

**Technical Support Document  
for  
Draft Air Emission Permit No. 10900011-101**

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 preliminary determination to issue the draft permit.

**1. General information**

**1.1 Applicant and stationary source location**

**Table 1. Applicant and source address**

<b>Applicant/Address</b>	<b>Stationary source/Address (SIC Code: 4911 - Electric Services)</b>
Rochester Public Utilities 4000 E River Rd NE Rochester, MN 55906	Rochester Public Utilities - Silver Lake Plant 425 W Silver Lake Dr NE Rochester, MN 55906-3607
Contact: Jim Lafflam Phone: 507-292-1202	

**1.2 Facility description**

The Rochester Public Utilities - Silver Lake facility is an existing steam generating station consisting of two natural-gas fired boilers and one small natural-gas fired heating boiler. Steam produced at Silver Lake is sold to the Franklin Heating Station, a Minnesota General Partnership by Mayo Clinic (Mayo) via a high-pressure steam line from the facility to Mayo's Prospect Plant, where it is used to generate electricity via steam, with the waste heat used for building heating. The total amount of steam sold is limited to 150,000 pounds per hour (lb/hr), on a 12-month rolling average basis. The pollutants of concern are Nitrogen Oxides (NO<sub>x</sub>) and Carbon Monoxide (CO).

**1.3 Description of the activities allowed by this permit action**

This permit action is a Part 70 Reissuance. No construction is being authorized with this permit action.

**Table 2. Notifications and applications included in this action**

<b>Date received</b>	<b>Application/Notification type and description</b>
05/13/2020	Part 70 Reissuance (IND20200002) with supplemental information received on 06/09/2026

**1.4 Facility emissions**

**Table 3. Total facility potential to emit summary**

	<b>PM (tpy)</b>	<b>PM<sub>10</sub> (tpy)</b>	<b>PM<sub>2.5</sub> (tpy)</b>	<b>SO<sub>2</sub> (tpy)</b>	<b>NO<sub>x</sub> (tpy)</b>	<b>CO (tpy)</b>	<b>VOC (tpy)</b>	<b>CO<sub>2</sub>e (tpy)</b>	<b>All HAPs (tpy)</b>
Total facility limited potential emissions	14.2	14.2	14.2	1.12	515	157	10.3	230,100	3.53
Total facility actual emissions (2025)	0.0799	0.0799	0.0792	0.147	68.5	20.6	1.35	*	

\* Not reported in Minnesota emission inventory.

**Table 4. Facility classification**

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

## 1.5 Changes to permit

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

- The permit has been updated to reflect current MPCA templates and standard citation formatting;
- Completed requirements and the requirements for equipment that has been removed have been deleted;
- Steam flow meters (EQUI 42 and EQUI 43) and the data acquisition system (EQUI 41) were added to the permit. The subject items were already present at the facility and their additions help demonstrate compliance;
- Some requirements have been reordered or moved to help with clarity (i.e., similar requirements are grouped);
- The insignificant activities for the facility have been updated to reflect the current activities on site as well as to reflect changes to these rules since the last permit was issued; and
- Appendix B was added to the permit for reference to 40 CFR Part 60, Subpart A - General Provisions.

## 2. Regulatory and/or statutory basis

### 2.1 New source review (NSR)

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

### 2.2 Part 70 permit program

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

### 2.3 New source performance standards (NSPS)

The Permittee has stated the facility is subject to New Source Performance Standards for one emission unit.

The Steam Heating Boiler (EQUI 18) is subject to 40 CFR pt. 60, subp. Dc for Small Industrial-Commercial Institutional Steam Generating Units. SO<sub>2</sub>, PM, and opacity limits do not apply to the EQUI 18, because the unit combusts natural gas. The facility is required to comply with reporting and recordkeeping requirements.

Boiler Unit #2 (EQUI 2) and Boiler Unit #3 (EQUI 4) are not subject to 40 CFR pt. 60, subp. Dc for Small Industrial-Commercial Institutional Steam Generating Units. Both units' construction began before June 9<sup>th</sup>, 1989. No NSPS subp. Dc emission limits or requirements apply.

### 2.4 National emission standards for hazardous air pollutants (NESHAP)

The Permittee has stated that no National Emission Standards for Hazardous Air Pollutants apply at the facility.

All boilers (EQUIs 2, 4, and 18) are not subject to 40 CFR pt. 63, subp. JJJJJ (NESHAP subp. JJJJJ). Filterable PM, mercury, and CO limits and other applicable NESHAP, subp. JJJJJ requirements do not apply to the boilers, because the units are all gas-fired boilers.

### 2.5 State implementation plan (SIP)

The facility is located in a "maintenance area" (formerly a nonattainment area) for PM<sub>10</sub> and SO<sub>2</sub> and is subject to numerous state implementation plan (SIP) requirements to restrict emissions of those pollutants. The previous permit 10900011-005 contained expiring SIP requirements for coal. EPA approved the updated SIP requirements on March 10<sup>th</sup>, 2017, and only conditions cited as "Title I Condition: 40 CFR Section 50.4, SO<sub>2</sub> SIP; Title I Condition: 40 CFR pt. 52, subp. Y" and "Title I Condition: 40 CFR Section 50.6, PM<sub>10</sub> SIP; Title I Condition: 40 CFR pt. 52, subp. Y" apply. The expired SIP requirements have been removed.

## 2.6 Compliance assurance monitoring (CAM)

CAM does not apply to any of the units at the facility.

## 2.7 Regulatory Overview

**Table 5. Regulatory overview of facility**

Subject item*	Applicable regulations	Rationale
COMG 1 – Boilers, Units #2 and #3	Title I Condition: Avoid major source under 40 CFR 52	Operational limit taken to ensure that actual operating conditions are consistent with the assumptions made in the PSD permit application for permit #10900011-003.
EQUI 2 – Boiler, Unit #2	Minn. R. 7011.0510	Standards of Performance for Existing Indirect Heating Equipment. Applicability criteria include: <ul style="list-style-type: none"> <li>• The unit was constructed before January 31, 1977;</li> <li>• The unit burns gaseous fuels;</li> <li>• The facility is located outside of the cities in Table I of the rule;</li> <li>• The unit capacity is less than 250 MMBtu/hr; and</li> <li>• The facility has greater than 250 MMBtu/hr of direct and indirect heating equipment.</li> </ul>
	Title I Condition: PM <sub>10</sub> SIP	SIP. Fuel restriction of natural gas only set at EQUI 2 to protect PM <sub>10</sub> NAAQS.
	Title I Condition: SO <sub>2</sub> SIP	SIP. Fuel restriction of natural gas only set at EQUI 2 to protect SO <sub>2</sub> NAAQS.
EQUI 4 – Boiler, Unit #3	Minn. R. 7011.0510	Standards of Performance for Existing Indirect Heating Equipment. Applicability criteria include: <ul style="list-style-type: none"> <li>• The unit was constructed before January 31, 1977;</li> <li>• The unit burns gaseous fuels;</li> <li>• The facility is located outside of the cities in Table I of the rule;</li> <li>• The unit capacity is greater than 250 MMBtu/hr; and</li> <li>• The facility has greater than 250 MMBtu/hr of direct and indirect heating equipment.</li> </ul>
	Title I Condition: PM <sub>10</sub> SIP	SIP. Fuel restriction of natural gas only set at EQUI 2 to protect PM <sub>10</sub> NAAQS.
	Title I Condition: SO <sub>2</sub> SIP	SIP. Fuel restriction of natural gas only set at EQUI 2 to protect SO <sub>2</sub> NAAQS.
EQUI 18 – Steam Heating Boiler	40 CFR pt. 60, subp. Dc	NSPS for Small Industrial-Commercial-Institutional Steam Generating Units. Applicability criteria include: <ul style="list-style-type: none"> <li>• The unit commenced construction after June 9, 1989;</li> <li>• The unit has a capacity greater than or equal to 10 MMBtu/hr and less than or equal to 100 MMBtu/hr; and</li> <li>• The unit burns only natural gas.</li> </ul>

\*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 as well as detailed spreadsheets and supporting information prepared by the MPCA and the Permittee.

#### 3.2 Environmental Justice

The Minnesota Pollution Control Agency's (MPCA) mission is to protect and improve our environment and enhance human health. The agency is committed to ensuring that pollution does not have a disproportionate impact on any group of people. The MPCA defines environmental justice as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. The impacts of pollution vary across Minnesota, and historical inequities have exposed some populations such as people of color, low-income households, and people with underlying health issues to greater health impacts from pollution.

Permits are an important tool used to protect the environment and people in Minnesota. The permitting process is a critical opportunity to identify activities and pollutants that pose the greatest risk to neighborhoods of environmental concern, and to evaluate potential pollution reduction efforts. Permit actions also allow for community involvement in an accessible and meaningful manner. This will allow the MPCA and the facilities to understand and address community concerns and establish or enhance relationships with the surrounding community members.

As a part of this permit action, there were concentrated conversations internally and with the facility about community outreach, on how to inform and involve community members early and often in the process.

#### 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 6. Monitoring**

Subject Item*	Requirement (basis)	What is the monitoring?	Why is this monitoring adequate?
COMG 1 – Boilers, Units #2 and #3	Steam Flow $\leq$ 150,000 lb/hr 12-month rolling average. [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]	Flow meter recorder, steam flow calculations, daily and monthly recordkeeping.	The Permittee has installed two meters (EQUI 42 and EQUI 43) that records the steam flow produced. The Permittee documents daily average steam flow rates and calculates monthly 12-month rolling averages, which can then be compared to the limit to assure compliance.

Subject Item*	Requirement (basis)	What is the monitoring?	Why is this monitoring adequate?
EQUI 2 – Boiler, Unit #2  EQUI 4 – Boiler, Unit #3	Filterable PM ≤ 0.6 lb/MMBtu.  Opacity ≤ 20%, except for one six-minute period per hour of ≤ 60%. [Minn. R. 7011.0510]  Fuel type: Natural gas only. [Title I Condition: SO <sub>2</sub> SIP, Title I Condition: PM <sub>10</sub> SIP, Title I Condition: 40 CFR pt. 52, subp. Y]	Recordkeeping of fuel purchases.	All units use only 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. The PTE for each unit, using AP-42, is 0.0077 lbs/MMBtu of PM compared to the rule limit of 0.6 lbs/MMBtu of PM.
EQUI 18 – Steam Heating Boiler	Fuel type: Natural gas only. [Title I Condition: Avoid major source under 40 CFR § 52.21(b)(1)(i), NSPS, Subpart Dc]	Monthly recordkeeping of the type and amount of fuel used.	Monitoring required by 40 CFR pt. 60, subp. Dc is adequate to demonstrate compliance with the standard.

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

### 3.4 Insignificant activities

Rochester Public Utilities - Silver Lake Plant 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.

**Table 7. Insignificant activities**

Insignificant activity	General applicable emission limit	Discussion
Emissions from a laboratory, as defined in Minn. R. 7007.1300, subp. 3(D)	PM, variable depending on airflow. Opacity ≤ 20%. (Minn. R. 7011.0710/0715)	These are very small, intermittent, bench-top operations that typically do not even have any emissions. It is highly unlikely that they could violate the applicable requirement.
Brazing, soldering, torch-cutting, or welding equipment	PM, variable depending on airflow. Opacity ≤ 20%. (Minn. R. 7011.0710/0715)	The facility uses 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.
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 permit contains a general requirement that this standard must be met.

### 3.5 Permit organization and standard language

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.

### 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 Rochester Public Utilities - Silver Lake Plant the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 10900011-101 and this TSD, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff members on permit team:

- Emmy Childs (permit engineer)
- Leah Waller (data coordinator)
- Megan Kuhl-Stennes (SIP team member)
- Daequan McAdam (environmental justice coordinator)
- Derek Nelson (peer reviewer)
- Luke Laub (enforcement team member)
- Laurie O'Brien (administrative support)

Tempo Activities: Part 70 Reissuance (IND20200002)

Attachments:

1. PTE summary spreadsheets
2. Subject item inventory and facility requirements

**Attachment 1 – PTE summary spreadsheets**

1a) AQ Facility ID No.: 10900011

1b) Agency Interest ID No.: 587

2) Facility Name: Rochester Public Utilities - Silver Lake Plant

Emissions By Source Table

Boiler #2					Boiler #3					Steam Heat Boiler					Total Facility Emissions Summary Table			
a) Delta ID No.:		EU002			a) Delta ID No.:		EU003			a) Delta ID No.:		EU005						
b) Tempo SI ID No.:		EQUI 2			b) Tempo SI ID No.:		EQUI 4			b) Tempo SI ID No.:		EQUI18						
c)	d)	e) Potential			c)	d)	e) Potential			c)	d)	e) Potential			f)	g) Potential		
Pollutant Name	CAS #	Hourly (lb/hr)	Uncontrolled (tpy)	Limited (tpy)	Pollutant Name	CAS #	Hourly (lb/hr)	Uncontrolled (tpy)	Limited (tpy)	Pollutant Name	CAS #	Hourly (lb/hr)	Uncontrolled (tpy)	Limited (tpy)	Pollutant Name	Hourly (lb/hr)	Uncontrolled (tpy)	Limited (tpy)
PM	N/A	1.35	4.85	4.85	PM	N/A	2.12	9.02	9.02	PM	N/A	0.08	0.35	0.35	PM	3.55	14.2	14.2
PM <sub>10</sub>	N/A	1.35	4.85	4.85	PM <sub>10</sub>	N/A	2.12	9.02	9.02	PM <sub>10</sub>	N/A	0.08	0.35	0.35	PM <sub>10</sub>	3.55	14.2	14.2
PM <sub>2.5</sub>	N/A	1.35	4.85	4.85	PM <sub>2.5</sub>	N/A	2.12	9.02	9.02	PM <sub>2.5</sub>	N/A	0.08	0.35	0.35	PM <sub>2.5</sub>	3.55	14.2	14.2
CO	630-08-0	14.88	53.61	53.61	CO	630-08-0	23.44	99.69	99.69	CO	630-08-0	0.88	3.85	3.85	CO	39.20	157	157
Lead	7439-92-1	0.00	3.191E-04	3.191E-04	Lead	7439-92-1	1.40E-04	5.93E-04	5.93E-04	Lead	7439-92-1	5.24E-06	2.29E-05	2.29E-05	Lead	0.00	9.35E-04	9.35E-04
NO <sub>x</sub>	N/A	49.60	178.70	178.70	NO <sub>x</sub>	N/A	78.13	332.30	332.30	NO <sub>x</sub>	N/A	1.05	4.59	4.59	NO <sub>x</sub>	128.78	516	516
SO <sub>2</sub>	7446-09-5	0.11	0.38	0.38	SO <sub>2</sub>	7446-09-5	0.17	0.71	0.71	SO <sub>2</sub>	7446-09-5	0.01	0.03	0.03	SO <sub>2</sub>	0.28	1.12	1.12
VOC	N/A	0.97	3.51	3.51	VOC	N/A	1.53	6.53	6.53	VOC	N/A	5.76E-02	2.52E-01	2.52E-01	VOC	2.57	10.3	10.3
Total HAPs	N/A	0.33	1.20	1.20	Total HAPs	N/A	5.27E-01	2.24	2.24	Total HAPs	N/A	1.98E-02	8.66E-02	8.66E-02	Total HAPs	0.88	3.53	3.53
Arsenic	7440-38-2	3.54E-05	1.28E-04	1.28E-04	Arsenic	7440-38-2	5.58E-05	2.37E-04	2.37E-04	Arsenic	7440-38-2	2.10E-06	9.18E-06	9.18E-06	Arsenic	9.33E-05	3.74E-04	3.74E-04
Benzene	71-43-2	3.72E-04	1.34E-03	1.34E-03	Benzene	71-43-2	5.86E-04	2.49E-03	2.49E-03	Benzene	71-43-2	2.20E-05	9.64E-05	9.64E-05	Benzene	9.80E-04	3.93E-03	3.93E-03
Beryllium	7440-41-7	2.13E-06	7.66E-06	7.66E-06	Beryllium	7440-41-7	3.35E-06	1.42E-05	1.42E-05	Beryllium	7440-41-7	1.26E-07	5.51E-07	5.51E-07	Beryllium	5.60E-06	2.25E-05	2.25E-05
Cadmium	7440-43-9	1.95E-04	7.02E-04	7.02E-04	Cadmium	7440-43-9	3.07E-04	1.31E-03	1.31E-03	Cadmium	7440-43-9	1.15E-05	5.05E-05	5.05E-05	Cadmium	5.13E-04	2.06E-03	2.06E-03
Total Chromium (Cr)	7440-47-3	2.48E-04	8.94E-04	8.94E-04	Total Chromium (Cr)	7440-47-3	3.91E-04	1.66E-03	1.66E-03	Total Chromium (Cr)	7440-47-3	1.47E-05	6.42E-05	6.42E-05	Total Chromium (Cr)	6.53E-04	2.62E-03	2.62E-03
Cobalt	7440-48-4	1.49E-05	5.36E-05	5.36E-05	Cobalt	7440-48-4	2.34E-05	9.97E-05	9.97E-05	Cobalt	7440-48-4	8.80E-07	3.85E-06	3.85E-06	Cobalt	3.92E-05	1.57E-04	1.57E-04
Dichlorobenzene	25321-22-6	2.13E-04	7.66E-04	7.66E-04	Dichlorobenzene	25321-22-6	3.35E-04	1.42E-03	1.42E-03	Dichlorobenzene	25321-22-6	1.26E-05	5.51E-05	5.51E-05	Dichlorobenzene	5.60E-04	2.25E-03	2.25E-03
Formaldehyde	50-00-0	1.33E-02	4.79E-02	4.79E-02	Formaldehyde	50-00-0	2.09E-02	8.90E-02	8.90E-02	Formaldehyde	50-00-0	7.86E-04	3.44E-03	3.44E-03	Formaldehyde	3.50E-02	1.40E-01	1.40E-01
Hexane	110-54-3	3.19E-01	1.15E+00	1.15E+00	Hexane	110-54-3	5.02E-01	2.14E+00	2.14E+00	Hexane	110-54-3	1.89E-02	8.26E-02	8.26E-02	Hexane	8.40E-01	3.37	3.37
Manganese	7439-96-5	6.73E-05	2.43E-04	2.43E-04	Manganese	7439-96-5	1.06E-04	4.51E-04	4.51E-04	Manganese	7439-96-5	3.98E-06	1.74E-05	1.74E-05	Manganese	1.77E-04	7.11E-04	7.11E-04
Mercury	7439-97-6	4.61E-05	1.66E-04	1.66E-04	Mercury	7439-97-6	7.26E-05	3.09E-04	3.09E-04	Mercury	7439-97-6	2.72E-06	1.19E-05	1.19E-05	Mercury	1.21E-04	4.86E-04	4.86E-04
Naphthalene	91-20-3	1.08E-04	3.89E-04	3.89E-04	Naphthalene	91-20-3	1.70E-04	7.24E-04	7.24E-04	Naphthalene	91-20-3	6.39E-06	2.80E-05	2.80E-05	Naphthalene	2.85E-04	1.14E-03	1.14E-03
Nickel	7440-02-0	3.72E-04	1.34E-03	1.34E-03	Nickel	7440-02-0	5.86E-04	2.49E-03	2.49E-03	Nickel	7440-02-0	2.20E-05	9.64E-05	9.64E-05	Nickel	9.80E-04	3.93E-03	3.93E-03
POM	N/A	1.24E-04	4.46E-04	4.46E-04	POM	N/A	1.95E-04	8.29E-04	8.29E-04	POM	N/A	7.31E-06	3.20E-05	3.20E-05	POM	3.26E-04	1.31E-03	1.31E-03
Selenium	7782-49-2	4.25E-06	1.53E-05	1.53E-05	Selenium	7782-49-2	6.70E-06	2.85E-05	2.85E-05	Selenium	7782-49-2	2.51E-07	1.10E-06	1.10E-06	Selenium	1.12E-05	4.49E-05	4.49E-05
Toluene	108-88-3	6.02E-04	2.17E-03	2.17E-03	Toluene	108-88-3	9.49E-04	4.04E-03	4.04E-03	Toluene	108-88-3	3.56E-05	1.56E-04	1.56E-04	Toluene	1.59E-03	6.36E-03	6.36E-03
CO <sub>2</sub>	124-38-9	21761	78405	78405	CO <sub>2</sub>	124-38-9	34280	145792	145792	CO <sub>2</sub>	124-38-9	1287	5637	5637	CO <sub>2</sub>	57329	229833	229833
CH <sub>4</sub>	74-82-8	0.451	1.63	1.63	CH <sub>4</sub>	74-82-8	7.11E-01	3.02E+00	3.02E+00	CH <sub>4</sub>	74-82-8	2.67E-02	1.17E-01	1.17E-01	CH <sub>4</sub>	1.19	4.76	4.76
N <sub>2</sub> O	10024-97-2	0.0451	0.163	0.163	N <sub>2</sub> O	10024-97-2	7.11E-02	3.02E-01	3.02E-01	N <sub>2</sub> O	10024-97-2	2.67E-03	1.17E-02	1.17E-02	N <sub>2</sub> O	0.12	0.48	0.48
CO <sub>2</sub> e	124-38-9	21786	78493	78493	CO <sub>2</sub> e	124-38-9	34319	145956	145956	CO <sub>2</sub> e	124-38-9	1288	5643	5643	CO <sub>2</sub> e	57393	230093	230093

**EQUI 2 - Boiler #2 Potential-To-Emit**

Heat Content: 1,050 MMBtu/MMscf NATURAL GAS

Maximum Heat Input for Boiler 2: 186.0 MMBtu/Hr (1-Hr); 153.0 MMBtu/Hr (24-Hr)

Pollutant	Emission Factor (EF)	Max Hourly Emission Rate	Uncontrolled Emissions	Controlled Emissions	Controlled Emissions
	(lb/MMBtu)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)
PM	7.24E-03	1.35	4.85	1.35	4.85
PM <sub>10</sub>	7.24E-03	1.35	4.85	1.35	4.85
PM <sub>2.5</sub>	7.24E-03	1.35	4.85	1.35	4.85
NO <sub>x</sub>	2.67E-01	49.6	179	49.6	179
SO <sub>2</sub>	5.71E-04	0.106	0.383	0.106	0.383
CO	8.00E-02	14.9	53.6	14.9	53.6
VOC	5.24E-03	0.97	3.51	0.97	3.51
Lead	4.76E-07	8.86E-05	3.19E-04	8.86E-05	3.19E-04

Emission factors from AP-42 Table 1.1 for NOx, CO, and Lead, and Table 1.2 for PM, PM10, PM2.5, SO2, and VOC.

Calculations assume PM = PM2.5 = PM10

Maximum Heat Input for Boiler 2: 186.0 MMBtu/Hr (1-Hr); 153.0 MMBtu/Hr (24-Hr)

**Hazardous Air Pollutants**

HAP Name (CAS)	Emission Factor <sup>1</sup>	Emission Rate	Uncontrolled Emissions	Controlled Emissions
	(lbs/MMscf)	(lbs/hr)	(tons/yr)	(tons/yr)
Arsenic [7440-38-2]	2.00E-04	3.54E-05	1.28E-04	1.28E-04
Benzene [71-43-2]	2.10E-03	3.72E-04	1.34E-03	1.34E-03
Beryllium [7440-41-7]	1.20E-05	2.13E-06	7.66E-06	7.66E-06
Cadmium [7440-43-9]	1.10E-03	1.95E-04	7.02E-04	7.02E-04
Chromium [7440-47-3]	1.40E-03	2.48E-04	8.94E-04	8.94E-04
Cobalt [7440-48-4]	8.40E-05	1.49E-05	5.36E-05	5.36E-05
Dichlorobenzene [25321-22-6]	1.20E-03	2.13E-04	7.66E-04	7.66E-04
Formaldehyde [50-00-0]	7.50E-02	1.33E-02	4.79E-02	4.79E-02
Hexane [110-54-3]	1.80	0.319	1.15	1.15
Manganese [7439-96-5]	3.80E-04	6.73E-05	2.43E-04	2.43E-04
Mercury [7439-97-6]	2.60E-04	4.61E-05	1.66E-04	1.66E-04
Naphthalene [91-20-3]	6.10E-04	1.08E-04	3.89E-04	3.89E-04
Nickel [7440-02-0]	2.10E-03	3.72E-04	1.34E-03	1.34E-03
POM <sup>2</sup>	6.98E-04	1.24E-04	4.46E-04	4.46E-04
Selenium [7782-49-2]	2.40E-05	4.25E-06	1.53E-05	1.53E-05
Toluene [108-88-3]	3.40E-03	6.02E-04	2.17E-03	2.17E-03
Total HAPs		0.334	1.20	1.20

<sup>1</sup>Emission factors from AP-42, Section 1.4 "Natural Gas Combustion", Tables 1.4-3 and 1.4-4 (July 1998)

<sup>2</sup>Total POM emission factor is equal to the sum of the individual POM compounds, includes Naphthalene

POM Emission Factors	
Pollutant	EF (lb/MMscf)
2-Methylnaphthalene	2.40E-05
3-Methylcholanthrene	1.80E-06
7,12-Dimethylbenz(a)anthracene	1.60E-05
Acenaphthene	1.80E-06
Acenaphthylene	1.80E-06
Anthracene	2.40E-06
Benz(a)anthracene	1.80E-06
Benzo(a)pyrene	1.20E-06
Benzo(b)fluoranthene	1.80E-06
Benzo(g,h,i)perylene	1.20E-06
Benzo(k)fluoranthene	1.80E-06
Chrysene	1.80E-06
Dibenzo(a,h)anthracene	1.20E-06
Fluoranthene	3.00E-06
Fluorene	2.80E-06
Indeno(1,2,3-c,d)pyrene	1.80E-06
Phenanthrene	1.70E-05
Pyrene	5.00E-06
Naphthalene	6.10E-04
Total	6.98E-04

**EQUI 4 - Boiler #3 Potential -To-Emit**

Heat Content: 1,050 MMBtu/MMscf NATURAL GAS

Maximum Heat Input for Boiler 3: 293.0 MMBtu/Hr (1-Hr); 284.5 MMBtu/Hr (24-Hr)

Pollutant	Emission Factor (EF)	Max Hourly Emission Rate	Uncontrolled Emissions	Controlled Emissions	Controlled Emissions
	(lb/MMBtu)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)
PM	7.24E-03	2.12	9.02	2.12	9.02
PM <sub>10</sub>	7.24E-03	2.12	9.02	2.12	9.02
PM <sub>2.5</sub>	7.24E-03	2.12	9.02	2.12	9.02
NO <sub>x</sub>	2.67E-01	78.13	332.3	78.13	332.3
SO <sub>2</sub>	5.71E-04	0.167	0.712	0.167	0.712
CO	8.00E-02	23.4	99.7	23.4	99.7
VOC	5.24E-03	1.53	6.53	1.53	6.53
Lead	4.76E-07	1.40E-04	5.93E-04	1.40E-04	5.93E-04

Emission factors from AP-42 Table 1.1 for NO<sub>x</sub>, CO, and Lead, and Table 1.2 for PM, PM10, PM2.5, SO<sub>2</sub>, and VOC.

Calculations assume PM = PM2.5 = PM10

Maximum Heat Input for Boiler 3 293.0 MMBtu/Hr (1-Hr); 284.5 MMBtu/Hr (24-Hr)

**Hazardous Air Pollutants**

HAP Name (CAS)	Emission Factor <sup>1</sup>	Emission Rate	Uncontrolled Emissions	Controlled Emissions
	(lbs/MMscf)	(lbs/hr)	(tons/yr)	(tons/yr)
Arsenic [7440-38-2]	2.00E-04	5.58E-05	2.37E-04	2.37E-04
Benzene [71-43-2]	2.10E-03	5.86E-04	2.49E-03	2.49E-03
Beryllium [7440-41-7]	1.20E-05	3.35E-06	1.42E-05	1.42E-05
Cadmium [7440-43-9]	1.10E-03	3.07E-04	1.31E-03	1.31E-03
Chromium [7440-47-3]	1.40E-03	3.91E-04	1.66E-03	1.66E-03
Cobalt [7440-48-4]	8.40E-05	2.34E-05	9.97E-05	9.97E-05
Dichlorobenzene [25321-22-6]	1.20E-03	3.35E-04	1.42E-03	1.42E-03
Formaldehyde [50-00-0]	7.50E-02	2.09E-02	8.90E-02	8.90E-02
Hexane [110-54-3]	1.80	0.502	2.14	2.14
Manganese [7439-96-5]	3.80E-04	1.06E-04	4.51E-04	4.51E-04
Mercury [7439-97-6]	2.60E-04	7.26E-05	3.09E-04	3.09E-04
Naphthalene [91-20-3]	6.10E-04	1.70E-04	7.24E-04	7.24E-04
Nickel [7440-02-0]	2.10E-03	5.86E-04	2.49E-03	2.49E-03
POM <sup>2</sup>	6.98E-04	1.95E-04	8.29E-04	8.29E-04
Selenium [7782-49-2]	2.40E-05	6.70E-06	2.85E-05	2.85E-05
Toluene [108-88-3]	3.40E-03	9.49E-04	4.04E-03	4.04E-03
Total HAPs		0.527	2.241	2.24

<sup>1</sup>Emission factors from AP-42, Section 1.4 "Natural Gas Combustion", Tables 1.4-3 and 1.4-4 (July 1998)

<sup>2</sup>Total POM emission factor is equal to the sum of the individual POM compounds, includes Naphthalene

POM Emission Factors	
Pollutant	EF (lb/MMscf)
2-Methylnaphthalene	2.40E-05
3-Methylcholanthrene	1.80E-06
7,12-Dimethylbenz(a)anthracene	1.60E-05
Acenaphthene	1.80E-06
Acenaphthylene	1.80E-06
Anthracene	2.40E-06
Benz(a)anthracene	1.80E-06
Benzo(a)pyrene	1.20E-06
Benzo(b)fluoranthene	1.80E-06
Benzo(g,h,i)perylene	1.20E-06
Benzo(k)fluoranthene	1.80E-06
Chrysene	1.80E-06
Dibenzo(a,h)anthracene	1.20E-06
Fluoranthene	3.00E-06
Fluorene	2.80E-06
Indeno(1,2,3-c,d)pyrene	1.80E-06
Phenanthrene	1.70E-05
Pyrene	5.00E-06
Naphthalene	6.10E-04
Total	6.98E-04

**EQUI 18 - Steam Heating Boiler Potential-To-Emit**

Heat Content: 1,050 MMBtu/MMscf NATURAL GAS

Maximum Heat Input for Steam Heating Boiler (EQUI18): 11 MMBtu/Hr

Pollutant	Emission Factor (EF)	Max Hourly Emission Rate	Uncontrolled Emissions	Controlled Emissions	Controlled Emissions
	(lb/MMBtu)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)
PM	7.24E-03	7.96E-02	0.349	7.96E-02	0.349
PM <sub>10</sub>	7.24E-03	7.96E-02	0.349	7.96E-02	0.349
PM <sub>2.5</sub>	7.24E-03	7.96E-02	0.349	7.96E-02	0.349
NO <sub>x</sub>	9.52E-02	1.05	4.59	1.05E+00	4.589
SO <sub>2</sub>	5.71E-04	6.29E-03	2.75E-02	6.29E-03	2.75E-02
CO	8.00E-02	0.88	3.85	0.880	3.854
VOC	5.24E-03	5.76E-02	0.252	0.058	0.252
Lead	4.76E-07	5.24E-06	2.29E-05	5.24E-06	2.29E-05

Emission factors from AP-42 Table 1.1 for NO<sub>x</sub>, CO, and Lead, and Table 1.2 for PM, PM10, PM2.5, SO<sub>2</sub>, and VOC.

Calculations assume PM = PM2.5 = PM10

Maximum Heat Input for Steam Heating Boiler (EQUI18): 11 MMBtu/Hr

**Hazardous Air Pollutants**

HAP Name (CAS)	Emission Factor <sup>1</sup>	Emission Rate	Uncontrolled Emissions	Controlled Emissions
	(lbs/MMscf)	(lbs/hr)	(tons/yr)	(tons/yr)
Arsenic [7440-38-2]	2.00E-04	2.10E-06	9.18E-06	9.18E-06
Benzene [71-43-2]	2.10E-03	2.20E-05	9.64E-05	9.64E-05
Beryllium [7440-41-7]	1.20E-05	1.26E-07	5.51E-07	5.51E-07
Cadmium [7440-43-9]	1.10E-03	1.15E-05	5.05E-05	5.05E-05
Chromium [7440-47-3]	1.40E-03	1.47E-05	6.42E-05	6.42E-05
Cobalt [7440-48-4]	8.40E-05	8.80E-07	3.85E-06	3.85E-06
Dichlorobenzene [25321-22-6]	1.20E-03	1.26E-05	5.51E-05	5.51E-05
Formaldehyde [50-00-0]	7.50E-02	7.86E-04	3.44E-03	3.44E-03
Hexane [110-54-3]	1.80	1.89E-02	8.26E-02	8.26E-02
Manganese [7439-96-5]	3.80E-04	3.98E-06	1.74E-05	1.74E-05
Mercury [7439-97-6]	2.60E-04	2.72E-06	1.19E-05	1.19E-05
Naphthalene [91-20-3]	6.10E-04	6.39E-06	2.80E-05	2.80E-05
Nickel [7440-02-0]	2.10E-03	2.20E-05	9.64E-05	9.64E-05
POM <sup>2</sup>	6.98E-04	7.31E-06	3.20E-05	3.20E-05
Selenium [7782-49-2]	2.40E-05	2.51E-07	1.10E-06	1.10E-06
Toluene [108-88-3]	3.40E-03	3.56E-05	1.56E-04	1.56E-04
Total HAPs		1.98E-02	8.66E-02	8.66E-02

<sup>1</sup>Emission factors from AP-42, Section 1.4 "Natural Gas Combustion", Tables 1.4-3 and 1.4-4 (July 1998)

<sup>2</sup>Total POM emission factor is equal to the sum of the individual POM compounds, includes Naphthalene

POM Emission Factors	
Pollutant	EF (lb/MMscf)
2-Methylnaphthalene	2.40E-05
3-Methylcholanthrene	1.80E-06
7,12-Dimethylbenz(a)anthracene	1.60E-05
Acenaphthene	1.80E-06
Acenaphthylene	1.80E-06
Anthracene	2.40E-06
Benz(a)anthracene	1.80E-06
Benzo(a)pyrene	1.20E-06
Benzo(b)fluoranthene	1.80E-06
Benzo(g,h,i)perylene	1.20E-06
Benzo(k)fluoranthene	1.80E-06
Chrysene	1.80E-06
Dibenzo(a,h)anthracene	1.20E-06
Fluoranthene	3.00E-06
Fluorene	2.80E-06
Indeno(1,2,3-c,d)pyrene	1.80E-06
Phenanthrene	1.70E-05
Pyrene	5.00E-06
Naphthalene	6.10E-04
Total	6.98E-04

**Greenhouse Gas Potential-To-Emit for EQUIs 2, 4, and 18**

1,050 MMBtu/MMscf (gas)

Total Heat Input from All Boilers (24-Hr Maximum): 437.50 MMBtu/Hr  
 Percentage of Total served by Boiler 2 (153.0 mm Btu/Hr): 34.97%  
 Percentage of Total served by Boiler 3 (284.5 mm Btu/Hr): 65.03%  
 100%

Gas

Heat Inputs Boiler 2 (MMBtu/Yr): 1,340,280  
 Heat Inputs Boiler 3 (MMBtu/Yr): 2,492,220  
 Total: 3,832,500

**EQUI 2 (Boiler 2)**

Maximum Heat Input for Boiler 2: 186.0 MMBtu/hr (1-Hr); 153.0 MMBtu/hr (24-Hr)

Pollutant	Global Warming Potential	Emission Factor	Hourly Emissions	Uncontrolled Emissions	Uncontrolled CO2e Emissions	Controlled Emissions
		(lb/MMBtu)	(lb/hr)	(tons/yr)	(tons/yr)	(tons/yr)
CO <sub>2</sub>	1	117	21,761	78,405	78,405	78,405
CH <sub>4</sub>	28	2.43E-03	0.451	1.625	45.5	45.5
N <sub>2</sub> O	265	2.43E-04	0.0451	0.1625	43.1	43.1
Total (CO <sub>2</sub> e):			21,786		78,493	78,493

Global warming potentials are from 40 CFR Part 98, Subpart A, Table A-1.

**EQUI 4 (Boiler 3)**

Maximum Heat Input for Boiler 3: 293.0 MMBtu/hr (1-Hr); 284.5 MMBtu/hr (24-Hr)

Pollutant	Global Warming Potential	Emission Factor	Hourly Emissions	Uncontrolled Emissions	Uncontrolled CO2e Emissions	Controlled Emissions
		(lb/MMBtu)	(lb/hr)	(tons/yr)	(tons/yr)	(tons/yr)
CO <sub>2</sub>	1	117	34,280	145,792	145,792	145,792
CH <sub>4</sub>	28	2.43E-03	0.7107	3.02	84.6	84.6
N <sub>2</sub> O	265	2.43E-04	0.0711	0.302	80.1	80.1
Total (CO <sub>2</sub> e):			34,319		145,956	145,956

Global warming potentials are from 40 CFR Part 98, Subpart A, Table A-1.

**EQUI 18 (Steam Heating Boiler)**

Maximum Heat Input for Steam Heating Boiler (EQUI18): 11 MMBtu/hr

Pollutant	Global Warming Potential	Emission Factor	Max Hourly Emission Rate	Uncontrolled Emissions	Uncontrolled CO2e Emissions	Controlled Emissions
		(lb/MMBtu)	(lb/hr)	(tons/yr)	(tons/yr)	(tons/yr)
CO <sub>2</sub>	1	117	1,287	5,637	5,637	5,637
CH <sub>4</sub>	28	2.43E-03	2.67E-02	1.17E-01	3.27	3.27
N <sub>2</sub> O	265	2.43E-04	2.67E-03	1.17E-02	3.10	3.10
Total (CO <sub>2</sub> e):			1,288		5,643	5,643

Global warming potentials are from 40 CFR Part 98, Subpart A, Table A-1.

Rochester Public Utilities -- Silver Lake Plant

Greenhouse Gas Emission Factor Selection

Fuel Parameters

Fuel Type	Pct. Sulfur	Pct. Ash	Heat Value	Units
Natural Gas	0.00%	0.00%	1,020	MMBtu/MMscf

Natural Gas:

Pollutant	40 CFR 98 Emission Factor <sup>1</sup> (lb/MMBtu)	Emission Factor (lb/MMBtu)
CO <sub>2</sub>	117.00	117.00
CH <sub>4</sub>	2.4E-03	2.4E-03
N <sub>2</sub> O	2.4E-04	2.4E-04

Sources

<sup>1</sup>Subpart C of 40 CFR Part 98. CO<sub>2</sub> factor of 53.06 kg/MMBtu from Table C-1 for Natural Gas "Pipeline (Weighted U.S. Average)"; CH<sub>4</sub> and N<sub>2</sub>O factors of 1.1E-03 and 1.1E-04 kg/MMBtu (respectively) from Table C-2 for "Natural Gas". Values converted to lb/MMBtu based on 2.205 kg/lb (0.002205 g/lb).

Rochester Public Utilities -- Silver Lake Plant

Emission Units:

EQUI2	Boiler, Unit #2
EQUI4	Boiler, Unit #3
EQUI18	Steam Heating Boiler

Heat Content	1,050	MMBtu/MMscf	NATURAL GAS
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Total Heat Input from All Boilers (24-Hr Maximum):	438	MMBtu/Hr
Percentage of Total served by Boiler 2 (153.0 mm Btu/Hr):	35.0%	
Percentage of Total served by Boiler 3 (284.5 mm Btu/Hr):	65.0%	
Total:	100.0%	

	<u>Gas</u>
Prorated Heat Inputs Boiler 2 (MMBtu/Yr):	1,340,280
Prorated Heat Inputs Boiler 3 (MMBtu/Yr):	2,492,220
Total:	3,832,500

**Attachment 2 – Subject item inventory and facility requirements**

SI List

AI ID (Name): 587 (Rochester Public Utilities - Silver Lake Plant)  
 Activity: IND20200002

SI Category	SI Type	Subject Item ID	Delta Designation	Description
Activity	Insignificant Air Emissions Activity	ACTV 3	Null	All AI's
Agency Interest	Conventional Site	AISI 587	Null	Null
Component Group	Air Component Group	COMG 1	GP001	Boilers, Units #2 and #3
Equipment	Boiler	EQUI 2	EU002	Boiler, Unit #2
		EQUI 4	EU003	Boiler, Unit #3
		EQUI 18	EU005	Steam Heating Boiler
	Data Acquisition System	EQUI 41	Null	DeltaV Continuous Historian
	Parametric Monitor	EQUI 42	Null	Boiler, Unit 2, Steam flowmeter
		EQUI 43	Null	Boiler, Unit 3, Steam flowmeter
Structure	Building	STRU 1	BG001	Silver Lake Plant (tiered building)
		STRU 6	Null	Warehouse #1
		STRU 7	Null	Warehouse #2
		STRU 8	Null	Coal Component Garage
		STRU 9	Null	Coal Thaw Shed
	Stack/Vent	STRU 2	SV001	Boiler #2 Stack
		STRU 3	SV002	Boiler #3 Stack
		STRU 5	SV004	Steam-Heating Boiler stack
Total Facility	Air Quality Total Facility	TFAC 1	10900011	Rochester Public Utilities - Silver Lake

## Insignificant Activities

AI ID (Name): 587 (Rochester Public Utilities - Silver Lake Plant)

Activity: IND20200002

SI Category	SI Type	Status Description	Sub Attribute Description	
Activity	Insignificant Air Emissions Activity	Null	Minn. R. 7007.1300, subp. 3(D)	
			Minn. R. 7007.1300, subp. 3(E)	
			Minn. R. 7007.1300, subp. 3(G)	

Emission Units 1

AI ID (Name): 587 (Rochester Public Utilities - Silver Lake Plant)

Activity: IND2020002

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	
Boiler	EQUI 2	EU002	Boiler, Unit #2	Riley	NB 1711	120,000	pounds/hours	Steam	Not coal burning	N	Null	12/31/1953	12/31/1953	Null	
	EQUI 4	EU003	Boiler, Unit #3	Babcock & Wilcox	NB 20790	220,000	pounds/hours	Steam	Not coal burning	N	Null	11/30/1962	11/30/1962	Null	
	EQUI 18	EU005	Steam Heating Boiler	Superior Boiler Works	4-5-1276-S15	7,700	pounds/hours	Steam	Not coal burning	N	Null	9/7/1993	1/10/1994	Null	

# Component Groups

AI ID (Name): 587 (Rochester Public Utilities - Silver Lake Plant)

Activity: IND20200002

Subject Item ID	Delta Designation	Description	Group Member ID	
COMG 1	GP001	Boilers, Units #2 and #3	EQUI 2	
			EQUI 4	

PTE by SI

AI ID (Name): 587 (Rochester Public Utilities - Silver Lake Plant)  
 Activity: IND20200002

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	Boiler	EQUI 2	EU002	Boiler, Unit #2	1,4-Dichlorobenzene (para-)	0.000213	0.000766	0.000766				
					Arsenic compounds	3.54e-05	0.000128	0.000128				
					Benzene	0.000372	0.00134	0.00134				
					Beryllium Compounds	2.13e-06	7.66e-06	7.66e-06				
					Cadmium compounds	0.000195	0.000702	0.000702				
					Carbon Dioxide	21,761	78,405	78,405				
					Carbon Dioxide Equivalent	21,786	78,493	78,493				
					Carbon Monoxide	14.88	53.61	53.61				
					Chromium compounds	0.000248	0.000894	0.000894				
					Cobalt compounds	1.49e-05	5.36e-05	5.36e-05				
					Formaldehyde	0.0133	0.0479	0.0479				
					HAPs - Total	0.334	1.2	1.2				
					Hexane	0.319	1.15	1.15				
					Lead	8.86e-05	0.000319	0.000319				
					Manganese compounds	6.73e-05	0.000243	0.000243				
					Mercury Compounds	4.61e-05	0.000166	0.000166				
					Methane	0.451	1.63	1.63				
					Naphthalene	0.000108	0.000389	0.000389				
					Nickel compounds	0.000372	0.00134	0.00134				
					Nitrogen Oxides	49.6	178.7	178.7				
					Nitrous Oxide	0.0451	0.163	0.163				
					Particulate Matter	1.35	4.85	4.85				
					PM < 2.5 micron	1.35	4.85	4.85				
					PM < 10 micron	1.35	4.85	4.85				
					Polycyclic organic matter	0.000124	0.000446	0.000446				
					Selenium compounds	4.25e-06	1.53e-05	1.53e-05				
					Sulfur Dioxide	0.106	0.383	0.383				
					Toluene	0.000602	0.00217	0.00217				
					Volatile Organic Compounds	0.974	3.51	3.51				
					EQUI 4	EU003	Boiler, Unit #3	1,4-Dichlorobenzene (para-)	0.000335	0.00142	0.00142	
								Arsenic compounds	5.58e-05	0.000237	0.000237	
								Benzene	0.000586	0.00249	0.00249	
								Beryllium Compounds	3.35e-06	1.42e-05	1.42e-05	
		Cadmium compounds	0.000307	0.00131				0.00131				
		Carbon Dioxide	34,280	145,792				145,792				
		Carbon Dioxide Equivalent	34,280	145,792				145,792				
		Carbon Monoxide	23.44	99.69				99.69				
		Chromium compounds	0.000391	0.00166				0.00166				
		Cobalt compounds	2.34e-05	9.97e-05				9.97e-05				
		Formaldehyde	0.0209	0.089				0.089				
		HAPs - Total	0.527	2.24				2.24				
		Hexane	0.502	2.14				2.14				
		Lead	0.00014	0.000593				0.000593				
		Manganese compounds	0.000106	0.000451				0.000451				
		Mercury Compounds	7.26e-05	0.000309				0.000309				
		Methane	0.711	3.02				3.02				
		Naphthalene	0.00017	0.000724				0.000724				
Nickel compounds	0.000586	0.00249	0.00249									
Nitrogen Oxides	78.13	332.3	332.3									
Nitrous Oxide	0.0711	0.302	0.302									
Particulate Matter	2.12	9.02	9.02									
PM < 2.5 micron	2.12	9.02	9.02									
PM < 10 micron	2.12	9.02	9.02									
Polycyclic organic matter	0.000195	0.000829	0.000829									
Selenium compounds	6.7e-06	2.85e-05	2.85e-05									
Sulfur Dioxide	0.167	0.712	0.712									
Toluene	0.000949	0.00404	0.00404									
Volatile Organic Compounds	1.53	6.53	6.53									
EQUI 18	EU005	Steam Heating Boiler	1,4-Dichlorobenzene (para-)	1.26e-05				5.51e-05	5.51e-05			
			Arsenic compounds	2.1e-06				9.18e-06	9.18e-06			
			Benzene	2.2e-05				9.64e-05	9.64e-05			
			Beryllium	1.26e-07				5.51e-07	5.51e-07			
			Cadmium compounds	1.15e-05				5.05e-05	5.05e-05			
			Carbon Dioxide	1,287	5,637	5,637						
			Carbon Dioxide Equivalent	1,288	5,643	5,643						
			Carbon Monoxide	0.88	3.85	3.85						
			Chromium compounds	1.47e-05	6.42e-05	6.42e-05						
			Cobalt compounds	8.8e-07	3.85e-06	3.85e-06						
			Formaldehyde	0.000786	0.00344	0.00344						
			HAPs - Total	0.0198	0.0866	0.0866						

PTE by SI

AI ID (Name): 587 (Rochester Public Utilities - Silver Lake Plant)  
 Activity: IND20200002

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	Boiler	EQUI 18	EU005	Steam Heating Boiler	Hexane	0.0189	0.0826	0.0826	
					Lead	5.24e-06	2.29e-05	2.29e-05	
					Manganese compounds	3.98e-06	1.74e-05	1.74e-05	
					Mercury	2.72e-06	1.19e-05	1.19e-05	
					Methane	0.0267	0.117	0.117	
					Naphthalene	6.39e-06	2.8e-05	2.8e-05	
					Nickel compounds	2.2e-05	9.64e-05	9.64e-05	
					Nitrogen Oxides	1.05	4.59	4.59	
					Nitrous Oxide	0.00267	0.0117	0.0117	
					Particulate Matter	0.0796	0.349	0.349	
					PM < 2.5 micron	0.0796	0.349	0.349	
					PM < 10 micron	0.0796	0.349	0.349	
					Polycyclic organic matter	7.31e-06	3.2e-05	3.2e-05	
					Selenium compounds	2.51e-07	1.1e-06	1.1e-06	
					Sulfur Dioxide	0.00629	0.0275	0.0275	
					Toluene	3.56e-05	0.000156	0.000156	
Volatile Organic Compounds	0.0576	0.252	0.252						

## Relationships

AI ID (Name): 587 (Rochester Public Utilities - Silver Lake Plant)

Activity: IND20200002

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	Boiler	EQUI 2	EU002	Boiler, Unit #2	is monitored by	EQUI 42	Null	Parametric Monitor	Null	9/4/2001	Null
					sends to	EQUI 41	Null	Data Acquisition System	Null	9/4/2001	Null
						STRU 2	100	Stack/Vent	SV001	8/22/1997	Null
		EQUI 4	EU003	Boiler, Unit #3	is monitored by	EQUI 43	Null	Parametric Monitor	Null	9/4/2001	Null
					sends to	EQUI 41	Null	Data Acquisition System	Null	9/4/2001	Null
						STRU 3	100	Stack/Vent	SV002	11/30/1962	Null
	EQUI 18	EU005	Steam Heating Boiler	sends to	STRU 5	100	Stack/Vent	SV004	8/22/1997	Null	
	Data Acquisition System	EQUI 41	Null	DeltaV Continuous Historian	receives from	EQUI 42	Null	Parametric Monitor	Null	9/4/2001	Null
						EQUI 43	Null	Parametric Monitor	Null	9/4/2001	Null

PMs

AI ID (Name): 587 (Rochester Public Utilities - Silver Lake Plant)

Activity: IND20200002

Subject Item ID	Delta Designation	Description	Manufacturer	Model	Serial Number	Parameter Monitored	Bypass Capability? (parametric)	Install Date (parametric)	
EQUI 42	Null	Boiler, Unit 2, Steam flowmeter	Null	Null	Null	Steam Flow	Null	9/4/2001	
EQUI 43	Null	Boiler, Unit 3, Steam flowmeter	Null	Null	Null	Steam Flow	Null	9/4/2001	

# DAS

AI ID (Name): 587 (Rochester Public Utilities - Silver Lake Plant)

Activity: IND20200002

Subject Item ID	Delta Designation	Description	Manufacturer	Model	Serial Number	Primary or Backup? (DASs)	Install Date (DASs)	
EQUI 41	Null	DeltaV Continuous Historian	Emerson	DeltaV	N/A	Primary	9/4/2001	

## Building

AI ID (Name): 587 (Rochester Public Utilities - Silver Lake Plant)

Activity: IND20200002

Subject Item ID	Delta Designation	Description	Height	Units (height)	Length	Units (length)	Width	Units (width)	
STRU 1	BG001	Silver Lake Plant (tiered building)	1,133	feet	250	feet	140	feet	
STRU 6	Null	Warehouse #1	22	feet	82	feet	40	feet	
STRU 7	Null	Warehouse #2	22	feet	80	feet	50	feet	
STRU 8	Null	Coal Component Garage	22	feet	78	feet	50	feet	
STRU 9	Null	Coal Thaw Shed	30	feet	112	feet	26	feet	

## Stack/Vents

AI ID (Name): 587 (Rochester Public Utilities - Silver Lake Plant)

Activity: IND20200002

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 2	SV001	Boiler #2 Stack	200	6.33	Null	Null	101,000	345	Test data	Upwards with no cap on stack/vent	
STRU 3	SV002	Boiler #3 Stack	200	6.66	Null	Null	109,000	320	Test data	Upwards with no cap on stack/vent	
STRU 5	SV004	Steam-Heating Boiler stack	90	1.67	Null	Null	3,160	365	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 must 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. [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 must 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 must 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 must identify all air pollution control equipment and control practices and must 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 must 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 must 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 must comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16. [Minn. R. 7007.0800, subp. 16]	

SI Id	Sequence	Requirement
	7650	<p>Monitoring Equipment Calibration - The Permittee must either:</p> <ol style="list-style-type: none"> <li>1. Calibrate or replace required monitoring equipment every 12 months; or</li> <li>2. Calibrate at the frequency stated in the manufacturer's specifications.</li> </ol> <p>For each monitor, the Permittee must maintain a record of all calibrations, including the date conducted, and any corrective action that resulted. The Permittee must 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)]</p>
	7660	<p>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)]</p>
	7670	<p>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)]</p>
	7680	<p>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)]</p>
	7690	<p>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 must be kept for a period of five years from the date the change was made or until permit reissuance, whichever is longer. The records must 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]</p>
	7700	<p>These following 40 CFR 52.21(r)(6) requirements apply if a reasonable possibility (RP) as defined in 40 CFR 52.21(r)(6)(vi) exists that a proposed project, analyzed using the actual-to-projected-actual (ATPA) test (either by itself or as part of the hybrid test at 40 CFR 52.21(a)(2)(iv)(f)) and found to not be part of a major modification, may result in a significant emissions increase (SEI). If the ATPA test is not used for the project, or if there is no RP that the proposed project could result in a SEI, these requirements do not apply to that project. The Permittee is only subject to the Preconstruction Documentation requirement for a project where a RP occurs only within the meaning of 40 CFR 52.21(r)(6)(vi)(b).</p> <p>Even though a particular modification is not subject to New Source Review (NSR), or where there isn't a RP that a proposed project could result in a SEI, a permit amendment, recordkeeping, or notification may still be required by Minn. R. 7007.1150 - 7007.1500. [Minn. R. 7007.0800, subp. 2(A), Title I Condition: 40 CFR 52.21(r)(6) and Minn. R. 7007.3000]</p>

SI Id	Sequence	Requirement
7710		<p>Preconstruction Documentation -- Before beginning actual construction on a project, the Permittee must document the following:</p> <ol style="list-style-type: none"> <li>1. Project description</li> <li>2. Identification of any emission unit whose emissions of an NSR pollutant could be affected</li> <li>3. Pre-change potential emissions of any affected existing emission unit, and the projected post-change potential emissions of any affected existing or new emission unit.</li> <li>4. A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions, the projected actual emissions, the amount of emissions excluded due to increases not associated with the modification and that the emission unit could have accommodated during the baseline period, an explanation of why the amounts were excluded, and any creditable contemporaneous increases and decreases that were considered in the determination.</li> </ol> <p>The Permittee must maintain records of this documentation. [Minn. R. 7007.0800, subps. 4-5, Minn. R. 7007.1200, subp. 4, Title I Condition: 40 CFR 52.21(r)(6) and Minn. R. 7007.3000]</p>
7720		<p>Post-change Emissions - The Permittee must monitor the actual emissions of any regulated NSR pollutant that could increase as a result of the project and that were analyzed using the ATPA test, and the potential emissions of any regulated NSR pollutant that could increase as a result of the project and that were analyzed using potential emissions in the hybrid test. The Permittee must calculate and maintain a record of the sum of the actual and potential (if the hybrid test was used in the analysis) emissions of the regulated pollutant, in tons per year on a calendar year basis, for a period of five years following resumption of regular operations after the change, or for a period of 10 years following resumption of regular operations after the change if the project increases the design capacity of or potential to emit of any unit associated with the project. [Minn. R. 7007.0800, subps. 4-5, Title I Condition: 40 CFR 52.21(r)(6) and Minn. R. 7007.3000]</p>
7730		<p>The Permittee must submit a report to the Agency if the annual summed (actual, plus potential if used in hybrid test) emissions differ from the preconstruction projection and exceed the baseline actual emissions by a significant amount as listed at 40 CFR 52.21(b)(23). Such report shall be submitted to the Agency within 60 days after the end of the year in which the exceedances occur. The report shall contain:</p> <ol style="list-style-type: none"> <li>a. The name and ID number of the Facility, and the name and telephone number of the Facility contact person;</li> <li>b. The annual emissions identified in the Post-change Emissions requirement (above); and</li> <li>c. Any other information, such as an explanation as to why the summed emissions differ from the preconstruction projection. [Minn. R. 7007.0800, subps. 4-5, Title I Condition: 40 CFR 52.21(r)(6) and Minn. R. 7007.3000]</li> </ol>
7740		<p>Before beginning actual construction of any project which includes any electric utility steam generating unit (EUSGU), the Permittee must submit a copy of the preconstruction documentation (items 1-4 under Preconstruction Documentation, above) to the Agency. [Minn. R. 7007.0800, subps. 4-5, Title I Condition: 40 CFR 52.21(r)(6)(ii) and Minn. R. 7007.3000]</p>

SI Id	Sequence Requirement
7750	<p>For any project which includes any EUSGU, the Permittee must submit an annual report to the Agency, within 60 days after the end of each calendar year during which records must be generated as described in the Post-change Emissions requirement in this permit. The report must contain:</p> <ol style="list-style-type: none"> <li>a. The name and ID number of the facility, and the name and telephone number of the facility contact person;</li> <li>b. The annual emissions identified in the Post-change Emissions requirement (above); and</li> <li>c. Any other information, such as an explanation as to why the summed emissions differ from the preconstruction projection, if that is the case.</li> </ol> <p>For any project which does not include any EUSGU, the Permittee must submit a report to the Agency if the annual summed (actual, plus potential used in hybrid test) emissions differ from the preconstruction projection and exceed the baseline actual emissions by a significant amount as listed at 40 CFR 52.21(b)(23). Such report must be submitted to the Agency within 60 days after the end of the year in which the exceedances occur. The report must contain:</p> <ol style="list-style-type: none"> <li>a. The name and ID number of the facility, and the name and telephone number of the facility contact person;</li> <li>b. The annual emissions identified in the Post-change Emissions requirement (above); and</li> <li>c. Any other information, such as an explanation as to why the summed emissions differ from the preconstruction projection. [Minn. R. 7007.0800, subps. 4-5, Title I Condition: 40 CFR 52.21(r)(6) and Minn. R. 7007.3000]</li> </ol>
7770	<p>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.</p> <p>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]</p>
7780	<p>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.</p> <p>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]</p>
7790	<p>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]</p>
7800	<p>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:</p> <ol style="list-style-type: none"> <li>1. the cause of the deviation;</li> <li>2. the exact dates of the period of the deviation, if the deviation has been corrected;</li> <li>3. whether or not the deviation has been corrected;</li> <li>4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and</li> <li>5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation. [Minn. R. 7019.1000, subp. 1]</li> </ol>

SI Id	Sequence	Requirement
	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 must file an application for an amendment within nine months of promulgation of the applicable requirement, pursuant to Minn. R. 7007.0400, subp. 3. [Minn. R. 7007.0400, subp. 3, Minn. R. 7007.1150 - 7007.1500]
	7840	Extension Requests: The Permittee may apply for an Administrative Amendment to extend a deadline in a permit by no more than 120 days, provided the proposed deadline extension meets the requirements of Minn. R. 7007.1400, subp. 1(H). Performance testing deadlines from the General Provisions of 40 CFR pt. 60 and pt. 63 are examples of deadlines for which the MPCA does not have authority to grant extensions and therefore do not meet the requirements of Minn. R. 7007.1400, subp. 1(H). [Minn. R. 7007.1400, subp. 1(H)]
	7860	The Permittee must submit a compliance certification : Due annually, by the 31st of January (for the previous calendar year). Submit this on form CR-04 (Annual Compliance Certification Report). This report covers all deviations experienced during the calendar year. If no deviations have occurred, submit the signed report certifying that there were no deviations. [Minn. R. 7007.0800, subp. 6(D)]
	7880	The Permittee must 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]
COMG 1	6430	Steam Flow <= 150,000 pounds per hour 12-month rolling average to be calculated by the 15th day of each month for the previous 12-month period as described later in this permit. The Permittee must operate and maintain flow meters (EQUI 42 and EQUI 43) to record the steam flow rate in lbs/hour.  This limit is to ensure that actual operating conditions are consistent with assumptions made in the PSD permit application dated 07/31/2003 for permit #10900011-003. [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
	6440	Steam Flow: Daily Recordkeeping: On each day of operation the Permittee must document the average hourly steam flow rate for the hours which EQUI 2 and/or EQUI 4 operate. This must be based on flow meter readings from EQUI 42 and EQUI 43. [Minn. R. 7007.0800, subps. 4-5, Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
	6450	Steam Flow: Monthly Recordkeeping: By the 15th of the month, the Permittee must calculate and record the following: 1) The average hourly steam flow for COMG 1 for the previous calendar month using the daily records; and 2) The 12-month rolling average of steam flow for the previous 12-month period by averaging the monthly steam flow used for the previous 12 months. [Minn. R. 7007.0800, subps. 4-5]
EQUI 2	1	Fuel type restriction: Natural gas only. [Title I Condition: 40 CFR 50.4(SO2 SIP), Title I Condition: 40 CFR pt. 52, subp. Y]
	2	Fuel type restriction: Natural gas only. [Title I Condition: 40 CFR 50.6(PM10 SIP), Title I Condition: 40 CFR pt. 52, subp. Y]
	3610	Filterable Particulate Matter <= 0.6 pounds per million Btu heat input. The potential to emit from the unit is 0.007 lb/MMBtu due to equipment design and allowable fuels. [Minn. R. 7011.0510, subp. 1]
	3620	Opacity <= 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity. [Minn. R. 7011.0510, subp. 2]
	3637	The Permittee must keep records of fuel purchases showing fuel types. [Minn. R. 7007.0800, subp. 5]

SI Id	Sequence	Requirement
EQUI 4	1	Fuel type restriction: Natural gas only. [Title I Condition: 40 CFR 50.4(SO2 SIP), Title I Condition: 40 CFR pt. 52, subp. Y]
	2	Fuel type restriction: Natural gas only. [Title I Condition: 40 CFR 50.6(PM10 SIP), Title I Condition: 40 CFR pt. 52, subp. Y]
	3610	Filterable Particulate Matter <= 0.6 pounds per million Btu heat input. The potential to emit from the unit is 0.007 lb/MMBtu due to equipment design and allowable fuels. [Minn. R. 7011.0510, subp. 1]
	3620	Opacity <= 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity. [Minn. R. 7011.0510, subp. 2]
	3637	The Permittee must keep records of fuel purchases showing fuel types. [Minn. R. 7007.0800, subp. 5]
EQUI 18	1	Fuel type: Natural gas only (limit to avoid classification as a significant net emissions increase as defined by 40 CFR Section 52.21). [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
	4830	Recordkeeping: By the last day of each calendar month, the Permittee must record the amount of natural gas combusted in the boiler during the previous calendar month. These records must consist of purchase records, receipts, or fuel meter readings. The Permittee must maintain the records for a period of two years following the date of such record. [40 CFR 60.48c(g), 40 CFR 60.48c(i), Minn. R. 7011.0570]
	35700	<p>The Permittee must comply with all applicable requirements of 40 CFR pt. 60, subp. A as follows:</p> <p>40 CFR 60.1(a)-(c);  40 CFR 60.2;  40 CFR 60.3;  40 CFR 60.4;  40 CFR 60.7(a)(4);  40 CFR 60.7(b);  40 CFR 60.9;  40 CFR 60.11(d);  40 CFR 60.11(f);  40 CFR 60.11(g);  40 CFR 60.12;  40 CFR 60.14(a)-(c);  40 CFR 60.14(e)-(h);  40 CFR 60.15;  40 CFR 60.17; and  40 CFR 60.19.</p> <p>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 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. A, Minn. R. 7007.0400, subp. 3, Minn. R. 7007.1150-7007.1500, Minn. R. 7011.0050, subp. 1(A), Minn. R. 7017.1010 &amp; 7017.2015, subp. 2, Minn. R. 7019.0100]</p>