOa and becomes subject to 40 CFR pt. 60, subp. OOOOb. [40 CFR 60.5365b(i)(3), Minn. R. 7007.0800, 2(A) & (B)]

	10000	The Permittee must comply with all applicable requirements of 40 CFR pt. 60, subp. OOOOa as follows: 40 CFR 60.5360a; 40 CFR 60.5365a(j); 40 CFR 60.5370a(a)-(b); 40 CFR 60.5371a becomes applicable after January 22, 2027; 40 CFR 60.5397a(a)-(e); 40 CFR 60.5397a(f)(2) 40 CFR 60.5397a(g)(2)-(4); 40 CFR 60.5397a(g)(6); 40 CFR 60.5397a(h)-(j); 40 CFR 60.5410a(j); 40 CFR 60.5415a(h); 40 CFR 60.5420a(a)(1); 40 CFR 60.5420a(b)(1); 40 CFR 60.5420a(b)(7)(i)(A)-(B); 40 CFR 60.5420a(b)(7)(ii); 40 CFR 60.5420a(b)(11); 40 CFR 60.5420a(b)(13)-(14); 40 CFR 60.5420a(c)(15)(i); 40 CFR 60.5420a(c)(15)(vi)-(vii); 40 CFR 60.5425a; 40 CFR 60.5430a; and 40 CFR pt. 60, subp. OOOOa, Table 3. A copy of 40 CFR pt. 60, subp. OOOOa is included in Appendix F. 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 must 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. OOOOa, Minn. R. 7007.0400, subp. 3, Minn. R. 7007.1150-7007.1500, Minn. R. 7011.3325(B)]

	10001	The Permittee must comply with all applicable requirements of 40 CFR pt. 60, subp. A as follows: 40 CFR 60.1(a)-(c); 40 CFR 60.2; 40 CFR 60.3; 40 CFR 60.4; 40 CFR 60.5; 40 CFR 60.6; 40 CFR 60.7(b); 40 CFR 60.7(f)(3); 40 CFR 60.7(g)-(h); 40 CFR 60.9; 40 CFR 60.12; 40 CFR 60.14, except to the extent any provision in 40 CFR 60.14 conflicts with specific provisions in 40 CFR pt. 60, subp. OOOOa, it is superseded by subp. OOOOa provisions; 40 CFR 60.14(a)-(g); 40 CFR 60.15(a)-(c); 40 CFR 60.15(g); 40 CFR 60.16; 40 CFR 60.17; and 40 CFR 60.19. A copy of 40 CFR pt. 60, subp. A 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. A, 40 CFR pt. 60, subp. OOOOa(Table 3), Minn. R. 7007.0400, subp. 3, Minn. R. 7007.1150-7007.1500, Minn. R. 7011.0050, subp. 1(A), Minn. R. 7011.3325(B), Minn. R. 7017.1010 & 7017.2015, subp. 2, Minn. R. 7019.0100]
	10002	The Permittee must submit initial annual report: Due no later than 90 days after the end of the initial compliance period as determined according to 40 CFR 60.5410a. Subsequent reports are due annually, by the 31st of January (no more than 12 calendar months following the previous report). The report must contain the applicable information identified in 40 CFR 60.5420a(b)(1) and (7). If the Permittee owns or operates more than one affected facility, the Permittee may submit one report for multiple affected facilities provided the report contains all of the information required as specified in paragraphs (b)(1) and (7) of 40 CFR 60.5420a. Multiple collection of fugitive emissions components at a compressor station may be included in a single annual report. Annual reports may coincide with title V reports as long as all the required elements of the annual report are included. The Permittee may arrange with the Administrator a common schedule on which reports required by this part may be submitted as long as the schedule does not extend the reporting period. submit annual report: Due annually, by the 31st of January. [40 CFR 60.5397a(j), 40 CFR 60.5410a(j)(5), 40 CFR 60.5420a(b), 40 CFR 60.5420a(b)(1), 40 CFR 60.5420a(b)(7), 40 CFR 60.5420a(h)(4), Minn. R. 7011.3325(B)]
FUGI 2	3680	Opacity <= 20 percent opacity. [Minn. R. 7011.0715, subp. 1(B)]
	3690	Particulate Matter <= 0.30 grains per dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. [Minn. R. 7011.0715, subp. 1(A)]

	9999	The Permittee must comply with the requirements from 40 CFR pt. 60, subp. OOOOa as required by this permit. If the affected facility, which is each collection of fugitive emissions components at a compressor station, undergoes modification as defined under 40 CFR 60.5365b(j)(3), it triggers the requirements of 40 CFR pt. 60, subp. OOOOb for modification. If 40 CFR pt. 60, subp. OOOOb requirements are triggered due to modification, the affected facility is no longer subject to 40 CFR pt. 60, subp. OOOOa and becomes subject to 40 CFR pt. 60, subp. OOOOb. [40 CFR 60.5365b(i)(3), Minn. R. 7007.0800, 2(A) & (B)]
	10000	The Permittee must comply with all applicable requirements of 40 CFR pt. 60, subp. OOOOa as follows: 40 CFR 60.5360a; 40 CFR 60.5365a(j); 40 CFR 60.5370a(a)-(b); 40 CFR 60.5371a becomes applicable after January 22, 2027; 40 CFR 60.5397a(a)-(e); 40 CFR 60.5397a(f)(2) 40 CFR 60.5397a(g)(2)-(4); 40 CFR 60.5397a(g)(6); 40 CFR 60.5397a(h)-(j); 40 CFR 60.5410a(j); 40 CFR 60.5415a(h); 40 CFR 60.5420a(a)(1); 40 CFR 60.5420a(b)(1); 40 CFR 60.5420a(b)(7)(i)(A)-(B); 40 CFR 60.5420a(b)(7)(ii); 40 CFR 60.5420a(b)(11); 40 CFR 60.5420a(b)(13)-(14); 40 CFR 60.5420a(c)(15)(i); 40 CFR 60.5420a(c)(15)(vi)-(vii); 40 CFR 60.5425a; 40 CFR 60.5430a; and 40 CFR pt. 60, subp. OOOOa, Table 3. A copy of 40 CFR pt. 60, subp. OOOOa is included in Appendix F. 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 must 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. OOOOa, Minn. R. 7007.0400, subp. 3, Minn. R. 7007.1150-7007.1500, Minn. R. 7011.3325(B)]

	10001	The Permittee must comply with all applicable requirements of 40 CFR pt. 60, subp. A as follows: 40 CFR 60.1(a)-(c); 40 CFR 60.2; 40 CFR 60.3; 40 CFR 60.4; 40 CFR 60.5; 40 CFR 60.6; 40 CFR 60.7(b); 40 CFR 60.7(f)(3); 40 CFR 60.7(g)-(h); 40 CFR 60.9; 40 CFR 60.12; 40 CFR 60.14, except to the extent any provision in 40 CFR 60.14 conflicts with specific provisions in 40 CFR pt. 60, subp. OOOOa, it is superseded by subp. OOOOa provisions; 40 CFR 60.14(a)-(g); 40 CFR 60.15(a)-(c); 40 CFR 60.15(g); 40 CFR 60.16; 40 CFR 60.17; and 40 CFR 60.19. A copy of 40 CFR pt. 60, subp. A 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. A, 40 CFR pt. 60, subp. OOOOa(Table 3), Minn. R. 7007.0400, subp. 3, Minn. R. 7007.1150-7007.1500, Minn. R. 7011.0050, subp. 1(A), Minn. R. 7011.3325(B), Minn. R. 7017.1010 & 7017.2015, subp. 2, Minn. R. 7019.0100]
	10002	The Permittee must submit initial annual report: Due no later than 90 days after the end of the initial compliance period as determined according to 40 CFR 60.5410a. Subsequent reports are due annually, by the 31st of January (no more than 12 calendar months following the previous report). The report must contain the applicable information identified in 40 CFR 60.5420a(b)(1) and (7). If the Permittee owns or operates more than one affected facility, the Permittee may submit one report for multiple affected facilities provided the report contains all of the information required as specified in paragraphs (b)(1) and (7) of 40 CFR 60.5420a. Multiple collection of fugitive emissions components at a compressor station may be included in a single annual report. Annual reports may coincide with title V reports as long as all the required elements of the annual report are included. The Permittee may arrange with the Administrator a common schedule on which reports required by this part may be submitted as long as the schedule does not extend the reporting period. submit annual report: Due annually, by the 31st of January. [40 CFR 60.5397a(j), 40 CFR 60.5410a(j)(5), 40 CFR 60.5420a(b), 40 CFR 60.5420a(b)(1), 40 CFR 60.5420a(b)(7), 40 CFR 60.5420a(h)(4), Minn. R. 7011.3325(B)]
FUGI 3	3680	Opacity <= 20 percent opacity. [Minn. R. 7011.0715, subp. 1(B)]
	3690	Particulate Matter <= 0.30 grains per dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. [Minn. R. 7011.0715, subp. 1(A)]

	9999	The Permittee must comply with the requirements from 40 CFR pt. 60, subp. OOOOa as required by this permit. If the affected facility, which is each collection of fugitive emissions components at a compressor station, undergoes modification as defined under 40 CFR 60.5365b(j)(3), it triggers the requirements of 40 CFR pt. 60, subp. OOOOb for modification. If 40 CFR pt. 60, subp. OOOOb requirements are triggered due to modification, the affected facility is no longer subject to 40 CFR pt. 60, subp. OOOOa and becomes subject to 40 CFR pt. 60, subp. OOOOb. [40 CFR 60.5365b(i)(3), Minn. R. 7007.0800, 2(A) & (B)]
	10000	The Permittee must comply with all applicable requirements of 40 CFR pt. 60, subp. OOOOa as follows: 40 CFR 60.5360a; 40 CFR 60.5365a(j); 40 CFR 60.5370a(a)-(b); 40 CFR 60.5371a becomes applicable after January 22, 2027; 40 CFR 60.5397a(a)-(e); 40 CFR 60.5397a(f)(2) 40 CFR 60.5397a(g)(2)-(4); 40 CFR 60.5397a(g)(6); 40 CFR 60.5397a(h)-(j); 40 CFR 60.5410a(j); 40 CFR 60.5415a(h); 40 CFR 60.5420a(a)(1); 40 CFR 60.5420a(b)(1); 40 CFR 60.5420a(b)(7)(i)(A)-(B); 40 CFR 60.5420a(b)(7)(ii); 40 CFR 60.5420a(b)(11); 40 CFR 60.5420a(b)(13)-(14); 40 CFR 60.5420a(c)(15)(i); 40 CFR 60.5420a(c)(15)(vi)-(vii); 40 CFR 60.5425a; 40 CFR 60.5430a; and 40 CFR pt. 60, subp. OOOOa, Table 3. A copy of 40 CFR pt. 60, subp. OOOOa is included in Appendix F. 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 must 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. OOOOa, Minn. R. 7007.0400, subp. 3, Minn. R. 7007.1150-7007.1500, Minn. R. 7011.3325(B)]

	10001	The Permittee must comply with all applicable requirements of 40 CFR pt. 60, subp. A as follows: 40 CFR 60.1(a)-(c); 40 CFR 60.2; 40 CFR 60.3; 40 CFR 60.4; 40 CFR 60.5; 40 CFR 60.6; 40 CFR 60.7(b); 40 CFR 60.7(f)(3); 40 CFR 60.7(g)-(h); 40 CFR 60.9; 40 CFR 60.12; 40 CFR 60.14, except to the extent any provision in 40 CFR 60.14 conflicts with specific provisions in 40 CFR pt. 60, subp. OOOOa, it is superseded by subp. OOOOa provisions; 40 CFR 60.14(a)-(g); 40 CFR 60.15(a)-(c); 40 CFR 60.15(g); 40 CFR 60.16; 40 CFR 60.17; and 40 CFR 60.19. A copy of 40 CFR pt. 60, subp. A 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. A, 40 CFR pt. 60, subp. OOOOa(Table 3), Minn. R. 7007.0400, subp. 3, Minn. R. 7007.1150-7007.1500, Minn. R. 7011.0050, subp. 1(A), Minn. R. 7011.3325(B), Minn. R. 7017.1010 & 7017.2015, subp. 2, Minn. R. 7019.0100]
	10002	The Permittee must submit initial annual report: Due no later than 90 days after the end of the initial compliance period as determined according to 40 CFR 60.5410a. Subsequent reports are due annually, by the 31st of January (no more than 12 calendar months following the previous report). The report must contain the applicable information identified in 40 CFR 60.5420a(b)(1) and (7). If the Permittee owns or operates more than one affected facility, the Permittee may submit one report for multiple affected facilities provided the report contains all of the information required as specified in paragraphs (b)(1) and (7) of 40 CFR 60.5420a. Multiple collection of fugitive emissions components at a compressor station may be included in a single annual report. Annual reports may coincide with title V reports as long as all the required elements of the annual report are included. The Permittee may arrange with the Administrator a common schedule on which reports required by this part may be submitted as long as the schedule does not extend the reporting period. submit annual report: Due annually, by the 31st of January. [40 CFR 60.5397a(j), 40 CFR 60.5410a(j)(5), 40 CFR 60.5420a(b), 40 CFR 60.5420a(b)(1), 40 CFR 60.5420a(b)(7), 40 CFR 60.5420a(h)(4), Minn. R. 7011.3325(B)]

	Cummins Inc Columbus, Indiana 47202-3005 **EXHAUST EMISSIONS DATA SHEET**	Base Engine Model: **GTA50E** Engine Critical Parts List: **4864**	Curve Number **FR60378** Date: **1/22/2018**	G-Drive **GTA** **1**

Displacement:	**3068 cu. in. (50 L)**	Bore x Stroke:	**6.25 x 6.25 in. (159 x 159 mm)**
Cylinders:	**16**	Aspiration:	**Turbocharged and Coolant-Air Aftercooled**

Engine Speed	Standby Power		Prime Power		Continuous Power	
rpm	kWm	bhp	kWm	bhp	kWm	bhp
1800	846	1135	N/A	N/A	N/A	N/A

US EPA NSPS (1800 rpm)

This engine is in compliance with the US EPA NSPS for Stationary regulations:

Component	g/hp-hr	g/kW-hr
NOx (Oxides of Nitrogen)	1.0	1.3
CO (Carbon Monoxide)	2.0	2.7
HC (Hydrocarbons)	0.7	0.9

Test Methods and Conditions:
To demonstrate compliance with the regulated levels shown above, tests were conducted per 40 CFR 1065 and weighted at load points prescribed in 40 CFR 60 JJJJ (ISO 8178-4: 1996(I

Fuel Specifications:
900 - 2300 BTU LHV Natural Gas: Pipeline Natural Gas

Reference:
25°C (77°F) Air Inlet Temperature, 40°C (104°F) Fuel Inlet Temperature, 100 kPa (29.53 in Hg) Barometric Pressure; 10.7 g/kg (75 grains H2O/lb) of dry air Humidity (required for NOx Intake Restriction set to maximum allowable limit for clean filter; Exhaust Back Pressure set to maximum allowable limit.

Data was taken from a single engine test according to the test methods, fuel specification and reference conditions stated above and is subject to engine-to-engine variability. Test conducted alternate test methods, instrumentation, fuel, or reference conditions can yield different results.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
2019 MODEL YEAR
CERTIFICATE OF CONFORMITY
WITH THE CLEAN AIR ACT

OFFICE OF TRANSPORTATION AND AIR QUALITY
ANN ARBOR, MICHIGAN 48105

Certificate Issued To: **Cummins Inc.**
(U.S. Manufacturer or Importer)

Certificate Number: KCEXB38.0AAA-013

Effective Date: 12/18/2018

Expiration Date: 12/31/2019

Byron J. Bunker, Division Director
Compliance Division

Issue Date: 12/18/2018

Revision Date: N/A

Manufacturer: Cummins Inc.
Engine Family: KCEXB38.0AAA
Mobile/Stationary Certification Type: Stationary
Fuel : Natural Gas (CNG/LNG)
LPG/Propane
Emission Standards :
Stationary Part 1048
NMHC + NOx (g/kW-hr) : 2.7
HC + NOx (g/kW-hr) : 2.7
CO (g/kW-hr) : 4.4
Part 60 Subpart JJJJ Table 1
NOx (g/Hp-hr) : 1.0
VOC (g/Hp-hr) : 0.7
CO (g/Hp-hr) : 2.0
Emergency Use Only : N

Pursuant to Section 213 of the Clean Air Act (42 U.S.C. section 7547) and 40 CFR Part 60, 1065, 1068, and 60 (stationary only and combined stationary and mobile) and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following nonroad engines, by engine family, more fully described in the documentation required by 40 CFR Part 60 and produced in the stated model year.

This certificate of conformity covers only those new nonroad spark-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Part 60 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 60. This certificate of conformity does not cover nonroad engines imported prior to the effective date of the certificate.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 1068.20 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Part 60. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void *ab initio* for other reasons specified in 40 CFR Part 60.

This certificate does not cover large nonroad engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.