Appendix A – Air Quality Permits Incorporated by Reference

Appendix A.1  Apex Plant, Lhoist North America
Appendix A.2  Pilot Peak Plant, Graymont Western
Appendix A.3  TS Power Plant, Nevada Newmont Energy Investment
Appendix A.4  Fernley Plant, Nevada Cement Company
Appendix A.5  Tracy Generating Station, NV Energy
Appendix A.6  Valmy Generating Station, NV Energy
Appendix A.1 - Apex Plant, Lhoist North America

The following proposed ATC permit issued by Clark County Department of Environment and Sustainability for the Apex Plant is hereby incorporated into Nevada’s Second Regional Haze SIP by reference. Provisions that are struck-out are not intended to be incorporated into the SIP by reference for approval or intended to be codified as part of Nevada’s Second Regional Haze SIP. Note, that this proposed ATC is intended for this Regional Haze SIP’s public notice period. A final version of the proposed ATC permit will be issued after the public notice period has ended and included in the final SIP submittal package for EPA approval.
AUTHORITY TO CONSTRUCT PERMIT
FOR A MAJOR PART 70 SOURCE

SOURCE ID: 3
Lhoist North America of Arizona Apex Plant
12101 North Las Vegas Boulevard
Las Vegas, Nevada 89124

ISSUED ON: TBD

Issued to: Lhoist North America of Arizona Inc
PO Box 363068
Las Vegas, Nevada 89165

Responsible Official: Sean Brennan
Plant Manager
PHONE: (702) 227-4935 FAX: (702) 643-9517
EMAIL: sean.brennan@lhoist.com

NATURE OF BUSINESS:
SIC code 3274, “Lime Manufacturing”
NAICS code 327410, “Lime Manufacturing”

Issued by the Clark County Department of Environment and Sustainability in accordance with Section 12.4 of the Clark County Air Quality Regulations.

Theodore A. Lendis, Permitting Manager
EXECUTIVE SUMMARY

Lhoist North America of Arizona (LNA) is a manufacturer of lime and lime products. The legal description of the source location is T18S, R63E, Sections 23 and 26 in Apex Valley, County of Clark, State of Nevada. The Apex plant is situated in Hydrographic Area 216 (Garnet Valley). Garnet Valley is designated as an attainment area for 8-hour ozone (regulated through NOx and VOC), PM10, CO, and SO2.

The LNA Apex Plant is a categorical source, as defined by AQR 12.2.2(j)(12). The plant is a major stationary source for PM10, PM2.5, NOX, CO, SO2 and single HAP (HCl), and a minor source for total HAP and VOC. LNA is also a major source of greenhouse gases. The Apex operation includes mining and excavating, limestone handling and processing, solid fuel handling, lime storage silos, fuel storage tanks, and truck and railcar loading and transporting. Four rotary lime kilns are used to convert limestone to quicklime. These kilns can be fired by coal, coke, or natural gas.

LNA was selected as a participant for evaluation of the regional haze four-factor review and control determination (four-factor analysis) for the second decadal implementation of the Long-Term Strategy of Nevada’s Regional Haze State Implementation Plan (Nevada Regional Haze SIP). The Nevada Regional Haze SIP addresses all visibility impairing pollutants (including PM10, SO2, and NOX). The current Regional Haze SIP revision is for the second implementation period (2018-2028) and relies on the findings from the four-factor analysis to achieve reasonable progress by reducing the emissions of target pollutants by adopting additional control strategies. As a result of the four-factor analysis, LNA is only expected to address NOX emissions with this ATC.

The table below summarizes the source PTE (in units of tons per year) for each regulated air pollutant for all emission units addressed in the Part 70 Operating Permit.

Source-wide Potential to Emit 4

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>PM10</th>
<th>PM2.5</th>
<th>NOX</th>
<th>CO</th>
<th>SO2</th>
<th>VOC</th>
<th>HAP2 (HCl)</th>
<th>HAP2</th>
<th>GHG3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tons/year</td>
<td>335.90</td>
<td>203.13</td>
<td>1,905.45</td>
<td>1,399.45</td>
<td>974.30</td>
<td>1,646.77</td>
<td>9.40</td>
<td>22.97</td>
<td>21.12</td>
</tr>
</tbody>
</table>

1 The PTE in this table is for informational purposes only.
2 Major source threshold for HAPs is 10 tons for any individual hazardous air pollutant or 25 tons for a combination of all HAPs.
3 Metric tons per year. CO2e = greenhouse gas pollutants.
4 New NOx PTE will be effective no later than two years after the EPA's approval of the control determination. NOx PTE value results from the AQR 12.4 ATC Application: 5/23/2022.

LNA is subject to 40 CFR Part 60, Subpart Y; 40 CFR Part 60, Subpart OOO; 40 CFR Part 60, Subpart IIII; 40 CFR Part 60, Subpart III; 40 CFR Part 63, Subpart ZZZZ; and 40 CFR Part 63, Subpart AAAAA. By meeting the requirements of 40 CFR Part 60, Subpart III, the source meets the requirements of 40 CFR Part 63, Subpart ZZZZ. The source is also subject to 40 CFR 51, Subpart P—Protection of Visibility.
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## Common Acronyms and Abbreviations
(These terms may be seen in the permit)

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>AQR</td>
<td>Clark County Air Quality Regulation</td>
</tr>
<tr>
<td>ATC</td>
<td>Authority to Construct</td>
</tr>
<tr>
<td>CEMS</td>
<td>Continuous Emissions Monitoring System</td>
</tr>
<tr>
<td>CFR</td>
<td>Code of Federal Regulations</td>
</tr>
<tr>
<td>CO</td>
<td>carbon monoxide</td>
</tr>
<tr>
<td>CO₂</td>
<td>carbon dioxide</td>
</tr>
<tr>
<td>DAQ</td>
<td>Division of Air Quality</td>
</tr>
<tr>
<td>DES</td>
<td>Department of Environment and Sustainability</td>
</tr>
<tr>
<td>DOM</td>
<td>date of manufacture</td>
</tr>
<tr>
<td>dscf</td>
<td>dry standard cubic feet</td>
</tr>
<tr>
<td>dscm</td>
<td>dry standard cubic meter</td>
</tr>
<tr>
<td>EPA</td>
<td>U.S. Environmental Protection Agency</td>
</tr>
<tr>
<td>EU</td>
<td>emission unit</td>
</tr>
<tr>
<td>g/gr</td>
<td>gram</td>
</tr>
<tr>
<td>HAP</td>
<td>hazardous air pollutant</td>
</tr>
<tr>
<td>hp</td>
<td>horsepower</td>
</tr>
<tr>
<td>kW</td>
<td>kilowatts</td>
</tr>
<tr>
<td>LNB</td>
<td>low-NOₓ burner</td>
</tr>
<tr>
<td>NAICS</td>
<td>North American Industry Classification System</td>
</tr>
<tr>
<td>NESHAP</td>
<td>National Emission Standards for Hazardous Air Pollutants</td>
</tr>
<tr>
<td>NOₓ</td>
<td>nitrogen oxides</td>
</tr>
<tr>
<td>NRS</td>
<td>Nevada Revised Statutes</td>
</tr>
<tr>
<td>NSPS</td>
<td>New Source Performance Standard</td>
</tr>
<tr>
<td>NSR</td>
<td>New Source Review</td>
</tr>
<tr>
<td>OP</td>
<td>Operating Permit</td>
</tr>
<tr>
<td>PM₂₅</td>
<td>particulate matter less than 2.5 microns in diameter</td>
</tr>
<tr>
<td>PM₁₀</td>
<td>particulate matter less than 10 microns in diameter</td>
</tr>
<tr>
<td>PSD</td>
<td>Prevention of Significant Deterioration</td>
</tr>
<tr>
<td>PTE</td>
<td>potential to emit</td>
</tr>
<tr>
<td>SIC</td>
<td>Standard Industrial Classification</td>
</tr>
<tr>
<td>SIP</td>
<td>Nevada Regional Haze State Implementation Plan for the second implementation period</td>
</tr>
<tr>
<td>SO₂</td>
<td>sulfur dioxides</td>
</tr>
<tr>
<td>tlp</td>
<td>tons of lime produced</td>
</tr>
<tr>
<td>tpd</td>
<td>tons per day</td>
</tr>
<tr>
<td>Acronym</td>
<td>Term</td>
</tr>
<tr>
<td>---------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>VMT</td>
<td>vehicle miles traveled</td>
</tr>
<tr>
<td>VOC</td>
<td>volatile organic compound</td>
</tr>
</tbody>
</table>
1.0 EQUIPMENT

1.1 EMISSION UNITS

1. This ATC consists of the affected emission units listed in Table 1-1. [AQR 12.4 ATC Application: 5/23/2022]

Table 1-1: List of Affected Emission Units

<table>
<thead>
<tr>
<th>EU</th>
<th>Source EU Identifier</th>
<th>Description</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>K102</td>
<td>KN-01</td>
<td>Rotary Kiln 1</td>
<td>81.25 MMBtu/hr</td>
</tr>
<tr>
<td>K202</td>
<td>KN-02</td>
<td>Rotary Kiln 2</td>
<td>81.25 MMBtu/hr</td>
</tr>
<tr>
<td>K302</td>
<td>KN-03</td>
<td>Rotary Kiln 3</td>
<td>91.10 MMBtu/hr</td>
</tr>
<tr>
<td>K402</td>
<td>K4-KN-305</td>
<td>Rotary Kiln 4</td>
<td>281.25 MMBtu/hr</td>
</tr>
</tbody>
</table>
2.0 CONTROLS

2.1 CONTROL DEVICES

1. Effective no later than two years after the Environmental Protection Agency’s (EPA’s) approval of the controls determination associated with the SIP, the additional control devices identified in Table 2-1 shall be installed. [AQR 12.4 ATC Application: 5/23/2022 and 40 CFR 51.308]

<table>
<thead>
<tr>
<th>EU</th>
<th>Description</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>K102</td>
<td>Kiln 1</td>
<td>LNB and SNCR</td>
</tr>
<tr>
<td>K302</td>
<td>Kiln 3</td>
<td>LNB and SNCR</td>
</tr>
<tr>
<td>K402</td>
<td>Kiln 4</td>
<td>LNB and SNCR</td>
</tr>
</tbody>
</table>

2.2 CONTROL REQUIREMENTS

1. The control requirements and the NO\textsubscript{X} emission reductions proposed in the ATC are permanent and shall not be removed, changed, revised, or modified without the approval of the Nevada Division of Environmental Protection and EPA upon becoming effective.

2. Effective no later than two years after the EPA’s approval of the controls determination associated with the SIP, the permittee shall install and maintain low-NO\textsubscript{X} burners (LNB) on Kilns 1, 3 and 4 in order to achieve a reduction of NO\textsubscript{X} emissions (EU: K102, K302, and K402). [AQR 12.4 ATC Application: 5/23/2022 and 40 CFR 51.308]

3. Effective no later than two years after the EPA’s approval of the controls determination associated with the SIP, the permittee shall install, operate, and maintain selective non-catalytic reduction (SNCR) on Kilns 1, 3, and 4 (EUs: K102, K302, and K402) to achieve reduction of NO\textsubscript{X} emissions. [AQR 12.4 ATC Application: 5/23/2022 and 40 CFR 51.308]
3.0 LIMITATIONS AND STANDARDS

3.1 OPERATIONAL LIMITS

1. The permittee shall limit the lime throughputs in Kiln 1 and Kiln 2 to 109,500 tons each per any consecutive twelve month period (EUs: K102 and K202). [APCHB Order on Appeal of Part 70 OP (10/15/2012)]

2. The permittee shall limit the total lime throughput in Kiln 3 to 146,000 tons per any consecutive twelve month period (EU: K302). [APCHB Order on Appeal of Part 70 OP (10/15/2012)]

3. The permittee shall limit the lime throughput in Kiln 4 to 1,350 tons per day, based on a calendar month average, and to 475,000 tons per any consecutive twelve-month period (EU: K402). [APCHB Order on Appeal of Part 70 OP (10/15/2012)]

3.2 EMISSION LIMITS

1. Effective no later than two years after the EPA’s approval of the controls determination associated with the SIP, the permittee shall limit total NOx emissions from all operating kilns to 3.75 tons per day based on a consecutive 30-day average (EUs: K102, K202, K302, and K402). [AQR 12.4 ATC Application: 5/23/2022 and 40 CFR 51.308]

2. Effective no later than two years after the EPA’s approval of the controls determination associated with the SIP, the permittee shall limit the combined total NOx emissions from all operating kilns to 3.59 lb/t per based on a consecutive twelve-month average (EUs: K102, K202, K302, and K402). [AQR 12.4 ATC Application: 5/23/2022 and 40 CFR 51.308]

3.3 MONITORING

1. Effective no later than two years after the EPA’s approval of the controls determination associated with the SIP, to demonstrate continuous, direct, compliance with the Kilns 1-4 (EUs: K102, K202, K302, and K402) emissions limits for NOx as specified in Conditions 3.2.1 and 3.2.2, the permittee shall calibrate, maintain, operate, and certify the continuous emissions monitoring system (CEMS) for NOx diluent gas and stack exhaust gas. [AQR 12.4.3.4(a)(10)]

2. Effective no later than two years after the EPA’s approval of the controls determination associated with the SIP, the permittee shall operate the CEMS at all times the Kilns 1-4 (EUs: K102, K202, K302, and K402) are in use, except during malfunctions, maintenance, calibration, and repairs of the CEMS and: [AQR 12.4.3.4(a)(10)]

   a. Shall include an automated data acquisition and handling system. [AQR 12.4.3.4(a)(10)]

   b. Subject to the provisions of 40 CFR 60 Subpart A, Appendix B and F, as applicable. [AQR 12.4.3.4(a)(10)]
3. Effective no later than two years after the EPA’s approval of the controls determination associated with the SIP, the CEMS shall monitor and record at least the following data for each kiln (EUs: K102, K202, K302, and K402): \[AQR\ 12.4.3.4(a)(10)\]
   a. Exhaust gas concentration of NO\textsubscript{X} and diluent O\textsubscript{2};
   b. Exhaust gas flow rate;
   c. Hourly emissions of NO\textsubscript{X};
   d. Hours of CEMS operation; and
   e. Dates and hours of CEMS downtime.

4. The permittee shall conduct Relative Accuracy Test Audits (RATA) and other periodic checks of the NO\textsubscript{X} and O\textsubscript{2} CEMS at least annually, as required by 40 CFR 60. \[AQR\ 12.4.3.4(a)(10)\]

5. Effective no later than two years after the EPA’s approval of the controls determination associated with the SIP, the permittee shall monitor each kiln (EUs: K102, K202, K302, and K402) to demonstrate compliance with the NO\textsubscript{X} emission limit of 3.75 tons per day. Each rolling kiln 30-operating-day average will be calculated per the following procedure: \[AQR\ 12.4.3.4(a)(10)\]
   a. The permittee shall measure the NO\textsubscript{X} emissions using CEMS and sum the hourly pounds of NO\textsubscript{X} emitted from Kilns 1, 2, 3, and 4 for the current operating-day period and the preceding 29-operating-day period for each kiln to obtain the total pounds of NO\textsubscript{X} for the 30-operating-day period.
   b. The permittee shall divide the total pounds of NO\textsubscript{X} by 2000 to calculate the total tons of NO\textsubscript{X} emitted over the most recent kiln 30-operating-day period.
   c. The permittee shall divide the total tons of NO\textsubscript{X} by 30 to calculate the rolling 30-operating-day NO\textsubscript{X} emission rate from all kilns.
   d. The permittee shall estimate NO\textsubscript{X} emissions during periods of CEMS downtime using the existing data substitution plan.

6. Effective no later than two years after the EPA’s approval of the controls determination associated with the SIP, the permittee shall monitor each kiln to demonstrate compliance with the NO\textsubscript{X} emission limit of 3.59 lb/tp (EUs: K102, K202, K302, and K402). Each 12-month rolling NO\textsubscript{X} emission rate will be calculated within 30 days following the end of each calendar month per the following procedure: \[AQR\ 12.4.3.4(a)(10)\]
   a. The permittee shall measure the NO\textsubscript{X} emissions using CEMS and sum the hourly pounds of NO\textsubscript{X} emitted from each kiln for the month just completed and the 11 months preceding to calculate the total pounds of NO\textsubscript{X} emitted over the most recent 12-month period.
   b. The permittee shall sum the total lime production, in tons, produced from Kilns 1, 2, 3, and 4 during the month just completed and the 11 months to calculate the total lime product produced over the most recent 12-month period. Total lime production is to consist of both saleable and any waste lime produced.
c. The permittee shall divide the total pounds of NO\textsubscript{X} by the total tons of lime product to calculate the 12-month rolling NO\textsubscript{X} emission rate in lb/tlp.

d. The permittee shall estimate NO\textsubscript{X} emissions during periods of CEMS downtime using the existing data substitution plan.

7. Effective no later than two years after the EPA’s approval of the controls determination associated with the SIP, the permittee shall monitor the amount of the reagent used for the SNCR for each kiln hourly (EUs: K102, K302, and K402). [AQR 12.4.3.4(a)(10)]

### 3.4 TESTING

1. No performance testing requirements have been identified.

### 3.5 RECORDKEEPING

1. The permittee shall keep records of all inspections, maintenance, and repairs, as required by this permit. [AQR 12.4.3.4(a)(10)]

2. All records, logs, etc., or copies thereof, shall be kept on-site for a minimum of five years from the date the measurement, or data was entered. [AQR 12.4.3.4(a)(10)]

3. Records and data required by this permit to be maintained by the permittee may be audited at any time by a third party selected by the Control Officer. [AQR 4.1]

4. The permittee shall create and maintain records, all of which must be producible on-site to the Control Officer’s authorized representative upon request and without prior notice during the permittee’s hours of operation. [AQR 12.4.3.4(a)(10)]

5. The permittee shall maintain the following records on-site and include, at a minimum: [AQR 12.4.3.4(a)(10)]

   a. CEMS data for each kiln (EUs: K102, K202, K302, and K402); and
   b. Hourly records of the amount of reagent used for the SNCR for each kiln (EUs: K102, K302, and K402).

6. The permittee shall maintain the following records on-site that require semiannual reporting and include, at a minimum: [AQR 12.4.3.4(a)(10)]

   a. Daily, consecutive 30-day average of total NO\textsubscript{X} in tpd from all kilns (EUs: K102, K202, K302, and K402);
   b. Monthly, consecutive 12-month average of total NO\textsubscript{X} in lb/tlp from all kilns (EUs: K102, K202, K302, and K402);
   c. The magnitude and duration of excess emissions, notification, monitoring system performance, malfunctions, corrective actions taken, and other data required by 40 CFR Part 60 and the CEMS Quality Assurance Plan (reported as required by Section 4.4.4 of this permit); and
   d. CEMS audit results or accuracy checks, as required by 40 CFR Part 60 and the CEMS Quality Assurance Plan.
3.6 REPORTING AND NOTIFICATIONS

1. All report submissions shall be addressed to the attention of the Control Officer. [AQR 14.1(h)]

2. The permittee shall certify compliance with the terms and conditions contained in this ATC, including emission limitations, standards, work practices, and the means for monitoring such compliance. [AQR 12.4.3.4(a)(10)]

3. The permittee shall submit compliance certifications annually in writing to the Control Officer (4701 W. Russell Road, Suite 200, Las Vegas, NV 89118) and the Region 9 Administrator (Director, Air and Radiation Divisions, 75 Hawthorne St., San Francisco, CA 94105). A compliance certification for each calendar year will be due on January 30 of the following year, and shall include the following: [AQR 12.4.3.4(a)(10)]

   a. The identification of each term or condition of the permit that is the basis of the certification;
   
   b. The identification of the methods or other means used by the permittee for determining the compliance status with each term and condition during the certification period. These methods and means shall include, at a minimum, the monitoring and related recordkeeping and reporting requirements described in 40 CFR Part 70.6(a)(3). If necessary, the permittee shall also identify any other material information that must be included in the certification to comply with Section 113(c)(2) of the Clean Air Act, which prohibits knowingly making a false certification or omitting material information; and
   
   c. The status of compliance with the terms and conditions of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall be based on the methods or means designated in (b) above. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify, as possible exceptions to compliance, any periods during which compliance was required and in which an excursion or exceedance, as defined under 40 CFR Part 64, occurred.

4. With the semiannual monitoring report, the permittee shall report to the Control Officer all deviations from permit conditions that do not result in excess emissions, including those attributable to malfunction, startup, or shutdown. Reports shall identify the probable cause of each deviation and any corrective actions or preventative measures taken. [AQR 12.4.3.4(a)(10)]

5. The owner or operator of any source required to obtain a permit under AQR 12 shall report to the Control Officer emissions in excess of an applicable requirement or emission limit that pose a potential imminent and substantial danger to public health and safety or the environment as soon as possible, but no later than 12 hours after the deviation is discovered, and submit a written report within two days of the occurrence. [AQR 25.6.2]

6. The permittee shall submit all compliance certifications to the EPA and to the Control Officer. [AQR 12.4.3.4(a)(10)]

7. Any application form, report, or compliance certification submitted to the Control Officer pursuant to the permit or the AQRs, shall contain a certification by a Responsible Official, with an original signature, of truth, accuracy, and completeness. This certification, and any
other required under AQR 12.5, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. \[AQR 12.4.3.4(a)(10)\]

8. The permittee shall furnish to the Control Officer, in writing and within a reasonable time, any information that the Control Officer may request to determine whether cause exists for revising, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Control Officer copies of records that the permit requires keeping. The permittee may furnish records deemed confidential directly to the Administrator, along with a claim of confidentiality. \[AQR 12.4.3.4(a)(10)\]

9. At the Control Officer’s request, the permittee shall provide any information or analyses that will disclose the nature, extent, quantity, or degree of air contaminants that are or may be discharged by the source, and the type or nature of control equipment in use. The Control Officer may require such disclosures be certified by a professional engineer registered in the state. In addition to this report, the Control Officer may designate an authorized agent to make an independent study and report on the nature, extent, quantity, or degree of any air contaminants that are or may be discharged from the source. An agent so designated may examine any article, machine, equipment, or other contrivance necessary to make the inspection and report. \[AQR 4.1\]

10. The permittee shall submit annual emissions inventory reports based on the following: \[AQRs 18.6.1 and 12.4.3.4(a)(10)\]

a. The annual emissions inventory must be submitted to DAQ by March 31 of each calendar year (if March 31 falls on a Saturday or Sunday, or on a Nevada or federal holiday, the submittal shall be due on the next regularly scheduled business day);

b. The calculated actual annual emissions from each emission unit shall be reported even if there was no activity, along with the total calculated actual annual emissions for the source based on the emissions calculation methodology used to establish the potential to emit (PTE) in the permit or an equivalent method approved by the Control Officer prior to submittal; and

c. As the first page of text, a signed certification containing the sentence: “I certify that, based on information and belief formed after reasonable inquiry, the statements contained in this document are true, accurate, and complete.” This statement shall be signed and dated by a Responsible Official of the company (a sample form is available from DAQ).

11. Stationary sources that emit 25 tons or more of nitrogen oxide (NO\textsubscript{X}) and/or emit 25 tons or more of volatile organic compounds (VOC) from their emission units, insignificant activities, and exempt activities during a calendar year shall submit an annual emissions statement for both pollutants. Emissions statements must include actual annual NO\textsubscript{X} and VOC emissions from all activities, including emission units, insignificant activities and exempt activities. Emissions statements are separate from, and additional to, the calculated annual emissions reported each year for all regulated air pollutants (i.e., Emissions Inventory). \[AQR 12.9.1\]

12. The permittee is responsible for all applicable notification and reporting requirements contained in 40 CFR Parts 60 and 63. \[AQR 12.4.3.4(a)(10)\]
13. The permittee shall submit semiannual monitoring reports to DAQ. [AQR12.4.3.4(a)(10)]

14. The following requirements apply to semiannual reports: [AQR12.4.3.4(a)(10)]
   a. The report shall include item listed in Section 3.5 for semiannual reporting.
   b. The report shall be based on a calendar semiannual period, which includes partial reporting periods.
   c. The report shall be received by DAQ within 30 calendar days after the semiannual period.

15. Regardless of the date of issuance of this ATC, the source shall comply with the schedule for report submissions outlined in Table 4-1:

<table>
<thead>
<tr>
<th>Required Report</th>
<th>Applicable Period</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semiannual report for 1st six-month period</td>
<td>January, February, March, April, May, June</td>
<td>July 30 each year¹</td>
</tr>
<tr>
<td>Semiannual report for 2nd six-month period and any additional annual records required</td>
<td>July, August, September, October, November, December</td>
<td>January 30 each year²</td>
</tr>
<tr>
<td>Annual Compliance Certification</td>
<td>Calendar year</td>
<td>January 30 each year²</td>
</tr>
<tr>
<td>Annual Emissions Inventory Report</td>
<td>Calendar year</td>
<td>March 31 each year²</td>
</tr>
<tr>
<td>Annual Emissions Statement²</td>
<td>Calendar year</td>
<td>March 31 each year²</td>
</tr>
<tr>
<td>Notification of Malfunctions, Startup, Shutdowns or Deviations with Excess Emission</td>
<td>As required</td>
<td>Within 24 hours of when permittee learns of event</td>
</tr>
<tr>
<td>Report of Malfunctions, Startup, Shutdowns or Deviations with Excess Emission</td>
<td>As required</td>
<td>Within 72 hours of DAQ notification</td>
</tr>
<tr>
<td>Deviation Report without Excess Emissions</td>
<td>As required</td>
<td>With semiannual reports⁴</td>
</tr>
<tr>
<td>Excess Emissions that Pose a Potential Inminent and Substantial Danger</td>
<td>As required</td>
<td>Within 12 hours of when permittee learns of event</td>
</tr>
<tr>
<td>Performance Testing Protocol</td>
<td>As required</td>
<td>No less than 45 days, but no more than 90 days, before anticipated test date¹</td>
</tr>
<tr>
<td>Performance Testing</td>
<td>As required</td>
<td>Within 60 days of end of test¹</td>
</tr>
</tbody>
</table>

¹If the due date falls on a Saturday, Sunday, or federal or Nevada holiday, the submittal is due on the next regularly scheduled business day.
²Required only for stationary sources that emit 25 tons or more of nitrogen oxide (NOx) and/or emit 25 tons or more of volatile organic compounds (VOC) during a calendar year.

16. The Control Officer reserves the right to require additional reports and reporting to verify compliance with permit emission limits, applicable permit requirements, and requirements of applicable federal regulations. [AQR 4.1]

3.7 MITIGATION

The source has no federal offset requirements. [AQR 12.7]
4.0 ADMINISTRATIVE REQUIREMENTS

4.1 GENERAL

1. This ATC does not modify, consolidate, supersede, and replace any ATC previously issued for this facility from the date of issuance of this permit forward, except for the emission units addressed in this ATC.

2. This ATC does not supersede or replace any Part 70 requirements, including any permit conditions, compliance requirements, and/or emission limitations outlined in the Part 70 (Title V) Operating Permit.

3. Except as provided in AQR 12.4.3.2(e) for minor revisions of a Part 70 Operating Permit, an owner or operator of an existing or new Part 70 source shall obtain an ATC Permit from the Control Officer before beginning actual construction or continuing to operate any of the following: [AQR 12.4.1.1(a)]
   a. A new Part 70 source;
   b. A “Major Modification” as defined in AQRs 12.2 or 12.3;
   c. A modification that increases the Part 70 source’s PTE by an amount equal to or greater than the minor NSR significant level in AQR 12.4.2.1;
   d. Construction, modification, or reconstruction of an affected facility that becomes newly subject to a standard, limitation, or other requirement under 40 CFR Part 60;
   e. Construction or reconstruction of a new source or of an affected source that becomes newly subject to a standard, limitation, or other requirement under 40 CFR Part 63, including, but not limited to, construction or modification that requires preconstruction review under 40 CFR Part 63.5; or
   f. A modification to a solid waste incinerator unit as defined by an applicable standard under 40 CFR Part 60.

4. Unless the Control Officer receives and grants a written request to extend the 18-month period referenced in paragraphs (b)(1) or (b)(2) of AQR 12.4.1.1 at least 30 days before the deadline, an ATC Permit issued under AQR 12.4 or an ATC authorization issued under AQR 12.5 shall remain in effect only if: [AQR 12.4.1.1(b)]
   a. The owner or operator commences the construction, modification, or reconstruction of the Part 70 source within 18 months of the issuance date of an ATC Permit or authorization to construct;
   b. Such activity is not discontinued for a period greater than 18 months; and
   c. The Control Officer does not revoke and reissue, or terminate, the ATC Permit for cause.
5. If an existing Part 70 Operating Permit would prohibit construction, modification, or reconstruction, the owner or operator of the Part 70 source must obtain a Part 70 Operating Permit revision pursuant to AQRs 12.5.2.13 or 12.5.2.14, as appropriate, before commencing operation. [AQR 12.4.1.1(c)]

6. This ATC does not convey any property rights or exclusive privilege. [AQR 12.4.3.4(a)(6)]

7. The permittee shall post this ATC in a location clearly visible and accessible to facility employees and department representatives. [AQRs 12.4.3.4(a)(16) & 12.13]

8. The permittee shall pay all fees assessed pursuant to AQR 18. [AQR 12.4.3.4(a)(17)]

9. A timely application for a source applying for a Part 70 Operating Permit for the first time is one that is submitted within 12 months of the source becoming subject to the permit program. If a source submits a timely application under this provision, it may continue operating under its ATC Permit until final action is taken on its application for a new Part 70 Operating Permit. [AQR 12.5.2.1(a)(1)]

10. A timely application for an existing Part 70 source that has obtained an ATC Permit is one that is submitted within 12 months of the source commencing operation of the modification or reconstruction authorized by this ATC, or on or before such earlier date that the Control Officer may establish. However, where an existing Part 70 Operating Permit would prohibit such construction or change in operation, the source must obtain a Part 70 permit revision pursuant to AQR 12.5.2.14 before commencing operation. [AQR 12.5.2.1(a)(3)]

4.2 MODIFICATION, REVISION, AND RENEWAL REQUIREMENTS

1. The Control Officer may revise an ATC Permit only through: [AQRs 12.4.4.1(a)]
   a. An administrative or significant permit revision, as specified in paragraphs (b) and (c) below;
   b. The Part 70 Operating Permit procedures specified in AQR 12.5.2.14; or
   c. A revision of AQR 12.4 applicable requirements in a Part 70 Operating Permit using the procedures in AQRs 12.5.2.13 or 12.4.2.14. Revising applicable requirements of, or adding terms and conditions to, the Part 70 Operating Permit may supersede or append certain terms and conditions to the ATC Permit, as specified in AQR 12.4.5.2(a).

2. The permittee shall file an application to make any change in the ownership or Responsible Official of the source, and may implement the change immediately upon submittal of the request provided the current and new permittee have submitted to the Control Officer a written agreement with a specific date for transfer of permit responsibility, coverage, and liability, and that the permit transfer procedures in AQR 12.12 are complied with. [AQRs 12.4.4.1(b)(1)(D)]

3. The permittee shall file an application for a transfer of ownership at least 30 days before the date of a change in ownership or operational control of the source. This application shall constitute a temporary ATC under the conditions of the existing permit. [AQRs 12.12.2(c) & (d)]
4. The Control Officer may revise, revoke and reissue, reopen and revise, or terminate this ATC for cause. \[AQR\ 12.4.3.4(a)(5)\]

### 4.3 REPORTING, NOTIFICATION, AND INFORMATION REQUIREMENTS

1. The permittee shall retain records of all required monitoring and performance demonstration data and supporting information for five years after the date of the sample collection, measurement, report, or analysis. Supporting information includes all records regarding calibration and maintenance of the monitoring equipment, all original strip-chart recordings for continuous monitoring instrumentation and, if applicable, all other records required to be maintained pursuant to Title 40, Part 64.9(b). \[AQR\ 12.4.3.4(a)(1)\]

2. The permittee shall provide, within a reasonable time and in writing, any information the Control Officer requests to determine whether cause exists for revising, revoking and reissuing, or terminating the permit, or to determine compliance with the conditions of the permit. Upon request, the permittee shall also furnish to the Control Officer copies of records the permit requires keeping; the permittee may furnish records deemed confidential directly to the Administrator, along with a claim of confidentiality. \[AQR\ 12.4.3.4(a)(7)\]

3. Upon presentation of credentials, the permittee shall allow the Control Officer (or any authorized representative) to enter the premises where the source is located or emissions-related activity is conducted and to:

   a. Access and copy, during normal business hours, any records that must be kept under the conditions of the permit;
   
   b. Inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this ATC;
   
   c. Sample or monitor substances or parameters to assure compliance with the conditions of this ATC or applicable requirements; and
   
   d. Document alleged violations using such devices as cameras or video equipment.

4. The permittee shall report the start of construction, construction interruptions exceeding nine months, and completion of construction to the Control Officer in writing no later than 15 working days after occurrence of the event. \[AQR\ 12.4.3.4(a)(12)\]

5. The permittee shall provide written notification of the actual date of commencing operation to the Control Officer within 15 calendar days. \[AQR\ 12.4.3.4(a)(13)\]

6. The permittee shall provide separate written notifications when commencing operations for each unit of phased construction, which may involve a series of units commencing operation at different times. \[AQR\ 12.4.3.4(a)(14)\]

### 4.4 COMPLIANCE REQUIREMENTS

1. Each of the conditions and requirements of this ATC is severable. If any are held invalid, the remaining conditions and requirements continue in effect. \[AQR\ 12.4.3.4(a)(2)\]
2. The permittee shall comply with all conditions contained in this ATC. Any noncompliance constitutes a violation and is grounds for an action for noncompliance, revocation and reissuance, or termination of the permit by the Control Officer, or for reopening or revising of the permit by the permittee as directed by the Control Officer. [AQR 12.4.3.4(a)(3)]

3. The need to halt or reduce activity to maintain compliance with the conditions of this ATC is not a defense to noncompliance with any condition of this ATC. [AQR 12.4.3.4(a)(4)]

4. Upon commencement of operations, the permittee shall report to the Control Officer (4701 W. Russell Road, Suite 200 [second floor], Las Vegas, Nevada 89118) any upset, breakdown, malfunction, emergency, or deviation that causes emissions of regulated air pollutants in excess of any limits set by regulations or by this ATC. The report shall be in two parts, as specified below: [AQR 25.6.1]

   a. Within 24 hours of the time the permittee learns of the excess emissions, the permittee shall notify DAQ by phone at (702) 455-5942, by fax at (702) 383-9994, or by email at AQCompliance@clarkcountynv.gov.

   b. Within 72 hours of the notification required by paragraph (a) above, the permittee shall submit a detailed written report containing the information required by AQR 25.6.3.

5. The permittee shall report to the Control Officer all deviations from permit conditions that do not result in excess emissions, including those attributable to malfunction, startup, or shutdown, with the semiannual monitoring report. Reports shall identify the probable cause of each deviation and any corrective actions or preventative measures taken. [AQR 12.5.2.6(d)(4)(B)(iii)]

6. A Responsible Official of the source shall certify that, based on information and belief formed after a reasonable inquiry, the statements made in any document required to be submitted by any condition of this ATC are true, accurate, and complete. [AQR 12.4.3.4(a)(9)]
Appendix A.2 - Pilot Peak Plant, Graymont Western

The following proposed air quality operating permit revision issued by the Nevada Division of Environmental Protection for the Pilot Peak Plant is hereby incorporated into Nevada’s Second Regional Haze SIP by reference. Note, that this proposed permit revision is intended for this Regional Haze SIP’s public notice period. A final version of this proposed permit revision will be issued after the public notice period has ended and included in the final SIP submittal package for EPA approval. In this appendix, NDEP is only providing pages containing specific permit conditions relevant to this Regional Haze SIP. Provisions that are struck-out are not intended to be incorporated into the SIP by reference for approval or intended to be codified as part of Nevada’s Second Regional Haze SIP.
Facility ID No. A0367  
Permit No. AP3274-1329.03

CLASS I AIR QUALITY OPERATING PERMIT (40 CFR Part 70 Program)

Issued to: GRAYMONT WESTERN US INC. – PILOT PEAK PLANT (HEREINAFTER REFERRED TO AS PERMITTEE)

Mailing Address: 3950 SOUTH 700 EAST, SUITE 301, SALT LAKE CITY, UTAH 84107

Driving Directions: 12 MILES NORTHWEST OF WENDOVER, NEVADA. TAKE I-80 WEST FROM WENDOVER FOR 11 MILES; TAKE EXIT 398 AND TURN LEFT ONTO PILOT RD; PROCEED FOR 3.5 MILES TO THE PILOT PEAK PLANT

General Facility Location:

Sections 10, 12 – 16, 21 – 28, and 34 – 36, T 34 N, R 68 E, MDB&M
Sections 30 and 31, T 34 N, R 69 E, MDB&M

HA 191 and 187 – PILOT CREEK VALLEY AND GOSHUTE VALLEY / ELKO COUNTY
NORTH 4,522,759 M, EAST 731,468 M, UTM ZONE 11, NAD 83

Emission Unit List:

A. System 01 — Limestone Truck-Dump
   PF1.001  Limestone Truck-Dump transfer to Primary Crusher Hopper
   PF1.001.1  Conveyor C-2 Transfer to Crusher R-1

B. System 02 — Primary Crushing and Screening Circuit (D-1)
   S2.001  Primary Crusher R-1 and Associated Transfers (IN from Primary Crusher Hopper; OUT to Conveyor C-1 (S2.002))
   S2.004  Primary Screen S-1 and Associated Transfers (IN from Conveyor C-1 (S2.006); OUT to Conveyors C-2 (S2.005), C-3 (S2.009), C-7 (S2.008), and C-305 (S2.010))
   S2.007  Conveyor C-306 to Conveyor C-2
   S2.010.1  Conveyor C-7 Transfer to Conveyor C-4
   S2.010.2  Hopper/Feeder F-1 Transfer to Conveyor C-4

C. System 03 — Secondary Screening Circuit (D-311)
   S2.012  Secondary Screen and Associated Transfers (IN from Conveyor C-305 (S2.011); OUT to Conveyors C-5 (S2.014), C-306 (S2.013), and C-307 (S2.015))

D. System 05 — Limestone Quarry Conveyance Transfers
   PF1.002  Conveyor C-3 Transfer to Stockpile
   PF1.003  Conveyor C-4 Transfer to Stockpile
   PF1.004  Conveyor C-5 Transfer to Conveyor C-6
   PF1.005  Conveyor C-6 Transfer to Stockpile
   PF1.006  Conveyor C-307 Transfer to Conveyor C-308
   PF1.007  Conveyor C-308 Transfer to Stockpile
Nevada Department of Conservation and Natural Resources • Division of Environmental Protection

Bureau of Air Pollution Control

Facility ID No. A0367 Permit No. AP3274-1329.03
CLASS II AIR QUALITY OPERATING PERMIT

Issued to: GRAYMONT WESTERN US INC. – PILOT PEAK PLANT

<table>
<thead>
<tr>
<th>Emission Unit List: (continued)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>E. System 06 – Lime Plant-Conveyance Transfers</strong></td>
</tr>
<tr>
<td>PF1.008 Stockpile Transfer to Conveyor C-10 (F214)</td>
</tr>
<tr>
<td>PF1.009 Stockpile Transfer to Conveyor C-10 (F213)</td>
</tr>
<tr>
<td>PF1.010 Stockpile Transfer to Conveyor C-10 (F12)</td>
</tr>
<tr>
<td>PF1.011 Stockpile Transfer to Conveyor C-10 (F11)</td>
</tr>
<tr>
<td>PF1.012 Stockpile Transfer to Conveyor C-10 (F10)</td>
</tr>
<tr>
<td>PF1.013 Stockpile Transfer to Conveyor C-10 (F215)</td>
</tr>
<tr>
<td>PF1.014 Stockpile Transfer to Conveyor C-10 (F216)</td>
</tr>
<tr>
<td>PF1.015 Stockpile Transfer to Conveyor C-10 (F217)</td>
</tr>
<tr>
<td>PF1.016 Stockpile Transfer to Conveyor C-10 (F218)</td>
</tr>
<tr>
<td>PF1.017 Stockpile Transfer to Conveyor C-311 (F310)</td>
</tr>
<tr>
<td>PF1.018 Stockpile Transfer to Conveyor C-311 (F311)</td>
</tr>
<tr>
<td>PF1.019 Stockpile Transfer to Conveyor C-312 (F312)</td>
</tr>
<tr>
<td>PF1.020 Stockpile Transfer to Conveyor C-312 (F313)</td>
</tr>
<tr>
<td>PF1.021 Stockpile Transfer to Conveyor C-312 (F314)</td>
</tr>
<tr>
<td>PF1.022 Stockpile Transfer to Conveyor C-312 (F315)</td>
</tr>
<tr>
<td>PF1.023 Stockpile Transfer to Conveyor C-312 (F316)</td>
</tr>
<tr>
<td>PF1.024 Conveyor C-313 Transfer to Fines Stockpile</td>
</tr>
<tr>
<td>PF1.025 Conveyor C-11 Transfer to Fines Stockpile</td>
</tr>
<tr>
<td>PF1.026 Conveyor C-311 Transfer to Conveyor C-312</td>
</tr>
<tr>
<td><strong>F. System 07 – Lime Plant Stone Dressing Screen (Kilns 1 and 2) (D-10)</strong></td>
</tr>
<tr>
<td>S2.017 Stone Dressing Screen S-10 and Associated Transfers (IN from Conveyor C-10 (S2.016); OUT to Conveyor C-11 (S2.018) and C-12 (S2.019))</td>
</tr>
<tr>
<td><strong>G. System 08 – Lime Plant Stone Dressing Screen</strong></td>
</tr>
<tr>
<td>S2.021 Stone Dressing Screen S-312 and Associated Transfers (IN from Conveyor C-312 (S2.020); OUT to Conveyors C-313 (S2.022) and C-314 (S2.023))</td>
</tr>
<tr>
<td><strong>H. System 09 – Lime Plant Stone Surge Bins N-19 (Kiln 1) and N-219 (Kiln 2) (D-19)</strong></td>
</tr>
<tr>
<td>S2.024 Conveyor C-12 Transfer to Stone Surge Bins N-19 and N-219</td>
</tr>
<tr>
<td>S2.026 Stone Surge Bin N-19 (S2.025) Transfer to Conveyor C-19</td>
</tr>
<tr>
<td>S2.027 Conveyor C-19 transfer to Kin #1 Pre-heater PH-20</td>
</tr>
<tr>
<td>S2.029 Stone Surge Bin N-219 (S2.028) Transfer to Conveyor C-219</td>
</tr>
<tr>
<td>S2.030 Conveyor C-219 Transfer to Kiln #2 Pre-heater PH-220</td>
</tr>
<tr>
<td><strong>I. System 10 - Kiln #1 Circuit (D-85) (Revised June 2022, Air Case 11108)</strong></td>
</tr>
<tr>
<td>S2.031 Kiln #1 Pre-heater PH-20</td>
</tr>
<tr>
<td>S2.032 Kiln #1 (K-20) and Associated Coal Mill R-92</td>
</tr>
<tr>
<td>S2.033 Kiln #1 Lime Cooler N-21</td>
</tr>
<tr>
<td><strong>J. System 11 – Kiln #1 Coal Handling Circuit</strong></td>
</tr>
<tr>
<td>PF1.027 Truck Dump to Coal Hopper N-90</td>
</tr>
<tr>
<td>PF1.028 Coal Hopper N-90 transfer to Conveyor C-90</td>
</tr>
<tr>
<td>PF1.029 Coal Silo T-90 Discharge to Conveyor C-92 (followed by fully enclosed transfer to Coal Mill R-92 (PF1.030))</td>
</tr>
<tr>
<td><strong>K. System 12 – #1 Coal Silo T-90 (D-91)</strong></td>
</tr>
<tr>
<td>S2.035 Conveyor C-90 Transfer to Coal Silo T-90</td>
</tr>
</tbody>
</table>
Facility ID No. A0367       Permit No. AP3274-1329.03
CLASS II AIR QUALITY OPERATING PERMIT

Issued to: GRAYMONT WESTERN US INC. – PILOT PEAK PLANT

Emission Unit List: (continued)

L. System 13 – Kiln #2 Circuit (D-285) (Revised June 2022, Air Case 11108)
  S2.036   Kiln #2 Pre-heater PH-220
  S2.037   Kiln #2 (K-220) and Associated Coal Mill R-292
  S2.038   Kiln #2 Lime Cooler N-221

M. System 13a – Kiln #2 Circuit (D-282)
  S2.037.1 Kiln #2 K-220 Cyclone-Bin N-280

N. System 14 – Kiln #2 Coal Handling Circuit
  PF1.031  Conveyor C-90 Transfer to Conveyor C-290
  PF1.032  Coal Silo T-290 Discharge to Conveyor C-292 (followed by fully enclosed transfer to coal mill R-292 via Conveyor C-292 (PF1.033))

O. System 15 – Kiln #2 Coal Silo T-290 (D-291)
  S2.039   Conveyor C-290 Transfer to Coal Silo T-290

P. System 16 – Lime Plant Stone Feed to Kiln #3 (D-382)
  S2.041   Kiln #3 Conveyor C-314 transfer to Pre-heater PH-321

Q. System 17 – Kiln #3 Circuit (D-385) (Revised June 2022, Air Case 11108)
  S2.042   Kiln #3 Pre-heater PH-321
  S2.043   Kiln #3 (K-321) and Associated Coal Mill R-392
  S2.044   Kiln #3 Lime Cooler N-332

R. System 18 – Kiln #3 Coal Handling Circuit
  PF1.034  Conveyor C-90 Transfer to Conveyor C-391
  PF1.035  Coal Silo T-391 Discharge to Conveyor C-392 (followed by fully enclosed transfer to Coal Mill R-392 via conveyor C-392 (PF1.036))

S. System 19 – Kiln #3 Coal Silo T-391
  S2.045   Conveyor C-391 Transfer to Coal Silo T-391
### Emission Unit List (continued)

#### T. System 20 – Product Lime Loadout from Kiln #1 D-82
- S2.047 Kiln #1 Lime Cooler N-21 - transfer to Conveyor C-30
- S2.048 Conveyor C-30 - Transfer to Bucket Elevator E-30
- S2.051 Gate G-36 - transfer to Kiln Run Silo T-40 (Silo T-40 discharges via Fully Enclosed Transfer (S2.052))
- S2.053 Feeder F - 50 - Transfer to Conveyor C-50
- S2.054 Crusher R - 50 and Associated Transfers (IN from Conveyor C-50; OUT to Gate G-55 (S2.055))
- S2.056 Gate G-55 - Transfer to Bucket Elevator E-30
- S2.057 Gate G-36 - Transfer to Core Bin N-30
- S2.058 Core Bin N-30 - Discharge
- S2.067 Loadout Silo T-42 - Discharge
- S2.072 Conveyor C-231 - Transfer to Bucket Elevator E-32
- S2.074 Conveyor C-42 - Transfer to Loadout Silo T-42
- S2.075 Conveyor C-44 - Transfer to Loadout Silo T-44 (Silo T-44 discharges via Fully Enclosed Transfer Point to Conveyor C-61 (S2.109))
- S2.077 Gate G-43 - transfer to Kiln Run Silo T-40
- S2.088 Gate G-39 - Transfer to Kiln Run Silo T-40
- S2.089 Gate G-39 - Transfer to Core Bin N-30
- S2.092 Gate G-37 - Transfer to Core Bin N-30
- S2.099 Gate G-44 - Transfer to Kiln Run Silo T-40
- S2.103 Conveyor C-51 - Transfer to Conveyor C-50
- S2.104 Gate G-55 - Transfer to Bucket Elevator E-31
- S2.106 Conveyor C-52 - Discharge to Loadout
- S2.108 Conveyor C-60 - Discharge to Loadout
- S2.110 Conveyor C-61 - Discharge to Loadout
- S2.111 Loadout Silo T-44 - Discharge

#### U. System 21 – Product Lime Loadout from Kiln #2
- S2.068 Kiln #2 Lime Cooler N-221 - Transfer to Conveyor C-230
- S2.069 Conveyor C-230 - Transfer to Bucket Elevator E-230
- S2.070 Mill R-250 and Associated Transfers (IN from Screen S-230 and Gate 236; OUT to Bucket Elevator E-230)
- S2.071 Gate G-236 - Transfer to Conveyor C-234
- S2.078 Bucket Elevator E-230 - Transfer to Gate G-235
- S2.079 Gate G-235 - Transfer to Screw Conveyor C-231
- S2.080 Screen S-230 and Associated Transfers (IN from Gate G-235; OUT to Mill R-250, Gate G-236, and Conveyor C-231)
<table>
<thead>
<tr>
<th>Emission Unit List: (continued)</th>
</tr>
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<tbody>
<tr>
<td><strong>V. System 22 – Product Lime Loadout from Kiln #2 (DC-30)</strong></td>
</tr>
<tr>
<td>S2.050 Screen S-30 and Associated Transfers (IN from Gate G-36 and G-37 (S2.093); OUT to Conveyor C-42 or C-43 via Gate G-41 and Gate G-42 (S2.059); OUT to Conveyor C-42 or Screen S-30 Transfer to Kiln Run Silo T-40 (S2.062))</td>
</tr>
<tr>
<td>S2.060 Conveyor C-43 transfer to Silo T-43 (Silo T-43 Discharges via Fully Enclosed Transfer to Conveyor C-52 or Conveyor C-60 (S2.061 or S2.107))</td>
</tr>
<tr>
<td>S2.076 Conveyor C-43 transfer to Silo T-43 (Silo T-43 Discharges via Fully Enclosed Transfer to Conveyor C-52 or Conveyor C-60 (S2.061 or S2.107))</td>
</tr>
<tr>
<td><strong>W. System 23 – Kiln #1 and Kiln #2 Cyclone/Baghouse Product Loadout (D-89)</strong></td>
</tr>
<tr>
<td>PF1.038 Fine Dust Silo T-89 to Pugmill (includes discharge of saturated material from pugmill into truck (PF1.038.1))</td>
</tr>
<tr>
<td><strong>X. System 24 – Kiln #1 and Kiln #2 Cyclone/Baghouse Fines Silo Discharge</strong></td>
</tr>
<tr>
<td>S2.113 Process Baghouse Transfer to Fine Dust Silo T-89 via Conveyor C-285 and Conveyor C-85</td>
</tr>
<tr>
<td><strong>Y. System 25 – Kiln #1 and Kiln #2 Baghouse Fines Silo Discharge System (D-11)</strong></td>
</tr>
<tr>
<td>S2.224 Fines Silo T-89 Discharge to Truck via Retractable Spout</td>
</tr>
<tr>
<td><strong>Z. System 26 – Kiln #3 Baghouse Collection Product Loadout (D-388)</strong></td>
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<tr>
<td>S2.115 Process Baghouse Transfer to Fine Dust Silo T-388 via Conveyor C-385</td>
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<tr>
<td><strong>AA. System 27 – Kiln #3 Baghouse Fines Discharge System (D-389)</strong></td>
</tr>
<tr>
<td>S2.116 Fine Dust Silo T-388 Discharge to Truck (Vaculoader System)</td>
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<tr>
<td><strong>AB. System 28 – Kiln #3 Baghouse Fines Discharge System</strong></td>
</tr>
<tr>
<td>PF1.042 Fine Dust Silo T-388 Transfer to Pugmill (includes transfer of fully saturated material from pugmill to truck (PF1.042.1))</td>
</tr>
<tr>
<td><strong>AC. System 29 – Hydrate Plant Surge Bin</strong></td>
</tr>
<tr>
<td>S2.117 Conveyor C-1105 Transfer to Surge Bin N-1101</td>
</tr>
<tr>
<td>S2.117.1 Product Lime Silo T-144 Transfer to Gate G-1105</td>
</tr>
<tr>
<td>S2.117.2 Gate G-1105 Transfer to Conveyor C-1105</td>
</tr>
<tr>
<td>S2.118 Surge Bin N-1101 Transfer to Conveyor C-1102</td>
</tr>
<tr>
<td>S2.118.1 Conveyor C-1102 Transfer to Conveyor C-1104</td>
</tr>
<tr>
<td>S2.119 Conveyor C-1104 Transfer to Hydrator Package</td>
</tr>
</tbody>
</table>
Emission Unit List:

**AD. System 30—Hydrate Plant-Hydrator**
S2.120   Hydrator
S2.121   Conveyor C-1122 Transfer to Gate G-1122

**AE. System 31—Hydrate Plant-Lime Transfer (DC-1132)**
S2.122   Gate G-1122 Transfer to Conveyor C-1123
S2.123   Separator Screen S-1130 and Associated Transfers (IN from Gate G-1122 and Bucket Elevator E-1130 (S2.130); OUT to Conveyor C-1130 (S2.124) and Conveyor C-1134 or Conveyor C-1132 (S2.128))
S2.125   Mill R-1130 and Associated Transfers (IN from Conveyor C-1130; OUT to Conveyor C-1131 (S2.129))
S2.126   Conveyor C-1131 Transfer to Bucket Elevator E-1130
S2.127   Separator Screen S-1131 and Associated Transfers (IN from Bucket Elevator E-1130; OUT to Conveyor C-1130, Conveyor C-1132, or Conveyor C-1134 (S2.128))
S2.131   Conveyor C-1134 and Conveyor C-1132 transfer to Bin N-1130

**AF. System 32—Hydrate Plant-Lime Transfer to Silo T-1140 (DC-1140) (Revised August 2021, Air Case # 10886)**
S2.132   Bin N-1130 Transfer to Gate G-1131
S2.132.1  Gate G-1131 to Gate G-1133
S2.135   Pneumatic Conveyor A-1130 Transfer to Loadout Silo T-1140 via Gate G-1133

**AG. System 33—Hydrate Plant-Lime Transfer to Silo T-1141 (Revised August 2021, Air Case # 10886)**
S2.132   Bin N-1130 Transfer to Gate G-1131
S2.132.1  Gate G-1131 to Gate G-1133
S2.137   Pneumatic Conveyor A-1130 Transfer to Loadout Silo T-1141 via Gate G-1133

**AH. System 34—Hydrate Silos Loadout**
S2.136   Loadout Silo T-1140 Discharge via Conveyor C-1140
S2.138   Loadout Silo T-1141 Discharge via Conveyor C-1141

**AI. System 35—Product Lime Kiln #3—Control Device #1 (D-331)**
S2.144   Bucket Elevator E-331 Transfer to Gate G-331
S2.145   Gate G-331 Transfer to Gate G-331 or Silo T-40
S2.146   Gate G-331 Transfer to Core Bin N-332 or Conveyor C-333
S2.147   Conveyor C-333 Transfer to Kiln #3 Run Silo T-331
S2.148   Core Bin N-332 Discharge to Truck
S2.149   Bucket Elevator E-332 Transfer to Gate G-332
S2.149.1 Gate G-332.1 Transfer to Conveyor C-334 or Bin N-332
S2.150   Conveyor C-334 Transfer to #3 Kiln Run Silo T-331
## Emission Unit List (continued)

### AJ. System 36—Product Lime Kiln #3 Control Device #2 (D-333)

<table>
<thead>
<tr>
<th>Unit ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S2.139</td>
<td>Kiln #3 Lime Cooler N-322 Transfer to Gate G-326</td>
</tr>
<tr>
<td>S2.140</td>
<td>Gate G-326 Transfer to Conveyor C-331</td>
</tr>
<tr>
<td>S2.141</td>
<td>Gate G-326 Transfer to Conveyor C-332</td>
</tr>
<tr>
<td>S2.142</td>
<td>Conveyor C-331 Transfer to Bucket Elevator E-331</td>
</tr>
<tr>
<td>S2.143</td>
<td>Conveyor C-332 Transfer to Bucket Elevator E-332</td>
</tr>
<tr>
<td>S2.151</td>
<td>Gate G-353 Transfer to Conveyor C-332</td>
</tr>
<tr>
<td>S2.152</td>
<td>Gate G-354 Transfer to Conveyor C-332</td>
</tr>
<tr>
<td>S2.154</td>
<td>Kiln #3 Run Silo T-331 Transfer via Feeder F-333 to Conveyor C-336</td>
</tr>
<tr>
<td>S2.155</td>
<td>Kiln #3 Run Silo T-331 Transfer via Feeder F-337 to Conveyor C-337</td>
</tr>
<tr>
<td>S2.156</td>
<td>Conveyor C-336 Transfer to Bucket Elevator E-336</td>
</tr>
<tr>
<td>S2.157</td>
<td>Conveyor C-337 Transfer to Bucket Elevator E-337</td>
</tr>
<tr>
<td>S2.158</td>
<td>Bucket Elevator E-336 Transfer to Gate G-336</td>
</tr>
<tr>
<td>S2.159</td>
<td>Screen S-336 and Associated Transfers (IN from Gate G-336; OUT to Crusher R-351 (S2.161), Gate G-351 (S2.162), and Gate G-353 (S2.165))</td>
</tr>
<tr>
<td>S2.160</td>
<td>Gate G-336 Transfer to Conveyor C-341</td>
</tr>
<tr>
<td>S2.163</td>
<td>Crusher R-351 and Associated Transfers (IN from Gate G-351 and Screen S-336 (S2.161); OUT to Screw Conveyor C-351 (S2.167))</td>
</tr>
<tr>
<td>S2.164</td>
<td>Gate G-351 Transfer to Conveyor C-342</td>
</tr>
<tr>
<td>S2.166</td>
<td>Gate G-352 Transfer to Conveyor C-341</td>
</tr>
<tr>
<td>S2.168</td>
<td>Conveyor C-351 Transfer to Bucket Elevator E-336</td>
</tr>
<tr>
<td>S2.169</td>
<td>Bucket Elevator E-337 Transfer to Gate G-337</td>
</tr>
<tr>
<td>S2.170</td>
<td>Screen S-337 and Associated Transfers (IN from Gate G-337; OUT to Crusher R-352 (S2.172), Gate G-352 (S2.175), and Gate G-354 (S2.178))</td>
</tr>
<tr>
<td>S2.171</td>
<td>Gate G-337 Transfer to Conveyor C-341</td>
</tr>
<tr>
<td>S2.173</td>
<td>Crusher R-352 and Associated Transfers (IN from Screen S-337 (S2.172) and Gate G-352 (S2.176); OUT to Screw Conveyor C-352)</td>
</tr>
<tr>
<td>S2.174</td>
<td>Conveyor C-352 Transfer to Bucket Elevator E-337</td>
</tr>
<tr>
<td>S2.172</td>
<td>Gate G-352 Transfer to Conveyor C-342</td>
</tr>
<tr>
<td>S2.179</td>
<td>Gate G-354 Transfer to Conveyor C-341</td>
</tr>
</tbody>
</table>

### AK. System 37—Product Lime Kiln #3 Control Device #3 (D-343)

<table>
<thead>
<tr>
<th>Unit ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S2.182</td>
<td>Conveyor C-341 Transfer to Bucket Elevator E-341</td>
</tr>
<tr>
<td>S2.183</td>
<td>Conveyor C-342 Transfer to Bucket Elevator E-342</td>
</tr>
<tr>
<td>S2.184</td>
<td>Bucket Elevator E-341 Transfer to Lime Silo T-343</td>
</tr>
<tr>
<td>S2.185</td>
<td>Bucket Elevator E-342 Transfer to Lime Silo T-342</td>
</tr>
</tbody>
</table>

### AL. System 38—Product Lime Kiln #3 Control Device #4 (D-361)

<table>
<thead>
<tr>
<th>Unit ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S2.187</td>
<td>Lime Silo T-343 Loadout to Truck (via Spout U-362 or Transfer to Conveyor C-364)</td>
</tr>
<tr>
<td>S2.188</td>
<td>Lime Silo T-342 Loadout to Truck (via Spout U-363 or Transfer to Conveyor C-365)</td>
</tr>
<tr>
<td>S2.188.1</td>
<td>Conveyor C-364 and Conveyor C-365 Transfer to Truck via Spout U-364</td>
</tr>
</tbody>
</table>

### AM. System 40—Gasoline Storage Tank (5,700 gallons)

<table>
<thead>
<tr>
<th>Unit ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S2.189</td>
<td>Gasoline Storage Tank (5,700 gallon capacity)</td>
</tr>
</tbody>
</table>

### AN. System 41—Kiln #1 Auxiliary Drive Motor

<table>
<thead>
<tr>
<th>Unit ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S2.190</td>
<td>Kiln #1 Auxiliary Drive Motor (76.5 hp; Deutz, model F3L912, manufactured pre-1988)</td>
</tr>
</tbody>
</table>
## Emission Unit List:

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
</table>
| AO. System 42 – Kiln #2 Auxiliary Drive Motor  
S2.191 | Kiln #2 Auxiliary Drive Motor (123 hp, Perkins, Model LD33469, manufactured pre-1994) |
| AP. System 43 – Kiln #3 Auxiliary Drive Motor  
S2.192 | Kiln #3 Auxiliary Drive Motor (131 hp, Deutz, model F5L912, manufactured pre-1996) |
| AQ. System 44 – Emergency Fire Pump  
S2.193 | Emergency Fire Pump (160 hp, Caterpillar, model CAT 3208, Pre-1989) |
| AR. System 45 – Toana Truck Unloading  
PFl.043 | Truck Unloading to Below-grade Hopper |
| AS. System 46 – Toana Railcar Loading  
S2.194 | Hopper Discharge to Conveyor  
S2.195 | Conveyor Discharge to Railcar via Loadout Spout |
| AT. System 47 – Fine Dust Surge Bin N-80 Transfer to Truck  
PFl.044 | Fine Dust Surge Bin N-80 transfer to Truck |
| AU. System 48 – Fine Dust Surge Bin N-280 Transfer to Truck  
PFl.045 | Fine Dust Surge Bin N-280 transfer to Truck |
| AV. System 49 – Fine Dust Surge Bin N-381 Transfer to Truck  
PFl.046 | Fine Dust Surge Bin N-381 transfer to Truck |

****End of Emission Unit List****
Section IV. Specific Operating Conditions (continued)

I. Emission Units S2.031 through S2.033

<table>
<thead>
<tr>
<th>System 10 – Kiln #1 Circuit (D-85) (Revised June 2022, Air Case 11108)</th>
<th>Location UTM (Zone 11, NAD 83)</th>
</tr>
</thead>
<tbody>
<tr>
<td>S2.031 Kiln #1 Pre-heater PH-20</td>
<td>m North 4,522,666, m East 731,377</td>
</tr>
<tr>
<td>S2.032 Kiln #1 (K-20) and Associated Coal Mill R-92</td>
<td></td>
</tr>
<tr>
<td>S2.033 Kiln #1 Lime Cooler N-21</td>
<td></td>
</tr>
</tbody>
</table>

1. Air Pollution Control Equipment (NAC 445B.3405)
   a. Emissions from S2.031 through S2.033 shall be controlled by a baghouse (D-85) and Low-NOx Burners.
   b. Descriptive Stack Parameters
      - Stack Height: 100.0 feet
      - Stack Diameter: 4.958 feet
      - Stack Temperature: 350 °F
      - Exhaust Flow: 60,000 dry standard cubic feet per minute (dscfm)

2. Operating Parameters (NAC 445B.3405)
   a. The S2.032 may combust, as the primary fuel source, coal only, with a maximum coal sulfur content of 3.0%. The use of diesel fuel or propane is designated for startups and flame stabilization purposes during the startup and/or shutdown of the S2.032.
   b. The maximum allowable fuel consumption rate for S2.032 shall not exceed 5.0 tons of coal per any one-hour period.
   c. The maximum allowable production rate for S2.031 through S2.033, each, shall not exceed 25.0 tons of lime per any one-hour period, averaged over a daily basis.
   d. Hours
      (1) S2.031 through S2.033, each, may operate a total of 24 hours per day.

   a. The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from the exhaust stack of baghouse (D-85) the following pollutants in excess of the following specified limits:
      (1) The discharge of PM (particulate matter) to the atmosphere shall not exceed 10.3 pounds per hour, nor more than 141.0 tons per 12-month rolling period.
      (2) The discharge of PM10 (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed 13.6 pounds per hour, nor more than 181.6 tons per 12-month rolling period.
      (3) The discharge of PM2.5 (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed 13.6 pounds per hour, nor more than 181.6 tons per 12-month rolling period.
      (4) The discharge of SO2 (sulfur dioxide) to the atmosphere shall not exceed 14.0 pounds per hour, nor more than 61.3 tons per 12-month rolling period.
      (5) The discharge of NOX (oxides of nitrogen) to the atmosphere shall not exceed 120.0 pounds per hour, nor more than 526.0 tons per 12-month rolling period.
      (6) The discharge of CO (carbon monoxide) to the atmosphere shall not exceed 308.0 pounds per hour, nor more than 1,349.0 tons per 12-month rolling period.
      (7) The discharge of VOCs (volatile organic compounds) to the atmosphere shall not exceed 4.35 pounds per hour, nor more than 19.1 tons per 12-month rolling period.
      (8) NAC 445B.22017—The opacity from baghouse (D-85) shall not equal or exceed 20 percent.
      (9) NAC 445B.2203—The maximum allowable discharge of PM10 to the atmosphere from baghouse (D-85) shall not exceed 0.33 pound per MMBtu.
      (10) NAC 445B.2204—The maximum allowable discharge of sulfur to the atmosphere from baghouse (D-85) shall not exceed 91.0 pounds per MMBtu.
      (11) NAC 445B.2203—The maximum allowable discharge of PM10 to the atmosphere from baghouse (D-85) shall not exceed 35.4 pounds per hour.
Section IV. Specific Operating Conditions (continued)

I. Emission Units S2.031 through S2.033 (continued)

   b. The Permittee, within 240 days upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from the exhaust stack of baghouse (D-85) the following pollutants in excess of the following specified limits:
      (1) Nevada Regional Haze SIP Limit – The discharge of NOX to the atmosphere shall not exceed 101.4 pounds per hour, based on a 30-day rolling average period.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.3405)
   The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
   a. Monitor and record the hours of operation for S2.031 through S2.033, each, on a daily basis.
   b. Monitor and record the consumption rate of coal on an hourly basis for Kiln #1 Circuit (in tons).
   c. Monitor and record the production rate of lime for Kiln #1 Circuit on a daily basis.
   d. Record the coal sulfur content as demonstrated and submitted by the coal supplier data on a daily basis.
   e. Record the monthly consumption rate and the corresponding annual consumption rate for the 12-month rolling period. The monthly consumption rate shall be determined at the end of each month as the sum of hourly consumption rate for each day of the month. The annual consumption rate shall be determined at the end of each month as the sum of the monthly consumption rate for the 12-month rolling period.
   f. Record the corresponding average hourly production rate of lime in tons per hour. The average hourly production rate shall be determined from the total daily production and the total daily hours of operation.
   g. Annually, conduct and record an internal inspection of Baghouse (D-85), including the bags. In the event that Kiln #1 Circuit operates without prolonged shutdown for an entire calendar year, and COMS data or Kiln #1 Circuit indicates that Baghouse (D-85) is operating properly, the internal baghouse inspection or dye test may be conducted during the next prolonged shutdown that will allow safe access inside Baghouse (D-85).
   h. Inspect the baghouse installed on Kiln #1 Circuit on a monthly basis in accordance with the manufacturer’s operation and maintenance manual and record the results (e.g., the condition of the filter fabric), and any corrective actions taken.
   i. Maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. (40 CFR 60.7(b))
   j. Install, calibrate, operate, and maintain a SO2 Continuous Emissions Monitoring System (CEMS) as specified in Section V.A. of this operating permit.
   k. Install, calibrate, operate, and maintain a Continuous Opacity Monitoring System (COMS) as specified in Section VI.A. of this operating permit.
   l. Monitor the bag cleaning air pressure for Baghouse D-85 every two weeks.
   m. Record any corrective actions taken to maintain the bag cleaning air pressure for Baghouse D-85 at or above 20 psi.
Section IV. Specific Operating Conditions (continued)

I. Emission Units S2.031 through S2.033 (continued)

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.3405) (continued)

The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.

n. For the Kiln #1 Circuit startup:
   (1) The time startup began.
   (2) The time coal firing began.
   (3) The time off-gases were routed through Baghouse D-85.
   (4) Baghouse D-85 inlet temperature when the kiln off-gases were routed through Baghouse D-85.
   (5) Records documenting why any deviation from the best management practices plan for the Kiln #1 Circuit startup was necessary.
   (6) Stack opacity as measured by the COMS.

o. The measured opacity (in percent opacity) from the COMS required in Section VI.A. of this operating permit. The opacity will be determined from reducing all data from the successive 10-second readings and recorded for each 6-minute average as required in NAC 445B.22017(1)(b), and as set forth in 40 CFR Part 60.13(b).

p. The emission rates of SO2 in pounds per hour (lbs/hr) and parts per million (ppm) measured by the CEMS required in Section V.A. of this operating permit, for each averaging period described below:
   (1) The SO2 emissions in pounds per hour (lbs/hr) for each 3-hour rolling period.
   (2) The following equation articulates the defining formula by which the pertinent data is calculated:

\[
E_h = K \times C_{hp} \times Q_m \left( \frac{100 - \%H_2O}{100} \right)
\]

where:

- \(E_h\): Hourly SO2 mass emission rate during unit operation, lb/hr.
- \(K\): \(1.660 \times 10^{-7}\) for SO2, (lb/scf)/ppm.
- \(C_{hp}\): Hourly average SO2 concentration during unit operation, ppm (dry).
- \(Q_m\): Hourly average volumetric flow rate during unit operation, scfh as measured (wet).
- \(\%H_2O\): Hourly average stack moisture content during unit operation or constant moisture value, percent by volume.
Section IV. Specific Operating Conditions (continued)

I. Emission Units S2.031 through S2.033 (continued)

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.3405) (continued)

The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.

q. The emission rates of NOX in pounds per hour (lbs/hr) and parts per million (ppm) measured by the CEMS required in Section V.B. of this operating permit, for each averaging period described below:

(1) The NOX emissions in pounds per hour (lbs/hr) for each 30-day rolling period.
(2) The following equation articulates the defining formula by which the pertinent data is calculated:

\[
E_h = K * C_{hp} * Q_{hs} * \left( \frac{100 - \%H_2O}{100} \right)
\]

where:

- \(E_h\) = Hourly NOx mass emission rate during unit operation, lb/hr.
- \(K = 1.660 \times 10^{-7}\) for NOX, (lb/scf)/ppm.
- \(C_{hp}\) = Hourly average NOX concentration during unit operation, ppm (dry).
- \(Q_{hs}\) = Hourly average volumetric flow rate during unit operation, scfh as measured (wet).
- \(\%H_2O\) = Hourly average stack moisture content during unit operation or constant moisture value, percent by volume.

r. As a result of the most recent performance tests performed in I.5.a. through j. of this section, the permittee shall derive emission factors for each of the following:

(1) Pounds of PM per ton of lime production (lbs-PM/ton-lime production)
(2) Pounds of PM10 per ton of lime production (lbs-PM10/ton-lime production)
(3) Pounds of PM2.5 per ton of lime production (lbs-PM2.5/ton-lime production)
(4) Pounds of NOx per ton of lime production (lbs-NOx/ton-lime production)
(5) Pounds of CO per ton of lime production (lbs-CO/ton-lime production)
(6) Pounds of VOC’s per ton of lime production (lbs-VOC’s/ton-lime production)

s. The annual emissions of PM, PM10, PM2.5, CO, and VOC’s from the Kiln #1 Circuit will be calculated based on the testing contained in I.5. of this section and then converted to tons of emissions per year.

t. The annual emissions of SO2 from the Kiln #1 Circuit will be calculated based on the data recorded by the CEMs in Section V.A. of this operating permit and then converted to tons of emissions per year.

u. The annual emissions of NOX from the Kiln #1 Circuit will be calculated based on the data recorded by the CEMs in Section V.B. of this operating permit and then converted to tons of emissions per year.
Section IV. Specific Operating Conditions (continued)

L. Emission Units S2.036 through S2.038

<table>
<thead>
<tr>
<th>System 13 - Kiln #2 Circuit (D-285) (Revised June 2022, Air Case 11108)</th>
<th>Location UTM (Zone 11, NAD 83)</th>
</tr>
</thead>
<tbody>
<tr>
<td>S2.036 Kiln #2 Pre-heater PH-220</td>
<td>m North</td>
</tr>
<tr>
<td>S2.037 Kiln #2 (K-220) and Associated Coal Mill R-292</td>
<td>4,522,713</td>
</tr>
<tr>
<td>S2.038 Kiln #2 Lime Cooler N-221</td>
<td></td>
</tr>
</tbody>
</table>

1. Air Pollution Control Equipment (NAC 445B.3405)
   a. Emissions from S2.036 through S2.038 shall be controlled by a baghouse (D-285) and Low-NOx Burners.
   b. Descriptive Stack Parameters
      Stack Height: 100.0 feet
      Stack Diameter: 7.04 feet
      Stack Temperature: 350 °F
      Exhaust Flow: 70,000 dry-standard cubic feet per minute (dscfm)

2. Operating Parameters (NAC 445B.3405)
   a. The S2.037 may combust, as the primary fuel source, coal only, with a maximum coal sulfur content of 3.0%. The use of diesel fuel or propane is designated for startups and flame stabilization purposes during the startup and/or shut down of the S2.037.
   b. The maximum allowable fuel consumption rate for S2.037 shall not exceed 7.5 tons of coal per any one-hour period.
   c. The maximum allowable throughput rate for S2.036 through S2.038, each, shall not exceed 33.3 tons of lime per any one-hour period, averaged over a daily basis.
   d. Hours
      (1) S2.036 through S2.038, each, may operate a total of 24 hours per day.

   a. The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from the exhaust stack of baghouse (D-285) the following pollutants in excess of the following specified limits:
      (1) The discharge of PM (particulate matter) to the atmosphere shall not exceed 12.0 pounds per hour, nor more than 52.6 tons per 12-month rolling period.
      (2) The discharge of PM10 (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed 15.2 pounds per hour, nor more than 66.6 tons per 12-month rolling period.
      (3) The discharge of PM2.5 (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed 15.2 pounds per hour, nor more than 66.6 tons per 12-month rolling period.
      (4) The discharge of SO2 (sulfur dioxide) to the atmosphere shall not exceed 21.0 pounds per hour, nor more than 92.0 tons per 12-month rolling period.
      (5) The discharge of NOX (oxides of nitrogen) to the atmosphere shall not exceed 160.0 pounds per hour, nor more than 701.0 tons per 12-month rolling period.
      (6) The discharge of CO (carbon monoxide) to the atmosphere shall not exceed 1,796.0 pounds per hour, nor more than 1,796.0 tons per 12-month rolling period.
      (7) The discharge of VOCs (volatile organic compounds) to the atmosphere shall not exceed 6.53 pounds per hour, nor more than 28.6 tons per 12-month rolling period.
      (8) NAC 445B.22017 — The opacity from the baghouse (D-285) shall not equal or exceed 20 percent.
      (9) NAC 445B.2203 — The maximum allowable discharge of PM10 to the atmosphere from baghouse (D-285) shall not exceed 0.30 pound per MMBtu.
      (10) NAC 445B.22047 — The maximum allowable discharge of sulfur to the atmosphere from baghouse (D-285) shall not exceed 136.5 pounds per MMBtu.
      (11) NAC 445B.22033 — The maximum allowable discharge of PM10 to the atmosphere from baghouse (D-285) shall not exceed 40.9 pounds per hour.
L. Emission Units S2.036 through S2.038 (continued)

   b. The Permittee, within 240 days upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from the exhaust stack of baghouse (D-285) the following pollutants in excess of the following specified limits:
      (1) Nevada Regional Haze SIP Limit – The discharge of NOX to the atmosphere shall not exceed 107.4 pounds per hour, based on a 30-day rolling average period.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.3405)
   The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
   a. Monitor and record the hours of operation for S2.036 through S2.038, each, on a daily basis.
   b. Monitor and record the consumption rate of coal on an hourly basis for Kiln #2 Circuit (in tons).
   c. Monitor and record the production rate of lime for Kiln #2 Circuit on a daily basis.
   d. Record the coal sulfur content as demonstrated and submitted by the coal supplier data on a daily basis.
   e. Record the monthly consumption rate and the corresponding annual consumption rate for the 12-month rolling period. The monthly consumption rate shall be determined at the end of each month as the sum of hourly consumption rate for each day of the month. The annual consumption rate shall be determined at the end of each month as the sum of the monthly consumption rate for the 12-month rolling period.
   f. Record the corresponding average hourly production rate of lime in tons per hour. The average hourly production rate shall be determined from the total daily production and the total daily hours of operation.
   g. Annually, conduct and record an internal inspection of Baghouse (D-285), including the bags. In the event that Kiln #2 Circuit operates without prolonged shutdown for an entire calendar year, and COMS data or Kiln #2 Circuit indicates that Baghouse (D-285) is operating properly, the internal baghouse inspection or dye test may be conducted during the next prolonged shutdown that will allow safe access inside Baghouse (D-285).
   h. Inspect the baghouse installed on Kiln #2 Circuit on a monthly basis in accordance with the manufacturer’s operation and maintenance manual and record the results (e.g., the condition of the filter fabric), and any corrective actions taken.
   i. Maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. (40 CFR 60.7(b))
   j. Install, calibrate, operate, and maintain a SO2 Continuous Emissions Monitoring System (CEMS) as specified in Section V.A. of this operating permit.
   k. Install, calibrate, operate, and maintain a Continuous Opacity Monitoring System (COMS) as specified in Section VI.A. of this operating permit.
   l. Monitor the bag cleaning air pressure for Baghouse D-285 every two weeks.
   m. Record any corrective actions taken to maintain the bag cleaning air pressure for Baghouse D-285 at or above 20 psi.
Section IV. Specific Operating Conditions (continued)

L. Emission Units S2.036 through S2.038 (continued)

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.3405) (continued)

The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.

n. For the Kiln #2 Circuit startup:
   (1) The time startup began.
   (2) The time coal firing began.
   (3) The time off-gases were routed through Baghouse D-285.
   (4) Baghouse D-285 inlet temperature when the kiln off-gases were routed through Baghouse D-285.
   (5) Records documenting why any deviation from the best management practices plan for the Kiln #2 Circuit startup was necessary.

o. The measured opacity (in percent opacity) from the COMS as required in Section VI.A. of this operating permit. The opacity will be determined from reducing all data from the successive 10-second readings and recorded for each 6-minute average as required in NAC 445B.22017(1)(b), and as set forth in 40 CFR Part 60.13(b).

p. The emission rates of SO₂ in pounds per hour (lbs/hr) and parts per million (ppm) measured by the CEMS required in Section V.A. of this operating permit, for each averaging period described below:
   (1) The SO₂ emissions in pounds per hour (lbs/hr) for each 3-hour rolling period.
   (2) The following equation articulates the defining formula by which the pertinent data is calculated:

\[
E_h = K \left( \frac{C_{hr} Q_{hs}}{100 - \% H_2O} \right)
\]

where:

- \( E_h \) = Hourly SO₂ mass emission rate during unit operation, lb/hr.
- \( K = 1.66 \times 10^{-2} \) for SO₂, (lb/scf)/ppm.
- \( C_{hr} \) = Hourly average SO₂ concentration during unit operation, ppm (dry).
- \( Q_{hs} \) = Hourly average volumetric flow rate during unit operation, scfh as measured (wet).
- \( \% H_2O \) = Hourly average stack moisture content during unit operation or constant moisture value, percent by volume.
Section IV. Specific Operating Conditions (continued)

L. Emission Units S2.036 through S2.038 (continued)

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.3405) (continued)
   The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and
   recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.

q. The emission rates of NOX in pounds per hour (lbs/hr) and parts per million (ppm) measured by the CEMS required in
   Section V.B. of this operating permit, for each averaging period described below:
   (1) The NOX emissions in pounds per hour (lbs/hr) for each 30-day rolling period.
   (2) The following equation articulates the defining formula by which the pertinent data is calculated:

   \[
   E_h = K \times C_{hp} \times Q_{hs} \times \left(100 - \frac{\%H_2O}{100}\right)
   \]

   where:

   \(E_h\) = Hourly NOX mass emission rate during unit operation, lb/hr.

   \(K\) = \(1.660 \times 10^{-7}\) for NOX, (lb/scf)/ppm.

   \(C_{hp}\) = Hourly average NOX concentration during unit operation, ppm (dry).

   \(Q_{hs}\) = Hourly average volumetric flow rate during unit operation, scfh as measured (wet).

   \(\%H_2O\) = Hourly average stack moisture content during unit operation or constant moisture value, percent
   by volume.

r. As a result of the most recent performance tests performed in L.5.a. through j. of this section, the permittee shall
   derive emission factors for each of the following:
   (1) Pounds of PM per ton of lime production (lbs-PM/ton-lime production)
   (2) Pounds of PM10 per ton of lime production (lbs-PM10/ton-lime production)
   (3) Pounds of PM2.5 per ton of lime production (lbs-PM2.5/ton-lime production)
   (4) Pounds of NOX per ton of lime production (lbs-NOX/ton-lime production)
   (5) Pounds of CO per ton of lime production (lbs-CO/ton-lime production)
   (6) Pounds of VOC’s per ton of lime production (lbs-VOC’s/ton-lime production)

s. The annual emissions of PM, PM10, PM2.5, CO, and VOC’s from the Kiln #2 Circuit will be calculated based on the
   testing contained in L.5. of this section and then converted to tons of emissions per year.

t. The annual emissions of SO2 from the Kiln #2 Circuit will be calculated based on the data recorded in Section V.A.
   of this operating permit and then converted to tons of emissions per year.

u. The annual emissions of NOX from the Kiln #2 Circuit will be calculated based on the data recorded in Section V.B.
   of this operating permit and then converted to tons of emissions per year.
Section IV. Specific Operating Conditions (continued)

Q. Emission Units S2.042 through S2.044

System 17 - Kiln #3 Circuit (D-385) (Revised June 2022, Air Case 11108)

<table>
<thead>
<tr>
<th>System</th>
<th>Unit Description</th>
<th>Location UTM (Zone 11, NAD 83)</th>
</tr>
</thead>
<tbody>
<tr>
<td>S2.042</td>
<td>Kiln #3 Pre-heater PH-321</td>
<td>m North: 4,522,532 m East: 731,431</td>
</tr>
<tr>
<td>S2.043</td>
<td>Kiln #3 (K-321) and Associated Coal Mill R-392</td>
<td></td>
</tr>
<tr>
<td>S2.044</td>
<td>Kiln #3 Lime Cooler N-332</td>
<td></td>
</tr>
</tbody>
</table>

1. Air Pollution Control Equipment (NAC 445B.3405)
   a. Emissions from S2.042 through S2.044 shall be controlled by a baghouse (D-385) and Low-NOx Burners.
   b. Descriptive Stack Parameters
      - Stack Height: 181.0 feet
      - Stack Diameter: 7.04 feet
      - Stack Temperature: 350 °F
      - Exhaust Flow: 100,000 dry-standard cubic feet per minute (dscfm)

2. Operating Parameters (NAC 445B.3405)
   a. The S2.043 may combust, as the primary fuel source, coal only, with a maximum coal sulfur content of 3.0%. The use of diesel fuel or propane is designated for startups and flame stabilization purposes during the startup and/or shutdown of the S2.043.
   b. The maximum allowable fuel consumption rate for S2.043 shall not exceed 12.0 tons of coal per any one-hour period.
   c. The maximum allowable throughput rate for S2.042 through S2.044, each, shall not exceed 50.0 tons of lime per any one-hour period, averaged over a daily basis.
   d. Hours
      - S2.042 through S2.044, each, may operate a total of 24 hours per day.

   a. The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from the exhaust stack of baghouse (D-385) the following pollutants in excess of the following specified limits:
      - The discharge of PM (particulate matter) to the atmosphere shall not exceed 17.1 pounds per hour, nor more than 75.1 tons per 12-month rolling period.
      - The discharge of PM10 (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed 23.7 pounds per hour, nor more than 103.8 tons per 12-month rolling period.
      - The discharge of PM2.5 (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed 23.7 pounds per hour, nor more than 103.8 tons per 12-month rolling period.
      - The discharge of SO2 (sulfur dioxide) to the atmosphere shall not exceed 33.0 pounds per hour, nor more than 144.5 tons per 12-month rolling period.
      - The discharge of NOX (oxides of nitrogen) to the atmosphere shall not exceed 200.0 pounds per hour, nor more than 876.0 tons per 12-month rolling period.
      - The discharge of CO (carbon monoxide) to the atmosphere shall not exceed 512.5 pounds per hour, nor more than 2,245.0 tons per 12-month rolling period.
      - The discharge of VOCs (volatile organic compounds) to the atmosphere shall not exceed 10.4 pounds per hour, nor more than 45.7 tons per 12-month rolling period.
      - NAC 445B.22017 — The opacity from the baghouse (D-385) shall not equal or exceed 20 percent.
      - NAC 445B.2203 — The maximum allowable discharge of PM10 to the atmosphere from baghouse (D-385) shall not exceed 0.27 pound per MMBtu.
      - NAC 445B.22047 — The maximum allowable discharge of sulfur to the atmosphere from baghouse (D-385) shall not exceed 187.2 pounds per MMBtu.
      - NAC 445B.22033 — The maximum allowable discharge of PM10 to the atmosphere from baghouse (D-385) shall not exceed 44.6 pounds per hour.
Section IV. Specific Operating Conditions (continued)

Q. Emission Units S2.042 through S2.044 (continued)

   b. The Permittee, within 240 days upon issuance of this operating permit, shall not discharge or cause the discharge into
      the atmosphere from the exhaust stack of baghouse (D-385) the following pollutants in excess of the following
      specified limits:
      (1) Nevada Regional Haze SIP Limit – The discharge of NOX to the atmosphere shall not exceed 143.7 pounds per
          hour, based on a 30-day rolling average period.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.3405)
   The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and
   recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
   a. Monitor and record the hours of operation for S2.042 through S2.044, each, on a daily basis.
   b. Monitor and record the consumption rate of coal on an hourly basis for Kiln #3 Circuit (in tons).
   c. Monitor and record the production rate of lime for Kiln #3 Circuit on a daily basis.
   d. Record the coal sulfur content as demonstrated and submitted by the coal supplier data on a daily basis.
   e. Record the monthly consumption rate and the corresponding annual consumption rate for the 12-month rolling period.
      The monthly consumption rate shall be determined at the end of each month as the sum of hourly consumption rate
      for each day of the month. The annual consumption rate shall be determined at the end of each month as the sum of
      the monthly consumption rate for the 12-month rolling period.
   f. Record the corresponding average hourly production rate of lime in tons per hour. The average hourly production rate
      shall be determined from the total daily production and the total daily hours of operation.
   g. Annually, conduct and record an internal inspection of Baghouse (D-385), including the bags. In the event that Kiln
      #3 Circuit operates without prolonged shutdown for an entire calendar year, and COMS data or Kiln #3 Circuit
      indicates that Baghouse (D-385) is operating properly, the internal baghouse inspection or dye test may be conducted
      during the next prolonged shutdown that will allow safe access inside Baghouse (D-385).
   h. Inspect the baghouse installed on Kiln #3 Circuit on a monthly basis in accordance with the manufacturer’s operation
      and maintenance manual and record the results (e.g., the condition of the filter fabric), and any corrective actions taken.
   i. Maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an
      affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous
      monitoring system or monitoring device is inoperative. (40 CFR 60.7(b))
   j. Install, calibrate, operate, and maintain a SO2 Continuous Emissions Monitoring System (CEMS) as specified in
      Section V.A. of this operating permit.
   k. Install, calibrate, operate, and maintain a Continuous Opacity Monitoring System (COMS) as specified in Section
      VI.A. of this operating permit.
   l. Monitor the bag cleaning air pressure for Baghouse D-385 every two weeks.
   m. Record any corrective actions taken to maintain the bag cleaning air pressure for Baghouse D-385 at or above 30 psi.
Section IV. Specific Operating Conditions (continued)

Q. Emission Units S2.042 through S2.044 (continued)

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.3405) (continued)

The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.

n. For the Kiln #3 Circuit startup:
   (1) The time startup began.
   (2) The time coal-firing began.
   (3) The time off-gases were routed through Baghouse D-385.
   (4) Baghouse D-385 inlet temperature when the kiln off-gases were routed through Baghouse D-385.
   (5) Records documenting why any deviation from the best management practices plan for the Kiln #3 Circuit startup was necessary.
   (6) Stack opacity as measured by the COMS.

o. The measured opacity (in percent opacity) from the COMS required in Section VI.A. of this operating permit. The opacity will be determined from reducing all data from the successive 10-second readings and recorded for each 6-minute average as required in NAC 445B.22017(1)(b), and as set forth in 40 CFR Part 60.13(h).

p. The emission rates of SO2 in pounds per hour (lbs/hr) and parts per million (ppm) measured by the CEMS required in Section V.A. of this operating permit, for each averaging period described below:
   (1) The SO2 emissions in pounds per hour (lbs/hr) for each 3-hour rolling period.
   (2) The following equation articulates the defining formula by which the pertinent data is calculated:

\[
E_h = K \times C_{hp} \times \left[ \left( \frac{100 - \%H_2O}{100} \right) \right]
\]

where:

- \( E_h \) = Hourly SO2 mass emission rate during unit operation, lb/hr.
- \( K = 1.660 \times 10^{-7} \) for SO2, (lb/scf)/ppm.
- \( C_{hp} \) = Hourly average SO2 concentration during unit operation, ppm (dry).
- \( Q_{hr} \) = Hourly average volumetric flow rate during unit operation, scfh as measured (wet).
- \( \%H_2O \) = Hourly average stack moisture content during unit operation or constant moisture value, percent by volume.
Section IV. Specific Operating Conditions (continued)

Q. Emission Units S2.042 through S2.044 (continued)

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.3405) (continued)

The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.

q. The emission rates of NOX in pounds per hour (lbs/hr) and parts per million (ppm) measured by the CEMS required in Section V.B. of this operating permit, for each averaging period described below:

(1) The NOX emissions in pounds per hour (lbs/hr) for each 30-day rolling period.

(2) The following equation articulates the defining formula by which the pertinent data is calculated:

\[ E_h = K \times C_{hp} \times Q_{hs} \times \left( \frac{100 - \%H_2O}{100} \right) \]

where:

- \( E_h \) = Hourly NOX mass emission rate during unit operation, lb/hr.
- \( K = 1.660 \times 10^{-7} \) for NOX, (lb/scf)/ppm.
- \( C_{hp} \) = Hourly average NOX concentration during unit operation, ppm (dry).
- \( Q_{hs} \) = Hourly average volumetric flow rate during unit operation, scfh as measured (wet).
- \( \%H_2O \) = Hourly average stack moisture content during unit operation or constant moisture value, percent by volume.

r. As a result of the most recent performance tests performed in Q.5.a. through j. of this section, the permittee shall derive emission factors for each of the following:

(1) Pounds of PM per ton of lime production (lbs-PM/ton-lime production)
(2) Pounds of PM10 per ton of lime production (lbs-PM10/ton-lime production)
(3) Pounds of PM2.5 per ton of lime production (lbs-PM2.5/ton-lime production)
(4) Pounds of NOX per ton of lime production (lbs-NOX/ton-lime production)
(5) Pounds of CO per ton of lime production (lbs-CO/ton-lime production)
(6) Pounds of VOC’s per ton of lime production (lbs-VOC’s/ton-lime production)

s. The annual emissions of PM, PM10, PM2.5, CO, and VOC’s from the Kiln #3 Circuit will be calculated based on the testing contained in Q.5. of this section and then converted to tons of emissions per year.

t. The annual emissions of SO2 from the Kiln #3 Circuit will be calculated based on the data recorded in Section V.A. of this operating permit and then converted to tons of emissions per year.

u. The annual emissions of NOX from the Kiln #3 Circuit will be calculated based on the data recorded in Section V.B. of this operating permit and then converted to tons of emissions per year.
Section V. Continuous Emissions Monitoring System (CEMS) Conditions (continued)

A. \(\text{SO}_2\) CEMS Requirements for System 10 (S2.031, S2.032, and S2.033), System 13 (S2.036, S2.037, and S2.038), and System 17 (S2.042, S2.043, and S2.044) (NAC 445B.3405) (continued)

8. Unless specified otherwise in the applicable subpart, the Permittee shall comply with the relative accuracy criteria:

   a. For RATA (40 CFR Part 60 Appendix F Procedure 1 Section 5.2.3(1)):
      (1) For \(\text{SO}_2\) emissions, RA shall be less than or equal to 20% (if the value determined by the Reference Method (RM) is greater than 50% of the emission limit) or RA shall be less than or equal to 10% (if the value determined by the RM is less than 50% of the emission limit). (40 CFR Part 60 Appendix B PS-2 Section 13.2)

   b. For CGA ± 15 percent of the average audit value for ± 5 ppm, whichever is greater. (40 CFR Part 60 Appendix F Procedure 1 Section 5.2.3(2))

9. The Permittee shall conduct and report to the Director a quarterly audit as specified under 40 CFR Part 60 Appendix F Procedure 1 Section 7.0. (40 CFR Part 60 Appendix F Procedure 1 Section 7.0)

B. \(\text{NO}_x\) (CEMS) Requirements for System 10 (S2.031, S2.032, and S2.033), System 13 (S2.036, S2.037, and S2.038), and System 17 (S2.042, S2.043, and S2.044) (NAC 445B.3405)

1. Within 240 days upon issuance of this operating permit, the Permittee shall install, calibrate, operate, and maintain a \(\text{NO}_x\) CEMS in the exhaust stacks of System 10 (S2.031, S2.032, and S2.033), System 13 (S2.036, S2.037, and S2.038), and System 17 (S2.042, S2.043, and S2.044), each. The CEMS sampling probe must be installed at an appropriate location in the exhaust stacks to accurately and continuously measure the concentration of \(\text{NO}_x\) (in ppm) from System 10 (S2.031, S2.032, and S2.033), System 13 (S2.036, S2.037, and S2.038), and System 17 (S2.042, S2.043, and S2.044), in accordance with the requirements prescribed in Nevada Administrative Code (NAC) 445B.252 to NAC 445B.267, applicable subparts 40 CFR Part 60 Appendix B and Appendix F. Verification of the operational status shall, as a minimum, include completion of the manufacturer’s written requirements or recommendations for installation, operation, and calibration of the devices.

2. The Permittee shall comply with the following method performance specifications (40 CFR Part 60 Appendix B PS-2 Section 13.0):
   a. Calibration Drift
   b. Relative Accuracy

3. The Permittee shall develop and implement a Quality Control (QC) program. As a minimum, each QC program must include written procedures which should describe in detail, complete, step-by-step procedures and operations for each of the following activities (40 CFR Part 60 Appendix F Procedure 1 Section 3.0):
   a. Calibration of CEMS
   b. Calibration maintenance of CEMS (including spare parts inventory)
   c. Preventative maintenance of CEMS (including spare parts inventory)
   d. Data recording, calculations, and reporting
   e. Accuracy audit procedures including sampling and analysis methods
   f. Program of corrective action for malfunctioning CEMS

4. The written procedures under V.A.3. of this section, must be kept on record and available for inspection by the Director. (40 CFR Part 60 Appendix F Procedure 1 Section 3.0)

5. The Permittee shall conduct a Calibration Drift Assessment according to 40 CFR Part 60 Appendix F Procedure 1 Sections 4.1 and 4.2. (40 CFR Part 60 Appendix F Procedure 1 Sections 4.1 and 4.2).

6. The Permittee shall record and report all CEMS data according to 40 CFR Part 60 Appendix F Procedure 1 Section 4.4. All measurements from the CEMS must be retained on file by the Permittee for at least 2 years. (40 CFR Part 60 Appendix F Procedure 1 Section 4.4)
Section V. Continuous Emissions Monitoring System (CEMS) Conditions (continued)

B. NO\textsubscript{X} (CEMS) Requirements for System 10 (S2.031, S2.032, and S2.033), System 13 (S2.036, S2.037, and S2.038), and System 17 (S2.042, S2.043, and S2.044) (NAC 445B.3405) (continued)

7. Each CEMS must be audited at least once each calendar quarter. Successive quarterly audits shall occur no closer than 2 months. The audits shall be conducted as follows (40 CFR Part 60 Appendix F Procedure 1 Section 5.1):
   a. The Relative Accuracy Test (RATA) shall be conducted once every four calendar quarters. (40 CFR Part 60 Appendix F Procedure 1 Section 5.1.1)
   b. The Cylinder Gas Audit (CGA) shall be conducted every quarter except when a RATA is conducted. (40 CFR Part 60 Appendix F Procedure 1 Section 5.1.2)

8. Unless specified otherwise in the applicable subpart, the Permittee shall comply with the relative accuracy criteria:
   a. For RATA (40 CFR Part 60 Appendix F Procedure 1 Section 5.2.3(1)):
      (1) For NO\textsubscript{X} emissions, RA shall be less than or equal to 20% (if the value determined by the Reference Method (RM) is greater than 50% of the emission limit) or RA shall be less than or equal to 10% (if the value determined by the RM is less than 50% of the emission limit). (40 CFR Part 60 Appendix B PS-2 Section 13.2)
   b. For CGA ±15 percent of the average audit value for ±5 ppm, whichever is greater. (40 CFR Part 60 Appendix F Procedure 1 Section 5.2.3(2))

9. The Permittee shall conduct and report to the Director a quarterly audit as specified under 40 CFR Part 60 Appendix F Procedure 1 Section 7.0. (40 CFR Part 60 Appendix F Procedure 1 Section 7.0)

C. NAC 445B.265

Monitoring systems: Records; Reports

1. The Permittee subject to the provisions of NAC 445B.256 to 445B.267, inclusive, shall maintain records of the occurrence and duration of any start-up, shutdown or malfunction in the operation of an affected facility and any malfunction of the air pollution control equipment or any periods during which a continuous monitoring system or monitoring device is inoperative.

2. The Permittee required to install a continuous monitoring system shall submit a written report of excess emissions to the director for every calendar quarter. All quarterly reports must be postmarked by the 30th day following the end of each calendar quarter and must include the following information:
   a. The magnitude of excess emissions computed in accordance with NAC 445B.256 to 445B.267, inclusive, any conversion factors used, and the date and time of commencement and completion of each time period of excess emissions.
   b. Specific identification of each period of excess emissions that occurs during start-ups, shutdowns and malfunctions of the affected facility.
   c. The nature and cause of any malfunction, if known, the corrective action taken or preventative measures adopted.
   d. Specific identification of each period during which the continuous monitoring system was inoperative, except for zero and span checks, and the nature of any repairs or adjustments that were made.
      (1) When no excess emissions have occurred and the continuous monitoring system has not been inoperative, repaired or adjusted, such information shall be included in the report.
Section V. Continuous Emissions Monitoring System (CEMS) Conditions (continued)

C. NAC 445B.265 (continued)
   Monitoring systems: Records; Reports (continued)
   3. The Permittee subject to the provisions of NAC 445B.256 to 445B.267, inclusive, shall maintain a file of all measurements, including:
      a. Continuous monitoring systems, monitoring devices and performance testing measurements;
      b. All continuous monitoring system performance evaluations;
      c. All continuous monitoring systems or monitoring device calibration checks;
      d. Adjustments and maintenance performed on these systems or devices; and
      e. All other information required by NAC 445B.256 to 445B.267, inclusive, recorded in a permanent form suitable for inspection.
         (1) The file shall be retained for at least 2 years following the date of the measurements, maintenance, reports and records.

****End of Continuous Emissions Monitoring System (CEMS) Conditions****
Intentionally left blank as place holder. NDEP is not relying on controls at the TS Power Plant to achieve reasonable progress, therefore, provisions from the facility’s air quality operating permit are not incorporated into the SIP by reference for approval.
Appendix A.4 - Fernley Plant, Nevada Cement Company

Intentionally left blank as place holder. NDEP is not relying on controls at the Fernley Plant to achieve reasonable progress, therefore, provisions from the facility’s air quality operating permit are not incorporated into the SIP by reference for approval.
Appendix A.5 - Tracy Generating Station, NV Energy

The following air quality operating permit issued by the Nevada Division of Environmental Protection for the Tracy Generating Station is hereby incorporated into Nevada’s Second Regional Haze SIP by reference. In this appendix, NDEP is only providing pages containing specific permit conditions relevant to this Regional Haze SIP. Provisions that are struck-out are not intended to be incorporated into the SIP by reference for approval or intended to be codified as part of Nevada’s Second Regional Haze SIP.
March 23, 2022

Jason Hammons  
Senior Director, Generation  
Sierra Pacific Power Company d/b/a NV Energy  
6226 West Sahara Avenue, M/S 78  
Las Vegas, Nevada 89146

RE: Notification of Issuance of the Renewal, Minor Revisions, Reopen-Revision of Class I Air Quality Operating Permit AP4911-0194.04, FIN A0029, Air Cases 9674, 10135, 10818, 11106 – Tracy Power Generating Station

Dear Mr. Hammons:

The Nevada Division of Environmental Protection – Bureau of Air Pollution Control (BAPC) has reviewed the applications submitted by Sierra Pacific Power Company d/b/a NV Energy – Tracy Power Generating Station (NV Energy) on May 18, 2018, July 2, 2019, and May 7, 2021, respectively, for the above-referenced operating permit under legal authority from Nevada Revised Statutes (NRS) 445B.100 through 445B.640, inclusive, and pursuant to regulations in Nevada Administrative Code (NAC) 445B.001 through 445B.3689, inclusive. Based upon technical review and recommendation, I hereby issue the operating permit with appropriate restrictions. Enclosed is your copy of the operating permit which must be posted conspicuously at the facility.

Pursuant to NAC 445B.3395, a 30-day public comment period was initiated and a draft copy of the operating permit was published for public review on January 31, 2022. The public comment period ended on March 2, 2022. The BAPC did not receive comments. The draft copy of the above-referenced permit was submitted to EPA Region 9 on January 31, 2022 for the required 45-day review period pursuant to NAC 445B.3395 which defaults to end on March 17, 2022. EPA Region 9 had no further comments.

In accordance with NRS 445B.340 and NAC 445B.890, you may appeal the Department’s issuance of the operating permit within 10 days after you receive the operating permit. Appeals may be filed with the State Environmental Commission located at 901 S. Stewart Street, Carson City, Nevada 89701. For questions regarding appeals, call (775) 687-9374. Please review the operating permit carefully and ensure you understand all conditions, restrictions, monitoring, recordkeeping, and other requirements. If you have any questions, contact Mark Talavera at (775) 687-9470 or mtalavera@ndep.nv.gov.

Sincerely,

Jennifer Schumacher, E.I., C.P.M.  
Chief, Bureau of Air Pollution Control

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Facility ID No. A0029                Permit No. AP4911-0194.04
CLASS I AIR QUALITY OPERATING PERMIT (40 CFR Part 70 Program)

Issued to: SIERRA PACIFIC POWER COMPANY D/B/A NV ENERGY – TRACY POWER GENERATING STATION
(HEREINAFTER REFERRED TO AS PERMITTEE)
Mailing Address: P.O. Box 98910, M/S 25, LAS VEGAS, NEVADA 89151
Physical Address: 1799 WALTHAM WAY, SPARKS, NEVADA 89437
Driving Directions: 17 MILES EAST OF SPARKS, NV TAKE THE USA PARKWAY EXIT SOUTH OFF INTERSTATE 80.
TURN WEST ON WALTHAM WAY FOR APPROXIMATELY 1.5 MILES

General Facility Location:

   SECTION 28, T 20 N, R 22 E, MDB&M
   SECTION 29, T 20 N, R 22 E, MDB&M
   SECTION 32, T 20 N, R 22 E, MDB&M
   SECTION 33, T 20 N, R 22 E, MDB&M
   HA 83 – TRACY SEGMENT / STOREY COUNTY
   NORTH 4,382,107 M, EAST 283,338 M, UTM ZONE 11, NAD 83

Emission Unit List:

A. System 03A – Tracy Unit #3 Steam Boiler
   S2.003 Steam Boiler (Manufactured by Babcock & Wilcox; Model B&W; Serial 3474; Date Aug 1970; Maximum Heat Input 1,150 MMBtu/hr; Nominal Output 133 MW)

B. System 05A – Clark Mountain Combustion Turbine #3 – Primary Operating Scenario
   S2.006 Simple Cycle Combustion Turbine (Manufactured by General Electric; Model PG 7111 (EA); Serial 813E494H3; Date 1992; Maximum Heat Input 1,011.2 MMBtu/hr; Output 83.5 MW)

C. System 05C – Clark Mountain Combustion Turbine Unit #3 – Power Augmented Scenario
   S2.006 Simple Cycle Combustion Turbine (Manufactured by General Electric; Model PG 7111 (EA); Serial 813E494H3; Date 1992; Maximum Heat Input 1,011.2 MMBtu/hr; Output 83.5 MW)

D. System 06A – Clark Mountain Combustion Turbine Unit #4 – Primary Operating Scenario
   S2.007 Simple Cycle Combustion Turbine (Manufactured by General Electric; Model PG 7111 (EA); Serial 943E972H6; Date 1992; Maximum Heat Input 1,011.2 MMBtu/hr; Output 83.5 MW)

E. System 06C – Clark Mountain Combustion Turbine #4 – Power Augmented Scenario
   S2.007 Simple Cycle Combustion Turbine (Manufactured by General Electric; Model PG 7111 (EA); Serial 943E972H6; Date 1992; Maximum Heat Input 1,011.2 MMBtu/hr; Output 83.5 MW)

F. System 07C – Tracy Unit #4 Piñon Pine Combustion Turbine/Duct Burner – Pipeline Quality Natural Gas
   S2.009 Combustion Turbine/HRSG ( Manufactured by General Electric; Model MS6001FA; Serial 1646; Maximum Heat Input 763.9 MMBtu/hr; Nominal Output 107 MW)
   S2.009.1 Duct Burner (Manufactured by Forney; Maximum Heat Input 156.464 MMBtu/hr; Nominal Output 23 MW)

G. System 25 – Tracy Unit #3 Cooling-Tower System
   S2.053 Tracy Unit #3 Cooling Tower (P026) (Positive Draft Type; Marley Model 6515-04-03; Serial 445TS; 70,000 gpm Circulating Water Flow Rate)
<table>
<thead>
<tr>
<th>Emission Unit List (Continued):</th>
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<tbody>
<tr>
<td><strong>H. System 26 – Pinon Pine Unit #4 Cooling-Tower System</strong></td>
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<tr>
<td>S2.054</td>
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<tr>
<td><strong>I. System 28 – Diesel Fuel-Storage Tank System #1</strong></td>
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<td>S2.056</td>
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<tr>
<td><strong>J. System 29 – Diesel Fuel-Storage Tank System #2</strong></td>
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<td>S2.057</td>
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<tr>
<td><strong>K. System 31 – Gasoline Dispensing Facility</strong></td>
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<tr>
<td>S2.063</td>
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<tr>
<td><strong>L. System 32 – Combined Cycle Combustion Turbine Circuit No. 8 – Pipeline Quality Natural Gas – 254 MW Nominal Output</strong></td>
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<tr>
<td>S2.064</td>
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<tr>
<td><strong>M. System 33 – Combined Cycle Combustion Turbine Circuit No. 9 – Pipeline Quality Natural Gas – 254 MW Nominal Output</strong></td>
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<tr>
<td>S2.066</td>
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<tr>
<td><strong>N. System 34 – Natural Gas Fired Auxiliary Boiler</strong></td>
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<tr>
<td>S2.068</td>
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<tr>
<td><strong>O. System 35 – Emergency Diesel Generator for Combustion Turbine No. 8 and 9</strong></td>
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<tr>
<td>S2.069</td>
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<tr>
<td><strong>P. System 36 – Emergency Diesel Generator for Switchyard</strong></td>
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<td>S2.070</td>
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<tr>
<td><strong>Q. System 40 – Emergency Diesel Generator for Boiler No. 3</strong></td>
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<tr>
<td>S2.074</td>
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</tbody>
</table>
Section IV. Specific Operating Conditions (continued)

B. Emission Unit S2.006

<table>
<thead>
<tr>
<th>System 05A – Clark Mountain Combustion Turbine Unit #3 – Primary Operating Scenario</th>
<th>Location UTM (Zone 11, NAD 83)</th>
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<tbody>
<tr>
<td>S2.006</td>
<td>m North</td>
</tr>
<tr>
<td>Simple Cycle Combustion Turbine (Manufactured by General Electric; Model PG 7111 (EA); Serial 813E494H3; Date 1992; Maximum Heat Input 1,011.2 MMBtu/hr; Output 83.5 MW)</td>
<td>4,382,280</td>
</tr>
</tbody>
</table>

1. Air Pollution Control Equipment (NAC 445B.3405)
   a. Emissions from S2.006 shall be controlled by Dry Low NOx Burners while combusting natural gas only. Emissions from S2.006 shall be controlled with Water Injection while combusting No. 2 Distillate Fuel Oil under "Emergency" conditions defined in B.2.c. of this section. Note, these controls are not add-on controls.
   b. Descriptive Stack Parameters:
      Stack Height: 55 feet
      Stack Dimensions: 9.5 x 18.33 feet
      Stack Temperature: 1,000 °F

2. Operating Parameters (NAC 445B.3405)
   a. S2.006 may consume only Pipeline Quality Natural Gas when operating under this scenario, except during emergency conditions as defined in B.2.c. of this section.
   b. The maximum allowable heat input rate for S2.006 shall not exceed 1,011.2 million Btu (MMBtu) per any one-hour period.
   c. "Emergency" conditions are defined as "unexpected loss of electric system generation due to:
      (1) Curtailment or unavailability of gas for purchase where the results would be the curtailment of services to customers; and/or
      (2) Upset/malfunction of natural gas suppliers pipeline or equipment necessary to fire the combustion turbines on natural gas."

   The Permittee shall notify the Bureau of Air Pollution Control within 24 hours of operation when combusting No. 2 Distillate Fuel Oil during an emergency condition: A report shall be submitted within 30 days of the emergency operation, which provides justification for the combustion of No. 2 Distillate Fuel Oil and the extent of the operation for consideration as an emergency period.

   d. Hours
      (1) S2.006 may operate a total of 24 hours per day.
      (2) S2.006 may not combust No. 2 Distillate Fuel Oil in excess of 500 hours per calendar year, under any conditions.

3. Emission Limits (NAC 445B.305, NAC 445B.3405)
   The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from S2.006 the following pollutants in excess of the following specified limits:
   a. The discharge of PM (particulate matter) to the atmosphere shall not exceed 7.20 pounds per hour, nor more than 31.5 tons per 12-month rolling period.
   b. The discharge of PM_{10} (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed 7.2 pounds per hour, nor more than 31.54 tons per 12-month rolling period.
   c. NAC 445B.2203 – The maximum allowable discharge of PM_{10} to the atmosphere from S2.006 shall not exceed 0.21 pounds per MMBtu.
   d. The discharge of PM_{2.5} (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed 7.2 pounds per hour, nor more than 31.54 tons per 12-month rolling period.
   e. The discharge of SO_{2} (sulfur dioxide) to the atmosphere shall not exceed 0.55 pound per hour, nor more than 2.01 tons per 12-month rolling period.
Section IV. Specific Operating Conditions (continued)

B. Emission Unit S2.006 (continued)

3. Emission Limits (NAC 445B.305, NAC 445B.3405) (continued)
   The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from S2.006 the following pollutants in excess of the following specified limits:
   f. The discharge of NOx (oxides of nitrogen) to the atmosphere shall not exceed:
      (1) 9 parts per million by volume (ppmv) at 15 percent oxygen and on a dry basis, based on a 24-hour rolling period;
      (2) 42.0 pounds per hour, based on a 720-hour rolling period;
      (3) 122.64 tons per year, based on a 12-month rolling period.
   g. The discharge of CO (carbon monoxide) to the atmosphere shall not exceed:
      (1) 25 ppmv, based on a 24-hour rolling period;
      (2) 54.0 pounds per hour, based on a 720-hour rolling period;
      (2) 115.0 pounds per hour, based on a 60-minute block average.
      (3) 205.86 tons per 12-month rolling period.
   h. The discharge of VOCs (volatile organic compounds) to the atmosphere shall not exceed 6.25 pounds per hour, nor more than 18.6 tons per 12-month rolling period.
   i. NAC 445B.32017 - The opacity from the S2.006 shall not equal or exceed 20 percent.

4. Specific Acid Rain Requirements (NAC 445B.305, 40 CFR 72.9, 40 CFR 73.10(b)(2))
   a. The Permittee shall not exceed the SO2 emission levels (acid rain allowances) for the indicated years as shown in Table B-1 below without holding the required acid rain allowances in accordance with Section 1.Y.2. of this Operating Permit and pursuant to 40 CFR Part 72.9, and specified in Table 2 of 40 CFR Part 73.10(b)(2):

<table>
<thead>
<tr>
<th>Table B-1: Acid Rain Allowance Allocations</th>
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<tbody>
<tr>
<td>S2.006</td>
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<tr>
<td>Utility Boilers &gt; 25 MW-Output Capacity</td>
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   b. The Permittee shall comply with the “Standard Requirements” provisions of the SO2 acid rain permit application dated December 12, 2013 entitled “Acid Rain Permit Application – For Acid Rain Permit Renewal” and all references contained therein, as submitted with the Permittee’s application for renewal of Class I Air Quality Operating Permit.

5. Monitoring, Recordkeeping, and Reporting (NAC 445B.3405)
   a. Monitor and record the hours of operation for S2.006 on a daily basis.
   b. Calibrate, operate, and maintain a fuel flow meter to continuously measure the volume of Pipeline Quality Natural Gas consumed in S2.006 (in standard cubic feet or hundreds of standard cubic feet). The fuel flow meter shall be installed at an appropriate location in the fuel delivery system to accurately and continuously measure the fuel consumed in S2.006 in accordance with the requirements prescribed in 40 CFR Part 75.
   c. Install, calibrate, operate, and maintain a Continuous Data Collection System (CDCS) to continuously record the quantity (in standard cubic feet or hundreds of standard cubic feet) of Pipeline Quality Natural Gas as measured by the fuel flow meter required under B.5.b. of this section. The CDCS will be installed, calibrated, operated and maintained in accordance with the manufacturer’s specifications and requirements prescribed in 40 CFR Part 75.
Section IV. Specific Operating Conditions (continued)

B. Emission Unit S2.006 (continued)

5. Monitoring, Recordkeeping, and Reporting (NAC 445B:3405)-(continued)

   The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.

   d. Determine the gross calorific value (GCV) of Pipeline Quality Natural Gas consumed in S2.006 by sampling the Pipeline Quality Natural Gas in S2.006 on a monthly basis. The GCV of the gas sample shall be determined using one of the following methods: ASTM D1826-94; ASTM D3588-98; ASTM D4891-89; Gas Processors Association (GPA) Standard 2472-96; Calculation of Gross Heating Value, Relative Density and Compressibility Factor for Natural Gas Mixtures from Compositional Analysis; or GPA Standard 2261-00. Analysis for Natural Gas and Similar Gaseous Mixtures by Gas Chromatography. Alternatively, at least once each month, the GCV may be verified by the contractual supplier, or the Permittee may use a maximum GCV value of 1,060 Btu/scf. If the supplier certification is used to verify the GCV, the supplier must provide documentation identifying the test method(s) used to determine the GCV.

   e. Missing GCV or fuel-flow data may be substituted as prescribed in 40 CFR Part 75, Appendix D.

   f. The hourly heat-input of the Pipeline Quality Natural Gas (in MMBtu/hr) combusted will be calculated from the hourly fuel usage-recorded in B.5.e. of this section.

   Sample Calculation:
   
   \[
   \text{(scf-Natural Gas/hr)(Btu/scf)} = \text{Btu/hr or MMBtu/hr}
   \]

   g. The hourly emission rate of PM, PM \(_{10}\), PM \(_{2.5}\), CO, and VOC, each in pounds per hour (lbs/hr) will be calculated from the hourly quantity of Pipeline Quality Natural Gas combusted determined in B.5.c. of this section, and the emission factor derived in B.6.l. of this section.

   Sample Calculation:
   
   \[
   \text{(scf/hr)(lbs pollutant/scf)} = \text{lbs pollutant/hr}
   \]
   
   \[
   \text{or}
   \]
   
   \[
   \text{(MMBtu/hr)(lbs pollutant/MMBtu)} = \text{lbs pollutant/hr}
   \]

   h. The hourly emission rate of PM, PM \(_{10}\), PM \(_{2.5}\), CO, and VOC, each in pounds per MMBtu (lbs/MMBtu) will be calculated from the heat content of the fuel determined in B.5.d. of this section, and the emission factor derived in B.6.l. of this section.

   Sample Calculation:
   
   \[
   \text{(scf/Btu)(lbs pollutant/scf)} = \text{lbs pollutant/Btu or lbs pollutant/MMBtu}
   \]

   i. Calculate annually the SO\(_2\) emissions in tons based on quantity of Pipeline Quality Natural Gas determined in B.5.e. of this section and sulfur in units of grains per dry standard cubic feet of Pipeline Quality Natural Gas from the SO\(_2\) emission factor for Pipeline Quality Natural Gas combusted from 40 CFR Part 75 Appendix D.
Section IV. Specific Operating Conditions (continued)

B. Emission Unit S2.006 (continued)


The Permittee, upon issuance of this operating permit, shall conduct and record renewal performance testing at least 90 days prior to the expiration of this operating permit, but no earlier than 365 days from the date of expiration of this operating permit, and every 5 years thereafter, in accordance with the following:

i. All opacity-compliance demonstrations and performance tests must comply with the advance notification, protocol review, operational conditions, reporting, and other requirements of Section 11. Testing and Sampling (NAC 445B.252), of this operating permit. Material sampling must be conducted in accordance with protocols approved by the Director. All performance test results shall be based on the arithmetic average of three valid runs. (NAC 445B.252(5))

ii. Testing shall be conducted on the exhaust stack of S2.006.

iii. Method 5 in Appendix A of 40 CFR Part 60 shall be used to determine PM emissions. The sample volume for each test run shall be at least 1.7 dsen (60 dsec). Test runs must be conducted for up to two hours in an effort to collect this minimum sample.

iv. Method 201A and Method 202 in Appendix M of 40 CFR Part 51 shall be used to determine PM_{10} and PM_{2.5} emissions. The sample time and sample volume collected for each test run shall be sufficient to collect enough mass to weigh accurately.

v. The Method 201A and 202 test required in this section may be replaced by a Method 5 in Appendix A of 40 CFR Part 60 and Method 202 in Appendix M of 40 CFR Part 51 test. All particulate captured in the Method 5 and Method 202 test performed under this provision shall be considered PM_{2.5} for determination of compliance.

vi. Method 7E in Appendix A of 40 CFR Part 60 shall be used to determine the nitrogen oxides concentration. Each test will be run for a minimum of one hour.

vii. Method 9 in Appendix A of 40 CFR Part 60 shall be used to determine opacity. Opacity observations shall be conducted concurrently with the applicable performance test. The minimum total time of observations shall be six minutes (24 consecutive observations recorded at 15 second intervals), unless otherwise specified by an applicable subpart.

viii. Method 10 in Appendix A of 40 CFR Part 60 shall be used to determine the carbon monoxide concentration. Each test will be run for a minimum of one hour.

ix. Method 25A in Appendix A of 40 CFR Part 60 shall be used to determine the volatile organic compound concentration. Method 18 in Appendix A of 40 CFR Part 60 or Method 320 in Appendix A of CFR Part 63 may be used in conjunction with Method 25A to break out the organic compounds that are not considered VOC's by definition per 40 CFR 51.1006(e). Each Method 25A test will be run for a minimum of one hour.

j. The performance-tests required in B.6c through B.6i. of this section shall be conducted at the best achievable heat input rate at normal operating conditions, unless otherwise approved pursuant to NAC 445B.252. Should any anticipated major boiler overhaul(s) be scheduled to be performed, which coincide with the performance tests, the performance testing shall be performed prior to the overhaul(s). If the performance testing cannot be performed prior to a major boiler overhaul(s), the performance testing shall be performed as soon as practicable following the overhaul(s), but not earlier than 60 days following the overhaul(s).

k. The Permittee shall record the quantity of Pipeline Quality Natural Gas combusted (in standard cubic feet or hundreds of standard cubic feet) for each test run and the heat content (in Btu/sec) for each performance test event.
Section IV. Specific Operating Conditions (continued)

B. Emission Unit S2.006 (continued)


The Permittee, upon issuance of this operating permit, shall conduct and record renewal performance testing at least 90 days prior to the expiration of this operating permit, but no earlier than 365 days from the date of expiration of this operating permit, and every 3 years thereafter, in accordance with the following:

I. Using the most recent performance tests, as specified above, the Permittee shall calculate the following emission factors, based on the average of 3 test runs:

- Pounds of PM per scf (lbs-PM/scf) of Pipeline Quality Natural Gas, or pounds of PM per MMBtu (lbs-PM/MMBtu) of Pipeline Quality Natural Gas.

- Pounds of PM per scf (lbs-PM/scf) of Pipeline Quality Natural Gas, or pounds of PM per MMBtu (lbs-PM/MMBtu) of Pipeline Quality Natural Gas.

- Pounds of PM per scf (lbs-PM/scf) of Pipeline Quality Natural Gas, or pounds of PM per MMBtu (lbs-PM/MMBtu) of Pipeline Quality Natural Gas.

- Pounds of NOX per scf (lbs-NOX/scf) of Pipeline Quality Natural Gas, or pounds of NOX per MMBtu (lbs-NOX/MMBtu) of Pipeline Quality Natural Gas.

- Pounds of CO per scf (lbs-CO/scf) of Pipeline Quality Natural Gas, or pounds of CO per MMBtu (lbs-CO/MMBtu) of Pipeline Quality Natural Gas.

- Pounds of VOC per scf (lbs-VOC/scf) of Pipeline Quality Natural Gas, or pounds of VOC per MMBtu (lbs-VOC/MMBtu) of Pipeline Quality Natural Gas.

7. Federal Requirements


   1) Standards for Nitrogen Oxides (40 CFR 60.332)

      On and after the date on which the performance test required by 40 CFR Part 60.8 is completed, the Permittee shall not discharge into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxide in excess of 85.0 parts per million by volume (ppmv) corrected to 15 percent oxygen. (40 CFR 60.332(a)(1))

   2) Standard for Sulfur Dioxide (40 CFR 60.333)

      On and after the date on which the performance test required to be conducted by 40 CFR Part 60.8 is completed, the Permittee shall comply with one or the other of the following conditions:

         (a) The Permittee shall not cause to be discharged into the atmosphere from any stationary gas turbine any gases which contain sulfur dioxide in excess of 0.0015 percent by volume at 15 percent oxygen on a dry basis. (40 CFR 60.333(a))

         (b) The Permittee shall not burn in any stationary gas turbine any fuel which contains total sulfur in excess of 0.8 percent by weight (8,000 ppmw). (40 CFR 60.333(b))

   3) Monitoring of Operations (40 CFR 60.334)

      (a) Except as provided in 40 CFR Part 60.334(b), the Permittee shall install, calibrate, maintain, and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water or steam to fuel being fired in the turbine while combusting No. 2 Distillate Fuel Oil under “Emergency” conditions defined in B.2.c. of this section. (40 CFR 60.334(a))

      (b) The Permittee may, as an alternative to operating the continuous monitoring system described in 40 CFR Part 60.334(a), install, certify, maintain, operate, and quality-assure a continuous emission monitoring system (CEMS) consisting of NOX and O2 monitors. As an alternative, a CO2 monitor may be used to adjust the measured NOX concentrations to 15 percent O2 by either converting the CO2 hourly averages to equivalent O2 concentrations using Equation F-14a or F-14b in Appendix F to 40 CFR Part 75 and making the adjustments to 15 percent O2, or by using the CO2 readings directly to make the adjustments, as described in Method 20. If the option to use a CEMS is chosen, the CEMS shall be installed, certified, maintained as stated in 40 CFR Parts 60.334(b)(1) through 60.334(b)(3). (40 CFR 60.334(b))
Section IV. Specific Operating Conditions (continued)

B. Emission Unit S2.006 (continued)

7. Federal Requirements (continued)
      (3) Monitoring of Operations (40 CFR 60.334) (continued)
         (c) The steam or water to fuel ratio or other parameters that are continuously monitored as described in 40 CFR Part 60.334(a) shall be monitored during the performance test required under 40 CFR Part 60.8, to establish acceptable values and ranges. The Permittee may supplement the performance test data with engineering analyses, design specifications, manufacturer’s recommendations, and other relevant information to define the acceptable parametric ranges more precisely. The Permittee shall develop and keep on-site a parameter monitoring plan which explains the procedures used to document proper operation of the NOx emission controls. The plan shall include the parameter(s) monitored and the acceptable range(s) of the parameter(s) as well as the basis for designating the parameter(s) and acceptable range(s). Any supplemental data such as engineering analyses, design specifications, manufacturer’s recommendations and other relevant information shall be included in the monitoring plan. For affected units that are also subject to 40 CFR Part 75 and that use the low mass emissions methodology in 40 CFR Part 75.19 or the NOx emission measurement methodology in Appendix E to 40 CFR Part 75, the Permittee may meet the requirements of this paragraph by developing and keeping on-site (or at a central location for unmanned facilities) a quality-assurance plan, as described in 40 CFR Part 75.19(e)(5) or in Section 2.3 of Appendix E and Section 1.3.6 of Appendix B to 40 CFR Part 75. (40 CFR 60.334(g))
         (d) The Permittee:
            (i) Shall monitor the total sulfur content of the fuel being fired in the turbine, except as provided in 40 CFR Part 60.334(h)(2). The sulfur content of the fuel shall be determined using total sulfur methods described in 40 CFR Part 60.335(b)(10). Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than 0.4 weight percent (4000 ppmw), ASTM D4084-82, D5504-91, D6228-98, or Gas Processors Association Standard 2377-86 (all of which are incorporated by reference—see 40 CFR Part 60.17), which measure the major sulfur compounds may be used; and (40 CFR 60.334(h)(1))
            (ii) Shall monitor the nitrogen content of the fuel combusted in the turbine, if the Permittee claims an allowance for fuel bound nitrogen (i.e., if an F-value greater than zero is being or will be used to calculate STD in 40 CFR Part 60.332). The nitrogen content of the fuel shall be determined using methods described in 40 CFR Part 60.335(b)(9) or an approved alternative. (40 CFR 60.334(h)(2))
            (iii) Notwithstanding the provisions of 40 CFR Part 60.334(h)(1), the Permittee may elect not to monitor the total sulfur content of the gaseous fuel combusted in the turbine; if the gaseous fuel is demonstrated to meet the definition of natural gas in 40 CFR Part 60.331(a), regardless of whether an existing custom schedule approved by the administrator for 40 CFR Part 60 Subpart GG requires such monitoring. The Permittee shall use one of the following sources of information to make the required demonstration (40 CFR 60.334(h)(3)):
               (i) The gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20.0 grains/100 scf or less; or (40 CFR 60.334(h)(3)(i))
               (ii) Representative fuel sampling data which show that the sulfur content of the gaseous fuel does not exceed 20 grains/100 scf. At a minimum, the amount of fuel sampling data specified in Section 2.3.1.4 or 2.3.2.4 of Appendix D to 40 CFR Part 75 is required. (40 CFR 60.334(h)(3)(ii))
Section IV. Specific Operating Conditions (continued)

B. Emission Unit S2.006 (continued)

7. Federal Requirements (continued)
   (3) Monitoring of Operations (40 CFR 60.334) (continued)
      (d) The Permittee (continued):
         (iv) For any turbine that commenced construction, reconstruction or modification after October 3, 1977, but before July 8, 2004, and for which a custom fuel monitoring schedule has previously been approved, the Permittee may, without submitting a special petition to the Administrator, continue monitoring on this schedule. (40 CFR 60.334(h)(4))
      (e) The frequency of determining the sulfur and nitrogen content of the fuel shall be as follows (40 CFR 60.334(i)):
         (i) Fuel Oil. For fuel oil, use one of the total sulfur sampling options and the associated sampling frequency described in Sections 2.2.3, 2.2.4.1, 2.2.4.2, and 2.2.4.3 of Appendix D to 40 CFR Part 75 (i.e., how proportional sampling, daily sampling, sampling from the unit's storage tank after each addition of fuel to the tank, or sampling each delivery prior to combining it with fuel oil already in the intended storage tank). If an emission allowance is being claimed for fuel-bound nitrogen, the nitrogen content of the oil shall be determined and recorded once per unit operating day. (40 CFR 60.334(i)(1))
         (ii) Gaseous fuel. Any applicable nitrogen content value of the gaseous fuel shall be determined and recorded once per unit operating day. For permittees that elect not to demonstrate sulfur content using options in 40 CFR Part 60.334(h)(3), and for which the fuel is supplied without intermediate bulk storage, the sulfur content value of the gaseous fuel shall be determined and recorded once per unit operating day. (40 CFR 60.334(i)(2))
         (iii) Custom schedules. Notwithstanding the requirements of 40 CFR Part 60.344(i)(2), operators or fuel vendors may develop custom schedules for determination of the total sulfur content of gaseous fuels, based on the design and operation of the affected facility and the characteristics of the fuel supply. Except as provided in 40 CFR Parts 60.344(i)(3) and 60.344(i)(3)(ii), custom schedules shall be substantiated with data and shall be approved by the Administrator before they can be used to comply with the standard in 40 CFR Part 60.333. (40 CFR 60.334(i)(3))
      (f) If the Permittee elects to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content or fuel nitrogen content under this subpart, the Permittee shall submit reports of excess emissions and monitor downtime, in accordance with 40 CFR Part 60.7(c). Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction. For the purpose of reports required under 40 CFR Part 60.7(c), periods of excess emissions and monitor downtime that shall be reported are defined as follows (40 CFR 60.334(j)):
         (i) Nitrogen Oxides. (40 CFR 60.334(j)(1))
            (I) For turbines using water or steam to fuel ratio monitoring (40 CFR 60.334(j)(1)(i)):
               (A) An excess emission shall be any unit operating hour for which the average steam or water to fuel ratio, as measured by the continuous monitoring system, falls below the acceptable steam or water to fuel ratio needed to demonstrate compliance with 40 CFR Part 60.332, as established during the performance test required in 40 CFR Part 60.8. Any unit operating hour in which no water or steam is injected into the turbine shall also be considered an excess emission. (40 CFR 60.334(j)(1)(i)(A))
               (B) A period of monitor downtime shall be any unit operating hour in which water or steam is injected into the turbine, but the essential parametric data needed to determine the steam or water to fuel ratio are unavailable or invalid. (40 CFR 60.334(j)(1)(i)(B))
Section IV. Specific Operating Conditions (continued)

B. Emission Unit S2.006 (continued)

7. Federal Requirements (continued)
      (3) Monitoring of Operations (40 CFR 60.334) (continued)
         (f) If the Permittee elects to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content or fuel nitrogen content under this subpart, the Permittee shall submit reports of excess emissions and monitor downtime, in accordance with 40 CFR Part 60.7(c). Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction. For the purpose of reports required under 40 CFR Part 60.7(c), periods of excess emissions and monitor downtime that shall be reported are defined as follows (40 CFR 60.334(j) (continued):
            (i) Nitrogen Oxides. (40 CFR 60.334(j)(1)) (continued)
               (I) For turbines using water or steam to fuel ratio monitoring (40 CFR 60.334(j)(1)(i)) (continued):
                  (D) Each report shall include the average steam or water to fuel ratio, average fuel consumption, ambient conditions (temperature, pressure, and humidity), gas turbine load, and (if applicable) the nitrogen content of the fuel during each excess emission. The Permittee does not have to report ambient conditions if opting to use the worst case ISO correction factor as specified in 40 CFR Part 60.334(b)(3)(ii), or are not using the ISO correction equation under the provisions of 40 CFR Part 60.35(b)(1). (40 CFR 60.334(j)(1)(ii)(C))
            (II) If the Permittee elects to take an emission allowance for fuel bound nitrogen, then excess emissions and periods of monitor downtime are as described in 40 CFR 60.344(j)(1)(ii)(A) and (B). (40 CFR 60.334(j)(1)(ii))
               (A) An excess emission shall be the period of time during which the fuel-bound nitrogen (N) is greater than the value measured during the performance test required in 40 CFR Part 60.8 and used to determine the allowance. The excess emission begins on the date and hour of the sample which shows that N is greater than the performance test value, and ends with the date and hour of a subsequent sample which shows a fuel nitrogen content less than or equal to the performance test value. (40 CFR 60.334(j)(1)(ii)(A))
               (B) A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour that a required sample is taken, if invalid results are obtained. The period of monitor downtime ends on the date and hour of the next valid sample. (40 CFR 60.334(j)(1)(ii)(B))
            (III) For turbines using NOX and diluent CEMS (40 CFR 60.334(j)(1)(iii)):
               (A) An hour of excess emissions shall be any unit operating hour in which the 4-hour rolling average NOX concentration exceeds the applicable emission limit in 40 CFR Part 60.332(a)(1) or (2). For the purposes of 40 CFR Subpart GG, a "4-hour rolling average NOX concentration" is the arithmetic average of the average NOX concentration measured by the CEMS for a given hour (corrected to 15 percent O2 and, if required under 40 CFR 60.35(b)(1), to ISO standard conditions) and the three unit operating hour average NOX concentrations immediately preceding that unit operating hour. (40 CFR 60.334(j)(1)(iii)(A))
               (B) A period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour, for either NOX concentration or diluent (or both). (40 CFR 60.334(j)(1)(iii)(B))
Section IV. Specific Operating Conditions (continued)

B. Emission Unit S2.006 (continued)

7. Federal Requirements (continued)
      (3) Monitoring of Operations (40 CFR 60.334) (continued)
         (f) If the Permittee elects to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content or fuel nitrogen content under this subpart, the Permittee shall submit reports of excess emissions and monitor downtime, in accordance with 40 CFR Part 60.7(c). Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction. For the purpose of reports required under 40 CFR Part 60.7(c), periods of excess emissions and monitor downtime that shall be reported are defined as follows (40 CFR 60.334(j)) (continued):
            (i) Nitrogen Oxides. (40 CFR 60.334(j)(1)) (continued)
                (III) For turbines using NOx and diluent CEMS (40 CFR 60.334(j)(1)(iii)) (continued):
                    (C) Each report shall include the ambient conditions (temperature, pressure, and humidity) at the time of the excess emission period and (if the owner or operator has claimed an emission allowance for fuel bound nitrogen) the nitrogen content of the fuel during the period of excess emissions. The Permittee does not have to report ambient conditions if you opt to use the worst case ISO correction factor as specified in 40 CFR Part 60.334(b)(3)(ii), or if the Permittee is not using the ISO correction equation under the provisions of 40 CFR 60.335(b)(1). (40 CFR 60.334(j)(1)(iii)(C))
            (IV) For permittees that elect, under 40 CFR Part 60.344(f), to monitor combustion parameters or parameters that document proper operation of the NOx emission controls (40 CFR 60.334(j)(1)(iv)):
                (A) An excess emission shall be a 4-hour rolling unit operating hour average in which any monitored parameter does not achieve the target value or is outside the acceptable range defined in the parameter monitoring plan for the unit. (40 CFR 60.334(j)(1)(iv)(A))
                (B) A period of monitor downtime shall be a unit operating hour in which any of the required parametric data are either not recorded or are invalid. (40 CFR 60.334(j)(1)(iv)(B))
            (i) Sulfur-Dioxide. If the Permittee is required to monitor the sulfur content of the fuel under 40 CFR Part 60.344(h)(4) (40 CFR 60.334(j)(2)): (f) For samples of gaseous fuel and for oil samples obtained using daily sampling, flow proportional sampling, or sampling from the unit’s storage tank, an excess emission occurs each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 weight percent and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit. (40 CFR 60.334(j)(2)(i))
                     (II) If the option to sample each delivery of fuel oil has been selected, the Permittee shall immediately switch to one of the other sampling options (i.e., daily sampling, flow proportional sampling, or sampling from the unit’s storage tank) if the sulfur content of a delivery exceeds 0.8 weight percent. The Permittee shall continue to use one of the other sampling options until all of the oil from the delivery has been combusted, and shall evaluate excess emissions according to 40 CFR Part 60.344(j)(2)(ii). When all of the fuel from the delivery has been burned, the permittee may resume using the as-delivered sampling option. (40 CFR 60.334(j)(2)(ii))
Section IV. Specific Operating Conditions (continued)

B. Emission Unit S2.006 (continued)

7. Federal Requirements (continued)
   (3) Monitoring of Operations (40 CFR 60.334) (continued)
      (f) If the Permittee elects to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content or fuel nitrogen content under this subpart, the Permittee shall submit reports of excess emissions and monitor downtime, in accordance with 40 CFR Part 60.7(c). Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction. For the purpose of reports required under 40 CFR Part 60.7(c), periods of excess emissions and monitor downtime that shall be reported are defined as follows (40 CFR 60.334(j)) (continued):
         (iii) Sulfur Dioxide. If the Permittee is required to monitor the sulfur content of the fuel under 40 CFR Part 60.334(h) (40 CFR 60.334(j)(2)) (continued):
             (fft) A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime shall include only unit operating hours, and ends on the date and hour of the next valid sample. (40 CFR 60.334(j)(2)(iii))
         (iii) Ice Fog. Each period during which an exemption provided in 40 CFR Part 60.332(f) is in effect shall be reported in writing to the Administrator quarterly. For each period the ambient conditions existing during the period, the date and time the air pollution control system was deactivated, and the date and time the air pollution control system was reactivated shall be reported. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter. (40 CFR 60.334(j)(3))
         (iv) Emergency Fuel. Each period during which an exemption provided in 40 CFR Part 60.332(k) is in effect shall be included in the report required in 40 CFR Part 60.7(c). For each period, the type, reasons, and duration of the firing of the emergency fuel shall be reported. (40 CFR 60.334(j)(4))
         (v) All reports required under 40 CFR Part 60.7(c) shall be postmarked by the 30th day following the end of each 6-month period.
   (4) Test Methods and Procedures (40 CFR 60.335)
      The Permittee shall follow the test methods and procedures under 40 CFR Part 60.335. (40 CFR 60.335)
   b. Continuous Emissions Monitoring System (CEMS) – 40 CFR Parts 60 and 75
      The Permittee, upon issuance of this operating permit, shall comply with the CEMS requirements set forth in Section V of this operating permit.
Section IV. Specific Operating Conditions (continued)

D. Emission Unit S2.007

<table>
<thead>
<tr>
<th>System 06A – Clark Mountain Combustion Turbine Unit #4 – Primary Operating Scenario</th>
<th>Location UTM (Zone 11, NAD 83)</th>
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<tbody>
<tr>
<td>S2.007 Simple Cycle Combustion Turbine (Manufactured by General Electric; Model PG 7111 (EA); Serial 943E972H6; Date 1992; Maximum Heat Input 1,011.2 MMBtu/hr; Output 83.5 MW)</td>
<td>m North</td>
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1. Air Pollution Control Equipment (NAC 445B.3405)
   a. Emissions from S2.007 shall be controlled by Dry Low NOx Burners while combusting Pipeline Natural Gas only.
   b. Emissions from S2.006 shall be controlled with Water Injection while combusting No. 2 Distillate Fuel Oil under "Emergency" conditions defined in D.2.c. of this section. Note, these controls are not add-on controls.

2. Operating Parameters (NAC 445B.3405)
   a. S2.007 may consume only Pipeline Quality Natural Gas when operating under this scenario, except during emergency conditions as defined in D.2.c. of this section.
   b. The maximum allowable heat input rate for S2.007 shall not exceed 1,011.2 million Btu (MMBtu) per any one-hour period.
   c. "Emergency" conditions are defined as "an unexpected loss of electric system generation due to:
      (1) Curtailment or unavailability of gas for purchase where the results would be the curtailment of services to customers; and/or
      (2) Upset/malfunction of natural gas suppliers pipeline or equipment necessary to fire the combustion turbines on natural gas."

   The Permittee shall notify the Bureau of Air Pollution Control within 24 hours of operation when combusting No. 2 Distillate Fuel Oil during an emergency condition. A report shall be submitted within 30 days of the emergency operation, which provides justification for the combustion of No. 2 Distillate Fuel Oil and the extent of the operation for consideration as an emergency period.
   d. Hours
      (1) S2.007 may operate a total of 24 hours per day.
      (2) S2.007 may not combust No. 2 Distillate Fuel Oil in excess of 500 hours per calendar year, under any condition.

3. Emission Limits (NAC 445B.305, NAC 445B.3405)
   The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from S2.007 the following pollutants in excess of the following specified limits:
   a. The discharge of PM (particulate matter) to the atmosphere shall not exceed 7.20 pounds per hour, nor more than 34.54 tons per 12-month rolling period.
   b. The discharge of PM10 (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed 7.5 pounds per hour, nor more than 34.54 tons per 12-month rolling period.
   c. NAC 445B.2203 – The maximum allowable discharge of PM10 to the atmosphere from S2.007 shall not exceed 0.21 pounds per MMBtu.
   d. The discharge of PM2.5 (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed 7.5 pounds per hour, nor more than 34.54 tons per 12-month rolling period.
   e. The discharge of SO2 (sulfur dioxide) to the atmosphere shall not exceed 0.55 pound per hour, nor more than 2.01 tons per 12-month rolling period.
Section IV. Specific Operating Conditions (continued)

D. Emission Unit S2.007 (continued)

3. Emission Limits (NAC 445B.305, NAC 445B.3405) (continued)

The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from S2.007 the following pollutants in excess of the following specified limits:

f. The discharge of NOx (oxides of nitrogen) to the atmosphere shall not exceed:
   (1) 9 parts per million by volume (ppmv) at 15 percent oxygen and on a dry basis, based on a 24-hour rolling period;
   (2) 42.0 pounds per hour, based on a 720-hour rolling period;
   (3) 122.64 tons per year, based on a 12-month rolling period.

The discharge of CO (carbon monoxide) to the atmosphere shall not exceed:
   (1) 25 ppmv, based on a 24-hour-block average.
   (2) 54.0 pounds per hour, based on a 720-hour rolling period.
   (3) 116.0 pounds per hour, based on a 60-minute rolling period.
   (4) 205.86 tons per year, based on a 12-month rolling period.

h. The discharge of VOCs (volatile organic compounds) to the atmosphere shall not exceed 4.25 pounds per hour, nor more than 18.6 tons per 12-month rolling period.

i. NAC 445B.22017 – The opacity from the S2.007 shall not equal or exceed 20 percent.

4. Specific Acid Rain Requirements (NAC 445B.305, 40 CFR 72.9, 40 CFR 73.10(b)(2))

a. The Permittee shall not exceed the SO2 emission levels (acid rain allowances) for the indicated years as shown in Table D-1 below without holding the required acid rain allowances in accordance with Section I.V.2. of this Operating Permit and pursuant to 40 CFR Part 72.9, and specified in Table 2 of 40 CFR Part 73.10(b)(2):

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<tr>
<td>Phase II (Years 2010 and Beyond)</td>
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b. The Permittee shall comply with the “Standard Requirements” provisions of the SO2 acid rain-permit application dated December 12, 2013 entitled “Acid Rain Permit Application – For Acid Rain Permit Renewal,” and all references contained therein, as submitted with the Permittee’s application for renewal of Class I Air Quality Operating Permit.

5. Monitoring, Recordkeeping, and Reporting (NAC 445B.3405)

The Permittee, upon issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.

a. Monitor and record the hours of operation for S2.007 on a daily basis.

b. Calibrate, operate, and maintain a fuel-flow meter to continuously measure the volume of Pipeline Quality Natural Gas consumed in S2.007 (in standard cubic feet or hundreds of standard cubic feet). The fuel flow meter shall be installed at an appropriate location in the fuel delivery system to accurately and continuously measure the fuel consumed in S2.007 in accordance with the requirements prescribed in 40 CFR Part 75.

C. Calibrate, operate, and maintain a Continuous Data Collection System (CDCS) to continuously record the quantity (in standard cubic feet or hundreds of standard cubic feet) of Pipeline Quality Natural Gas as measured by the fuel-flow meter required under D.5.b. of this section. The CDCS will be installed, calibrated, operated and maintained in accordance with the manufacturer’s specifications and requirements prescribed in 40 CFR Part 75.
D. Emission Unit S2.007 (continued)

5. Monitoring, Recordkeeping, and Reporting (NAC 445B:3405) (continued)

The Permittee, upon issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar-date of the record.

d. Determine the gross calorific value (GCV) of Pipeline Quality Natural Gas consumed in S2.007 by sampling the Pipeline Quality Natural Gas in S2.007 on a monthly basis. The GCV of the gas sample shall be determined using one of the following methods: ASTM D1826-94; ASTM D3588-98; ASTM D4891-89; Gas Processors Association (GPA) Standard 2172-96; Calculation of Gross Heating Value; Relative Density and Compressibility Factor for Natural Gas Mixtures from Compositional Analysis; or GPA Standard 2261-00, Analysis for Natural Gas and Similar Gaseous Mixtures by Gas Chromatography. Alternatively, at least once each month, the GCV may be verified by the contractual supplier, or the Permittee may use a maximum GCV value of 1,060 Btu/scf. If the supplier certification is used to verify the GCV, the supplier must provide documentation identifying the test method(s) used to determine the GCV.

e. Missing GCV or fuel flow data may be substituted as prescribed in 40 CFR Part 75, Appendix D.

f. The hourly heat input of the Pipeline Quality Natural Gas (in MMBtu/hr) combusted will be calculated from the hourly fuel usage recorded in D.5.e. of this section.

Sample Calculation:

\[(\text{scf-Natural-Gas/hr})(\text{Btu/scf}) = \text{Btu/hr or MMBtu/hr}\]

g. The hourly emission rate of PM, PM\(_{10}\), PM\(_{2.5}\), CO, and VOC, each in pounds per hour (lbs/hr) will be calculated from the hourly quantity of Pipeline Quality Natural Gas combusted determined in D.5.c. of this section, and the emission factor derived in D.6.f. of this section.

Sample Calculation:

\[(\text{scf/hr})(\text{lbs pollutant/scf}) = \text{lbs pollutant/hr}\]

\[\text{or}\]

\[(\text{MMBtu/hr})(\text{lbs pollutant/MMBtu}) = \text{lbs pollutant/hr}\]

h. The hourly emission rate of PM, PM\(_{10}\), PM\(_{2.5}\), CO, and VOC, each in pounds per MMBtu (lbs/MMBtu) will be calculated from the heat-content of the fuel determined in D.5.d. of this section, and the emission factor derived in D.6.i. of this section.

Sample Calculation:

\[(\text{scf/Btu})(\text{lbs pollutant/scf}) = \text{lbs pollutant/Btu} \text{or lbs pollutant/MMBtu}\]

i. Calculate annually the SO\(_2\) emissions in tons based on quantity of Pipeline Quality Natural Gas determined in D.5.e. of this section and sulfur in units of grains per dry standard cubic feet of Pipeline Quality Natural Gas from the SO\(_2\) emission factor for Pipeline Quality Natural Gas combusted from 40 CFR Part 75 Appendix D.
Section IV. Specific Operating Conditions (continued)

D. Emission Unit S2.007 (continued)

   
   The Permittee, upon issuance of this operating permit, shall conduct and record renewal performance testing at least 90 days prior to the expiration of this operating permit, but no earlier than 365 days from the date of expiration of this operating permit, and every 5 years thereafter, in accordance with the following:

   a. All opacity-compliance demonstrations and performance tests must comply with the advance notification, protocol review, operational conditions, reporting, and other requirements of Section I.I., Testing and Sampling (NAC 445B.252), of this operating permit. Material sampling must be conducted in accordance with protocols approved by the Director. All performance test results shall be based on the arithmetic average of three valid runs. (NAC 445B.252(5))

   b. Testing shall be conducted on the exhaust stack of S2.007.

   c. Method 5 in Appendix A of 40 CFR Part 60 shall be used to determine PM emissions. The sample volume for each test run shall be at least 1.7 dscm (60 dscf). Test runs must be conducted for up to two hours in an effort to collect this minimum sample.

   d. Method 201A and Method 202 in Appendix M of 40 CFR Part 51 shall be used to determine PM in and PM10 emissions. The sample time and sample volume collected for each test run shall be sufficient to collect enough mass to weigh accurately.

   e. The Method 201A and 202 test required in this section may be replaced by a Method 5 in Appendix A of 40 CFR Part 60 and Method 202 in Appendix M of 40 CFR Part 51 test. All particulate captured in the Method 5 and Method 202 test performed under this provision shall be considered PM10 for determination of compliance.

   f. Method 7E in Appendix A of 40 CFR Part 60 shall be used to determine the nitrogen oxides concentration. Each test will be run for a minimum of one-hour.

   g. Method 9 in Appendix A of 40 CFR Part 60 shall be used to determine opacity. Opacity observations shall be conducted concurrently with the applicable-performance test. The minimum total time of observations shall be six minutes (24 consecutive observations recorded at 15-second-intervals), unless otherwise specified by an applicable subpart.

   h. Method 10 in Appendix A of 40 CFR Part 60 shall be used to determine the carbon monoxide concentration. Each test will be run for a minimum of one-hour.

   i. Method 25A in Appendix A of 40 CFR Part 60 shall be used to determine the volatile organic compound concentration. Method 18 in Appendix A of 40 CFR Part 60 or Method 320 in Appendix A of CFR Part 63 may be used in conjunction with Method 25A to break out the organic compounds that are not considered VOC's by definition per 40 CFR 51:160(5). Each Method 25A test will be run for a minimum of one-hour.

   j. The performance tests required in D.6.c. through D.6.i. of this section shall be conducted at the best achievable heat input rate at normal operating conditions; unless otherwise approved pursuant to NAC 445B.252. Should any anticipated major boiler overhaul(s) be scheduled to be performed; which coincide with the performance tests, the performance testing shall be performed prior to the overhaul(s); if the performance testing cannot be performed prior to a major boiler overhaul(s); the performance testing shall be performed as soon as practicable following the overhaul(s); but no earlier than 60 days following the overhaul(s).

   k. The Permittee shall record the quantity of Pipeline Quality Natural Gas combusted (in standard cubic feet or hundreds of standard cubic feet) for each test run and the heat content (in Btu/scf) for each performance test-event.
Section IV. Specific Operating Conditions (continued)

D. Emission Unit S2.007 (continued)


The Permittee, upon issuance of this operating permit, shall conduct and record renewal performance testing at least 90 days prior to the expiration of this operating permit, but no earlier than 365 days from the date of expiration of this operating permit, and every 5 years thereafter, in accordance with the following:

- Using the most recent performance tests, as specified above, the Permittee shall calculate the following emission factors, based on the average of 3 test runs:
  
  (1) Pounds of PM per scf (lbs-PM/scf) of Pipeline Quality Natural Gas, or pounds of PM per MMBtu (lbs-PM/MMBtu) of Pipeline Quality Natural Gas.
  
  (2) Pounds of PM10 per scf (lbs-PM10/scf) of Pipeline Quality Natural Gas, or pounds of PM10 per MMBtu (lbs-PM10/MMBtu) of Pipeline Quality Natural Gas.
  
  (3) Pounds of PM2.5 per scf (lbs-PM2.5/scf) of Pipeline Quality Natural Gas, or pounds of PM2.5 per MMBtu (lbs-PM2.5/MMBtu) of Pipeline Quality Natural Gas.
  
  (4) Pounds of NOx per scf (lbs-NOx/scf) of Pipeline Quality Natural Gas, or pounds of NOx per MMBtu (lbs-NOx/MMBtu) of Pipeline Quality Natural Gas.
  
  (5) Pounds of CO per scf (lbs-CO/scf) of Pipeline Quality Natural Gas, or pounds of CO per MMBtu (lbs-CO/MMBtu) of Pipeline Quality Natural Gas.
  
  (6) Pounds of VOC per scf (lbs-VOC/scf) of Pipeline Quality Natural Gas, or pounds of VOC per MMBtu (lbs-VOC/MMBtu) of Pipeline Quality Natural Gas.

7. Federal Requirements


(1) Standards for Nitrogen Oxides (40 CFR 60.332)

On and after the date on which the performance test required by 40 CFR Part 60.8 is completed, the Permittee shall not discharge into the atmosphere from any stationary gas turbine any gases which contain nitrogen oxide in excess of what is calculated in the equation under 40 CFR Part 60.332(a)(1). (40 CFR 60.332(a)(1))

(2) Standard for Sulfur Dioxide (40 CFR 60.333)

On and after the date on which the performance test required to be conducted by 40 CFR Part 60.8 is completed, the Permittee shall comply with one or the other of the following conditions:

(a) The Permittee shall not cause to be discharged into the atmosphere from any stationary gas turbine any gases which contain sulfur dioxide in excess of 0.0015 percent by volume at 15 percent oxygen on a dry basis. (40 CFR 60.333(a))

(b) The Permittee shall not burn in any stationary gas turbine any fuel which contains total sulfur in excess of 0.8 percent by weight (8,000 ppmv). (40 CFR 60.333(b))

(3) Monitoring of Operations (40 CFR 60.334)

(a) Except as provided in 40 CFR Part 60.334(b), the Permittee shall install, calibrate, maintain, and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water or steam to fuel being fired in the turbine while combusting No. 2 Distillate Fuel Oil under “Emergency” conditions defined in D.2.e. of this section. (40 CFR 60.334(a))

(b) The Permittee may, as an alternative to operating the continuous monitoring system described in 40 CFR Part 60.334(a), install, certify, maintain, operate, and quality-assure a continuous emission monitoring system (CEMS) consisting of NOx and CO monitors. As an alternative, a CO2 monitor may be used to adjust the measured NOx concentrations to 15 percent O2 by either converting the NOx hourly averages to equivalent O2 concentrations using Equation F-14a or F-14b in Appendix F to 40 CFR Part 75 and making the adjustments to 15 percent O2, or by using the CO2 readings directly to make the adjustments, as described in Method 20. If the option to use a CEMS is chosen, the CEMS shall be installed, certified, maintained as stated in 40 CFR Parts 60.334(b)(1) through 60.334(b)(3). (40 CFR 60.334(b))
Section IV. Specific Operating Conditions (continued)

D. Emission Unit S2.007 (continued)

7. Federal Requirements (continued)
      (3) Monitoring of Operations (40 CFR 60.334) (continued)
         (c) The steam or water to fuel ratio or other parameters that are continuously monitored as described in 40 CFR Part 60.334(a) shall be monitored during the performance test required under 40 CFR Part 60.8, to establish acceptable values and ranges. The Permittee may supplement the performance test data with engineering analyses, design specifications, manufacturer’s recommendations, and other relevant information to define the acceptable parametric ranges more precisely. The Permittee shall develop and keep on-site a parameter monitoring plan which explains the procedures used to document proper operation of the NOX emission controls. The plan shall include the parameter(s) monitored and the acceptable range(s) of the parameter(s) as well as the basis for designating the parameter(s) and acceptable range(s). Any supplemental data such as engineering analyses, design specifications, manufacturer’s recommendations and other relevant information shall be included in the monitoring plan. For affected units that are also subject to 40 CFR Part 75 and that use the low mass emissions methodology in 40 CFR Part 75.19 or the NOx emission measurement methodology in Appendix E to 40 CFR Part 75, the Permittee may meet the requirements of this paragraph by developing and keeping on-site (or at a central location for unmanned facilities) a quality-assurance plan, as described in 40 CFR Part 75.19(e)(5) or in Section 2.3 of Appendix E and Section 1.3.6 of Appendix B to 40 CFR Part 75. (40 CFR 60.334(g))
         (d) The Permittee:
            (i) Shall monitor the total sulfur content of the fuel being fired in the turbine, except as provided in 40 CFR Part 60.334(h)(3). The sulfur content of the fuel must be determined using total sulfur methods described in 40 CFR Part 60.335(b)(10). Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than 0.4 weight percent (4000 ppmw), ASTM D4084-82, 94, D5504-01, D6228-98, or Gas Processors Association Standard 2377-86 (all of which are incorporated by reference-see 40 CFR Part 60.17), which measure the major sulfur compounds may be used; and (40 CFR 60.334(h)(1))
            (ii) Shall monitor the nitrogen content of the fuel combusted in the turbine, if the Permittee claims an allowance for fuel bound nitrogen (i.e., if an F-value greater than zero is being or will be used to calculate STD in 40 CFR Part 60.332). The nitrogen content of the fuel shall be determined using methods described in 40 CFR Part 60.335(b)(9) or an approved alternative. (40 CFR 60.334(h)(2))
            (iii) Notwithstanding the provisions of 40 CFR Part 60.334(h)(1), the Permittee may elect not to monitor the total sulfur content of the gaseous fuel combusted in the turbine, if the gaseous fuel is demonstrated to meet the definition of natural gas in 40 CFR Part 60.331(u), regardless of whether an existing custom schedule approved by the administrator for 40 CFR Part 60 Subpart GG requires such monitoring. The Permittee shall use one of the following sources of information to make the required demonstration (40 CFR 60.334(h)(3)):  
               (I) The gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20.0 grains/100 scf or less; or (40 CFR 60.334(h)(3)(i))
               (II) Representative fuel sampling data which show that the sulfur content of the gaseous fuel does not exceed 20 grains/100 scf. At a minimum, the amount of fuel sampling data specified in Section 2.3.1.4 or 2.3.2.4 of Appendix D to 40 CFR Part 75 is required. (40 CFR 60.334(h)(3)(ii))
Section IV. Specific Operating Conditions (continued)

D. Emission Unit S2.007 (continued)

7. Federal Requirements (continued)
      (3) Monitoring of Operations (40 CFR 60.334) (continued)
         (d) The Permittee (continued):
            (iv) For any turbine that commenced construction, reconstruction or modification after October 3, 1977, but before July 8, 2004, and for which a custom fuel monitoring schedule has previously been approved, the Permittee may, without submitting a special petition to the Administrator, continue monitoring on this schedule. (40 CFR 60.334(h)(4))
            (e) The frequency of determining the sulfur and nitrogen content of the fuel shall be as follows (40 CFR 60.334(i)):
               (i) Fuel oil. For fuel oil, use one of the total sulfur sampling options and the associated sampling frequency described in Sections 2.2.3, 2.2.4.1, 2.2.4.2, and 2.2.4.3 of Appendix D to 40 CFR Part 75 (i.e., flow proportional sampling, daily sampling, sampling from the unit's storage tank after each addition of fuel to the tank, or sampling each delivery prior to combining it with fuel oil already in the intended storage tank). If an emission allowance is being claimed for fuel-bound nitrogen, the nitrogen content of the oil shall be determined and recorded once per unit operating day. (40 CFR 60.334(i)(1))
               (ii) Gaseous fuel. Any applicable nitrogen content value of the gaseous fuel shall be determined and recorded once per unit operating day. For permittee to elect not to demonstrate sulfur content using options in 40 CFR Part 60.334(h)(3), and for which the fuel is supplied without intermediate bulk storage, the sulfur content value of the gaseous fuel shall be determined and recorded once per unit operating day. (40 CFR 60.334(i)(2))
               (iii) Custom schedules. Notwithstanding the requirements of 40 CFR Part 60.344(i)(2), operators or fuel vendors may develop custom schedules for determination of the total sulfur content of gaseous fuels based on the design and operation of the affected facility and the characteristics of the fuel supply. Except as provided in 40 CFR Parts 60.344(i)(3)(i) and 60.344(i)(3)(ii), custom schedules shall be substantiated with data and shall be approved by the Administrator before they can be used to comply with the standard in 40 CFR Part 60.333. (40 CFR 60.334(i)(3))
               (f) If the Permittee elects to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content or fuel nitrogen content under this subpart, the Permittee shall submit reports of excess emissions and monitor downtime, in accordance with 40 CFR Part 60.7(c). Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction. For the purpose of reports required under 40 CFR Part 60.7(c), periods of excess emissions and monitor downtime that shall be reported are defined as follows (40 CFR 60.334(j)):
                  (i) Nitrogen Oxides. (40 CFR 60.334(j)(1))
                     (1) For turbines using water or steam to fuel ratio monitoring (40 CFR 60.334(j)(1)(i)):
                        (A) An excess emission shall be any unit operating hour for which the average steam to water to fuel ratio, as measured by the continuous monitoring system, falls below the acceptable steam or water to fuel ratio needed to demonstrate compliance with 40 CFR Part 60.332, as established during the performance test required in 40 CFR Part 60.8. Any unit operating hour in which no water or steam is injected into the turbine shall also be considered an excess emission. (40 CFR 60.334(j)(1)(i)(A))
                        (B) A period of monitor downtime shall be any unit operating hour in which water or steam is injected into the turbine, but the essential parametric data needed to determine the steam to water to fuel ratio are unavailable or invalid. (40 CFR 60.334(j)(1)(i)(B))
Section IV. Specific Operating Conditions (continued)

D. Emission Unit S2.007 (continued)

7. Federal Requirements (continued)
   (3) Monitoring of Operations (40 CFR 60.334) (continued)
      (f) If the Permittee elects to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content or fuel nitrogen content under this subpart, the Permittee shall submit reports of excess emissions and monitor downtime, in accordance with 40 CFR Part 60.7(c). Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction. For the purpose of reports required under 40 CFR Part 60.7(c), periods of excess emissions and monitor downtime that shall be reported are defined as follows (40 CFR 60.334(j)(1)(i)) (continued):
         (i) Nitrogen Oxides. (40 CFR 60.334(j)(1)(i)) (continued)
            (I) For turbines using water or steam to fuel ratio monitoring (40 CFR 60.334(j)(1)(i)(D)) (continued):
               (D) Each report shall include the average steam or water to fuel ratio, average fuel consumption, ambient conditions (temperature, pressure, and humidity), gas turbine load, and (if applicable) the nitrogen content of the fuel during each excess emission. The Permittee does not have to report ambient conditions if opting to use the worst case ISO correction factor as specified in 40 CFR Part 60.334(b)(3)(ii), or are not using the ISO correction equation under the provisions of 40 CFR Part 60.335(b)(1).
               (40 CFR 60.334(j)(1)(i)(C))
            (II) If the Permittee elects to take an emission allowance for fuel bound nitrogen, then excess emissions and periods of monitor downtime are as described in 40 CFR 60.344(j)(1)(ii)(A) and (B). (40 CFR 60.334(j)(1)(ii))
               (A) An excess emission shall be the period of time during which the fuel-bound nitrogen (N) is greater than the value measured during the performance test required in 40 CFR Part 60.8 and used to determine the allowance. The excess emission begins on the date and hour of the sample which shows that N is greater than the performance test value, and ends with the date and hour of a subsequent sample which shows a fuel nitrogen content less than or equal to the performance test value. (40 CFR 60.334(j)(1)(ii)(A))
               (B) A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour that a required sample is taken, if invalid results are obtained. The period of monitor downtime ends on the date and hour of the next valid sample. (40 CFR 60.334(j)(1)(ii)(B))
            (III) For turbines using NOx and diluent CEMS (40 CFR 60.334(j)(1)(iii)): (A) An hour of excess emissions shall be any unit operating hour in which the 4-hour rolling average NOx concentration exceeds the applicable emission limit in 40 CFR Part 60.332(a)(1) or (2). For the purposes of 40 CFR Subpart GG, a “4-hour rolling average NOx concentration” is the arithmetic average of the average NOx concentration measured by the CEMS for a given hour (corrected to 15 percent O2) and, if required under 40 CFR 60.335(b)(1), to ISO standard conditions and the three unit operating hour average NOx concentrations immediately preceding that unit operating hour. (40 CFR 60.334(j)(1)(iii)(A))
               (B) A period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour, for either NOx concentration or diluent (or both). (40 CFR 60.334(j)(1)(iii)(B))
Section IV. Specific Operating Conditions (continued)

D. Emission Unit S2.007 (continued)

7. Federal Requirements (continued)
      (3) Monitoring of Operations (40 CFR 60.334) (continued)
      (f) If the Permittee elects to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content or fuel nitrogen content under this subpart, the Permittee shall submit reports of excess emissions and monitor downtime, in accordance with 40 CFR Part 60.7(c). Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction. For the purpose of reports required under 40 CFR Part 60.7(c), periods of excess emissions and monitor downtime that shall be reported are defined as follows (40 CFR 60.334(j) (continued):
         (i) Nitrogen Oxides. (40 CFR 60.334(j)(1)) (continued)
         (III) For turbines using NO\textsubscript{x} and diluent CEMS (40 CFR 60.334(j)(1)(iii)) (continued):
            (C) Each report shall include the ambient conditions (temperature, pressure, and humidity) at the time of the excess emission period and if the owner or operator has claimed an emission allowance for fuel bound nitrogen the nitrogen content of the fuel during the period of excess emissions. The Permittee does not have to report ambient conditions if you opt to use the worst case ISO correction factor as specified in 40 CFR Part 60.334(b)(3)(ii), or if the Permittee is not using the ISO correction equation under the provisions of 40 CFR 60.335(b)(1). (40 CFR 60.334(j)(1)(iii)(C))
         (IV) For permits that elect, under 40 CFR Part 60.344(f), to monitor combustion parameters or parameters that document proper operation of the NO\textsubscript{x} emission controls (40 CFR 60.334(j)(1)(iv)):
            (A) An excess emission shall be a 4-hour rolling unit operating hour average in which any monitored parameter does not achieve the target value or is outside the acceptable range defined in the parameter monitoring plan for the unit. (40 CFR 60.334(j)(1)(iv)(A))
            (B) A period of monitor downtime shall be a unit operating hour in which any of the required parametric data are either not recorded or are invalid. (40 CFR 60.334(j)(1)(iv)(B))
      (ii) Sulfur Dioxide. If the Permittee is required to monitor the sulfur content of the fuel under 40 CFR Part 60.344(b) (40 CFR 60.334)(j)(2)):
         (f) For samples of gaseous fuel and for oil samples obtained using daily sampling, flow proportional sampling, or sampling from the unit's storage tank, an excess emission occurs each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 weight percent and ending on the day and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit. (40 CFR 60.334(j)(2)(i))
         (f) If the option to sample each delivery of fuel oil has been selected, the Permittee shall immediately switch to one of the other oil sampling options (i.e., daily sampling, flow proportional sampling, or sampling from the unit's storage tank) if the sulfur content of a delivery exceeds 0.8 weight percent. The Permittee shall continue to use one of the other sampling options until all of the oil from the delivery has been combusted, and shall evaluate excess emissions according to 40 CFR Part 60.344(j)(2)(i). When all of the fuel from the delivery has been burned, the permittee may resume using the as-delivered sampling option. (40 CFR 60.334(j)(2)(ii))
Section IV. Specific Operating Conditions (continued)

D. Emission Unit S2.007 (continued)

7. Federal Requirements (continued)
      (3) Monitoring of Operations (40 CFR 60.334) (continued)
         (f) If the Permittee elects to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content or fuel nitrogen content under this subpart, the Permittee shall submit reports of excess emissions and monitor downtime, in accordance with 40 CFR Part 60.7(c). Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction. For the purpose of reports required under 40 CFR Part 60.7(c), periods of excess emissions and monitor downtime that shall be reported are defined as follows (40 CFR 60.334(j)) (continued):
            (ii) Sulfur Dioxide. If the Permittee is required to monitor the sulfur content of the fuel under 40 CFR Part 60.334(b) (40 CFR 60.334(f)(2)) (continued):
                 (1) A period of monitor downtime begins when a required sample is not taken by its due date.
                 (2) A period of monitor downtime also begins on the date and hour of a required sample if invalid results are obtained. The period of monitor downtime shall include only unit operating hours, and ends on the date and hour of the next valid sample. (40 CFR 60.334(j)(2)(iii))
            (iii) Ice Fog: Each period during which an exemption provided in 40 CFR Part 60.332(f) is in effect shall be reported in writing to the Administrator quarterly. For each period the ambient conditions existing during the period; the date and time the air pollution control system was deactivated; and the date and time the air pollution control system was reactivated shall be reported. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter. (40 CFR 60.334(f)(3))
            (iv) Emergency Fuel. Each period during which an exemption provided in 40 CFR Part 60.332(k) is in effect shall be included in the report required in 40 CFR Part 60.7(c). For each period, the type, reasons, and duration of the firing of the emergency fuel shall be reported. (40 CFR 60.334(j)(4))
         (v) All reports required under 40 CFR Part 60.7(c) shall be postmarked by the 30th day following the end of each 6-month period.

(4) Test Methods and Procedures (40 CFR 60.335)
   The Permittee shall follow the test methods and procedures under 40 CFR Part 60.335. (40 CFR 60.335)

b. Continuous Emissions Monitoring System (CEMS) – 40 CFR Parts 60 and 75
   The Permittee, upon issuance of this operating permit, shall comply with the CEMS requirements set forth in Section V of this operating permit.
### Section IV. Specific Operating Conditions (continued)

#### F. Emission Units S2.009 and S2.009.1

<table>
<thead>
<tr>
<th>System 07C – Tracy Unit #4 Piñon Pine Combustion Turbine/Duct Burner – Pipeline Quality Natural Gas</th>
<th>Location UTM (Zone 11, NAD 83)</th>
</tr>
</thead>
<tbody>
<tr>
<td>S2.009</td>
<td>Combustion Turbine/HRSG (Manufactured by General Electric; Model MS6001FA; Serial 1646; Maximum Heat Input 763.9 MMBtu/hr; Nominal Output 107 MW)</td>
</tr>
<tr>
<td>S2.009.1</td>
<td>Duct Burner (Manufactured by Forney; Maximum Heat Input 156.464 MMBtu/hr; Nominal Output 23 MW)</td>
</tr>
</tbody>
</table>

1. **Air Pollution Control Equipment** (NAC 445B.3405)
   - Emissions from S2.009 shall be controlled by a **Steam Injection** for control of NO\textsubscript{X}.
   - Emissions from S2.009.1 shall be controlled by **Dry Low NO\textsubscript{X} Burners**. Note, these are not add-on controls.
   - Emissions from S2.009 and S2.009.1 are discharged through the same exhaust stack.
   - **Descripative Stack Parameters**
     - Stack Height: 225.0 feet
     - Stack Diameter: 12.0 feet
     - Stack Temperature: 366.5 °F

2. **Operating Parameters** (NAC 445B.3405)
   - S2.009 and S2.009.1 may consume only Pipeline Quality Natural Gas.
   - The maximum allowable heat input rate for S2.009 and S2.009.1, combined, shall not exceed **920.36 million Btu (MMBtu)** per any one-hour period.
   - **Hours**
     - S2.009 and S2.009.1, each, may operate a total of **24 hours per day**.

3. **Emission Limits** (NAC 445B.305, NAC 445B.3405)
   - The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from the exhaust stack of **S2.009** and **S2.009.1** the following pollutants in excess of the following specified limits:
     - The discharge of **PM** (particulate matter) to the atmosphere shall not exceed 20.1 pounds per hour, nor more than 29.9 tons per 12-month rolling period.
     - The discharge of **PM\textsubscript{10}** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed 20.1 pounds per hour, nor more than 19.9 tons per 12-month rolling period.
     - NAC 445B.2203 – The maximum allowable discharge of **PM\textsubscript{10}** to the atmosphere from the exhaust S2.009 and S2.009.1 shall not exceed 0.31 pounds per MMBtu.
     - The discharge of **PM\textsubscript{2.5}** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed 20.1 pounds per hour, nor more than 19.9 tons per 12-month rolling period.
     - The discharge of **SO\textsubscript{2}** (sulfur dioxide) to the atmosphere shall not exceed 0.54 pounds per hour, nor more than 2.42 tons per 12-month rolling period.
     - The discharge of **NO\textsubscript{X}** (oxides of nitrogen) to the atmosphere shall not exceed 141.0 pounds per hour, nor more than 533.1 tons per 12-month rolling period.
     - The discharge of **CO** (carbon monoxide) to the atmosphere shall not exceed 34.4 pounds per hour, nor more than 148.8 tons per 12-month rolling period.
     - The discharge of **VOCs** (volatile organic compounds) to the atmosphere shall not exceed 5.40 pounds per hour, nor more than 54.47 tons per 12-month rolling period.
     - NAC 445B.22017 – The opacity from the exhaust stack of S2.009 and S2.009.1 shall not exceed or exceed 20 percent.
Section IV. Specific Operating Conditions (continued)

F. Emission Units S2.009 and S2.009.1 (continued)

4. Specific Acid Rain Requirements (NAC 445B.305, 40 CFR 72.9, 40 CFR 73.10(b)(2))
   a. The Permittee shall not exceed the SO2 emission levels (acid rain allowances) for the indicated years as shown in Table B-1 below without holding the required acid rain allowances in accordance with Section I.V.2, of this Operating Permit and pursuant to 40 CFR Part 72.9, and specified in Table 2 of 40 CFR Part 73.10(b)(2):

<table>
<thead>
<tr>
<th>S2.009</th>
<th>Phase I (Years 2010 and Beyond) Utility Boilers &gt; 25 MW-Output Capacity</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
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<tbody>
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</table>

   b. The Permittee shall comply with the “Standard Requirements” provisions of the SO2 acid rain permit application dated December 12, 2013 entitled “Acid Rain Permit Application - For Acid Rain Permit Renewal” and all references contained therein, as submitted with the Permittee’s application for renewal of Class I Air Quality Operating Permit.

5. Monitoring, Recordkeeping, and Reporting (NAC 445B.3405)
   The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
   a. Monitor and record the hours of operation for S2.009 and S2.009.1 on a daily basis.
   b. Calibrate, operate, and maintain a fuel flow meter to continuously measure the volume of Pipeline Quality Natural Gas consumed in S2.009 and S2.009.1 (in standard cubic feet or hundreds of standard cubic feet). The fuel flow meter shall be installed at an appropriate location in the fuel delivery system to accurately and continuously measure the fuel consumed in S2.009 and S2.009.1 in accordance with the requirements prescribed in 40 CFR Part 75.
   c. Calibrate, operate, and maintain a Continuous Data Collection System (CDCS) to continuously record the quantity (in standard cubic feet or hundreds of standard cubic feet) of Pipeline Quality Natural Gas as measured by the fuel flow meter required under F.5.b. of this section. The CDCS will be installed, calibrated, operated, and maintained in accordance with the manufacturer’s specifications and requirements prescribed in 40 CFR Part 75.
   d. Determine the gross caloric value (GCV) of Pipeline Quality Natural Gas consumed in S2.009 and S2.009.1 by sampling the Pipeline Quality Natural Gas in S2.009 and S2.009.1 on a monthly basis. The GCV of the gas sample shall be determined using one of the following methods: ASTM D1826-94; ASTM D2588-98; ASTM D4891-89; Gas Processors Association (GPA) Standard 2172-96; Calculation of Gross Heating Value; Relative Density and Compressibility Factor for Natural Gas Mixtures from Compositional Analysis; or GPA Standard 2261-00; Analysis for Natural Gas and Similar Gaseous Mixtures by Gas Chromatography. Alternatively, at least once each month, the GCV may be verified by the contractual supplier, or the Permittee may use a maximum GCV value of 1,060 Btu/scf. If the supplier certification is used to verify the GCV, the supplier must provide documentation identifying the test method(s) used to determine the GCV.
Section IV. Specific Operating Conditions (continued)

F. Emission Units S2.009 and S2.009.1 (continued)

5. Monitoring, Recordkeeping, and Reporting (NAC 445B.3405) (continued)

The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record. All specified records shall be entered into the log at the end of the shift, end of the day of operation, or the end of the final day of operation for the month, as appropriate.

c. Missing GCV or fuel flow data may be substituted as prescribed in 40 CFR Part 75, Appendix D.

d. The hourly heat input of the Pipeline Quality Natural Gas (in MMBtu/hr) combusted will be calculated from the hourly fuel usage recorded in F.5.c. of this section.

Sample Calculation:

\[(\text{scf-Natural Gas/hr})(\text{Btu/scf}) = \text{Btu/hr or MMBtu/hr}\]

The hourly emission rate of PM, PM_10, PM_2.5, CO, and VOC, each, in pounds per hour (lbs/hr) will be calculated from the hourly quantity of Pipeline Quality Natural Gas combusted determined in F.5.e. of this section, and the emission factor derived in F.6.a.(11) of this section.

Sample Calculation:

\[(\text{scf/hr})(\text{lbs pollutant/scf}) = \text{lbs pollutant/hr}\]

or

\[(\text{MMBtu/hr})(\text{lbs pollutant/MMBtu}) = \text{lbs pollutant/hr}\]

The hourly emission rate of PM, PM_10, PM_2.5, CO, and VOC, each in pounds per MMBtu (lbs/MMBtu) will be calculated from the heat content of the fuel determined in F.5.d. of this section, and the emission factor derived in F.6.a.(11) of this section.

Sample Calculation:

\[(\text{scf/Btu})(\text{lb pollutant/scf}) = \text{lbs pollutant/Btu or lbs pollutant/MMBtu}\]

The hourly emission rate of PM, PM_10, PM_2.5, CO, and VOC, each in pounds per MMBtu (lbs/MMBtu) will be calculated from the heat content of the fuel determined in F.5.d. of this section, and the emission factor derived in F.6.a.(11) of this section.

Sample Calculation:

\[(\text{scf/Btu})(\text{lb pollutant/scf}) = \text{lbs pollutant/Btu or lbs pollutant/MMBtu}\]

Calculate annually the SO_2 emissions in tons based on quantity of Pipeline Quality Natural Gas determined in F.5.e. of this section and sulfur in units of grains per dry standard cubic feet of Pipeline Quality Natural Gas from the SO_2 emission factor for Pipeline Quality Natural Gas combusted from 40 CFR Part 75 Appendix D.
Section IV. Specific Operating Conditions (continued)

F. Emission Units S2.009 and S2.009.1 (continued)


a. The Permittee, upon issuance of this operating permit, shall conduct and record renewal performance testing at least 90 days prior to the expiration of this operating permit, no earlier than 365 days from the date of expiration of this operating permit, and every 5 years thereafter, in accordance with the following:

(1) All performance tests must comply with the advance notification, protocol review, operational conditions, reporting, and other requirements of Section I.E. Testing and Sampling (NAC 445B.252), of this operating permit. Material sampling must be conducted in accordance with protocols approved by the Director. All performance test results shall be based on the arithmetic average of three valid runs. (NAC 445B.252(5))

(2) Testing shall be conducted on the exhaust stack of S2.009 and S2.009.1.

(3) Method 5 in Appendix A of 40 CFR Part 60 shall be used to determine PM emissions. The sample volume for each test run shall be at least 1.7 dscm (60 dscf). Test runs must be conducted for up to two hours in an effort to collect this minimum sample.

(4) Method 201A and Method 202 in Appendix M of 40 CFR Part 51 shall be used to determine PM_{10} and PM_{2.5} emissions. The sample time and sample volume collected for each test run shall be sufficient to collect enough mass to weigh accurately.

(5) The Method 201A and Method 202 test required in this section may be replaced by a Method 5 in Appendix A of 40 CFR Part 60 and Method 201A in Appendix M of 40 CFR Part 51 test. All particulate captured in the Method 5 and Method 202 test performed under this provision shall be considered PM_{2.5} for determination of compliance.

(6) Method 7E in Appendix A of 40 CFR Part 60 shall be used to determine the nitrogen oxides concentration. Each test will be run for a minimum of one hour.

(7) Method 10 in Appendix A of 40 CFR Part 60 shall be used to determine the carbon monoxide concentration. Each test will be run for a minimum of one hour.

(8) Method 25A in Appendix A of 40 CFR Part 60 shall be used to determine the volatile organic compound concentration. Method 18 in Appendix A of 40 CFR Part 60 or Method 320 in Appendix A of CFR Part 63 may be used in conjunction with Method 25A to break out the organic compounds that are not considered VOC's by definition per 40 CFR 51.100(s). Each Method 25A test will be run for a minimum of one hour.

(9) The performance tests required in F.6.a.(1) through F.6.a.(8) of this section shall be conducted at the best achievable heat input rate at normal operating conditions, unless otherwise approved pursuant to NAC 445B.252. Should any anticipated major boiler overhaul(s) be scheduled to be performed, which coincide with the performance tests, the performance testing shall be performed prior to the overhaul(s). If the performance testing cannot be performed prior to a major boiler overhaul(s), the performance testing shall be performed as soon as practicable following the overhaul(s), but no earlier than 60 days following the overhaul(s).

(10) The Permittee shall record the quantity of Pipeline Quality Natural Gas combusted (in standard cubic feet or hundreds of standard cubic feet) for each test run and the heat content (in Btu/scf) for each performance test event.

(11) Using the most recent performance tests, as specified above, the Permittee shall calculate the following emission factors, based on the average of 3 test runs:

(a) Pounds of PM per scf (lbs/PM/scf) of Pipeline Quality Natural Gas; or pounds of PM per MMBtu (lbs/PM/MMBtu) of Pipeline Quality Natural Gas.

(b) Pounds of PM\(_{10}\) per scf (lbs/PM\(_{10}\)/scf) of Pipeline Quality Natural Gas; or pounds of PM\(_{10}\) per MMBtu (lbs/PM\(_{10}\)/MMBtu) of Pipeline Quality Natural Gas.

(c) Pounds of PM\(_{2.5}\) per scf (lbs/PM\(_{2.5}\)/scf) of Pipeline Quality Natural Gas; or pounds of PM\(_{2.5}\) per MMBtu (lbs/PM\(_{2.5}\)/MMBtu) of Pipeline Quality Natural Gas.

(d) Pounds of NO\(_x\) per scf (lbs/NO\(_x\)/scf) of Pipeline Quality Natural Gas; or pounds of NO\(_x\) per MMBtu (lbs/NO\(_x\)/MMBtu) of Pipeline Quality Natural Gas.

(e) Pounds of CO per scf (lbs/CO/scf) of Pipeline Quality Natural Gas; or pounds of CO per MMBtu (lbs/CO/MMBtu) of Pipeline Quality Natural Gas.

(f) Pounds of VOC per scf (lbs/VOC/scf) of Pipeline Quality Natural Gas; or pounds of VOC per MMBtu (lbs/VOC/MMBtu) of Pipeline Quality Natural Gas.

   b. The Permittee, upon issuance of this operating permit, shall conduct and record annual opacity compliance demonstrations within 90 days of the anniversary date of the previous initial opacity compliance demonstrations or annual opacity compliance demonstrations, and annually thereafter, in accordance with the following:

   (1) All opacity compliance demonstrations must comply with the advance notification, protocol review, operational conditions, reporting, and other requirements of Section I.F: Testing and Sampling (NAC 445B.252) of this operating permit.

   (2) Opacity-compliance demonstrations shall be conducted on the exhaust stack of S2.009 and S2.009.1.

   (3) Method 9 in Appendix A of 40 CFR Part 60 shall be used to determine opacity. Opacity observations shall be conducted concurrently with the applicable performance test. The minimum total-time of observations shall be six minutes (24 consecutive observations recorded at 15 second intervals), unless otherwise specified by an applicable subpart.

   (4) The opacity compliance demonstrations required in F.6.b.(1) through F.6.b.(3) of this section shall be conducted at the best achievable heat input rate at normal operating conditions, unless otherwise approved pursuant to NAC 445B.252. Should any anticipated major boiler overhaul(s) be scheduled to be performed, which coincide with the opacity-compliance demonstrations, the opacity-compliance demonstrations shall be performed prior to the overhaul(s). If the opacity-compliance demonstrations cannot be performed prior to a major boiler overhaul(s), the opacity-compliance demonstrations shall be performed as soon as practicable following the overhaul(s), but not earlier than 60 days following the overhaul(s).

7. **Federal Requirements**

   (1) **Standards for Nitrogen Oxides (40 CFR 60.332)**

      On and after the date on which the performance test required by 40 CFR Part 60.8 is completed, the Permittee shall not discharge into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxide in excess of what is calculated in the equation under 40 CFR Part 60.332(a)(1). (40 CFR 60.332(a)(1))

   (2) **Standard for Sulfur Dioxide (40 CFR 60.335)**

      On and after the date on which the performance test required to be conducted by 40 CFR Part 60.8 is completed, the Permittee shall comply with one or the other of the following conditions:

      (a) The Permittee shall not cause to be discharged into the atmosphere from any stationary gas turbine any gases which contain sulfur dioxide in excess of 0.0015 percent by volume at 15 percent oxygen on a dry basis. (40 CFR 60.335(a))

      (b) The Permittee shall not burn in any stationary gas turbine any fuel which contains total sulfur in excess of 0.8 percent by weight (8,000 ppmv). (40 CFR 60.335(b))

   (3) **Monitoring of Operations (40 CFR 60.334)**

      (a) Except as provided in 40 CFR Part 60.334(b), the Permittee shall install, calibrate, maintain, and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water or steam to fuel being fired in the turbine. (40 CFR 60.334(a))

      (b) The Permittee may, as an alternative to operating the continuous monitoring system described in 40 CFR Part 60.334(a), install, certify, maintain, operate, and quality-assure a continuous emission monitoring system (CEMS) consisting of NOX and O2 monitors. As an alternative, a CO2 monitor may be used to adjust the measured NOX concentrations to 15 percent O2 by either converting the CO2 hourly averages to equivalent O2 concentrations using Equation F-14a or F-14b in Appendix F to 40 CFR Part 75 and making the adjustments to 15 percent O2 or by using the CO2 readings directly to make the adjustments, as described in Method 20. If the option to use a CEMS is chosen, the CEMS shall be installed, certified, maintained as stated in 40 CFR Parts 60.334(b)(1) through 60.334(b)(3). (40 CFR 60.334(b))
Section IV. Specific Operating Conditions (continued)

F. Emission Units S2.009 and S2.009.1 (continued)

7. Federal Requirements (continued)
      (3) Monitoring of Operations (40 CFR 60.334) (continued)
         (c) The steam or water to fuel ratio or other parameters that are continuously monitored as described in 40 CFR Part 60.334(a) shall be monitored during the performance test required under 40 CFR Part 60.8, to establish acceptable values and ranges. The Permittee may supplement the performance test data with engineering analyses, design specifications, manufacturer’s recommendations, and other relevant information to define the acceptable parametric ranges more precisely. The Permittee shall develop and keep on-site a parameter monitoring plan which explains the procedures used to document proper operation of the NOX emission controls. The plan shall include the parameter(s) monitored and the acceptable range(s) of the parameter(s) as well as the basis for designating the parameter(s) and acceptable range(s). Any supplemental data such as engineering analyses, design specifications, manufacturer’s recommendations and other relevant information shall be included in the monitoring plan. For affected units that are also subject to 40 CFR Part 75 and that use the low mass emissions methodology in 40 CFR Part 75.19 or the NOX emission measurement methodology in Appendix E to 40 CFR Part 75, the Permittee may meet the requirements of this paragraph by developing and keeping on-site (or at a central location for unmanned facilities) a quality-assurance plan, as described in 40 CFR Part 75.19 (c)(5) or in Section 2.3 of Appendix E and Section 1.3.6 of Appendix B to 40 CFR Part 75. (40 CFR 60.334(g))
   (d) The Permittee:
      (i) Shall monitor the total sulfur content of the fuel being fired in the turbine, except as provided in 40 CFR Part 60.334(h)(3). The sulfur content of the fuel must be determined using total sulfur methods described in 40 CFR Part 60.335(b)(10). Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than 0.4 weight percent (4000 ppmw), ASTM D4084-82, 94, D5504-01, D6228-98, or Gas Processors Association Standard 2377-86 (all of which are incorporated by reference-see 40 CFR Part 60.17), which measure the major sulfur compounds may be used; and (40 CFR 60.334(h)(1))
      (ii) Shall monitor the nitrogen content of the fuel combusted in the turbine, if the Permittee claims an allowance for fuel bound nitrogen (i.e., if an F-value greater than zero is being or will be used to calculate STD in 40 CFR Part 60.332). The nitrogen content of the fuel shall be determined using methods described in 40 CFR Part 60.335(b)(9) or an approved alternative. (40 CFR 60.334(h)(2))
      (iii) Notwithstanding the provisions of 40 CFR Part 60.334(h)(1), the Permittee may elect not to monitor the total sulfur content of the gaseous fuel combusted in the turbine, if the gaseous fuel is demonstrated to meet the definition of natural gas in 40 CFR Part 60.331(u), regardless of whether an existing custom schedule approved by the administrator for 40 CFR Part 60 Subpart GG requires such monitoring. The Permittee shall use one of the following sources of information to make the required demonstration (40 CFR 60.334(h)(3)):  
         (I) The gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20.0 grains/100 scf or less; or (40 CFR 60.334(h)(3)(i))
         (II) Representative fuel sampling data which show that the sulfur content of the gaseous fuel does not exceed 20 grains/100 scf. At a minimum, the amount of fuel sampling data specified in Section 2.3.1.4 or 2.3.2.4 of Appendix D to 40 CFR Part 75 is required. (40 CFR 60.334(h)(3)(ii))
Section IV. Specific Operating Conditions (continued)

F. Emission Units S2.009 and S2.009.1 (continued)

7. Federal Requirements (continued)

(3) Monitoring of Operations (40 CFR 60.334) (continued)
   (d) The Permittee (continued):
      (iv) For any turbine that commenced construction, reconstruction or modification after October 3, 1977, but before July 8, 2004, and for which a custom fuel monitoring schedule has previously been approved, the Permittee may, without submitting a special petition to the Administrator, continue monitoring on this schedule. (40 CFR 60.334(h)(4))

(c) The frequency of determining the sulfur and nitrogen content of the fuel shall be as follows (40 CFR 60.334(i)):
   (i) Fuel oil. For fuel oil, use one of the total sulfur sampling options and the associated sampling frequency described in Sections 2.2.3, 2.2.4.1, 2.2.4.2, and 2.2.4.3 of Appendix D to 40 CFR Part 75 (i.e., flow proportional sampling, daily sampling, sampling from the unit's storage tank after each addition of fuel to the tank, or sampling each delivery prior to combining it with fuel oil already in the intended storage tank). If an emission allowance is being claimed for fuel-bound nitrogen, the nitrogen content of the oil shall be determined and recorded once per unit operating day. (40 CFR 60.334(i)(1))
   (ii) Gaseous fuel. Any applicable nitrogen content value of the gaseous fuel shall be determined and recorded once per unit operating day. For permittees that elect not to demonstrate sulfur content using options in 40 CFR Part 60.334(h)(3), and for which the fuel is supplied without intermediate bulk storage, the sulfur content value of the gaseous fuel shall be determined and recorded once per unit operating day. (40 CFR 60.334(i)(2))
   (iii) Custom schedules. Notwithstanding the requirements of 40 CFR Part 60.334(i)(2), operators or fuel vendors may develop custom schedules for determination of the total sulfur content of gaseous fuels, based on the design and operation of the affected facility and the characteristics of the fuel supply. Except as provided in 40 CFR Parts 60.344(i)(3)(i) and 60.344(i)(3)(ii), custom schedules shall be substantiated with data and shall be approved by the Administrator before they can be used to comply with the standard in 40 CFR Part 60.333. (40 CFR 60.334(i)(3))

   (1) The two custom sulfur monitoring schedules set forth in 40 CFR Parts 60.344(i)(3)(i)(A) through (D) and in Part 60.344(i)(3)(ii) are acceptable, without prior Administrative approval (40 CFR 60.334(i)(3)(i)): (A) The Permittee shall obtain daily total sulfur content measurements for 30 consecutive unit operating days, using the applicable methods specified in this subpart. Based on the results of the 30 daily samples, the required frequency for subsequent monitoring of the fuel's total sulfur content shall be as specified in 40 CFR Parts 60.344(i)(3)(i)(B), (C), or (D), as applicable. (40 CFR 60.334(i)(3)(i)(A))

   (B) If none of the 30 daily measurements of the fuel's total sulfur content exceeds 0.4 weight percent (4,000 ppmw), subsequent sulfur content monitoring may be performed at 12 month intervals. If any of the samples taken at 12-month intervals has a total sulfur content between 0.4 and 0.8 weight percent (4,000 and 8,000 ppmw), follow the procedures in 40 CFR Part 60.344(i)(3)(i)(C). If any measurement exceeds 0.8 weight percent (8,000 ppmw), follow the procedures in 40 CFR Part 60.344(i)(3)(i)(D). (40 CFR 60.334(i)(3)(i)(B))
Section IV. Specific Operating Conditions (continued)

F. Emission Units S2.009 and S2.009.1 (continued)

7. Federal Requirements (continued)
      (3) Monitoring of Operations (40 CFR 60.334) (continued)
         (e) The frequency of determining the sulfur and nitrogen content of the fuel shall be as follows (40 CFR 60.334(i)) (continued):
            (iii) Custom schedules. Notwithstanding the requirements of 40 CFR Part 60.344(i)(2), operators or fuel vendors may develop custom schedules for determination of the total sulfur content of gaseous fuels, based on the design and operation of the affected facility and the characteristics of the fuel supply. Except as provided in 40 CFR Parts 60.344(i)(3)(i) and 60.344(i)(3)(ii), custom schedules shall be substantiated with data and shall be approved by the Administrator before they can be used to comply with the standard in 40 CFR Part 60.333. (40 CFR 60.334(i)(3))
            (I) The two custom sulfur monitoring schedules set forth in 40 CFR Parts 60.344(i)(3)(i)(A) through (D) and in Part 60.344(i)(3)(ii) are acceptable, without prior Administrative approval (40 CFR 60.334(i)(3)(i)):
               (C) If at least one of the 30 daily measurements of the fuel's total sulfur content is between 0.4 and 0.8 weight percent (4,000 and 8,000 ppmw), but none exceeds 0.8 weight percent (8,000 ppmw), then (40 CFR 60.334(i)(3)(i)(C)):
                  I. Collect and analyze a sample every 30 days for three months. If any sulfur content measurement exceeds 0.8 weight percent (8,000 ppmw), follow the procedures in 40 CFR Part 60.344(i)(3)(i)(D). Otherwise, follow the procedures in 40 CFR Part 60.344(i)(3)(i)(C)(2). (40 CFR 60.334(i)(3)(i)(C)(1))
                  II. Begin monitoring at 6-month intervals for 12 months. If any sulfur content measurement exceeds 0.8 weight percent (8,000 ppmw), follow the procedures in 40 CFR Part 60.344(i)(3)(i)(D). Otherwise, follow the procedures in 40 CFR Part 60.344(i)(3)(i)(C)(2)
                  III. Begin monitoring at 12-month intervals. If any sulfur content measurement exceeds 0.8 weight percent (8,000 ppmw), follow the procedures in 40 CFR Part 60.344(i)(3)(i)(D). Otherwise, continue to monitor at this frequency. (40 CFR 60.334(i)(3)(i)(C)(3))
               (D) If a sulfur content measurement exceeds 0.8 weight percent (8,000 ppmw), immediately begin daily monitoring according to 40 CFR Part 60.344(i)(3)(i)(A). Daily monitoring shall continue until 30 consecutive daily samples, each having a sulfur content no greater than 0.8 weight percent (8,000 ppmw), are obtained. At that point, the applicable procedures of 40 CFR Part 60.344(i)(3)(i)(B) or (C) shall be followed. (40 CFR 60.334(i)(3)(i)(D)): 


7. Federal Requirements (continued)
      (3) Monitoring of Operations (40 CFR 60.334) (continued)
         (e) The frequency of determining the sulfur and nitrogen content of the fuel shall be as follows (40 CFR 60.334(i)(3)(ii) (continued):
            (iii) Custom schedules. Notwithstanding the requirements of 40 CFR Part 60.344(i)(2), operators or fuel vendors may develop custom schedules for determination of the total sulfur content of gaseous fuels, based on the design and operation of the affected facility and the characteristics of the fuel supply. Except as provided in 40 CFR Parts 60.344(i)(3)(i) and 60.344(i)(3)(ii), custom schedules shall be substantiated with data and shall be approved by the Administrator before they can be used to comply with the standard in 40 CFR Part 60.333. (40 CFR 60.334(i)(3)) (continued)
         (II) The Permittee may use the data collected from the 720-hour sulfur sampling demonstration described in section 2.3.6 of 40 CFR Part 75 to determine a custom sulfur sampling schedule, as follows (40 CFR 60.334(i)(3)(ii): (A) If the maximum fuel sulfur content obtained from the 720 hourly samples does not exceed 20 grains/100 scf (i.e., the maximum total sulfur content of natural gas as defined in 40 CFR Part 60.331(u)), no additional monitoring of the sulfur content of the gas is required, for the purposes of 40 CFR Subpart GG. (40 CFR 60.334(i)(3)(ii)(A))
            (B) If the maximum fuel sulfur content obtained from any of the 720 hourly samples exceeds 20 grains/100 scf, but none of the sulfur content values (when converted to weight percent sulfur) exceeds 0.4 weight percent (4,000 ppmw), then the minimum required sampling frequency shall be one sample at 12 month intervals. (40 CFR 60.334(i)(3)(ii)(B))
            (C) If any sample result exceeds 0.4 weight percent sulfur (4,000 ppmw), but none exceeds 0.8 weight percent sulfur (8,000 ppmw), follow the provisions of 40 CFR Part 60.344(i)(3)(i)(C). (40 CFR 60.334(i)(3)(ii)(C))
            (D) If the sulfur content of any of the 720 hourly samples exceeds 0.8 weight percent (8,000 ppmw), follow the provisions of 40 CFR Part 60.344(i)(3)(i)(D). (40 CFR 60.334(i)(3)(ii)(D))
         (f) If the Permittee elects to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content or fuel nitrogen content under this subpart, the Permittee shall submit reports of excess emissions and monitor downtime, in accordance with 40 CFR Part 60.7(c). Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction. For the purpose of reports required under 40 CFR Part 60.7(c), periods of excess emissions and monitor downtime that shall be reported are defined as follows (40 CFR 60.334(j)):
            (i) Nitrogen Oxides. (40 CFR 60.334(j)(1))
               (I) For turbines using water or steam to fuel ratio monitoring (40 CFR 60.334(j)(1)(i)): (A) An excess emission shall be any unit operating hour for which the average steam or water to fuel ratio, as measured by the continuous monitoring system, falls below the acceptable steam or water to fuel ratio needed to demonstrate compliance with 40 CFR Part 60.332, as established during the performance test required in 40 CFR Part 60.8. Any unit operating hour in which no water or steam is injected into the turbine shall also be considered an excess emission. (40 CFR 60.334(j)(1)(i)(A))
               (B) A period of monitor downtime shall be any unit operating hour in which water or steam is injected into the turbine, but the essential parametric data needed to determine the steam or water to fuel ratio are unavailable or invalid. (40 CFR 60.334(j)(1)(i)(B))
Section IV. Specific Operating Conditions (continued)

F. Emission Units S2.009 and S2.009.1 (continued)

7. Federal Requirements (continued)
      (3) Monitoring of Operations (40 CFR 60.334) (continued)
         (f) If the Permittee elects to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content or fuel nitrogen content under this subpart, the Permittee shall submit reports of excess emissions and monitor downtime, in accordance with 40 CFR Part 60.7(c). Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction. For the purpose of reports required under 40 CFR Part 60.7(c), periods of excess emissions and monitor downtime that shall be reported are defined as follows (40 CFR 60.334(j)) (continued):
            (i) Nitrogen Oxides. (40 CFR 60.334(j)(1)) (continued)
                (1) For turbines using water or steam to fuel ratio monitoring (40 CFR 60.334(j)(1)(i)) (continued):
                    (D) Each report shall include the average steam or water to fuel ratio, average fuel consumption, ambient conditions (temperature, pressure, and humidity), gas turbine load, and (if applicable) the nitrogen content of the fuel during each excess emission. The Permittee does not have to report ambient conditions if opting to use the worst case ISO correction factor as specified in 40 CFR Part 60.334(b)(3)(ii), or are not using the ISO correction equation under the provisions of 40 CFR Part 60.335(b)(1).
                        (40 CFR 60.334(j)(1)(i)(C))
                (ii) If the Permittee elects to take an emission allowance for fuel bound nitrogen, then excess emissions and periods of monitor downtime are as described in 40 CFR 60.344(j)(1)(ii)(A) and (B). (40 CFR 60.334(j)(1)(ii))
                        (A) An excess emission shall be the period of time during which the fuel-bound nitrogen (N) is greater than the value measured during the performance test required in 40 CFR Part 60.8 and used to determine the allowance. The excess emission begins on the date and hour of the sample which shows that N is greater than the performance test value, and ends with the date and hour of a subsequent sample which shows a fuel nitrogen content less than or equal to the performance test value. (40 CFR 60.334(j)(1)(ii)(A))
                        (B) A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour that a required sample is taken, if invalid results are obtained. The period of monitor downtime ends on the date and hour of the next valid sample. (40 CFR 60.334(j)(1)(ii)(B))
                (III) For turbines using NOx and diluent CEMS (40 CFR 60.334(j)(1)(iii)):
                        (A) An hour of excess emissions shall be any unit operating hour in which the 4-hour rolling average NOx concentration exceeds the applicable emission limit in 40 CFR Part 60.332(a)(1) or (2). For the purposes of 40 CFR Subpart GG, a “4-hour rolling average NOx concentration” is the arithmetic average of the average NOx concentration measured by the CEMS for a given hour (corrected to 15 percent O2 and, if required under 40 CFR 60.335(b)(1), to ISO standard conditions) and the three unit operating hour average NOx concentrations immediately preceding that unit operating hour. (40 CFR 60.334(j)(1)(iii)(A))
                        (B) A period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour, for either NOx concentration or diluent (or both). (40 CFR 60.334(j)(1)(iii)(B))
Section IV. Specific Operating Conditions (continued)

F. Emission Units S2.009 and S2.009.1 (continued)

7. Federal Requirements (continued)
      (3) Monitoring of Operations (40 CFR 60.334) (continued)
         (f) If the Permittee elects to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content or fuel nitrogen content under this subpart, the Permittee shall submit reports of excess emissions and monitor downtime, in accordance with 40 CFR Part 60.7(c). Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction. For the purpose of reports required under 40 CFR Part 60.7(c), periods of excess emissions and monitor downtime that shall be reported are defined as follows (40 CFR 60.334(j)) (continued):
            (i) Nitrogen Oxides. (40 CFR 60.334(j)(1)) (continued)
               (III) For turbines using NOX and diluent CEMS (40 CFR 60.334(j)(1)(iii)) (continued):
                  (C) Each report shall include the ambient conditions (temperature, pressure, and humidity) at the time of the excess emission period and (if the owner or operator has claimed an emission allowance for fuel bound nitrogen) the nitrogen content of the fuel during the period of excess emissions. The Permittee does not have to report ambient conditions if you opt to use the worst case ISO correction factor as specified in 40 CFR Part 60.334(b)(3)(ii), or if the Permittee is not using the ISO correction equation under the provisions of 40 CFR 60.335(b)(1). (40 CFR 60.334(j)(1)(iii)(C))
               (IV) For permittees that elect, under 40 CFR Part 60.344(f), to monitor combustion parameters or parameters that document proper operation of the NOX emission controls (40 CFR 60.334(j)(1)(iv)):
                  (A) An excess emission shall be a 4-hour rolling unit operating hour average in which any monitored parameter does not achieve the target value or is outside the acceptable range defined in the parameter monitoring plan for the unit. (40 CFR 60.334(j)(1)(iv)(A))
                  (B) A period of monitor downtime shall be a unit operating hour in which any of the required parametric data are either not recorded or are invalid. (40 CFR 60.334(j)(1)(iv)(B))
            (ii) Sulfur Dioxide. If the Permittee is required to monitor the sulfur content of the fuel under 40 CFR Part 60.344(h) (40 CFR 60.334(j)(2)):
               (I) For samples of gaseous fuel and for oil samples obtained using daily sampling, flow proportional sampling, or sampling from the unit's storage tank, an excess emission occurs each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 weight percent and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit. (40 CFR 60.334(j)(2)(i))
               (II) If the option to sample each delivery of fuel oil has been selected, the Permittee shall immediately switch to one of the other oil sampling options (i.e., daily sampling, flow proportional sampling, or sampling from the unit's storage tank) if the sulfur content of a delivery exceeds 0.8 weight percent. The Permittee shall continue to use one of the other sampling options until all of the oil from the delivery has been combusted, and shall evaluate excess emissions according to 40 CFR Part 60.344(j)(2)(i). When all of the fuel from the delivery has been burned, the permittee may resume using the as-delivered sampling option. (40 CFR 60.334(j)(2)(ii))
Section IV. Specific Operating Conditions (continued)

F. Emission Units S2.009 and S2.009.1 (continued)

7. Federal Requirements (continued)


(3) Monitoring of Operations (40 CFR 60.334) (continued)

(f) If the Permittee elects to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content or fuel nitrogen content under this subpart, the Permittee shall submit reports of excess emissions and monitor downtime, in accordance with 40 CFR Part 60.7(c). Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction. For the purpose of reporting required under 40 CFR Part 60.7(c), periods of excess emissions and monitor downtime that shall be reported are defined as follows (40 CFR 60.334(j)) (continued):

(ii) Sulfur Dioxide. If the Permittee is required to monitor the sulfur content of the fuel under 40 CFR Part 60.344(h) (40 CFR 60.334(j)(2)) (continued):

(1) A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime shall include only unit operating hours, and ends on the date and hour of the next valid sample. (40 CFR 60.334(j)(2)(iii))

(iii) Ice Fog. Each period during which an exemption provided in 40 CFR Part 60.333(c) is in effect shall be reported in writing to the Administrator quarterly. For each period the ambient conditions existing during the period, the date and time the air pollution control system was deactivated, and the date and time the air pollution control system was reactivated shall be reported. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter. (40 CFR 60.334(j)(3))

(iv) Emergency Fuel. Each period during which an exemption provided in 40 CFR Part 60.332(k) is in effect shall be included in the report required in 40 CFR Part 60.7(c). For each period, the type, reasons, and duration of the firing of the emergency fuel shall be reported. (40 CFR 60.334(j)(4))

(v) All reports required under 40 CFR Part 60.7(c) shall be postmarked by the 30th day following the end of each 6-month period.

(4) Test Methods and Procedures (40 CFR 60.335)

The Permittee shall follow the test methods and procedures under 40 CFR Part 60.335. (40 CFR 60.335)


(1) Standards for Nitrogen Oxides (NOx) (40 CFR 60.44b)

(a) Except as provided under 40 CFR Parts 60.44b(k) and 60.44b(l), the Permittee shall not cause to be discharged into the atmosphere from that affected facility any gases that contain NOx (expressed as NO2) in excess of the following emission limits 0.20 pounds per MMBtu based on a 30-day rolling average. (40 CFR 60.44b(a)(4))

(b) The NOx standards under 40 CFR Part 60.44b(a)(4) shall apply at all times including periods of startup, shutdown, or malfunction. (40 CFR 60.44b(h))

(c) Except as provided under 40 CFR Part 60.44b(j), compliance with the emission limits under 40 CFR Part 60 Subpart Db is determined on a 30-day rolling average basis. (40 CFR Part 60.44b(j))
Section IV. Specific Operating Conditions (continued)

F. Emission Units S2.009 and S2.009.1 (continued)

7. Federal Requirements (continued)

   (2) Compliance and Performance Test Methods and Procedures for Nitrogen Oxides (40 CFR 60.46b)
      (a) Compliance with the NOx emission standards under 40 CFR Part 60.44b shall be determined through performance testing under 40 CFR Parts 60.46b(e) or (f), or 40 CFR Parts 60.46b(g) and (h), as applicable. (40 CFR 60.46(e))
      (b) To determine compliance with the emission limits for NOx required under 40 CFR part 60.44b, the Permittee shall conduct the performance test as required under 40 CFR Part 60.8 using the continuous system for monitoring NOx under 40 CFR Part 60.48(b). (40 CFR 60.46(e))
         (i) Following the date on which the initial performance test is completed or is required to be completed under 40 CFR Part 60.8, whichever date comes first, the Permittee shall determine compliance with the NOx standards under 40 CFR Part 60.44b on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly NOx emission data for the preceding 30 steam generating unit operating days. (40 CFR 60.46(e)(3))
      (c) To determine compliance with the emissions limits for NOx required by 40 CFR Part 60.44b(a)(4) or 40 CFR Part 60.44b(l) for duct burners used in combined cycle systems, either of the procedures described in 40 CFR Parts 60.46(f)(1) or (2) may be used (40 CFR 60.46(f));
         (i) The Permittee shall conduct the performance test required under 40 CFR Part 60.8 as follows (40 CFR 60.46(f)(1)(i)):
            (A) The emission rate (E) of NOx shall be computed using the equation below (40 CFR 60.46(f)(1)(i)):

                  \[ E = E_{\text{ng}} + \left( \frac{H_T}{H_E} \right) (E_{\text{ng}} - E_g) \]

            Where:
            
            \[ E = \text{Emissions rate of NOx from the duct burner, ng/J (lb/MMBtu) heat input;} \]
            
            \[ E_{\text{ng}} = \text{Combined effluent emissions rate, in ng/J (lb/MMBtu) heat input using appropriate F factor as described in Method 19 of 40 CFR Part 60 Appendix A;} \]
            
            \[ H_T = \text{Heat input rate to the combustion turbine, in J/hr (MMBtu/hr);} \]
            
            \[ H_E = \text{Heat input rate to the duct burner, in J/hr (MMBtu/hr);} \text{ and} \]
            
            \[ E_g = \text{Emissions rate from the combustion turbine, in ng/J (lb/MMBtu) heat input calculated using appropriate F factor as described in Method 19 of 40 CFR Part 60 Appendix A.} \]

            (B) Method 7E of 40 CFR Part 60 Appendix A or Method 320 of 40 CFR Part 63 Appendix A shall be used to determine the NOx concentrations. Method 3A or 3B of 40 CFR Part 60 Appendix A shall be used to determine O2 concentration. (40 CFR 60.46(f)(1)(ii))
            
            (C) The Permittee shall identify and demonstrate to the Administrator's satisfaction suitable methods to determine the average hourly heat input rate to the combustion turbine and the average hourly heat input rate to the affected duct burner. (40 CFR 60.46(f)(1)(iii))
Section IV. Specific Operating Conditions (continued)

F. Emission Units S2.009 and S2.009.1 (continued)

7. Federal Requirements (continued)


(2) Compliance and Performance Test Methods and Procedures for Nitrogen Oxides (40 CFR 60.46b) (continued)

(c) To determine compliance with the emissions limits for NOX required by 40 CFR Part 60.44b(a)(4) or 40 CFR Part 60.44b(l) for duct burners used in combined cycle systems, either of the procedures described in 40 CFR Parts 60.46(f)(1) or (2) may be used (40 CFR 60.46(f)(1) (continued):

(i) The Permittee shall conduct the performance test required under 40 CFR Part 60.8 as follows (40 CFR 60.46(f)(1)(iv)) (continued):

(D) Compliance with the emissions limits under 40 CFR Parts 60.44b(a)(4) or 60.44b(l) is determined by the three-run average (nominal 1-hour runs) for the initial and subsequent performance tests; or (40 CFR 60.46(f)(1)(iv))

(ii) The Permittee may elect to determine compliance on a 30-day rolling average basis by using the CEMS specified under 40 CFR Part 60.48b for measuring NOX and O2 and meet the requirements of 40 CFR Part 60.48b. The sampling site shall be located at the outlet from the steam generating unit. The NOX emissions rate at the outlet from the steam generating unit shall constitute the NOX emissions rate from the duct burner of the combined cycle system. (40 CFR 60.46(f)(2))

(3) Reporting and Recordkeeping Requirements (40 CFR 60.49b)

(a) The Permittee shall submit to the Administrator the performance test data from the initial performance test and the performance evaluation of the CEMS using the applicable performance specifications in 40 CFR Part 60 Appendix B. The Permittee shall submit to the Administrator the maximum heat input capacity data from the demonstration of the maximum heat input capacity. (40 CFR 60.49b(b))

(b) Except as provided in 40 CFR Part 60.49b(d)(2), the Permittee shall record and maintain records as specified in 40 CFR Part 60.49b(d)(1). (40 CFR 60.49b(d))

(i) The Permittee shall record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for natural gas for the reporting period. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month. (40 CFR 60.49b(d)(1))

(c) Except as provided under 40 CFR Part 60.49b(p), the Permittee shall maintain records of the following information for each steam generating unit operating day (40 CFR 60.49b(g)(1) through (10)):

(i) Calendar date;

(ii) The average hourly NOX emission rates (expressed as NO2) (ng/J or lb/MMBtu heat input) measured or predicted;

(iii) The 30-day average NOX emission rates (ng/J or lb/MMBtu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days;

(iv) Identification of the steam generating unit operating days when the calculated 30-day average NOX emission rates are in excess of the NOX emissions standards under § 60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken;

(v) Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken;

(vi) Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data;

(vii) Identification of “F” factor used for calculations, method of determination, and type of fuel combusted;

(viii) Identification of the times when the pollutant concentration exceeded full span of the CEMS;
Section IV. Specific Operating Conditions (continued)

F. Emission Units S2.009 and S2.009.1 (continued)

7. Federal Requirements (continued)
      (3) Reporting and Recordkeeping Requirements (40 CFR 60.69b) (continued)
         (c) Except as provided under 40 CFR Part 60.49b(p), the Permittee shall maintain records of the following information for each steam generating unit operating day (40 CFR 60.49b(g)(1) through (10)) (continued):
            (ix) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3; and
            (x) Results of daily CEMS drift tests and quarterly accuracy assessments as required under 40 CFR Part 60 Appendix F, Procedure 1.
         (d) All records required under this 40 CFR Part 60.49b shall be maintained by the Permittee for a period of 2 years following the date of such record. (40 CFR 60.49b(o))
         (e) The reporting period for the reports required under 40 CFR Part 60 Subpart Db is each 6 month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period. (40 CFR 60.49b(w))
   c. Continuous Emissions Monitoring System (CEMS) – 40 CFR Parts 60 and 75
      The Permittee, upon issuance of this operating permit, shall comply with the CEMS requirements set forth in Section V of this operating permit.
Section IV. Specific Operating Conditions (continued)

L. Emission Units S2.064 and S2.065

<table>
<thead>
<tr>
<th>System 32 – Combined Cycle Combustion Turbine Circuit No. 8 – Pipeline Quality Natural Gas – 254 MW Nominal Output</th>
<th>Location UTM (Zone 11, NAD 83)</th>
</tr>
</thead>
<tbody>
<tr>
<td>S2.064 Combined Cycle Combustion Turbine #8 (Manufactured by General Electric; Serial CT8-298613; Date 2007; Maximum Heat Input Rate 1,862.0 MMBtu/hr)</td>
<td>m North</td>
</tr>
<tr>
<td>S2.065 Duct Burner #8 (Manufactured by Nooter; Serial DB-22896A; Date 2007; Maximum Heat Input Rate 660.0 MMBtu/hr) &amp; Heat Recovery Steam Generator #8 (Manufactured by General Electric; Serial HRSG8-CP28-08-01; Date 2007)</td>
<td>4,382,139</td>
</tr>
</tbody>
</table>

1. Air Pollution Control Equipment (NAC 445B.3405)
   a. NOx emissions from S2.064 and S2.065 shall be controlled by a Selective Catalytic Reduction (SCR). The SCR shall utilize Ammonia Injection into the SCR at a volume specified by the manufacturer.
   b. CO and VOC emissions from S2.064 and S2.065 shall be controlled by an Oxidation Catalyst for control.
   c. Emissions from S2.064 and S2.065 are discharged through the same exhaust stack.
   d. Descriptive Stack Parameters:
      - Stack Height: 150.0 feet
      - Stack Diameter: 18.0 feet
      - Stack Temperature: 113 °F
      - Exhaust Flow: 960,000 dry standard cubic feet per minute (dscfm)

2. Operating Parameters (NAC 445B.3405)
   a. S2.064 and S2.065 may consume only Pipeline Quality Natural Gas.
   b. The maximum allowable heat input rate for S2.064 and S2.065, combined, shall not exceed 2,522.0 million Btu (MMBtu) per any one-hour period.
   c. The maximum allowable fuel consumption rate for S2.064 and S2.065, combined, shall not exceed 2,475,000.0 standard cubic feet (scf) per any one-hour period.
   d. Hours (†) S2.064 and S2.065, each, may operate a total of 24 hours per day.

3. Emission Limits (NAC 445B.305, NAC 445B.3405)
   The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from the exhaust stack of S2.064 and S2.065 the following pollutants in excess of the following specified limits:
   a. The discharge of PM (particulate matter) to the atmosphere shall not exceed 25.0 pounds per hour, nor more than 109.5 tons per 12-month rolling period.
   b. The discharge of PM10 (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed 25.0 pounds per hour, nor more than 109.5 tons per 12-month rolling period.
   c. BACT Emission Limit – The discharge of PM10 to the atmosphere shall not exceed 0.011 pounds per million Btu (MMBtu); filterable and condensable, based on a 3-hour rolling period.
   d. The discharge of PM25 (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed 25.0 pounds per hour, nor more than 109.5 tons per 12-month rolling period.
   e. The discharge of SO2 (sulfur dioxide) to the atmosphere shall not exceed 2.0 pound per hour, nor more than 8.76 tons per 12-month rolling period.
   f. The discharge of NOx (oxides of nitrogen) to the atmosphere shall not exceed 20.0 pounds per hour (based on a 3-hour rolling period), nor more than 87.6 tons per 12-month rolling period.
   g. BACT Emission Limit – The discharge of NOx to the atmosphere shall not exceed 2.0 parts per million by volume (ppmv) at 15 percent oxygen on a dry basis, based on a 3-hour rolling period.
   h. The discharge of CO (carbon monoxide) to the atmosphere shall not exceed 12.0 pounds per hour, nor more than 52.6 tons per 12-month rolling period.
   i. BACT Emission Limit – The discharge of CO to the atmosphere shall not exceed 3.5 ppmv at 15 percent oxygen on a dry basis, based on a 3-hour rolling period.
Section IV. Specific Operating Conditions (continued)

L. Emission Units S2.064 and S2.065 (continued)

3. Emission Limits (NAC 445B:3405) (continued)
   The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from the exhaust stack of S2.064 and S2.065, the following pollutants in excess of the following specified limits:
   j. The discharge of VOCs (volatile organic compounds) to the atmosphere shall not exceed 7.5 pounds per hour, nor more than 32.9 tons per 12-month rolling period;
   k. BACT Emission Limit – The discharge of VOCs to the atmosphere shall not exceed 4.0 ppmv at 15 percent oxygen on a dry basis; based on a 3-hour rolling period;
   l. BACT Emission Limit – The discharge of Sulfuric Acid Mist to the atmosphere shall not exceed 1.00 pounds per hour, nor more than 4.40 tons per 12-month rolling period.
   m. NAC 445B:22017 – The opacity from the exhaust stack of S2.064 and S2.065, combined, shall not equal or exceed 20 percent.
   n. NAC 445B:22003 – The maximum allowable discharge of PM10 to the atmosphere from the exhaust S2.064 and S2.065, combined, shall not exceed 0.17 pounds per MMBtu.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B:3405)
   The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record.
   a. Monitor and record the hours of operation for S2.064 and S2.065 on a daily basis.
   b. Calibrate, operate, and maintain a fuel-flow meter to continuously measure the volume of Pipeline Quality Natural Gas consumed in S2.064 and S2.065 (in standard cubic feet or hundreds of standard cubic feet). The fuel-flow meter shall be installed at an appropriate location in the fuel-distribution system to accurately and continuously measure the fuel consumed in S2.064 and S2.065 in accordance with the requirements prescribed in 40 CFR Part 75.
   c. Calibrate, operate, and maintain a Continuous Data Collection System (CDCS) to continuously record the quantity (in standard cubic feet or hundreds of standard cubic feet) of Pipeline Quality Natural Gas as measured by the fuel flow meter required under L.5.b. of this section. The CDCS will be installed, calibrated, operated, and maintained in accordance with the manufacturer’s specifications and requirements prescribed in 40 CFR Part 75.
   d. Missing GCV or fuel-flow data may be substituted as prescribed in 40 CFR Part 75, Appendix D.
   e. Monitor and record the heat content of the Pipeline Quality Natural Gas combusted (in Btu per standard-cubic foot).
   f. The hourly heat input of the Pipeline Quality Natural Gas (in MMBtu/hr) combusted will be calculated from the hourly fuel usage recorded in L.5.e. of this section.

Sample Calculation:

\[(\text{scf-Natural Gas/hr})(\text{Btu/scf}) = \text{Btu/hr or MMBtu/hr}\]

\[(\text{scf/hr})(\text{lvs pollutant/scf}) = \text{lvs pollutant/hr}\]

or

\[(\text{MMBtu/hr})(\text{lvs pollutant/MMBtu}) = \text{lvs pollutant/hr}\]
Section IV. Specific Operating Conditions (continued)

L. Emission Units $2.064$ and $2.065$ (continued)

4. Monitoring, Recordkeeping, and Reporting (NAC 445B:3405) (continued)

The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar-date of the record. All specified records shall be entered into the log at the end of the shift, end of the day of operation, or at the end of the final day of operation for the month, as appropriate.

The hourly emission rate of PM, PM$_{10}$, PM$_{2.5}$, VOC, and Sulfuric Acid Mist, each in pounds per MMBtu (lbs/MMBtu) will be calculated from the heat content of the fuel determined in L.5.e. of this section, and the emission factor derived in L.6.m. of this section.

Sample Calculation:

\[
\text{(scf/Btu)/(lb pollutant/scf)} = \text{lbs pollutant/Btu or lbs pollutant/MMBtu}
\]

Calculate annually the SO$_2$ emissions in tons based on quantity of Pipeline Quality Natural Gas determined in L.5.e. of this section and sulfur in units of grains per dry standard cubic feet of Pipeline Quality Natural Gas from the SO$_2$ emission factor for Pipeline Quality Natural Gas combusted from 40 CFR Part 75 Appendix D.


The Permittee, upon issuance of this operating permit, shall conduct and record renewal performance testing at least 90 days prior to the expiration of this operating permit, but no earlier than 365 days from the date of expiration of this operating permit, and every 5 years thereafter, in accordance with the following:

a. All opacity-compliance demonstrations and performance tests must comply with the advance notification, protocol review, operational conditions, reporting, and other requirements of Section I.A, Testing and Sampling (NAC 445B:252), of this operating permit. Material sampling must be conducted in accordance with protocols approved by the Director. All performance test results shall be based on the arithmetic average of three valid runs. (NAC 445B:252(5))

b. Testing shall be conducted on the exhaust stack of $2.064$ and $2.065$.

c. Method 5 in Appendix A of 40 CFR Part 60 shall be used to determine PM emissions. The sample volume for each test run shall be at least 1.7 dscm (60 dscf). Test runs must be conducted for up to two hours in an effort to collect this minimum sample.

d. Method 201A and Method 202 in Appendix M of 40 CFR Part 51 shall be used to determine PM$_{10}$ and PM$_{2.5}$ emissions. The sample time and sample volume collected for each test run shall be sufficient to collect enough mass to weigh accurately.

e. The Method 201A and 202 test required in this section may be replaced by a Method 5 in Appendix A of 40 CFR Part 60 and Method 202 in Appendix M of 40 CFR Part 51 test. All particulate captured in the Method 5 and Method 202 test performed under this provision shall be considered PM$_{2.5}$ for determination of compliance.

f. Method 7C in Appendix A of 40 CFR Part 60 shall be used to determine the nitrogen oxides concentration. Each test will be run for a minimum of one hour.

g. Method 8 in Appendix A of 40 CFR Part 60 shall be used to determine the Sulfuric Acid Mist concentration. The Method 8 test required in this section may be replaced by a combination of Conditional Test Method (CTM)-013, CTM-013A, and CTM-013B tests. Each test will be run for a minimum of one hour.

h. Method 9 in Appendix A of 40 CFR Part 60 shall be used to determine opacity. Opacity observations shall be conducted concurrently with the applicable performance test. The minimum-total time of observations shall be six minutes (24 consecutive observations recorded at 15 second intervals), unless otherwise specified by an applicable subpart.

i. Method 10 in Appendix A of 40 CFR Part 60 shall be used to determine the carbon monoxide concentration. Each test will be run for a minimum of one hour.
Section IV. Specific Operating Conditions (continued)

L. Emission Units S2.064 and S2.065 (continued)


The Permittee, upon issuance of this operating permit, shall conduct and record renewal performance testing at least 90 days prior to the expiration of this operating permit, but no earlier than 365 days from the date of expiration of this operating permit, and every 5 years thereafter, in accordance with the following:

j. Method 25A in Appendix A of 40 CFR Part 60 shall be used to determine the volatile organic compound concentration.

Method 18 in Appendix A of 40 CFR Part 60 or Method 320 in Appendix A of CFR Part 63 may be used in conjunction with Method 25A to break out the organic compounds that are not considered VOC’s by definition per 40 CFR 51.100(e). Each Method 25A test will be run for a minimum of one hour.

k. The performance tests required in L.5.c. through L.5.j. of this section shall be conducted at the best achievable heat input rate at normal operating conditions, unless otherwise approved pursuant to NAC 445B:252.

l. The Permittee shall record the quantity of Pipeline Quality Natural Gas combusted (in standard cubic feet or hundreds of standard cubic feet) for each test run and the heat content (in Btu/scf) for each performance test event.

m. Using the most recent performance tests, as specified above, the Permittee shall calculate the following emission factors, based on the average of 3 test runs:

(1) Pounds of PM per scf (lbs-PM/scf) of Pipeline Quality Natural Gas, or pounds of PM per MMBtu (lbs-PM/MMBtu) of Pipeline Quality Natural Gas.

(2) Pounds of PM10 per scf (lbs-PM10/scf) of Pipeline Quality Natural Gas, or pounds of PM10 per MMBtu (lbs-PM10/MMBtu) of Pipeline Quality Natural Gas.

(3) Pounds of PM2.5 per scf (lbs-PM2.5/scf) of Pipeline Quality Natural Gas, or pounds of PM2.5 per MMBtu (lbs-PM2.5/MMBtu) of Pipeline Quality Natural Gas.

(4) Pounds of NOx per scf (lbs-NOx/scf) of Pipeline Quality Natural Gas, or pounds of NOx per MMBtu (lbs-NOx/MMBtu) of Pipeline Quality Natural Gas.

(5) Pounds of CO per scf (lbs-CO/scf) of Pipeline Quality Natural Gas, or pounds of CO per MMBtu (lbs-CO/MMBtu) of Pipeline Quality Natural Gas.

(6) Pounds of VOC per scf (lbs-VOC/scf) of Pipeline Quality Natural Gas, or pounds of VOC per MMBtu (lbs-VOC/MMBtu) of Pipeline Quality Natural Gas.

6. Federal Requirements


(1) Emission Limits for Nitrogen Oxides (40 CFR 60.4320, Table 1)

For a new, modified, or reconstructed turbine firing natural gas with a heat input at peak load greater than 850 MMBtu per hour, the Permittee shall meet the NOx emission standard of 15 parts per million (ppm) at 15 percent O2 (101.8 lb/hr) or 52 nanograms per Joule (ng/J) of useful output (0.43 pounds per megawatt-hour (lb/MWh)), (40 CFR 60.4320(a) and (b))

(2) Emission Limits for Sulfur Dioxide (40 CFR 60.4330)

The Permittee shall comply with one of the following (40 CFR 60.4430(a)):

(a) Not cause to be discharged into the atmosphere from the subject stationary-combustion turbine any gases which contain SO2 in excess of 118 ng/J (0.96 lb/MWh gross output or 228.6 lb/hr) (40 CFR 60.4430(a)(1)); or

(b) For each stationary-combustion turbine burning at least 50 percent biogas on a calendar month basis, as determined based on total heat input, the Permittee must not cause to be discharged into the atmosphere from the affected source any gases that contain SO2 in excess of 65 ng SO2/J (0.15 lb SO2/MMBtu) heat input. (40 CFR 60.4430(a)(3))
Section IV. Specific Operating Conditions (continued)

L. Emission Units $2.064$ and $2.065$ (continued)

6. Federal Requirements (continued)
      (3) General Compliance Requirements (40 CFR 60.4333)
         (a) The Permittee must maintain the stationary combustion turbine, air pollution control equipment, and monitoring equipment in a manner consistent with the good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction. (40 CFR 60.4333(a))

   (4) Monitoring
      (a) Demonstrating Continuous Compliance for NOx if Not Using Water or Steam Injection (40 CFR 60.4340)
         (i) If the Permittee is not using water or steam injection to control NOx emissions, the Permittee must perform annual performance tests in accordance with 40 CFR Part 60.4400 to demonstrate continuous compliance. 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))

         (ii) As an alternative, the Permittee may install, calibrate, maintain, and operate one of the following continuous monitoring systems (40 CFR 60.4340(b)):

            (1) Continuous emission monitoring as described in 40 CFR Parts 60.4335(b) and 60.4345, or (40 CFR 60.4340(b)(1))

   (b) Requirements for the Continuous Emission Monitoring System Equipment if Chosen Option (40 CFR 60.4345)

      If the option to use a NOx CEMS is chosen:

         (i) Each NOx diluent CEMS must be installed and certified according to Performance Specification 2 (PS 2) in Appendix B of 40 CFR Part 60, except the 7-day calibration drift is based on unit operating days, not calendar days. With state approval, Procedure 1 in Appendix F to 40 CFR Part 60 is not required. Alternatively, a NOx diluent CEMS that is installed and certified according to Appendix A of 40 CFR Part 75 is acceptable for use under this subpart. The relative accuracy test audit (RATA) of the CEMS shall be performed on a lb/MMBtu basis. (40 CFR 60.4345(a))

         (ii) As specified in 40 CFR Part 60.13(e)(2), during each full unit operating hour, both the NOx monitor and the diluent monitor must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour, to validate the hour. For partial unit operating hours, at least one valid data point must be obtained with each monitor for each quadrant of the hour in which the unit operates. For unit operating hours in which required quality assurance and maintenance activities are performed on the CEMS, a minimum of two valid data points (one in each of two quadrants) are required for each monitor to validate the NOx emission rate for the hour. (40 CFR 60.4345(b))
Section IV. Specific Operating Conditions (continued)

L. Emission Units S2.064 and S2.065 (continued)

6. Federal Requirements (continued)
      (4) Monitoring (continued)
         b. Requirements for the Continuous Emission Monitoring System Equipment if Chosen Option (40 CFR 40.4345) (continued)
            If the option to use a \text{NO}_x \text{CEMS} is chosen (continued):
            
            (iii) Each fuel flowmeter shall be installed, calibrated, maintained, and operated according to the manufacturer’s instructions. Alternatively, with state approval, fuel flowmeters that meet the installation, certification, and quality assurance requirements of Appendix D to 40 CFR Part 75 are acceptable for use under this subpart. (40 CFR 60.4345(c))
            
            (iv) Each watt meter, steam flow meter, and each pressure or temperature measurement device shall be installed, calibrated, maintained, and operated according to manufacturer’s instructions. (40 CFR 60.4345(d))
            
            (v) The Permittee shall develop and keep on-site a quality assurance (QA) plan for all of the continuous monitoring equipment described in 40 CFR Parts 60.4345(a), (c), and (d). For the CEMS and fuel flow meters, the Permittee may, with state approval, satisfy the requirements of this paragraph by implementing the QA program and plan described in Section 1 of Appendix B to 40 CFR Part 75. (40 CFR 60.4345(e))

   c. Identifying Excess Emissions Using Data from the Continuous Emission Monitoring Equipment (40 CFR 60.4350)
      
      For the purposes of identifying emissions:
      (i) All CEMS data must be reduced to hourly averages as specified in 40 CFR Part 60.13(h). (40 CFR 60.4350(a))
      (ii) For each unit operating hour in which a valid hourly average, as described in 40 CFR Part 60.4345(b), is obtained for both \text{NO}_x and diluent monitors, the data acquisition and handling system must calculate and record the hourly \text{NO}_x emission rate in units of ppm or lb/MMBtu, using the appropriate equation from Method 19 in 40 CFR Part 60 Appendix A. For any hour in which the hourly average \text{O}_2 concentration exceeds 19.0 percent \text{O}_2 (or the hourly average \text{CO}_2 concentration is less than 1.0 percent \text{CO}_2), a diluent cap value of 19.0 percent \text{O}_2 or 1.0 percent \text{CO}_2 (as applicable) may be used in the emission calculations. (40 CFR 60.4350(b))
      (iii) Correction of measured \text{NO}_x concentrations to 15 percent \text{O}_2 is not allowed. (40 CFR 60.4350(c))
      (iv) If the Permittee has installed and certified a \text{NO}_x diluent CEMS to meet the requirements of 40 CFR Part 75, states can approve that only quality assured data from the CEMS shall be used to identify excess emissions under this subpart. Periods where the missing data substitution procedures in 40 CFR Part 75 Subpart D are applied are to be reported as monitor downtime in the excess emissions and monitoring performance report required under 40 CFR Part 60.7(c). (40 CFR 60.4350(d))
      (v) All required fuel flow rate, steam flow rate, temperature, pressure, and megawatt data must be reduced to hourly averages. (40 CFR 60.4350(e))
Section IV. Specific Operating Conditions (continued)

L. Emission Units S2.064 and S2.065 (continued)

6. Federal Requirements (continued)
      (4) Monitoring (continued)
         (c) Identifying Excess Emissions Using Data from the Continuous Emission Monitoring Equipment (40 CFR 60.4350) (continued)
            (vi) Calculate the hourly average NO\textsubscript{x} emission rates, in units of the emission standards under 40 CFR Part 60.4320, using either ppm for units complying with the concentration limit or the following equation for units complying with the output based standard (40 CFR Part 60.4350(f)):

\[
E = (\text{NO}_x)_h \times (\text{HI})_h / P
\]

Where:

- E = hourly NO\textsubscript{x} emission rate, in lb/MWhr,
- \((\text{NO}_x)_h\) = hourly NO\textsubscript{x} emission rate, in lb/MMBtu
- \((\text{HI})_h\) = hourly heat input rate to the unit, in MMBtu/hr, measured using the fuel flowmeter(s)
- P = gross energy output of the combustion turbine in MW

(vii) For simple cycle units without heat recovery, use the calculated hourly average emission rates from 40 CFR Part 60.4350(f) to assess excess emissions on a 4-hour rolling average basis, as described in 40 CFR Part 60.4380(b)(1). (40 CFR Part 60.4350(g))

(viii) For combined cycle and combined heat and power units with heat recovery, use the calculated hourly average emission rates from 40 CFR Part 60.4350(f) to assess excess emissions on a 30 unit operating day rolling average basis, as described in 40 CFR Part 60.4380(b)(1). (40 CFR Part 60.4350(h))

(d) Establishing and Documenting a Proper Parameter Monitoring Plant (40 CFR 60.4355)
   (i) For affected units that are also subject to 40 CFR Part 75 and that have state approval to use the low mass emissions methodology in 40 CFR Part 75.19 or the NO\textsubscript{x} emission measurement methodology in Appendix E to 40 CFR Part 75, the Permittee may meet the requirements of this paragraph by developing and keeping on-site (or at a central location for unmanned facilities) a QA plan, as described in 40 CFR part 75.19(e)(5) or in Section 2.3 of Appendix E to 40 CFR Part 75 and Section 1.3.6 of Appendix B to 40 CFR Part 75. (40 CFR 60.4355(b))
Section IV. Specific Operating Conditions (continued)

L. Emission Units S2.064 and S2.065 (continued)

6. Federal Requirements (continued)


(4) Monitoring (continued)

(c) Determining the Total Sulfur Content of the Turbine’s Combustion Fuel (40 CFR 60.4360)

The Permittee must monitor the total sulfur content of the fuel being fired in the turbine, except as provided in 40 CFR Part 60.4365. The sulfur content of the fuel must be determined using total-sulfur methods described in 40 CFR Part 60.4415. Alternatively, if the total-sulfur content of the gaseous fuel during the most recent performance test was less than half the applicable limit, ASTM D4084, D4810, D5504, or D6228; or Gas Processors Association Standard 2277 (all of which are incorporated by reference, see 40 CFR Part 60.17), which measure the major-sulfur compounds, may be used. (40 CFR 60.4360)

(f) Exemption from Monitoring the Total Sulfur Content of Fuel (40 CFR 60.4365)

The Permittee may elect not to monitor the total-sulfur content of the fuel combusted in the turbine, if the fuel is demonstrated not to exceed potential sulfur emissions of 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input for units located in non-continental areas and 180 ng SO₂/J (0.42 lb SO₂/MMBtu) heat input for units located in non-continental areas or a continual area that the Administrator determines do not have access to natural gas and that the removal of sulfur compounds would cause more environmental harm than benefit. The Permittee must use one of the following sources of information to make the required demonstration (40 CFR 60.4365):

(i) The fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel; specifying that the maximum total-sulfur content for fuel oil use in continental areas is 0.05 weight-percent (500 ppmw) or less and 0.4 weight-percent (4,000 ppmw) or less for non-continental areas; the total-sulfur content for natural gas use in continental areas is 20 grams of sulfur or less per 100 standard cubic feet and 140 grams of sulfur or less per 100 standard cubic feet for non-continental areas; has potential sulfur emissions of less than 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input for continental areas and has potential sulfur emissions of less than 180 ng SO₂/J (0.42 lb SO₂/MMBtu) heat input for non-continental areas (40 CFR 60.4365(a)); or

(ii) Representative fuel sampling data which show that the sulfur content of the fuel does not exceed 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input for continental areas or 180 ng SO₂/J (0.42 lb SO₂/MMBtu) heat input for non-continental areas. At a minimum, the amount of fuel sampling data specified in Section 2.3.1.4 or 2.3.2.4 of 40 CFR Part 75 Appendix D is required. (40 CFR 60.4365(b))

(g) Determining the Sulfur Content of the Fuel (40 CFR 60.4370)

The frequency of determining the sulfur content of the fuel must be as follows:

(i) Fuel Oil. For fuel oil, use one of the total-sulfur sampling options and the associated-sampling frequency described in Sections 2.2.3, 2.2.4.1, 2.2.4.2, and 2.2.4.3 of Appendix D to 40 CFR Part 75 (i.e.: flow proportional-sampling, daily sampling, sampling from the unit’s storage tank after each addition of fuel to the tank, or sampling each delivery prior to combining it with fuel-oil already in the intended storage tank). (40 CFR 60.4370(a))
Section IV. Specific Operating Conditions (continued)

L. Emission Units S2.064 and S2.065 (continued)

6. Federal Requirements (continued)
      (4) Monitoring (continued)
         (g) Determining the Sulfur Content of the Fuel (40 CFR 60.4370) (continued)
            The frequency of determining the sulfur content of the fuel must be as follows (continued):
            (iii) Gaseous Fuel. If the Permittee elects not to demonstrate sulfur content using options in 40 CFR Part 60.4265, and the fuel is supplied without intermediate bulk storage, the sulfur content value of the gaseous fuel must be determined and recorded once per unit operating-day. (40 CFR 60.4270(b))
            (iii) Custom Schedules. Notwithstanding the requirements of 40 CFR Part 60.4370(b), operators or fuel vendors may develop custom schedules for determination of the total sulfur content of gaseous fuels, based on the design and operation of the affected facility and the characteristics of the fuel supply. Except as provided in 40 CFR Parts 60.4370(c)(1) and 60.4370(c)(2), custom schedules shall be substantiated with data and shall be approved by the Administrator before they can be used to comply with the standard in 40 CFR Part 60.4330. (40 CFR 60.4370(c))

(5) Reporting
   (a) Required Reports to be Submitted (40 CFR 60.4375)
      (i) For each affected unit required to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content under this subpart, you must submit reports of excess emissions and monitor downtime, in accordance with 40 CFR Part 60.7(c). Excess emissions must be reported for all periods of unit operation, including start-up, shutdown, and malfunction. (40 CFR 60.4375(a))
      (ii) For each affected unit that performs annual performance tests in accordance with 40 CFR Part 60.4340(a), 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. (40 CFR 60.4375(b))

   (b) Definition of Excess Emissions and Monitor Downtime for NOx (40 CFR 60.4380)
      For the purpose of reports required under 40 CFR Part 60.7(c), periods of excess emissions and monitor downtime that must be reported are defined as follows:
      (i) For turbines using water or steam to fuel ratio monitoring (40 CFR 60.4380(a)):
         (I) An excess emission is any unit operating hour for which the 4-hour rolling average steam or water to fuel ratio, as measured by the continuous monitoring system, falls below the acceptable steam or water to fuel ratio needed to demonstrate compliance with 40 CFR Part 60.4320, as established during the performance test required in 40 CFR Part 60.8. Any unit operating hour in which no water or steam is injected into the turbine when a fuel is being burned that requires water or steam injection for NOx control will also be considered an excess emission. (40 CFR 60.4380(a)(1))
         (II) A period of monitor downtime is any unit operating hour in which water or steam is injected into the turbine, but the essential parametric data needed to determine the steam or water to fuel ratio are unavailable or invalid. (40 CFR 60.4380(a)(2))
         (III) Each report must include the average steam or water to fuel ratio, average fuel consumption, and the combustion turbine load during each excess emission. (40 CFR 60.4380(a)(3))
Section IV. Specific Operating Conditions (continued)

L. Emission Units S2.064 and S2.065 (continued)

6. Federal Requirements (continued)
      (5) Reporting (continued)
         (b) Definition of Excess Emissions and Monitor Downtime for NOx (40 CFR 60.4380)
            For the purpose of reports required under 40 CFR Part 60.7(c), periods of excess emissions and monitor downtime that must be reported are defined as follows (continued):
            (ii) For turbines using continuous emission monitoring, as described in 40 CFR Parts 60.4335(b) and 60.4345 (40 CFR 60.4380(b)):
                (I) An excess emissions is any unit operating period in which the 4-hour or 30-day rolling average NOx emission rate exceeds the applicable emission limit in 40 CFR Part 60.4320. For the purposes of 40 CFR Part 60 Subpart KKKK, a “4-hour rolling average NOx emission rate” is the arithmetic average of the average NOx emission rate in ppm or ng/l (lb/MWh) measured by the continuous emission monitoring equipment for a given hour and the three unit operating hour average NOx emission rates immediately preceding that unit operating hour. Calculate the rolling average if a valid NOx emission rate is obtained for at least 3 of the 4 hours. For the purposes of this subpart, a “30-day rolling average NOx emission rate” is the arithmetic average of all hourly NOx emission data in ppm or ng/l (lb/MWh) measured by the continuous emission monitoring equipment for a given day and the twenty-nine unit operating days immediately preceding that unit operating day. A new 30-day average is calculated each unit operating day as the average of all hourly NOx emission rates for the preceding 30 unit operating days if a valid NOx emission rate is obtained for at least 75 percent of all operating hours. (40 CFR 60.4380(b)(1))

                (II) A period of monitor downtime is any unit operating hour in which the data for any of the following parameters are either missing or invalid: NOx concentration, CO2 or O2 concentration, fuel flow rate, steam flow rate, steam temperature, steam pressure, or megawatts. The steam flow rate, steam temperature, and steam pressure are only required if the Permittee will use this information for compliance purposes. (40 CFR 60.4380(b)(2))

                (III) For operating periods during which multiple emissions standards apply, the applicable standard is the average of the applicable standards during each hour. For hours with multiple emissions standards, the applicable limit for that hour is determined based on the condition that corresponded to the highest emissions standard. (40 CFR 60.4380(b)(3))

   (iii) For turbines required to monitor combustion parameters or parameters that document proper operation of the NOx emission controls (40 CFR 60.4380(c)):
        (I) An excess emission is a 4-hour rolling unit operating hour average in which any monitored parameter does not achieve the target value or is outside the acceptable range defined in the parameter monitoring plan for the unit. (40 CFR 60.4380(c)(1))

        (II) A period of monitor downtime is a unit operating hour in which any of the required parametric data are either not recorded or are invalid. (40 CFR 60.4380(c)(2))
Section IV. Specific Operating Conditions (continued)

L. Emission Units S2.064 and S2.065 (continued)

6. Federal Requirements (continued)
      (5) Reporting (continued)
         (c) Definition of Excess Emissions and Monitor Downtime for SO\(_2\) (40 CFR 60.4385)
           If the Permittee chooses the option to monitor the sulfur content of the fuel, excess emissions and monitoring-downtime are defined as follows:
           (i) For samples of gaseous fuel and for oil samples obtained using daily-sampling, flow proportional sampling, or sampling from the unit's storage tank, an excess emission occurs each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the fuel being fired in the combustion turbine exceeds the applicable limit and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit. (40 CFR 60.4385(a))
           (ii) If the option to sample each delivery of fuel oil has been selected, the Permittee must immediately switch to one of the other oil sampling options (i.e., daily sampling, flow proportional sampling, or sampling from the unit's storage tank) if the sulfur content of a delivery exceeds 0.05 weight percent. The Permittee must continue to use one of the other sampling options until all of the oil from the delivery has been combusted, and the Permittee must evaluate excess emissions according to 40 CFR Part 60.4385(3)(a). When all of the fuel from the delivery has been burned, the Permittee may resume using the as-delivered sampling option. (40 CFR 60.4385(b))
           (iii) A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor-downtime also begins on the date and hour of a required sample, if invalid results are obtained. The period of monitor-downtime ends on the date and hour of the next valid sample. (40 CFR 60.4385(c))
      (d) When to Submit Reports
         All reports required under 40 CFR Part 60.7(c) must be postmarked by the 30th day following the end of each 6-month period. (40 CFR 60.4395)
Section IV. Specific Operating Conditions (continued)

L. Emission Units S2.064 and S2.065 (continued)

6. Federal Requirements (continued)


(b) Performance Tests

(i) Conducting Initial and Subsequent Performance Tests, Regarding NOx (40 CFR 60.4400)

(1) The Permittee must conduct an initial performance test, as required in 40 CFR Part 60.8. Subsequent NOx performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test). (40 CFR 60.4400(a))

(II) Sampling traverse points for NOx and if applicable) diluent gas are to be selected following EPA Method 20 or EPA Method 1 (non-particulate procedures), and sampled for equal time intervals. The sampling must be performed with a traversing single-hole probe, or, if feasible, with a stationary multi-hole probe that samples each of the points sequentially. Alternatively, a multi-hole probe designed and documented to sample volumes from each hole may be used to sample simultaneously at the required points. (40 CFR 60.4400(a)(2))

(III) Notwithstanding 40 CFR Part 60.4400(a)(2), the Permittee may test at fewer points than are specified in EPA Method 1 or EPA Method 20 in 40 CFR Part 60 Appendix A if the following conditions are met (40 CFR 60.4400(a)(3)):

(A) The Permittee may perform a stratification test for NOx and diluent pursuant to the procedures specified in Section 6.5.6.1(a) through 1 of 40 CFR Part 75 Appendix A. (40 CFR 60.4400(a)(3)(i))

(B) Once the stratification sampling is completed, the Permittee may use the alternative sample point selection criteria for the performance test as stated under 40 CFR Part 60.4400(a)(3)(ii)(A) through 60.4400(a)(3)(ii)(C). (40 CFR 60.4400(a)(3)(ii))

(ii) The performance test must be done at any load condition within plus or minus 25 percent of 100 percent of peak load. The Permittee may perform testing at the highest achievable load point, if at least 75 percent of peak load cannot be achieved in practice. The Permittee must conduct three separate test runs for each performance test. The minimum time per run is 20 minutes. (40 CFR 60.4400(b))

(II) If the stationary combustion turbine combusts both oil and gas as primary or backup fuels, separate performance testing is required for each fuel. (40 CFR 60.4400(b)(1))

(III) For a combined cycle and CHP turbine systems with supplemental heat (duct burner), the Permittee must measure the total NOx emissions after the duct burner rather than directly after the turbine. The duct burner must be in operation during the performance test. (40 CFR 60.4400(b)(2))

(III) If water or steam injection is used to control NOx with no additional post-combustion NOx control and you choose to monitor the steam or water to fuel ratio in accordance with 40 CFR Part 60.4335, then that monitoring system must be operated concurrently with each EPA Method 20 or EPA Method 7E run and must be used to determine the fuel consumption and the steam or water to fuel ratio necessary to comply with the applicable 40 CFR Part 60.4320 NOx emission limit. (40 CFR 60.4400(b)(3))

(IV) Compliance with the applicable emission limit in 40 CFR Part 60.4320 must be demonstrated at each tested load level. Compliance is achieved if the three-run arithmetic average NOx emission rate at each tested level meets the applicable emission limit in 40 CFR Part 60.4320. (40 CFR 60.4400(b)(4))
Section IV. Specific Operating Conditions (continued)

L. Emission Units S2.064 and S2.065 (continued)

6. Federal Requirements (continued)
      (6) Performance Tests (continued)
         (a) Conducting Initial and Subsequent Performance Tests, Regarding NOx (40 CFR 60.4400) (continued)
            (i) The performance test must be done at any load condition within plus or minus 25 percent of 100 percent of peak load. The Permittee may perform testing at the highest achievable load point, if at least 75 percent of peak load cannot be achieved in practice. The Permittee must conduct three separate test runs for each performance test. The minimum time per run is 20 minutes. (40 CFR 60.4400(b)) (continued)
            (V) If the Permittee elects to install a CEMS, the performance evaluation of the CEMS may either be conducted separately or (as described in 40 CFR Part 60.4405) as part of the initial performance test of the affected unit. (40 CFR 60.4400(b)(5))
            (VI) The ambient temperature must be greater than 0 °F during the performance test. (40 CFR 60.4400(b)(6))
         (b) Establishing a Valid Parameter Range if Choosing to Continuously Monitor Parameters (40 CFR 60.4410)
            If the Permittee has chosen to monitor combustion parameters or parameters indicative of proper operation of NOx emission controls in accordance to 40 CFR Part 60.4340, the appropriate parameters must be continuously monitored and recorded during each run of the initial performance test, to establish acceptable operating ranges, for purposes of the parameter monitoring plan for the affected unit, as specified in 40 CFR Part 60.4355.
         (c) Conducting the Initial and Subsequent Performance Tests for Sulfur (40 CFR 60.4415)
            (I) The Permittee must conduct an initial performance test, as required in 40 CFR Part 60.8. Subsequent SOx performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test). There are three methodologies that you may use to conduct the performance tests. (40 CFR 60.4415(a))
            (I) If the Permittee chooses to periodically determine the sulfur content of the fuel combusted in the turbine, a representative fuel sample would be collected following ASTM D5287 (incorporated by reference; see 40 CFR Part 60.17) for natural gas or ASTM D4177 (incorporated by reference; see 40 CFR Part 60.17) for oil. Alternatively, for oil, the Permittee may follow the procedures for manual pipeline sampling in section 14 of ASTM D4057 (incorporated by reference; see 40 CFR Part 60.17). The fuel analyses of this section may be performed either by the Permittee, a service contractor retained by the Permittee, the fuel vendor, or any other qualified agency. Analyze the samples for the total sulfur content of the fuel using (40 CFR 60.4415(a)(1)(i)): (A) For liquid fuels, ASTM D129, or alternatively D1266, D1552, D2622, D4294, or D5453 (all of which are incorporated by reference, see 40 CFR Part 60.17) (40 CFR 60.4415(a)(1)(ii)) or
               (B) For gaseous fuels, ASTM D1072, or alternatively D3246, D4084, D4468, D4810, D6228, D6667, or Gas Processors Association Standard 2377 (all of which are incorporated by reference, see 40 CFR Part 60.17). (40 CFR 60.4415(a)(1)(iii))
Section IV. Specific Operating Conditions (continued)

L. Emission Units S2.064 and S2.065 (continued)

6. Federal Requirements (continued)
   (6) Performance Tests (continued)
      (c) Conducting the Initial and Subsequent Performance Tests for Sulfur (40 CFR 60.4415) (continued)
         (i) The Permittee must conduct an initial performance test, as required in 40 CFR Part 60.8. Subsequent SO₂ performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test). There are three methodologies that you may use to conduct the performance tests. (40 CFR 60.4415(a)) (continued)
         (ii) Measure the SO₂ concentration (in parts-per million (ppm)), using EPA Methods 6, 6C, 8, or 20 in Appendix A of 40 CFR Part 60. In addition, the American Society of Mechanical Engineers (ASME) standard, ASME PTC 19-10-1981 Part 10, “Flue and Exhaust Gas Analyses,” manual methods for sulfur dioxide (incorporated by reference, see 40 CFR Part 60.17) can be used instead of EPA Methods 6 or 20. For units complying with the output based standard, concurrently measure the stack gas flow rate, using EPA Methods 1 and 2 in Appendix A of 40 CFR Part 60, and measure and record the electrical and thermal output from the unit. Then use the following equation to calculate the SO₂ emission rate under 40 CFR Part 60.4415(a)(2). (40 CFR 60.4415(a)(2))
         (iii) Measure the SO₂ and diluent gas concentrations, using either EPA Methods 6, 6C, or 8 and 3A, or 20 in Appendix A of 40 CFR Part 60. In addition, the Permittee may use the manual methods for sulfur dioxide ASME PTC 19-10-1981 Part 10 (incorporated by reference, see 40 CFR Part 60.17). Concurrently measure the heat input to the unit, using a fuel flowmeter (or flowmeters), and measure the electrical and thermal output of the unit. Use EPA Method 19 in Appendix A of 40 CFR Part 60 to calculate the SO₂ emission rate in lb/MMBtu. Then, use Equations 1 and, if necessary, 2 and 3 in 40 CFR Part 60.4350(f) to calculate the SO₂ emission rate in lb/MWh. (40 CFR 60.4415(a)(3))

   b. Continuous Emissions Monitoring System (CEMS) – 40 CFR Parts 60 and 75
      The Permittee, upon issuance of this operating permit, shall comply with the CEMS requirements set forth in Section V of this operating permit.
Section IV. Specific Operating Conditions (continued)

M. Emission Units S2.066 and S2.067

| System 33 – Combined Cycle Combustion Turbine Circuit No. 9 – Pipeline Quality Natural Gas – 254 MW Nominal Output | Location UTM (Zone 11, NAD 83) |
|---|---|---|
| S2.066 | Combined Cycle Combustion Turbine #9 (Manufactured by General Electric; Serial CT19-298614; Date 2007; Maximum Heat Input Rate 1,862.0 MMBtu/hr) | m North | m East |
| S2.067 | Duct Burner #9 (Manufactured by Nooter; Serial DB-22896B; Date 2007; Maximum Heat Input Rate 660.0 MMBtu/hr) & Heat Recovery Steam Generator #9 (Manufactured by General Electric; Serial HRSG9-CP28-09-01; Date 2007) | 4,382,090 | 283,144 |

1. Air Pollution Control Equipment (NAC 445B.3405)
   a. NOx emissions from S2.066 and S2.067 shall be controlled by a Selective Catalytic Reduction (SCR). The SCR shall utilize Ammonia Injection into the SCR at a volume specified by the manufacturer.
   b. CO and VOC emissions from S2.066 and S2.067 shall be controlled by an Oxidation Catalyst for control.
   c. Emissions from S2.066 and S2.067 are discharged through the same exhaust stack.
   d. Descriptive Stack Parameters
      Stack Height: 150.0 feet
      Stack Diameter: 18.0 feet
      Stack Temperature: 173 °F
      Exhaust Flow: 960,000 dry standard cubic feet per minute (scfm)

2. Operating Parameters (NAC 445B.3405)
   a. S2.066 and S2.067 may consume only Pipeline Quality Natural Gas.
   b. The maximum allowable heat input rate for S2.066 and S2.067, combined, shall not exceed 2,522.0 million Btu (MMBtu) per any one-hour period.
   c. The maximum allowable fuel consumption rate for S2.066 and S2.067, combined, shall not exceed 2,475,000.0 standard cubic feet (scf) per any one-hour period.
   d. Hours (†) S2.066 and S2.067, each, may operate a total of 24 hours per day.

3. Emission Limits (NAC 445B.305, NAC 445B.3405)
The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from the exhaust stack of S2.066 and S2.067 the following pollutants in excess of the following specified limits:
   a. The discharge of PM (particulate matter) to the atmosphere shall not exceed 25.0 pounds per hour; nor more than 109.5 tons per 12-month rolling period.
   b. The discharge of PM10 (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed 25.0 pounds per hour; nor more than 109.5 tons per 12-month rolling period.
   c. BACT Emission Limit – The discharge of PM10 to the atmosphere shall not exceed 0.011 pounds per million Btu (MMBtu), filterable and condensable, per 3-hour rolling period.
   d. The discharge of PM2.5 (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed 25.0 pounds per hour; nor more than 109.5 tons per 12-month rolling period.
   e. The discharge of SO2 (sulfur dioxide) to the atmosphere shall not exceed 2.0 pound per hour; nor more than 8.76 tons per 12-month rolling period.
   f. The discharge of NOx (oxides of nitrogen) to the atmosphere shall not exceed 28.0 pounds per hour (based on a 3-hour rolling period); nor more than 87.6 tons per 12-month rolling period.
   g. BACT Emission Limit – The discharge of NOx to the atmosphere shall not exceed 2.00 parts per million (ppmv) by volume at 15 percent oxygen and on a dry basis, per 3-hour rolling period.
   h. The discharge of CO (carbon monoxide) to the atmosphere shall not exceed 12.0 pounds per hour; nor more than 52.6 tons per 12-month rolling period.
   i. BACT Emission Limit – The discharge of CO to the atmosphere shall not exceed 350 ppmv by volume at 15 percent oxygen and on a dry basis, per 3-hour rolling period.
Section IV. Specific Operating Conditions (continued)

M. Emission Units S2.066 and S2.067 (continued)

3. Emission Limits (NAC 445B.305, NAC 445B.3405) (continued)
   The Permittee, upon issuance of this operating permit, shall not discharge or cause the discharge into the atmosphere from the exhaust stack of S2.066 and S2.067 the following pollutants in excess of the following specified limits:
   
f. The discharge of VOCs (volatile organic compounds) to the atmosphere shall not exceed 7.5 pounds per hour, nor more than 32.9 tons per 12-month rolling period.

h. BACT Emission Limit - The discharge of VOCs to the atmosphere shall not exceed 4.00 ppmv by volume at 15 percent oxygen and on a dry basis, per 3-hour rolling period.

i. The discharge of Sulfuric Acid Mist to the atmosphere shall not exceed 1.00 pounds per hour, nor more than 4.40 tons per 12-month rolling period.

m. NAC 445B.22017 - The opacity from the exhaust stack of S2.066 and S2.067 shall not exceed 20 percent.

r. NAC 445B.2203 - The maximum allowable discharge of PM to the atmosphere from the exhaust S2.066 and S2.067 shall not exceed 0.17 pounds per MMBtu.

4. Monitoring, Recordkeeping, and Reporting (NAC 445B.3405)
   The Permittee, upon issuance of this operating permit, shall maintain, in a contemporaneous log, the monitoring and recordkeeping specified in this section. All records in the log must be included with the calendar date of the record. All specified records shall be entered into the log at the end of the shift, end of the day of operation, or the end of the final day of operation for the month, as appropriate.

a. Monitor and record the hours of operation for S2.066 and S2.067 on a daily basis.

b. Calibrate, operate, and maintain a fuel-flow meter to continuously measure the volume of Pipeline Quality Natural Gas consumed in S2.066 and S2.067 in standard cubic feet or hundreds of standard cubic feet. The fuel flow meter shall be installed at an appropriate location in the fuel-delivery system to accurately and continuously measure the fuel consumed in S2.066 and S2.067 in accordance with the requirements prescribed in 40 CFR Part 75-

b. Calibrate, operate, and maintain a Continuous Data Collection System (CDCS) to continuously record the quantity (in standard cubic feet or hundreds of standard cubic feet) of Pipeline Quality Natural Gas as measured by the fuel flow meter required under M.5.m. of this section. The CDCS will be installed, calibrated, operated, and maintained in accordance with the manufacturer's specifications and requirements prescribed in 40 CFR Part 75.

d. Missing GCV or fuel flow data may be substituted as prescribed in 49 CFR Part 75, Appendix D.

e. Monitor and record the heat content of the Pipeline Quality Natural Gas combusted (in BTU per standard cubic feet). The heat content of the Pipeline Quality Natural Gas will be based on the supplier's data and specifications.

f. The hourly heat input of the Pipeline Quality Natural Gas (in MMBtu/hr) combusted will be calculated from the hourly-fuel usage recorded in M.5.c. of this section.

Sample Calculation:

\[
\text{(scf-Natural Gas/hr)/(Btu/scf)} = \text{Btu/hr or MMBtu/hr}
\]

\[
\text{(MMBtu/hr)/(lbs pollutant/MMBtu)} = \text{lbs pollutant/hr}
\]

The hourly emission rate of PM, PM \(_{10}\), PM \(_{2.5}\), VOC, and Sulfuric Acid Mist, each, in pounds per hour (lbs/hr) will be calculated from the hourly quantity of Pipeline Quality Natural Gas combusted determined in M.5.c. of this section, and the emission factor derived in M.6.m. of this section.

Sample Calculation:

\[
\text{(scf/hr)/(lbs pollutant/scf)} = \text{lbs pollutant/hr}
\]

or

\[
\text{(MMBtu/hr)/(lbs pollutant/MMBtu)} = \text{lbs pollutant/hr}
\]
Section IV: Specific Operating Conditions

4. Monitoring, Recordkeeping, and Reporting (NAC 445B:3405) (continued)

The Permittee, upon the issuance of this operating permit, shall maintain, in a contemporaneous log—the monitoring and recordkeeping specified in this section. All records in the log must be identified with the calendar date of the record. All specified records shall be entered into the log at the end of the shift, end of the day of operation, or the end of the final day of operation for the month, as appropriate.

h. The hourly emission rates of PM, PM₁₀, PM₂₅, VOC; and Sulfuric Acid Mist, each in pounds per MMBtu (lbs/MMBtu), will be calculated from the heat content of the fuel determined in M.5.c. of this section, and the emission factors derived in M.6.m. of this section.

Sample Calculation:

\[(\text{scf}/\text{Btu})(\text{lbs pollutant/scf}) = \text{lbs pollutant/Btu or lbs pollutant/MMBtu}\]

i. Calculate annually the SO₂ emissions in tons based on the quantity of Pipeline Quality Natural Gas determined in M.5.e. of this section and sulfur in units of grains per dry standard cubic feet of Pipeline Quality Natural Gas from the SO₂ emission factor for Pipeline Quality Natural Gas combusted from 40 CFR Part 75 Appendix D.


The Permittee, upon issuance of this operating permit, shall conduct and record renewal performance testing at least 90 days prior to the expiration of this operating permit, but no earlier than 365 days from the date of expiration of this operating permit, and every 5 years thereafter, in accordance with the following:

a. All opacity compliance demonstrations and performance tests must comply with the advance notification, protocol review, operational conditions, reporting, and other requirements of Section I.H., Testing and Sampling (NAC 445B.252), of this operating permit. Material sampling must be conducted in accordance with protocols approved by the Director. All performance test results shall be based on the arithmetic average of three valid runs (NAC 445B.252(3)).

b. Testing shall be conducted on the exhaust stack of S2.066 and S2.067.

c. Method 5 in Appendix A of 40 CFR Part 60 shall be used to determine PM emissions. The sample volume for each test run shall be at least 1.7 dsm (60 dscf). Test runs must be conducted for up to two hours in an effort to collect this minimum sample.

d. Method 201A and Method 202 in Appendix M of 40 CFR Part 51 shall be used to determine PM₁₀ and PM₂₅ emissions. The sample time and sample volume collected for each test run shall be sufficient to collect enough mass to weigh accurately.

e. The Method 201A and 202 test required in this section may be replaced by a Method 5 in Appendix A of 40 CFR Part 60 and Method 202 in Appendix M of 40 CFR Part 51 test. All particulate captured in the Method 5 and Method 202 test performed under this provision shall be considered PM₂₅ for determination of compliance.

f. Method 7E in Appendix A of 40 CFR Part 60 shall be used to determine the nitrogen oxides concentration. Each test will be run for a minimum of one hour.

g. Method 8 in Appendix A of 40 CFR Part 60 shall be used to determine the Sulfuric Acid Mist concentration. The Method 8 test required in this section may be replaced by a combination of Conditional Test Method (CTM)-013, CTM-013A, and CTM-11B tests. Each test will be run for a minimum of one hour.

h. Method 9 in Appendix A of 40 CFR Part 60 shall be used to determine opacity. Opacity observations shall be conducted concurrently with the applicable performance test. The minimum total time of observations shall be six minutes (24 consecutive observations recorded at 15 second intervals), unless otherwise specified by an applicable subpart.

i. Method 10 in Appendix A of 40 CFR Part 60 shall be used to determine the carbon monoxide concentration. Each test will be run for a minimum of one hour.
Section IV. Specific Operating Conditions (continued)

M. Emission Units S2.066 and S2.067 (continued)

   The Permittee, upon issuance of this operating permit, shall conduct and record renewal performance testing at least 90 days prior to the expiration of this operating permit, but no earlier than 365 days from the date of expiration of this operating permit, and every 5 years thereafter, in accordance with the following:

   ❍ Method 25A in Appendix A of 40 CFR Part 60 shall be used to determine the volatile organic compound concentration.
   Method 18 in Appendix A of 40 CFR Part 60 or Method 320 in Appendix A of CFR Part 63 may be used in conjunction with Method 25A to break out the organic compounds that are not considered VOC's by definition per 40 CFR 51.100(c). Each Method 25A test will be run for a minimum of one hour.

   k. The performance tests required in M.5.c. through M.5.j. of this section shall be conducted at the best achievable heat input rate at normal operating conditions, unless otherwise approved pursuant to NAC 445B.252.

   l. The Permittee shall record the quantity of Pipeline Quality Natural Gas combusted (in standard cubic feet or hundreds of standard cubic feet) for each test run and the heat content (in Btu/scf) for each performance test event.

   m. Using the most recent performance tests, as specified above, the Permittee shall calculate the following emission factors, based on the average of 3 test runs:

   (1) Pounds of PM per scf (lbs-PM/scf) of Pipeline Quality Natural Gas, or pounds of PM per MMBtu (lbs-PM/MMBtu) of Pipeline Quality Natural Gas.

   (2) Pounds of PM per scf (lbs-PM/scf) of Pipeline Quality Natural Gas, or pounds of PM per MMBtu (lbs-PM/MMBtu) of Pipeline Quality Natural Gas.

   (3) Pounds of PM per scf (lbs-PM/scf) of Pipeline Quality Natural Gas, or pounds of PM per MMBtu (lbs-PM/MMBtu) of Pipeline Quality Natural Gas.

   (4) Pounds of NOX per scf (lbs-NOx/scf) of Pipeline Quality Natural Gas, or pounds of NOX per MMBtu (lbs-NOx/MMBtu) of Pipeline Quality Natural Gas.

   (5) Pounds of CO per scf (lbs-CO/scf) of Pipeline Quality Natural Gas, or pounds of CO per MMBtu (lbs-CO/MMBtu) of Pipeline Quality Natural Gas.

   (6) Pounds of VOC per scf (lbs-VOC/scf) of Pipeline Quality Natural Gas, or pounds of VOC per MMBtu (lbs-VOC/MMBtu) of Pipeline Quality Natural Gas.

6. Federal Requirements


   (1) Emission Limits for Nitrogen Oxides (40 CFR 60.4320, Table 1)
   For a new, modified, or reconstructed turbine firing natural gas with a heat input at peak load greater than 850 MMBtu per hour, the Permittee shall meet the NOX emission standard of 15 parts per million (ppm) at 15 percent O2 (101.8 lb/hr) or 52 nanograms per Joule (ng/J) of useful output (0.43 pounds per megawatt-hour (lb/MWh)).
   (40 CFR 60.4320(a) and (b))

   (2) Emission Limits for Sulfur Dioxide (40 CFR 60.4330)
   The Permittee shall comply with one of the following (40 CFR 60.4430(a)): (a) Not cause to be discharged into the atmosphere from the subject stationary-combustion turbine any gases which contain SO2 in excess of 110 ng/J (0.90 lb-MMBtu gross output or 226.6 lb/hr) (40 CFR 60.4430(a)(1)); or
   (b) For each stationary-combustion turbine burning at least 50 percent biogas on a calendar month basis, as determined based on total heat input, the Permittee must not cause to be discharged into the atmosphere from the affected source any gases that contain SO2 in excess of 65 ng SO2/J (0.15 lb-SO2/MMBtu) heat input. (40 CFR 60.4430(a)(3))

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M. Emission Units S2.066 and S2.067 (continued)

6. Federal Requirements (continued)
      (3) General Compliance Requirements (40 CFR 60.4333)
         (a) The Permittee must operate and maintain the stationary combustion turbine, 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))
      (4) Monitoring
         (a) Demonstrating Continuous Compliance for NOx if Not Using Water or Steam Injection (40 CFR 60.4340)
            (i) If the Permittee is not using water or steam injection to control NOx emissions, the Permittee must perform annual performance tests in accordance with 40 CFR Part 60.4400 to demonstrate continuous compliance. 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))
            (ii) As an alternative, the Permittee may install, calibrate, maintain and operate one of the following continuous monitoring systems (40 CFR 60.4340(b)): (i) Continuous emission monitoring as described in 40 CFR Parts 60.4335(b) and 60.4345, or (40 CFR 60.4340(b)(1))
      (b) Requirements for the Continuous Emission Monitoring System Equipment if Chosen Option (40 CFR 60.4345)
         If the option to use a NOx CEMS is chosen:
            (i) Each NOx diluent CEMS must be installed and certified according to Performance Specification 2 (PS 2) in Appendix B of 40 CFR Part 60, except the 7-day calibration drift is based on unit operating days, not calendar days. With state approval, Procedure 1 in Appendix F to 40 CFR Part 60 is not required. Alternatively, a NOx diluent CEMS that is installed and certified according to Appendix A of 40 CFR Part 75 is acceptable for use under this subpart. The relative accuracy test audit (RATA) of the CEMS shall be performed on a lb/MMBtu basis. (40 CFR 60.4345(a))
            (ii) As specified in 40 CFR Part 60.13(e)(2), during each full unit operating hour, both the NOx monitor and the diluent monitor must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour, to validate the hour. For partial unit operating hours, at least one valid data point must be obtained with each monitor for each quadrant of the hour in which the unit operates. For unit operating hours in which required quality assurance and maintenance activities are performed on the CEMS, a minimum of two valid data points (one in each of two quadrants) are required for each monitor to validate the NOx emission rate for the hour. (40 CFR 60.4345(b))
Section IV. Specific Operating Conditions (continued)

M. Emission Units S2.066 and S2.067 (continued)

6. Federal Requirements (continued)
      (4) Monitoring (continued)
         (b) Requirements for the Continuous Emission Monitoring System Equipment if Chosen Option (40 CFR 40.4345) (continued)
            If the option to use a NOx CEMS is chosen (continued):
               (iii) Each fuel flowmeter shall be installed, calibrated, maintained, and operated according to the manufacturer’s instructions. Alternatively, with state approval, fuel flowmeters that meet the installation, certification, and quality assurance requirements of Appendix D to 40 CFR Part 75 are acceptable for use under this subpart. (40 CFR 60.4345(c))
               (iv) Each watt meter, steam flow meter, and each pressure or temperature measurement device shall be installed, calibrated, maintained, and operated according to manufacturer’s instructions. (40 CFR 60.4345(d))
               (v) The Permittee shall develop and keep on-site a quality assurance (QA) plan for all of the continuous monitoring equipment described in 40 CFR Parts 60.4345(a), (c), and (d). For the CEMS and fuel flow meters, the Permittee may, with state approval, satisfy the requirements of this paragraph by implementing the QA program and plan described in Section 1 of Appendix B to 40 CFR Part 75. (40 CFR 60.4345(e))
         (c) Identifying Excess Emissions Using Data from the Continuous Emission Monitoring Equipment (40 CFR 60.4350)
            For the purposes of identifying emissions:
               (i) All CEMS data must be reduced to hourly averages as specified in 40 CFR Part 60.13(b). (40 CFR 60.4350(a))
               (ii) For each unit operating hour in which a valid hourly average, as described in 40 CFR Part 60.4345(b), is obtained for both NOx and diluent monitors, the data acquisition and handling system must calculate and record the hourly NOx emission rate in units of ppm or lb/MMBtu, using the appropriate equation from Method 19 in 40 CFR Part 60 Appendix A. For any hour in which the hourly average O2 concentration exceeds 19.0 percent O2 (or the hourly average CO2 concentration is less than 1.0 percent CO2), a diluent cap value of 19.0 percent O2 or 1.0 percent CO2 (as applicable) may be used in the emission calculations. (40 CFR 60.4350(b))
               (iii) Correction of measured NOx concentrations to 15 percent O2 is not allowed. (40 CFR 60.4350(c))
               (iv) If the Permittee has installed and certified a NOx diluent CEMS to meet the requirements of 40 CFR Part 75, states can approve that only quality assured data from the CEMS shall be used to identify excess emissions under this subpart. Periods where the missing data substitution procedures in 40 CFR Part 75 Subpart D are applied are to be reported as monitor downtime in the excess emissions and monitoring performance report required under 40 CFR Part 60.7(c). (40 CFR 60.4350(d))
               (v) All required fuel flow rate, steam flow rate, temperature, pressure, and megawatt data must be reduced to hourly averages. (40 CFR 60.4350(e))
Section IV. Specific Operating Conditions (continued)

M. Emission Units S2.066 and S2.067 (continued)

6. Federal Requirements (continued)
      (4) Monitoring (continued)
         (c) Identifying Excess Emissions Using Data from the Continuous Emission Monitoring Equipment (40 CFR 60.4350) (continued)
            (vi) Calculate the hourly average NOx emission rates, in units of the emission standards under 40 CFR Part 60.4320, using either ppm for units complying with the concentration limit or the following equation for units complying with the output based standard (40 CFR Part 60.4350(f)):

            \[ E = \frac{(NO_x)_{h} \times (HI)_h}{P} \]

            Where:

            \( E \) = hourly NOx emission rate, in lb/MWhr,
            \( (NO_x)_{h} \) = hourly NOX emission rate, in lb/MMBtu
            \( (HI)_h \) = hourly heat input rate to the unit, in MMBtu/hr, measured using the fuel flowmeter(s)
            \( P \) = gross energy output of the combustion turbin in MW

            (vii) For simple cycle units without heat recovery, use the calculated hourly average emission rates from 40 CFR Part 60.4350(f) to assess excess emissions on a 4-hour rolling average basis, as described in 40 CFR Part 60.4380(b)(1). (40 CFR Part 60.4350(g))

            (viii) For combined cycle and combined heat and power units with heat recovery, use the calculated hourly average emission rates from 40 CFR Part 60.4350(f) to assess excess emissions on a 30 unit operating day rolling average basis, as described in 40 CFR Part 60.4380(b)(1). (40 CFR Part 60.4350(h))

      (d) Establishing and Documenting a Proper Parameter Monitoring Plan (40 CFR 60.4355)
         (i) For affected units that are also subject to 40 CFR Part 75 and that have state approval to use the low mass emissions methodology in 40 CFR Part 75.19 or the NOx emission measurement methodology in Appendix E to 40 CFR Part 75, the Permittee may meet the requirements of this paragraph by developing and keeping on-site (or at a central location for unmanned facilities) a QA plan, as described in 40 CFR part 75.19(e)(5) or in Section 2.3 of Appendix E to 40 CFR Part 75 and Section 1.3.6 of Appendix B to 40 CFR Part 75. (40 CFR 60.4355(b))
Section IV. Specific Operating Conditions (continued)

M. Emission Units S2.066 and S2.067 (continued)

6. Federal Requirements (continued)
      (4) Monitoring (continued)
         (c) Determining the Total Sulfur Content of the Turbine’s Combustion Fuel (40 CFR 60.4369)
           The Permittee must monitor the total sulfur content of the fuel being fired in the turbine, except as provided in 40 CFR Part 60.4365. The sulfur content of the fuel must be determined using total-sulfur methods described in 40 CFR Part 60.4415. Alternatively, if the total sulfur content of the gaseous fuel during the most recent pre-test was less than half the applicable limit, ASTM D4810, D5854, or D6228, or Gas Processors Association Standard 2377 (all of which are incorporated by reference, see 40 CFR Part 60.17), which measure the major sulfur compounds, may be used. (40 CFR 60.4369)

         (f) Exemption from Monitoring the Total Sulfur Content of Fuel (40 CFR 60.4365)
           The Permittee may elect not to monitor the total sulfur content of the fuel combusted in the turbine, if the fuel is demonstrated not to exceed potential sulfur emissions of 26 ng SO₂/J (0.06 lb SO₂/MMBtu) heat input for units located in continental areas and 180 ng SO₂/J (0.42 lb SO₂/MMBtu) heat input for units located in non-continental areas or sections of a continental area that the Administrator determines does not have access to natural gas and that the removal of sulfur compounds would cause more environmental harm than benefit. The Permittee must use one of the following sources of information to make the required determination (40 CFR 60.4365):

           (i) The fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel, specifying that the maximum total sulfur content for oil use in continental areas is 0.05 weight percent (500 ppmw) or less and 0.4 weight percent (4,000 ppmw) or less for non-continental areas, the total sulfur content for natural-gas use in continental areas is 20 grains of sulfur or less per 100 standard cubic feet and 140 grains of sulfur or less per 100 standard cubic feet for non-continental areas, has potential sulfur emissions of less than 26 ng SO₂/J (0.06 lb SO₂/MMBtu) heat input for continental areas and has potential sulfur emissions of less than 180 ng SO₂/J (0.42 lb SO₂/MMBtu) heat input for non-continental areas (40 CFR 60.4365(a)); or

           (ii) Representative fuel sampling data which show that the sulfur content of the fuel does not exceed 26 ng SO₂/J (0.06 lb SO₂/MMBtu) heat input for continental areas or 180 ng SO₂/J (0.42 lb SO₂/MMBtu) heat input for non-continental areas. At a minimum, the amount of fuel sampling data specified in Section 2.2.4.1 or 2.2.4.2 of 40 CFR Part 75 Appendix D is required. (40 CFR 60.4365(b))

         (g) Determining the Sulfur Content of the Fuel (40 CFR 60.4370)
           The frequency of determining the total combustion sulfur content of the fuel must be as follows:

           (i) Fuel Oil. For fuel oil, use one of the total-sulfur sampling options and the associated sampling frequency described in Sections 2.2.4.1, 2.2.4.2, and 2.2.4.3 of Appendix D to 40 CFR Part 75 (i.e., flow proportional sampling, daily sampling, sampling from the unit’s storage tank after each addition of fuel to tank, or sampling each delivery prior to combining it with fuel oil already in the intended storage tank). (40 CFR 60.4370(a))
Section IV. Specific Operating Conditions (continued)

M. Emission Units S2.066 and S2.067 (continued)

6. Federal Requirements (continued)
      (4) Monitoring (continued)
         (g) Determining the Sulfur Content of the Fuel (40 CFR 60.4370) (continued)
            The frequency of determining the sulfur content of the fuel must be as follows (continued):
               (ii) Gaseous Fuel: If the Permittee elects not to demonstrate sulfur content using options in 40 CFR Part 60.4365, and the fuel is supplied without intermediate bulk storage, the sulfur content value of the gaseous fuel must be determined and recorded once per unit operating day. (40 CFR 60.4370(b))
               (iii) Custom Schedules: Notwithstanding the requirements of 40 CFR Part 60.4370(b), operators or fuel vendors may develop custom schedules for determination of the total sulfur content of gaseous fuels, based on the design and operation of the affected facility and the characteristics of the fuel supply. Except as provided in 40 CFR Parts 60.4370(c)(1) and 60.4370(c)(2), custom schedules shall be substantiated with data and shall be approved by the Administrator before they can be used to comply with the standard in 40 CFR Part 60.4330. (40 CFR 60.4370(c))

      (5) Reporting
         (a) Required Reports to be Submitted (40 CFR 60.4375)
            (i) For each affected unit required to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content under this subpart, you must submit reports of excess emissions and monitor downtime, in accordance with 40 CFR Part 60.7(c). Excess emissions must be reported for all periods of unit operation, including start-up, shutdown, and malfunction. (40 CFR 60.4375(a))
            (ii) For each affected unit that performs annual performance tests in accordance with 40 CFR Part 60.4340(a), 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. (40 CFR 60.4375(b))

         (b) Definition of Excess Emissions and Monitor Downtime for NOx (40 CFR 60.4380)
            For the purpose of reports required under 40 CFR Part 60.7(c), periods of excess emissions and monitor downtime that must be reported are defined as follows:
            (i) For turbines using water or steam to fuel ratio monitoring (40 CFR 60.4380(a)):
               (I) An excess emission is any unit operating hour for which the 4-hour rolling average steam or water to fuel ratio, as measured by the continuous monitoring system, falls below the acceptable steam or water to fuel ratio needed to demonstrate compliance with 40 CFR Part 60.4320, as established during the performance test required in 40 CFR Part 60.8. Any unit operating hour in which no water or steam is injected into the turbine when a fuel is being burned that requires water or steam injection for NOx control will also be considered an excess emission. (40 CFR 60.4380(a)(1))
               (II) A period of monitor downtime is any unit operating hour in which water or steam is injected into the turbine, but the essential parametric data needed to determine the steam or water to fuel ratio are unavailable or invalid. (40 CFR 60.4380(a)(2))
               (III) Each report must include the average steam or water to fuel ratio, average fuel consumption, and the combustion turbine load during each excess emission. (40 CFR 60.4380(a)(3))
Section IV. Specific Operating Conditions (continued)

M. Emission Units S2.066 and S2.067 (continued)

6. Federal Requirements (continued)
      (5) Reporting (continued)
         (b) Definition of Excess Emissions and Monitor Downtime for NOx (40 CFR 60.4380)
            For the purpose of reports required under 40 CFR Part 60.7(c), periods of excess emissions and monitor downtime that must be reported are defined as follows (continued):
            (ii) For turbines using continuous emission monitoring, as described in 40 CFR Parts 60.4325(b) and 60.4345 (40 CFR 60.4380(b));
                (I) An excess emission is any unit operating period in which the 4-hour or 30-day rolling average NOx emission rate exceeds the applicable emission limit in 40 CFR Part 60.4320. For the purposes of 40 CFR Part 60 Subpart KKKK, a “4-hour rolling average NOx emission rate” is the arithmetic average of the average NOx emission rate in ppm or ng/J (lb/MWh) measured by the continuous emission monitoring equipment for a given hour and the three unit operating hour average NOx emission rates immediately preceding that unit operating hour. Calculate the rolling average if a valid NOx emission rate is obtained for at least 3 of the 4 hours. For the purposes of this subpart, a “30-day rolling average NOx emission rate” is the arithmetic average of all hourly NOx emission data in ppm or ng/J (lb/MWh) measured by the continuous emission monitoring equipment for a given day and the twenty-nine unit operating days immediately preceding that unit operating day. A new 30-day average is calculated each unit operating day as the average of all hourly NOx emissions rates for the preceding 30 unit operating days if a valid NOx emission rate is obtained for at least 75 percent of all operating hours. (40 CFR 60.4380(b)(1))
                (II) A period of monitor downtime is any unit operating hour in which the data for any of the following parameters are either missing or invalid: NOx concentration, CO2 or O2 concentration, fuel flow rate, steam flow rate, steam temperature, steam pressure, or megawatts. The steam flow rate, steam temperature, and steam pressure are only required if the Permittee will use this information for compliance purposes. (40 CFR 60.4380(b)(2))
                (III) For operating periods during which multiple emissions standards apply, the applicable standard is the average of the applicable standards during each hour. For hours with multiple emissions standards, the applicable limit for that hour is determined based on the condition that corresponded to the highest emissions standard. (40 CFR 60.4380(b)(3))
            (iii) For turbines required to monitor combustion parameters or parameters that document proper operation of the NOx emission controls (40 CFR 60.4380(c)):
                (I) An excess emission is a 4-hour rolling unit operating hour average in which any monitored parameter does not achieve the target value or is outside the acceptable range defined in the parameter monitoring plan for the unit. (40 CFR 60.4380(c)(1))
                (II) A period of monitor downtime is a unit operating hour in which any of the required parametric data are either not recorded or are invalid. (40 CFR 60.4380(c)(2))
Section IV. Specific Operating Conditions (continued)

M. Emission Units S2.066 and S2.067 (continued)

6. Federal Requirements (continued)
      (5) Reporting (continued)
         (c) Definition of Excess Emissions and Monitor Downtime for SO\(_2\) (40 CFR 60.4385)
            If the Permittee chooses the option to monitor the sulfur content of the fuel, excess emissions and monitoring downtime are defined as follows:
            (i) For samples of gaseous fuel and for oil samples obtained using daily sampling, flow proportional sampling, or sampling from the unit's storage tank, an excess emission occurs each unit operating hour in the period beginning on the date and hour of any sample for which the sulfur content of the fuel being fired in the combustion turbine exceeds the applicable limit and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit. (40 CFR 60.4385(a))
            (ii) If the option to sample each delivery of fuel oil has been selected, the Permittee must immediately switch to one of the other oil sampling options (i.e., daily sampling, flow proportional sampling, or sampling from the unit's storage tank) if the sulfur content of a delivery exceeds 0.05 weight percent. The Permittee must continue to use one of the other sampling options until all of the oil from the delivery has been combusted, and the Permittee must evaluate excess emissions according to 40 CFR Part 60.4385(2)(a). When all of the fuel from the delivery has been burned, the Permittee may resume using the as-delivered sampling option. (40 CFR 60.4385(b))
            (iii) A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime ends on the date and hour of the next valid sample. (40 CFR 60.4385(c))

   (d) When to Submit Reports
      All reports required under 40 CFR Part 60.7(c) must be postmarked by the 30th day following the end of each 6-month period. (40 CFR 60.4395)
Section IV. Specific Operating Conditions (continued)

M. Emission Units S2.066 and S2.067 (continued)

6. Federal Requirements (continued)
      (6) Performance Tests
         (a) Conducting Initial and Subsequent Performance Tests, Regarding NOx (40 CFR 60.4400)
            (i) The Permittee must conduct an initial performance test, as required in 40 CFR Part 60.8. Subsequent NOx performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test). (40 CFR 60.4400(a))
            (I) The Permittee may conduct the performance tests using two general methodologies under 40 CFR Parts 60.4400(a)(1)(i) and 60.4400(a)(1)(ii). (40 CFR 60.4400(a)(1))
            (II) Sampling traverse points for NOx and if applicable diluent gas are to be selected following EPA Method 20 or EPA Method 1 (non-particulate procedures), and sampled for equal time intervals. The sampling must be performed with a traversing single-hole probe, or, if feasible, with a stationary multi-hole probe that samples each of the points sequentially. Alternatively, a multi-hole probe designed and documented to sample equal volumes from each hole may be used to sample simultaneously at the required points. (40 CFR 60.4400(a)(2))
            (III) Notwithstanding 40 CFR Part 60.4400(a)(2), the Permittee may test at fewer points than are specified in EPA Method 1 or EPA Method 20 in 40 CFR Part 60 Appendix A if the following conditions are met (40 CFR 60.4400(a)(3)):
               (A) The Permittee may perform a stratification test for NOx and diluent pursuant to the procedures specified in Section 6.5.6.1(a) through 1 of 40 CFR Part 75 Appendix A. (40 CFR 60.4400(a)(3)(i))
               (B) Once the stratification sampling is completed, the Permittee may use the alternative sample point selection criteria for the performance test as stated under 40 CFR Part 60.4400(a)(3)(ii)(A) through 60.4400(a)(3)(ii)(C). (40 CFR 60.4400(a)(3)(ii))
            (ii) The performance test must be done at any load condition within plus or minus 25 percent of 100 percent of peak load. The Permittee may perform testing at the highest achievable load point, if at least 75 percent of peak load cannot be achieved in practice. The Permittee must conduct three separate test runs for each performance test. The minimum time per run is 20 minutes. (40 CFR 60.4400(b))
               (I) If the stationary combustion turbine combats both oil and gas as primary or backup fuels, separate performance testing is required for each fuel. (40 CFR 60.4400(b)(1))
               (II) For a combined cycle and CHP turbine systems with supplemental heat (duct burner), the Permittee must measure the total NOx emissions after the duct burner rather than directly after the turbine. The duct burner must be in operation during the performance test. (40 CFR 60.4400(b)(2))
               (III) If water or steam injection is used to control NOx with no additional post-combustion NOx control and you choose to monitor the steam or water to fuel ratio in accordance with 40 CFR Part 60.4335, then that monitoring system must be operated concurrently with each EPA Method 20 or EPA Method 7E run and must be used to determine the fuel consumption and the steam or water to fuel ratio necessary to comply with the applicable 40 CFR Part 60.4320 NOx emission limit. (40 CFR 60.4400(b)(3))
               (IV) Compliance with the applicable emission limit in 40 CFR Part 60.4320 must be demonstrated at each tested load level. Compliance is achieved if the three-run arithmetic average NOx emission rate at each tested level meets the applicable emission limit in 40 CFR Part 60.4320. (40 CFR 60.4400(b)(4))
Section IV. Specific Operating Conditions (continued)

M. Emission Units S2.066 and S2.067 (continued)

6. Federal Requirements (continued)
      (6) Performance Tests (continued)
         (a) Conducting Initial and Subsequent Performance Tests, Regarding NOX (40 CFR 60.4400) (continued)
             (ii) The performance test must be done at any load condition within plus or minus 25 percent of 100 percent of peak load. The Permittee may perform testing at the highest achievable load point, if at least 75 percent of peak load cannot be achieved in practice. The Permittee must conduct three separate test runs for each performance test. The minimum time per run is 20 minutes. (40 CFR 60.4400(b)) (continued)
             (V) If the Permittee elects to install a CEMS, the performance evaluation of the CEMS may either be conducted separately or (as described in 40 CFR Part 60.4405) as part of the initial performance test of the affected unit. (40 CFR 60.4400(b)(5))
             (VI) The ambient temperature must be greater than 0 °F during the performance test. (40 CFR 60.4400(b)(6))
         (b) Establishing a Valid Parameter Range if Choosing to Continuously Monitor Parameters (40 CFR 60.4410)
             If the Permittee has chosen to monitor combustion parameters or parameters indicative of proper operation of NOX emission controls in accordance to 40 CFR Part 60.4340, the appropriate parameters must be continuously monitored and recorded during each run of the initial performance test, to establish acceptable operating ranges, for purposes of the parameter monitoring plan for the affected unit, as specified in 40 CFR Part 60.4355.
         (c) Conducting the Initial and Subsequent Performance Tests for Sulfur (40 CFR 60.4415)
             (r) The Permittee must conduct an initial performance test, as required in 40 CFR Part 60.8. Subsequent SO2 performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test). There are three methodologies that you may use to conduct the performance tests. (40 CFR 60.4415(a))
             (+) If the Permittee chooses to periodically determine the sulfur content of the fuel combusted in the turbine, a representative fuel sample would be collected following ASTM D5287 (incorporated by reference; see 40 CFR Part 60.17) for natural gas or ASTM D1477 (incorporated by reference; see 40 CFR Part 60.17) for oil. Alternatively, for oil, the Permittee may follow the procedures for manual pipeline sampling in section 14 of ASTM D4057 (incorporated by reference; see 40 CFR Part 60.17). The fuel analyses of this section may be performed either by the Permittee, a service contractor retained by the Permittee, the fuel vendor, or any other qualified agency. Analyze the samples for the total sulfur content of the fuel using (40 CFR 60.4415(a)(1)(i)):
                 (A) For liquid fuels, ASTM D129, or alternatively D1266, D1552, D2622, D4294, or D5453 (all of which are incorporated by reference, see 40 CFR Part 60.17) (40 CFR 60.4415(a)(1)(ii)); or
                 (B) For gaseous fuels, ASTM D1072, or alternatively D3246, D4084, D4468, D4810, D6228, D6667, or Gas Processors Association Standard 2377 (all of which are incorporated by reference, see 40 CFR Part 60.17) (40 CFR 60.4415(a)(1)(ii))
Section IV. Specific Operating Conditions (continued)

L. Emission Units S2.064 and S2.065 (continued)

6. Federal Requirements (continued)
      (6) Performance Tests (continued)
         (c) Conducting the Initial and Subsequent Performance Tests for Sulfur (40 CFR 60.4415) (continued)
            (i) The Permittee must conduct an initial performance test, as required in 40 CFR Part 60.8. Subsequent SO\textsubscript{2} performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test). There are three methodologies that you may use to conduct the performance tests. (40 CFR 60.4415(a) (continued)
               (ii) Measure the SO\textsubscript{2} concentration (in parts per million (ppm)), using EPA Methods 6, 6C, 8, or 20 in Appendix A of 40 CFR Part 60. In addition, the American Society of Mechanical Engineers (ASME) standard, ASME PTC 19-10-1981-Part 10: “Flue and Exhaust Gas Analyses,” manual methods for sulfur dioxide (incorporated by reference, see 40 CFR Part 60.17) can be used instead of EPA Methods 6 or 20. For units complying with the output based standard, concurrently measure the stack gas flow rate, using EPA Methods 1 and 2 in Appendix A of 40 CFR Part 60, and measure and record the electrical and thermal output from the unit. Then use the following equation to calculate the SO\textsubscript{2} emission rate under 40 CFR Part 60.4415(a)(2). (40 CFR 60.4415(a)(2))
               (iii) Measure the SO\textsubscript{2} and diluent gas concentrations, using either EPA Methods 6, 6C, or 8 and 3A, or 20 in Appendix A of 40 CFR Part 60. In addition, the Permittee may use the manual methods for sulfur dioxide-ASME PTC 19-10-1981-Part 10 (incorporated by reference, see 40 CFR Part 60.17). Concurrently measure the heat input to the unit, using a fuel flowmeter (or flowmeters), and measure the electrical and thermal output of the unit. Use EPA Method 19 in Appendix A of 40 CFR Part 60 to calculate the SO\textsubscript{2} emission rate in lb/MMBtu. Then, use Equations 1 and, if necessary, 2 and 3 in 40 CFR Part 60.4350(f) to calculate the SO\textsubscript{2} emission rate in lb/MWh. (40 CFR 60.4415(a)(3))

b. Continuous Emissions Monitoring System (CEMS) — 40 CFR Parts 60 and 75
   The Permittee, upon issuance of this operating permit, shall comply with the CEMS requirements set forth in Section V of this operating permit.
Section V. Continuous Emissions Monitoring System (CEMS) Conditions

A. 40 CFR Part 60 Appendix B and Appendix F – Oxides of Nitrogen (NOx) Continuous Emissions Monitoring System (CEMS) Requirements for System 03A (52.003), Systems 05A/05C (52.006), System 06A/06C (52.007), System 07C (52.009/52.009.1), System 32 (52.064/52.065), and System 33 (52.066/52.067) (NAC 4458.252)

1. On or before the date of start-up of 52.003, 52.006, 52.007, 52.009/52.009.1, 52.064/52.065, and 52.066/52.067, each, the Permittee shall install, calibrate, operate, and maintain a NOx CEMS in the exhaust stacks of 52.003, 52.006, 52.007, 52.009/52.009.1, 52.064/52.065, and 52.066/52.067, each. The CEMS sampling probe must be installed at an appropriate location in the exhaust stacks to accurately and continuously measure the concentration of NOx (in ppmv) from 52.003, 52.006, 52.007, 52.009/52.009.1, 52.064/52.065, and 52.066/52.067, each, in accordance with the requirements prescribed in Nevada Administrative Code (NAC) 4458.252 to NAC 4458.267, applicable subparts 40 CFR Part 75 Appendix A and Appendix B. Verification of the operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the devices.

2. The Permittee shall conduct the following performance specifications (40 CFR Part 75 Appendix A Section 3.0):
   a. **Calibration Error** (40 CFR Part 75 Appendix A Section 3.1):
      The calibration error of the NOx pollutant concentration monitor shall not deviate from the reference value of either the zero or upscale calibration gas by more than 2.5 percent of the span of the instrument. Alternatively, where the span value is less than 200 ppm, calibration error test results are also acceptable if the absolute value of the difference between the monitor response value and the reference value is less than or equal to 5 ppm.
   b. **Linearity Check** (40 CFR part 75 Appendix A 3.2):
      For the NOx pollutant concentration monitor, the error in linearity for each calibration gas concentration shall not exceed or deviate from the reference value by more than 5.0 percent. Linearity check results are also acceptable if the absolute value of the difference between the average of the monitor response values and the average of the reference values is less than or equal to 5 ppm.
   c. **Relative Accuracy** (40 CFR Part 75 Appendix A Section 3.3):
      Relative Accuracy for NOx-Diluent Continuous Emission Monitoring Systems:
      (1) The relative accuracy for NOx-diluent continuous emission monitoring systems shall not exceed 10.0 percent.
      (2) For affected units where the average of the reference method measurements of NOx emission rate during the relative accuracy test audit is less than or equal to 0.200 lb/mmBtu, the difference between the mean value of the continuous emission monitoring system measurements and the reference method mean value shall not exceed ±0.020 lb/mmBtu, where the relative accuracy specification of 10.0 percent is not achieved.
   d. **Bins** (40 CFR Part 75 Appendix A Section 3.4):
      NOx Concentration Monitoring Systems and NOx-Diluent Continuous Emission Monitoring Systems:
      (1) NOx-diluent continuous emission monitoring systems and NOx concentration monitoring systems used to determine NOx mass emissions shall not be biased low.
   e. **Cycle Time** (40 CFR Part 75 Appendix A Section 3.5):
      The cycle time for pollutant concentration monitors, oxygen monitors used to determine percent moisture, and any other monitoring component of a continuous emission monitoring system that is required to perform a cycle time test shall not exceed 15 minutes.

3. Data Acquisition and Handling Systems shall (40 CFR Part 75 Appendix A Sections 4(a), 4(b), 4(c)):
   a. Read and record the full range of pollutant concentrations, volumetric flow, and fuel flowrate through the upper range value;
   b. Calculate and record intermediate values necessary to obtain emissions, such as mass fuel flowrate and heat input rate;
   c. Interpret and convert the individual output signals from all applicable monitoring systems to produce a continuous readout of pollutant emission rates or pollutant mass emissions in the appropriate units;
   d. Predict and record NOx emission rate using the heat input rate and the NOx/heat input correlation;
   e. Monitor calibration error, any bias adjustments to pollutant emission rates or pollutant mass emissions data;
   f. Calculate and record all missing data substitution values; and
   g. Provide a continuous, permanent record of all measurements and required information in an electronic format.
4. The Permittee shall comply with the following certification tests and procedures (40 CFR Part 75 Appendix A Section 6.0):
   a. Linearity Check
   b. 7-Day Calibration Test
   c. Cycle Time Test
   d. Relative Accuracy and Bias Tests

5. The Permittee shall develop and implement a quality assurance/quality control (QA/QC) program for the continuous emission monitoring systems and alternative monitoring systems under 40 CFR Part 75 Subpart E and their components. (40 CFR Part 75 Appendix B Section 1.0)

6. The Permittee shall comply with the following monitoring system requirements (40 CFR Part 75 Appendix B Section 1.1):
   a. Preventative Maintenance (40 CFR Part 75 Appendix B Section 1.1.1):
      The Permittee shall keep a written record of procedures needed to maintain the monitoring system in proper operating condition and a schedule for those procedures.
   b. Recordkeeping and Reporting (40 CFR Part 75 Appendix B Section 1.1.2):
      The Permittee shall keep a written record describing procedures that will be used to implement the recordkeeping and reporting requirements in the applicable subparts.
   c. Maintenance Records (40 CFR Part 75 Appendix B Section 1.1.3):
      The Permittee shall keep a record of all testing, maintenance, or repair activities performed on any monitoring system or component in a location and format suitable for inspection. A maintenance log may be used for this purpose. Additionally, any adjustment that recharacterizes a system's ability to record and report emissions data must be recorded, and a written explanation of the procedures used to make the adjustment(s) shall be kept.

7. The Permittee shall comply with the following specific requirements for CEMS (40 CFR Part 75 Appendix B Section 1.2):
   a. Calibration Error Test and Linearity Check Procedures (40 CFR Part 75 Appendix B Section 1.2.1):
      The Permittee shall keep a written record of the procedures used for daily calibration error tests and linearity checks and identify any calibration error test and linearity check procedures specific to the continuous emission monitoring system that vary from the applicable procedures.
   b. Calibration and Linearity Adjustments (40 CFR Part 75 Appendix B Section 1.2.2):
      The Permittee shall explain how each component of the CEMS will be adjusted to provide correct responses to calibration gases, reference values, and/or indications of interference both initially and after repairs or corrective action. The Permittee shall identify equations, conversion factors and other factors affecting calibration of each CEMS.
   c. Relative Accuracy Test Audit Procedures (40 CFR Part 75 Appendix B Section 1.2.3):
      The Permittee shall keep a written record of procedures and details peculiar to the installed continuous emission monitoring systems that are to be used for relative accuracy test audits, such as sampling and analysis methods.
   d. Parametric Monitoring for Units With Add-on Emission Controls (40 CFR Part 75 Appendix B Section 1.2.4):
      The Permittee shall keep a written (or electronic) record including a list of operating parameters for the add-on SO₂ or NOₓ emission controls, and the range of each operating parameter that indicates the add-on emission controls are operating properly. The Permittee shall keep a written (or electronic) record of the parametric monitoring data during each NOₓ missing data period.
Section V. Continuous Emissions Monitoring System (CEMS) Conditions (continued)

A. 40 CFR Part 60 Appendix B and Appendix F – NOx CEMS Requirements for System 03A (S2.003), Systems 05A/05C (S2.006), System 06A/06C (S2.007), System 07C (S2.009/S2.009.1), System 32 (S2.064/S2.065), and System 33 (S2.066/S2.067) (NAC 445B.3405) (continued)

8. The Permittee shall conduct quality assurance testing at the required frequencies as described by the following (40 CFR Part 75 Appendix B Section 2.0):
   a. Daily Assessments
      (1) Calibration Error Test
         (a) On-line Daily Calibration Error Tests
         (b) Off-line Daily Calibration Error Tests
      (2) Daily Flow Interference Check
      (3) Additional Calibration Error Tests and Calibration Adjustments
   b. Quarterly Assessments
      (1) Linearity Check
      (2) Leak Check
      (3) Flow-to-Load Ratio or Gross Heat Rate Evaluation
   c. Semiannual and Annual Assessments
      (1) Relative Accuracy Test Audit (RATA)
         (a) The Permittee shall perform relative accuracy test audits semiannually for each applicable primary and redundant backup monitor. No more than eight successive calendar quarters shall elapse after the quarter in which a RATA was last performed without a subsequent RATA having been conducted.
         (b) Relative accuracy test audits of applicable primary and redundant backup monitors may be performed annually if any of the conditions under 40 CFR Part 75 Appendix B Sections 2.3.1.2(a) through 2.3.1.2(i) are met for the specific monitoring system involved.
         (c) Annual 2-load flow RATA or annual 3-load flow RATA.

9. The Permittee shall ensure RATA data validation by conducting the following (40 CFR Part 75 Appendix B Section 2.3.2):
   a. A RATA shall not commence if the monitoring system is operating out-of-control with respect to any of the daily and quarterly quality assurance or with respect to the additional calibration error tests.
   b. The RATA may be done with no corrective maintenance, repair, calibration adjustments, re-linearization or reprogramming of the monitoring system prior to the test.
   c. The RATA may be done after performing only the routine or non-routine calibration adjustments but no other corrective maintenance, repair, re-linearization or reprogramming of the monitoring system. Trial RATA runs may be performed after the calibration adjustments and additional adjustments may be made prior to the RATA, as necessary, to optimize the performance of the CEMS. The trial RATA runs need not be reported.
   d. The RATA may be done after repair, corrective maintenance, re-linearization or reprogramming of the monitoring system.
   e. Once a RATA is commenced, the test must be done hands-off. No adjustment of the monitor's calibration is permitted during the RATA test period, other than the routine calibration adjustments following daily calibration error tests. If a routine daily calibration error test is performed and passed just prior to a RATA (or during a RATA test period) and a mathematical correction factor is automatically applied by the DAHS, the correction factor shall be applied to all subsequent data recorded by the monitor, including the RATA test data. For 2-level and 3-level flow monitor audits, no linearization or reprogramming of the monitor is permitted in between load levels.
   f. For each monitoring system, report the results of all completed and partial RATAs that affect data validation in the quarterly report. A record of all RATAs, trial RATA runs and RATA attempts (whether reported or not) must be kept on-site as part of the official test log for each monitoring system.

10. If an applicable monitor fails the bias test, the Permittee shall use a bias adjustment factor (BAF) or the allowable alternative BAF to adjust the monitored data. (40 CFR Part 75 Appendix B Section 2.3.4)
Section V. Continuous Emissions Monitoring System (CEMS) Conditions (continued)

B. 40 CFR Part 60 Appendix B and Appendix F – Carbon-Monoxide (CO) CEMS Requirements for Systems 05A/05C (S2.006), System-06A/06C (S2.007), System-32 (S2.064/S2.065), and System-33 (S2.066/S2.067) (NAC 445B.3405)

1. On or before the date of start-up of S2.006, S2.007, S2.064/S2.065, and S2.066/S2.067, each, the Permittee shall install, calibrate, operate, and maintain a CO-CEMS in the exhaust stacks of S2.006, S2.007, S2.064/S2.065, and S2.066/S2.067, each. The CEMS sampling probe must be installed at an appropriate location in the exhaust stacks to accurately and continuously measure the concentration of CO (in ppmv) from S2.006, S2.007, S2.064/S2.065, and S2.066/S2.067, each, in accordance with the requirements prescribed in Nevada Administrative Code (NAC) 445B.252 to NAC 445B.267, applicable subparts 40 CFR Part 60 Appendix B and Appendix F: Verification of the operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the devices.

2. The Permittee shall perform procedures for the following (40 CFR Part 60 Appendix B PS-4A Sections 8.3 through 8.4):
   a. Response Time Test
   b. Interference Check

3. The Permittee shall comply with the following method performance specifications (40 CFR Part 60 Appendix B PS-4A Section 13.0):
   a. Calibration Drift
   b. Relative Accuracy
   c. Response Time

4. The Permittee may perform alternative procedures as specified under 40 CFR Part 60 Appendix B PS-4A Section 16.0 (40 CFR Part 60 Appendix B PS-4A Section 16.0)

5. The Permittee shall develop and implement a Quality Control (QC) program. As a minimum, each QC program must include written procedures which should describe in detail, complete, step-by-step procedures and operations for each of the following activities (40 CFR Part 60 Appendix F Procedure 1 Section 3.0):
   a. Calibration of CEMS
   b. Calibration maintenance of CEMS (including spare parts inventory)
   c. Preventative maintenance of CEMS (including spare parts inventory)
   d. Data recording, calculations, and reporting
   e. Accuracy-audit procedures including sampling and analysis methods
   f. Program of corrective action for malfunctioning CEMS

6. The written procedures under B.5. of this section must be kept on record and available for inspection by the Director. (40 CFR Part 60 Appendix F Procedure 1 Section 3.0)

7. The Permittee shall conduct a Calibration Drift Assessment according to 40 CFR Part 60 Appendix F Procedure 1 Sections 4.1 and 4.2. (40 CFR Part 60 Appendix F Procedure 1 Sections 4.1 and 4.2)

8. The Permittee shall record and report all CEMS data according to 40 CFR Part 60 Appendix F Procedure 1 Section 4.4. All measurements from the CEMSs must be retained on file by the Permittee for at least 2 years. (40 CFR Part 60 Appendix F Procedure 1 Section 4.4)

9. Each CEMS must be audited at least once each calendar quarter. Successive quarterly audits shall occur no closer than 2 months. The audits shall be conducted as follows (40 CFR Part 60 Appendix F Procedure 1 Section 5.1):
   a. The Relative Accuracy Test (RATA) shall be conducted once every four calendar quarters. (40 CFR Part 60 Appendix F Procedure 1 Section 5.1.1)
   b. The Cylinder Gas Audit (CGA) shall be conducted every quarter except when a RATA is conducted. (40 CFR Part 60 Appendix F Procedure 1 Section 5.1.2)
Section V. Continuous Emissions Monitoring System (CEMS) Conditions (continued)

B. 40 CFR Part 60 Appendix B and Appendix F - CO CEMS Requirements for Systems 05A/05C (52.007), System 06A/06C (52.007), System 32 (52.064/52.065), and System 33 (52.066/52.067) (NAC 445B.3405) (continued)

16. Unless specified otherwise in the applicable subpart, the Permittee shall comply with the relative accuracy criteria:
   a. For RAFA (40 CFR Part 60 Appendix F Procedure I Section 5.2.3(1)):
      (1) For CO emissions, RA shall be less than or equal to 10% (if the value determined by the Reference Method (RM) is greater than 50% of the emission limit) or RA shall be less than or equal to 5% (if the value determined by the RM is less than 50% of the emission limit). (40 CFR Part 60 Appendix B-PS-4 Section 13.2)
   b. For CGA ±15 percent of the average audit value for ±5 ppm, whichever is greater. (40 CFR Part 60 Appendix F Procedure I Section 5.2.3(2))

17. The Permittee shall conduct and report to the Director a quarterly audit as specified under 40 CFR Part 60 Appendix F Procedure I Section 7.0. (40 CFR Part 60 Appendix F Procedure I Section 7.0)

C. Monitoring Systems: Records: Reports (NAC 445B.265)

1. The Permittee subject to the provisions of NAC 445B.256 to 445B.267, inclusive, shall maintain records of the occurrence and duration of any start-up, shutdown or malfunction in the operation of an affected facility and any malfunction of the air pollution control equipment or any periods during which a continuous monitoring system or monitoring device is inoperative.

2. The Permittee required to install a continuous monitoring system shall submit a written report of excess emissions to the director for every calendar quarter. All quarterly reports must be postmarked by the 30th day following the end of each calendar quarter and must include the following information:
   a. The magnitude of excess emissions computed in accordance with NAC 445B.256 to 445B.267, inclusive, any conversion factors used, and the date and time of commencement and completion of each time period of excess emissions.
   b. Specific identification of each period of excess emissions that occurs during start-ups, shutdowns and malfunctions of the affected facility.
   c. The nature and cause of any malfunction, if known, the corrective action taken or preventative measures adopted.
   d. Specific identification of each period during which the continuous monitoring system was inoperative, except for zero and span checks, and the nature of any repairs or adjustments that were made.
      (1) When no excess emissions have occurred and the continuous monitoring system has not been inoperative, repaired or adjusted, such information shall be included in the report.

3. The Permittee subject to the provisions of NAC 445B.256 to 445B.267, inclusive, shall maintain a file of all measurements, including:
   a. Continuous monitoring systems, monitoring devices and performance testing measurements;
   b. All continuous monitoring system performance evaluations;
   c. All continuous monitoring systems or monitoring device calibration checks;
   d. Adjustments and maintenance performed on these systems or devices; and
   e. All other information required by NAC 445B.256 to 445B.267, inclusive, recorded in a permanent form suitable for inspection.
      (1) The file shall be retained for at least 2 years following the date of the measurements, maintenance, reports and records.

****End of Continuous Emissions Monitoring System (CEMS) Conditions****
Section VIII. Schedules of Compliance


As part of Nevada’s Regional Haze State Implementation Plan’s (SIP) Long-Term Strategy to achieve reasonable progress, the Permittee shall shutdown and permanently cease operation of System 07C (S2.009, S2.009.1) no later than December 31, 2031.

****End of Schedule of Compliance****
Appendix A.6 - Valmy Generating Station, NV Energy

The following air quality operating permit issued by the Nevada Division of Environmental Protection for the Valmy Generating Station is hereby incorporated into Nevada’s Second Regional Haze SIP by reference. In this appendix, NDEP is only providing pages containing specific permit conditions relevant to this Regional Haze SIP. Provisions that are struck-out are not intended to be incorporated into the SIP by reference for approval or intended to be codified as part of Nevada’s Second Regional Haze SIP.
April 7, 2022

Jason Hammons
Senior Director, Generation
Sierra Pacific Power Company (dba NV Energy)
6226 West Sahara Avenue, M/S 78
Las Vegas, Nevada 89146

RE: Notification of Issuance of the Reopened and Revised of Class I Air Quality Operating Permit AP4911-0457.03, FIN A0375, Air Case 11107 – North Valmy Generating Station

Dear Mr. Hammons:

In accordance with Nevada Administrative Code (NAC) 445B.325, the Nevada Division of Environmental Protection – Bureau of Air Pollution Control (BAPC) sent a letter to Sierra Pacific Power Company (dba NV Energy) – North Valmy Generating Station on February 7, 2022 to provide the required 30-day notice prior to reopening and revising the above referenced operating permit. Under legal authority from Nevada Revised Statutes (NRS) 445B.100 through 445B.640, inclusive, and pursuant to regulations in Nevada Administrative Code (NAC) 445B.001 through 445B.3689, inclusive, the BAPC is issuing the reopened and revised operating permit. Enclosed is your copy of the operating permit which must be posted conspicuously at the facility.

In accordance with NRS 445B.340 and NAC 445B.890, you may appeal the Department’s issuance of the operating permit within 10 days after you receive the operating permit. Appeals may be filed with the State Environmental Commission located at 901 S. Stewart Street, Carson City, Nevada 89701. For questions regarding appeals, call (775) 687-9374.

Please review the operating permit carefully and ensure you understand all conditions, restrictions, monitoring, recordkeeping, and other requirements. If you have any questions, contact Mark Talavera at (775) 687-9470 or mtalavera@ndep.nv.gov.

Sincerely,

[Signature]
Jamie Mara
Supervisor, Permitting Branch
Bureau of Air Pollution Control

Class I Air Quality Operating Permit AP4911-0457.03
9171 9690 0935 0218 7438 19
Starla Lacy, NV Energy
Tony Garcia, NV Energy
Sean Spitzer, NV Energy
Brigid McHale, NV Energy
Dawn Clevenger, NV Energy
Christopher Heintz, NV Energy
Facility ID No. A0375

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: SIERRA PACIFIC POWER COMPANY (DBA NV ENERGY) – NORTH VALMY GENERATING STATION (HEREINAFTER REFERRED TO AS PERMITTEE)

Mailing Address: 6226 WEST SAHARA AVENUE, MS #25, P.O. BOX 98910, LAS VEGAS, NEVADA 89151-001

Physical Address: 23755 TREATY HILL ROAD, VALMY, NEVADA 89438

Driving Directions: APPROXIMATELY 4 MILES NORTH OF INTERSTATE HIGHWAY 80

General Facility Location:

SECTIONS 20, 21, 28, & 29, T 35 N, R 43 E, MDB&M
HA 64 – CLOVERS AREA/HUMBOLDT COUNTY
NORTH 4,529,390 M, EAST 487,280 M, UTM ZONE 11, NAD 83

Emission Unit List:

A. System 01 – Unit #1 Boiler (REVISED 05/2015)
   S2.001 Babcock & Wilcox balanced draft, dry bottom, opposed wall fired geometry boiler, model # FM 9-30 OF-36, serial # 82-7501, Commencement of Construction: September 20, 1977

B. System 02 – Unit #2 Boiler (REVISED 05/2015)
   S2.002 Foster Wheeler balanced draft, dry bottom, single wall fired geometry boiler, model # Monowall, serial # 85-8051, Commencement of Construction: April 11, 1979

C. System 03A – Coal Handling System A (REVISED 05/2015)
   S2.003 Rotary Stacker and associated conveyors, Engineered by Watkins Engineering

D. System 03B – Coal Handling System B (REVISED 05/2015). Replaces S2.004
   S2.031 Conveyor 3, Engineered by Stone & Webster
   S2.032 Conveyor 7A, Engineered by Stone & Webster

E. System 03C – Coal Handling System C (REVISED 05/2015)
   S2.005 Reclaim Area Hopper and associated conveyors, Engineered by Stone & Webster

F. System 03D – Coal Handling System D (REVISED 05/2015)
   S2.006 Crusher Tower and associated conveyors, Engineered by Pennsylvania Crusher Corporation

G. System 03E – Coal Handling System E (REVISED 05/2015). Replaces S2.007
   S2.033 Conveyor 5A, Engineered by Stone & Webster
   S2.034 Conveyor 5B, Engineered by Stone & Webster

H. System 03F – Coal Handling System F
   S2.008 Tripper Area Hopper and associated conveyors, Engineered by Stone & Webster

I. System 03G – Coal Handling System G
   S2.009 #1 Unit Coal Silos A & B (2 silos) and associated conveyors, each 56'10" (H) x 22' (W)
   S2.010 #1 Unit Coal Silos C & D (2 silos) and associated conveyors, each 56'10" (H) x 22' (W)
   S2.011 #2 Unit Coal Silos A & B (2 silos) and associated conveyors, each 56'10" (H) x 22' (W)
   S2.012 #2 Unit Coal Silos C & D (2 silos) and associated conveyors, each 56'10" (H) x 22' (W)
**Emission Unit List (continued):**

<table>
<thead>
<tr>
<th>Unit Number</th>
<th>Description</th>
<th>Additional Information</th>
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<tbody>
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<td>S2.013</td>
<td>Unit #1 Soda Ash Storage Bin Loading</td>
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<tr>
<td>PF1.001</td>
<td>Unit #1 Soda Ash Storage Bin Unloading</td>
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<td>S2.014</td>
<td>Unit #1 Magnesium Oxide Storage Bin Loading</td>
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<td>PF1.002</td>
<td>Unit #1 Magnesium Oxide Storage Bin Unloading</td>
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<td>S2.015</td>
<td>Unit #2 Soda Ash Storage Bin Loading</td>
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<tr>
<td>S2.017</td>
<td>Unit #1 Fly Ash Silo Loading</td>
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<td>PF1.005</td>
<td>Unit #1 Fly Ash Silo Unloading</td>
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<td>S2.018</td>
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**Emission Unit List (continued):**

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<tr>
<th>System</th>
<th>Description</th>
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<tr>
<td><strong>U. System 09A – Unit #2 Lime Scrubber System B</strong> (Scrubber – Loop 1 Recycle Ash Day, 50 ton capacity) (REVISED 05/2015)</td>
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<tr>
<td>S2.021</td>
<td>Loop 1 Recycle Ash Day Storage Bin Loading</td>
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<td>PF1.009</td>
<td>Loop 1 Recycle Ash Day Storage Bin Unloading</td>
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<tr>
<td><strong>V. System 09B – Unit #2 Lime Scrubber System B</strong> (Scrubber - Loop 2 Recycle Ash Day Storage Bin, 50 ton capacity) (REVISED 05/2015)</td>
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<td>Loop 2 Recycle Ash Day Storage Bin Unloading</td>
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<td><strong>W. System 10A – Unit #2 Lime Scrubber System C</strong> (West Lime Storage Silo, 50’ (H) x 20’ (W), 500 ton capacity) (REVISED 05/2015)</td>
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<td>S2.023</td>
<td>West Lime Storage Silo Loading</td>
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<td><strong>X. System 10B – Unit #2 Lime Scrubber System C</strong> (East Lime Storage Silo, 50’ (H) x 20’ (W), 500 ton capacity) (REVISED 05/2015)</td>
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<td><strong>X. System 11 – Cooling Tower System for Unit #1 Boiler</strong></td>
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<tr>
<td>PF1.015</td>
<td>SPX 8-Cell Cooling Tower, Wet-Draft, Cross-Flow</td>
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<td><strong>Z. System 12 – Cooling Tower System</strong> (REVISED 09/2019)</td>
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<td>PF1.014</td>
<td>Unit #2 Cooling Tower, Manufactured by SPX (6-Cell, Wet-Draft, Counter Flow)</td>
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<td><strong>AA. System 13 – Fuel Oil Storage Tank</strong></td>
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<td>S2.025</td>
<td>Fuel Oil Storage Tank, Vertical Fixed Roof, 150,000 gallon capacity</td>
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<td><strong>AB. System 14 – Auxiliary Boiler</strong></td>
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<td>S2.026</td>
<td>Babcock &amp; Wilcox oil-fired package boiler, model # FM 103-88, serial # NA</td>
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<td><strong>AC. System 15 – Emergency Diesel Fire Pumps</strong></td>
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<td>S2.027</td>
<td>Emergency Diesel Fire Pump, 227 HP Output</td>
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<td>S2.028</td>
<td>Emergency Diesel Fire Pump, 227 HP Output</td>
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<td><strong>AD. System 16 – Emergency Diesel Generator #1</strong></td>
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<tr>
<td>S2.029</td>
<td>Emergency Diesel Generators, 375 HP Output</td>
</tr>
<tr>
<td><strong>AE. System 17 – Emergency Diesel Generator #2</strong></td>
<td></td>
</tr>
<tr>
<td>S2.030</td>
<td>Emergency Diesel Generators, 600 HP Output</td>
</tr>
</tbody>
</table>
Emmission Unit List (continued):

AF. System 18 – 1A North DSI Lime Silo (REVISED 09/2019)
S2.035 1A North DSI Lime Silo Loading
PF1.016 1A North DSI Lime Silo Unloading

AG. System 19 – 2B South DSI Lime Silo (REVISED 09/2019)
S2.036 2B South DSI Lime Silo Loading
PF1.017 2B South DSI Lime Silo Unloading

****End of Emission Unit List****
Section V. General Monitoring, Recordkeeping, and Reporting Requirements

A. NAC 445B.315.3(b) Part 70 Program
   The Permittee shall retain records of all required monitoring data and supporting information for 5 years from the date of the sample collection, measurement, report or analysis. Supporting information includes, but is not limited to, all records regarding calibration and maintenance of the monitoring equipment and all original strip-chart recordings for continuous monitoring instrumentation.

B. NAC 445B.3405.1(d) Part 70 Program
   The Permittee will record:
   1. Monitoring information required by the conditions of this permit including the date, the location and the time of the sampling or the measurements and the operating conditions at the time of the sampling or measurements; and
   2. The date on which the analyses were performed, the company that performed them, the analytical techniques that the company used, and the results of such analyses.

C. NAC 445B.3405.1(e) Part 70 Program
   The Permittee will:
   1. Promptly report to the Director all deviations from the requirements of this Operating Permit; and
   2. Report to the Director the probable cause of all deviations and any action taken to correct the deviations. For this Operating Permit, prompt is defined as submittal of a report within 15 days of the deviation. This definition does not alter any reporting requirements as established for reporting of excess emissions as required under NAC 445B.232 and under Section III.B of this permit, or for reporting of an emergency (as defined by NAC 445B.326) under Section I.G. of this permit; and
   3. Submit reports of any required monitoring every 6 months, within 8 weeks after June 30 and December 31 of each calendar year. The reports must contain a summary of the data collected as required by all monitoring, recordkeeping and compliance requirements and as specified in sections VI and VII of this operating permit.

D. NAC 445B.315.3(h) Part 70 Program
   The Permittee will submit yearly reports including, but not limited to, throughput, production, fuel consumption, hours of operation, and emissions. These reports will be submitted on the form provided by the Bureau of Air Pollution Control for all emission units/systems specified on the form. The completed form must be submitted to the Bureau of Air Pollution Control no later than March 1 annually for the preceding calendar year, unless otherwise approved by the Bureau of Air Pollution Control.

E. NAC 445B.3405.1(j) Part 70 Program
   1. The Permittee will submit a compliance certification for all applicable requirements, reflecting the terms and conditions of the permit, to the Administrator of the Division of Environmental Protection and the Administrator of USEPA annually, on or before March 1 for the preceding calendar year. The compliance certification must include:
      a. An identification of each term or condition of the Operating Permit that is the basis of the certification;
      b. The status of the stationary source’s compliance with any applicable requirement;
      c. A statement of whether compliance was continuous or intermittent;
      d. The method used for determining compliance; and
      e. Any other facts the Director determines to be necessary to determine compliance.
Section V. General Monitoring, Recordkeeping, and Reporting Requirements (continued)

F. NAC 445B.265 (Federally Enforceable SIP Requirement)

Monitoring systems: Records; Reports

1. The Permittee subject to the provisions of NAC 445B.256 to 445B.267, inclusive, shall maintain records of the occurrence and duration of any start-up, shutdown or malfunction in the operation of an affected facility and any malfunction of the air pollution control equipment or any periods during which a continuous monitoring system or monitoring device is inoperative.

2. The Permittee required to install a continuous monitoring system shall submit a written report of excess emissions to the director for every calendar quarter. All quarterly reports must be postmarked by the 30th day following the end of each calendar quarter and must include the following information:
   a. The magnitude of excess emissions computed in accordance with NAC 445B.256 to 445B.267, inclusive, any conversion factors used, and the date and time of commencement and completion of each time period of excess emissions.
   b. Specific identification of each period of excess emissions that occurs during start-ups, shutdowns and malfunctions of the affected facility.
   c. The nature and cause of any malfunction, if known, the corrective action taken or preventative measures adopted.
   d. Specific identification of each period during which the continuous monitoring system was inoperative, except for zero and span checks, and the nature of any repairs or adjustments that were made.
      (1) When no excess emissions have occurred and the continuous monitoring system has not been inoperative, repaired or adjusted, such information shall be included in the report.

3. The Permittee subject to the provisions of NAC 445B.256 to 445B.267, inclusive, shall maintain a file of all measurements, including:
   a. Continuous monitoring systems, monitoring devices and performance testing measurements;
   b. All continuous monitoring system performance evaluations;
   c. All continuous monitoring systems or monitoring device calibration checks;
   d. Adjustments and maintenance performed on these systems or devices; and
   e. All other information required by NAC 445B.256 to 445B.267, inclusive, recorded in a permanent form suitable for inspection.
      (1) The file shall be retained for at least 2 years following the date of the measurements, maintenance, reports and records.

G. NAC 445B.063 State-Only Requirement

The Department may use any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed, to determine excess emissions.

H. NAC 445B.308 State-Only Requirement

The Permittee shall monitor and record PM$_{10}$ and SO$_2$ concentrations in the ambient air and monitor and record meteorological conditions, in accordance with 1 through 3 below, from the commencement of operation of the facility until the termination of the operation or, if applicable, until reclamation of the project is complete or the Permittee has been relieved of its ambient monitoring requirement by the Chief of the Bureau of Air Pollution Control or Chief of the Bureau of Air Quality Planning or their designee. Ambient monitoring sites shall be approved in advance of required monitoring by the Chief of the Bureau of Air Quality Planning or the Chief of the Bureau of Air Pollution Control or his designee. All required ambient air quality and meteorological monitoring shall be conducted and findings reported in accordance with the October 2006 version of the Nevada Division of Environmental Protection (NDEP), Bureau of Air Quality Planning’s Ambient Air Quality Monitoring Guidelines and documents listed therein as currently displayed on the http://ndep.nv.gov/baqp/eaudit/monitoring_guidelines.pdf website. Monitoring reports of the findings shall be submitted to the NDEP, Bureau of Air Quality Planning for each calendar quarter within 60 days after the end of the calendar quarter.
Section V. General Monitoring, Recordkeeping, and Reporting Requirements (continued)

H. NAC 445B.308 State-Only Requirement (continued)

At least one of the three monitoring stations listed below shall have collocated PM$_{10}$ samplers or monitors. The following sites have been approved by NDEP-BAPC:

1. **Station 1**
   - Location: Section 21, T34N, R43E, MDB&M (HA64)
   - Monitor and Record: PM$_{10}$, PM$_{2.5}$, and NO$_X$ concentrations, wind speed, wind direction, ambient temperature, and solar radiation.

   Meteorological data shall be collected at the 2, 10, 50 and 100-meter levels as follows:
   a. 2-meter level: Temperature;
   b. 10-meter level: Wind Speed, Wind Direction, Temperature;
   c. 50-meter level: Wind Speed, Wind Direction, Temperature;
   d. 100-meter level: Wind Speed, Wind Direction, Temperature; and
   e. 2-meter to 10-meter level: Solar Radiation.

   The 2 meter and 10 meter levels shall use matched temperature sensors (or equivalent) to achieve the 10m – 2m delta-T audit tolerance as required for use in AERMOD modeling. The 50 meter and 100 meter levels shall also use matched temperature sensors (or equivalent) to achieve the 100m – 50m delta-T audit tolerance as required for use in AERMOD modeling.

   If PM$_{10}$ monitoring utilizes high-volume samplers, at least one of the PM$_{10}$ monitoring stations shall have collocated PM$_{10}$ samplers and sampling shall be conducted in accordance with US EPA Quality Assurance Handbook, Vol. II, Section 2.11 guidance as discussed in Bureau’s Ambient Air Quality Monitoring Guidelines.

2. **Station 2**
   - Location: Section 31, T34N, R43E, MDB&M (HA64)
   - Monitor and Record: PM$_{10}$ and PM$_{2.5}$ concentrations, SO$_2$ concentrations, NO$_X$ concentrations, 10-meter wind speed, 10-meter wind direction, and 2-meter temperature.

   If PM$_{10}$ monitoring utilizes high-volume samplers, at least one of the PM$_{10}$ monitoring stations shall have collocated PM$_{10}$ samplers and sampling shall be conducted in accordance with US EPA Quality Assurance Handbook, Vol. II, Section 2.11 guidance as discussed in Bureau’s Ambient Air Quality Monitoring Guidelines.

3. **Station 3**
   - Location: Section 22, T34N, R45E, MDB&M (HA64)
   - Monitor and Record: PM$_{10}$ and PM$_{2.5}$ concentrations, SO$_2$ concentrations, NO$_X$ concentrations, 10-meter wind speed, 10-meter wind direction, and 2-meter temperature.

   If PM$_{10}$ monitoring utilizes high-volume samplers, at least one of the PM$_{10}$ monitoring stations shall have collocated PM$_{10}$ samplers and sampling shall be conducted in accordance with US EPA Quality Assurance Handbook, Vol. II, Section 2.11 guidance as discussed in Bureau’s Ambient Air Quality Monitoring Guidelines.

See Section X. of this operating permit for PM$_{2.5}$ and NO$_X$ schedule of compliance.

****End of General Monitoring, Recordkeeping, and Reporting Requirements****
Section VI. Specific Operating Conditions

A. Emission Unit S2.001

System 01 – Unit #1 Boiler (REVISED 05/2015)  

<table>
<thead>
<tr>
<th>System 01</th>
<th>Babcock &amp; Wilcox balanced draft, dry bottom, opposed wall fired geometry boiler, model # FM 9-30 OF-36, serial # 82-7501, Commencement of Construction: September 20, 1977</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location UTM (Zone 11, NAD 83)</td>
<td>m North</td>
</tr>
<tr>
<td>S2.001</td>
<td>4,525,590</td>
</tr>
</tbody>
</table>

1. NAC 445B.3405 (NAC 445B.316) Part 70 Program  
   Air Pollution Control Equipment
   a. Control system consisting of:
      (1) Baghouse to control particulate matter emissions.
      (2) Air atomized ignitors to control particulate matter and opacity during startup and for flame stabilization.
      (3) Multi-stage combustion to control nitrogen oxides emissions through the use of Low NO\textsubscript{X} Burners and Over Fired Air.
   b. Descriptive Stack Parameters
      Stack Height: 504.9 ft
      Stack Diameter: 18.44 ft
      Nominal Exhaust Temperature: 285.2 °F
      Nominal Volumetric Flowrate: 674,931.4 dscfm

2. NAC 445B.3405 (NAC 445B.316) Part 70 Program  
   Emission Limits
   On and after the date of startup of S2.001, Permittee will not discharge or cause the discharge into the atmosphere from the exhaust stack of S2.001 the following pollutants in excess of the following specified limits:
   a. NAC 445B.2203 Federally Enforceable SIP Requirement – The discharge of PM\textsubscript{10} (particulate matter less than 10 microns in diameter) to the atmosphere will not exceed 0.166 pound per million Btu.
   b. 40 CFR Part 60.42(a)(1) Federal Enforceable New Source Performance Standard Requirement – The discharge of PM (total particulate matter) to the atmosphere will not exceed 0.10 pound per million Btu.
   c. NAC 445B.305 Part 70 Program – The discharge of PM\textsubscript{10} (particulate matter less than 10 microns in diameter) to the atmosphere will not exceed 256.0 pounds per hour.
   d. NAC 445B.305 Part 70 Program – The discharge of PM (particulate matter) to the atmosphere will not exceed 256.0 pounds per hour.
   e. 40 CFR Part 60.44(a)(3) Federal Enforceable New Source Performance Standard Requirement – The discharge of NO\textsubscript{X} (nitrogen oxides) to the atmosphere will not exceed 0.70 pound per million Btu, based on a 3-hour rolling average.
   f. NAC 445B.305 Part 70 Program – The discharge of NO\textsubscript{X} (nitrogen oxides) to the atmosphere will not exceed 7,849 tons per year, based on a 12-month rolling average.
   g. NAC 445B.2204 Federally Enforceable SIP Requirement – The discharge of sulfur to the atmosphere will not exceed 1,536.0 pounds per hour, averaged over each one-hour period.
   h. 40 CFR Part 60.43(a)(2) Federal Enforceable New Source Performance Standard Requirement – The discharge of SO\textsubscript{2} (sulfur dioxide) to the atmosphere will not exceed 1.20 pounds per million Btu, based on a 3-hour rolling average.
   i. NAC 445B.305 Part 70 Program – The discharge of SO\textsubscript{2} (sulfur dioxide) to the atmosphere will not exceed 3,072.0 pounds per hour, based on a 3-hour rolling average.
   j. NAC 445B.305 Part 70 Program – The discharge of CO (carbon monoxide) to the atmosphere will not exceed 8,340.0 pounds per hour.
   k. NAC 445B.305 Part 70 Program – The discharge of VOC (volatile organic compounds) to the atmosphere will not exceed 55.0 pounds per hour.
Section VI. Specific Operating Conditions (continued)

A. Emission Unit S2.001 (continued)

2. NAC 445B.3405 (NAC 445B.316) Part 70 Program

Emission Limits (continued)

On and after the date of startup of S2.001, Permittee will not discharge or cause the discharge into the atmosphere from the exhaust stack of S2.001 the following pollutants in excess of the following specified limits:

l. NAC 445B.305 Part 70 Program — The discharge of Pb (lead) to the atmosphere will not exceed 31.0 pounds per hour.

m. NAC 445B.22017 Federally Enforceable SIP Requirement — The opacity from S2.001 will not equal or exceed 20%. The opacity must be determined as set forth in 445B.22017.1(a) or (b). S2.001 is allowed one 6-minute period per hour of not more than 27 percent opacity as set forth in 40 CFR part 60.42(a)(2).

n. 40 CFR Part 60.42(a)(2) Federal Enforceable New Source Performance Standard Requirement — The opacity from S2.001 will not exceed 20% for a period of 6 minutes in any one hour, except for one 6-minute period per hour of not more than 27% opacity.

o. 40 CFR Part 63.9991 Federal Enforceable National Emission Standards for Hazardous Air Pollutants for Source Categories Requirements — Permittee must comply with the following emission limits (Table 2 to 40 CFR Part 63 Subpart UUUU for a coal-fired unit not low rank virgin coal):

(1) Filterable particulate matter (PM) will not exceed 3.0E-2 lb/MMBtu or 3.0E-1 lb/MWh (gross electric output), total non-Hg HAP metals will not exceed 5.0E-5 lb/MMBtu or 5.0E-1 lb/GWh, OR the following individual HAP metals:

(i) Antimony (Sb) will not exceed 8.0E-1 lb/TBtu or 8.0E-3 lb/GWh,
(ii) Arsenic (As) will not exceed 1.1 lb/TBtu or 2.0E-2 lb/GWh,
(iii) Beryllium (Be) will not exceed 2.0E-1 lb/TBtu or 2.0E-3 lb/GWh,
(iv) Cadmium (Cd) will not exceed 3.0E-1 lb/TBtu or 3.0E-3 lb/GWh,
(v) Chromium (Cr) will not exceed 2.8 lb/TBtu or 3.0E-2 lb/GWh,
(vi) Cobalt (Co) will not exceed 8.0E-1 lb/TBtu or 8.0E-3 lb/GWh,
(vii) Lead (Pb) will not exceed 1.2 lb/TBtu or 2.0E-2 lb/GWh,
(viii) Manganese (Mn) will not exceed 4.0 lb/TBtu or 5.0E-2 lb/GWh,
(ix) Nickel (Ni) will not exceed 3.5 lb/TBtu or 4.0E-2 lb/GWh,
(x) Selenium (Se) will not exceed 5.0 lb/TBtu or 6.0E-2 lb/GWh;

(2) Hydrogen chloride (HCl) will not exceed 2.0E-2 lb/MMBtu or 2.0E-2 lb/MWh OR sulfur dioxide (SO2) will not exceed 0.0E-1 lb/MMBtu or 1.5 lb/MWh, and

(3) Mercury (Hg) will not exceed 1.2 lb/TBtu or 1.3E-2 lb/GWh.

p. Specific Acid Rain Requirements

(1) Sierra Pacific Power Company d/b/a NV Energy – North Valmy Generating Station will not exceed the SO2 emission levels (acid rain allowances) for S2.001 in the indicated years as shown in the following table without holding the required acid rain allowances in accordance with the Acid Rain provisions [40 CFR Part 72.9]:

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Calendar-Year</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>SO2 (sulfur-dioxide)</td>
<td>Acid-Rain Allowance</td>
<td>6,569</td>
<td>6,569</td>
<td>6,569</td>
<td>6,569</td>
<td>6,569</td>
</tr>
<tr>
<td>NOx (nitrogen-oxides)</td>
<td>Acid-Rain Emission Limit (lb/MMBtu, annual average)*</td>
<td>0.46</td>
<td>0.46</td>
<td>0.46</td>
<td>0.46</td>
<td>0.46</td>
</tr>
</tbody>
</table>

*Note: the NOx emission limit is effective through December 31, 2019.

(2) Sierra Pacific Power Company d/b/a NV Energy – North Valmy Generating Station will comply with the SO2 acid rain permit application signed December 16, 2014 entitled “Acid Rain Permit Application” and all references contained therein, which is hereby incorporated by reference into this operating permit as Attachment 1 (NAC 445B.305).
Section VI. Specific Operating Conditions (continued)

A. Emission Unit S2.001 (continued)

2. NAC 445B.3405 (NAC 445B.316) Part 70 Program
   Emission Limits (continued)
   On and after the date of startup of S2.001, Permittee will not discharge or cause the discharge into the atmosphere from the exhaust stack of S2.001 the following pollutants in excess of the following specified limits:
   
   p. Specific Acid Rain Requirements (continued)

   (3) Sierra Pacific Power Company d/b/a NV Energy – North Valmy Generating Station will comply with the NOx acid rain permit application signed December 16, 2014 entitled “Acid Rain Permit Application” and all references contained therein, including the Phase II NOx Compliance Plan and the Phase II NOx Averaging Plan (effective from January 1, 2015 to December 31, 2019), which are hereby incorporated by reference into this operating permit as Attachment 1 (40 CFR Part 72.40, NAC 445B.305).

3. NAC 445B.3405 (NAC 445B.316) Part 70 Program
   Operating Parameters
   a. Maximum allowable heat input for any fuel combusted in S2.001 will not exceed 2,560.0 MMBtu/hr, averaged over a one-hour period.

   b. S2.001 may combust coal as the primary fuel. The use of #2 fuel oil and “on-spec” used oil is designated for boiler startup and flame stabilization purposes during the startup or shutdown of a coal burner. “On-spec” used oil is defined as nonhazardous oil meeting the requirements of 40 CFR Part 279, Standards for the Management of Used Oil.

   c. All “on-spec” used oil combusted in S2.001 will be obtained only from Sierra Pacific Power Company – North Valmy Generating Station facilities.

   d. Hours S2.001 may operate a total of 8,760 hours per calendar year.

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
   Compliance, Monitoring, Recordkeeping and Reporting
   a. Compliance/Performance Testing
      Permittee, will conduct and record the annual compliance test within 90 days of the anniversary date of the previous annual compliance testing. As part of the annual compliance test the Permittee shall:

      (1) Conduct and record a Method 5 performance test for particulate matter (PM) on the exhaust stack of S2.001 consisting of three valid runs. The Method 5 emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A, Method 5, and include the back-half catch. Compliance with the particulate matter standards contained in A.2.a through A.2.d shall be determined by using the dry basis F factor (O2) procedures in Method 19 to compute the emissions rate. Method 5 shall be used to determine the particulate matter concentration. The sampling time and sample volume for each run shall be at least 120 minutes and 1.70 dscm (60 dscf). The probe and filter holder heating system in the sampling train may be set to provide an average gas temperature of 160 +/- 14 °C (320 +/- 25 °F). For each particulate run, the emission rate correction factor, integrated or grab sampling and analysis procedures of Method 3B shall be used to determine the O2 concentration (%O2). The O2 sample shall be obtained simultaneously with, and at the same traverse points as, the particulate run. If the particulate run has more than 12 traverse points, the O2 traverse points may be reduced to 12 provided that Method 1 is used to locate the 12 O2 traverse points (40 CFR Part 60.46(b)(2)).

      (2) Conduct and record a Method 201A and 202 performance test for PM10 on the exhaust stack of S2.001 consisting of three valid runs. The Method 201A and 202 emissions tests must be conducted in accordance with 40 CFR Part 51, Appendix M, Method 201A and 202. The sample volume for each test run shall be at least 1.7 dscm (60 dscf). Test runs must be conducted for up to two hours in an effort to collect this minimum sample.
Section VI. Specific Operating Conditions (continued)

A. Emission Unit S2.001 (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
   Compliance, Monitoring, Recordkeeping and Reporting (continued)
   Permittee, will conduct and record the annual compliance test within 90 days of the anniversary date of the previous annual compliance testing. As part of the annual compliance test the Permittee shall:
   
a. Compliance/Performance Testing (continued)
   
(3) The Method 201A and 202 emissions tests on the exhaust stack of S2.001 may be replaced by the Method 5 performance test with the back-half catch (Method 5 and 202) consisting of three valid runs, provided that all particulate matter captured in the Method 5 and 202 test shall be considered PM10 emissions for determination of compliance with the emission limitations established in this permit. The sample volume for each test run shall be at least 1.7 dscm (60 dscf). Test runs must be conducted for up to two hours in an effort to collect this minimum sample.

(4) Conduct and record a Method 6 or 6C performance test for SO\textsubscript{2} on the exhaust stack of S2.001 consisting of three valid runs. The Method 6 or 6C emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A, Method 6 or 6C.

(5) Conduct and record a Method 7 or 7E performance test for NO\textsubscript{x} on the exhaust stack of S2.001 consisting of three valid runs. The Method 7 or 7E emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A, Method 7 or 7E.

(6) Conduct and record a Method 10 performance test for CO on the exhaust stack of S2.001 consisting of three valid runs. The Method 10 emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A, Method 10.

(7) Conduct and record a Method 25 or 25A in conjunction with a Method 18 performance test for VOC on the exhaust stack of S2.001 consisting of three valid runs. The Method 25, 25A and 18 emissions test(s) must be conducted in accordance with 40 CFR Part 60, Appendix A, Method 25, 25A and 18.

(8) Conduct and record a Method 29 performance test for Pb on the exhaust stack of S2.001 consisting of three valid runs. The Method 29 emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A, Method 29.

(9) If an anticipated major boiler overhaul is to be performed which will coincide with a compliance test, the compliance testing will be performed prior to the overhaul, or as soon as practicable following the overhaul, but not earlier than 60 days following the overhaul.

(10) During each compliance test, record the opacity of the discharge from the exhaust stack of S2.001 using either a calibrated continuous opacity monitor or a visible emissions evaluation conducted in accordance with 40 CFR Part 60, Appendix A, Method 9. The Method 9 visible emissions test must be conducted by a certified visible emissions reader for a period of at least 60 minutes (recorded as ten 6-minute averages).

(11) The performance tests will be conducted at the maximum operating heat input rate limit established in A.3.a of this section for each pollutant required to be tested, unless otherwise approved pursuant to NAC 445B.252.2 & 3. The Permittee shall make available to the director such records as may be necessary to determine the conditions of the test of performance. Operations during periods of startup, shutdown and malfunction must not constitute representative conditions of a test of performance unless otherwise specified in the applicable standard (NAC 445B.252.3).

(12) The Permittee shall give notice to the director 30 days before the test of performance to allow the director to have an observer present. A written testing procedure for the test of performance must be submitted to the director at least 30 days before the test of performance to allow the director to review the proposed testing procedures (NAC 445B.252.4). The alternative to the reference methods and procedures provided in 40 CFR Part 60.46(d) may be utilized to the extent that they are applicable to S2.001, and must be identified in the testing procedures as alternative methods.
Section VI. Specific Operating Conditions (continued)

A. Emission Unit S2.001 (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
   Compliance, Monitoring, Recordkeeping and Reporting (continued)
   Permittee, will conduct and record the annual compliance test within 90 days of the anniversary date of the previous annual compliance testing. As part of the annual compliance test the Permittee shall:
   a. Compliance/Performance Testing (continued)
      (13) During each performance test required in A.4.a.(1) through (8) of this section, record the quantity (in tons) of coal combusted during each test run, the heat content value of the coal combusted during each test run (in Btu/ton) and include these data in the test results submitted. The emissions results of the Method 5 with the back-half catch or Method 201A and 202, Method 6 or 6C, Method 7 or 7E, Method 10, Method 25A or 25 and 18, and Method 29 performance tests for PM$_{10}$, SO$_2$, NO$_x$, CO, VOC, and Pb must be converted to emissions of PM$_{10}$, SO$_2$, sulfur, NO$_x$, CO, VOC, and Pb (lb/hr and lb/MMBtu), each.
      (14) As a result of the most recent performance test performed in A.4.a.(1), (2), and (3) of this section, derive emission factors for each of the following:
         (i) Pounds of PM per MMBtu (lbs-PM/MMBtu), filterable and condensable.
         (ii) Pounds of PM$_{10}$ per MMBtu (lbs-PM$_{10}$/MMBtu), filterable and condensable.
   These emission factors will be based on the average of the 3 test runs.
   (15) Within 60 days after completing the performance tests and opacity observations contained in A.4.a of this section, the Permittee shall furnish the director a written report of the results of the performance tests, the opacity observations and the resultant emissions factors. All information and analytical results of testing and sampling must be certified as to the truth and accuracy and as to their compliance with NAC 445B.001 to 445B.3689 (NAC 445B.252.8).
   (16) Conduct and record the Relative Accuracy Test Audit (RATA) as specified in Section VII.A.
   b. Monitoring
   The Permittee, upon startup of S2.001, will:
   (1) Install, calibrate, operate and maintain a coal mass measurement device to continuously measure the amount of coal (in tons) combusted in S2.001. The coal mass measurement device will be installed at an appropriate location in the fuel delivery system to accurately and continuously measure the fuel combusted in S2.001.
   (2) Install, calibrate, operate and maintain a Continuous Data Collection System (CDCS) to continuously record the quantity (in tons) of coal as measured by the coal mass measurement device required in A.4.b.(1) of this section. The CDCS will be installed, calibrated, operated and maintained in accordance with the manufacturer's specifications.
   (3) Install, calibrate, maintain, and operate continuous emissions monitoring systems (CEMS) for measuring the opacity of emissions, SO$_2$ emissions, NO$_x$ emissions, and either carbon dioxide (CO$_2$) or oxygen (O$_2$) as specified in 40 CFR Part 60 Subpart D and Section VII.A. of this operating permit.
   (4) Install, calibrate, maintain, and operate a Continuous Data Collection System (CDCS) to continuously record the SO$_2$ concentration, NO$_x$ concentration, carbon dioxide or oxygen content, as specified in 40 CFR Part 60 Subpart D and Section VII.A. of this operating permit.
   (5) Install, calibrate, maintain, and operate a Continuous Opacity Monitoring System (COMS) as specified in 40 CFR Part 60 Subpart D and Section VII.B. of this operating permit.
   (6) Install, calibrate, operate and maintain a Continuous Data Collection System (CDCS) to continuously record the opacity (in percent opacity) as specified in 40 CFR Part 60 Subpart D and Section VII.B. of this operating permit.
   (7) The owner or operator shall determine and record the heat input rate, in units of MMBtu/hr, to each affected unit for every hour or part of an hour any fuel is combusted (40 CFR Part 75.10(c)).
   (8) The results of the 1-hour average for SO$_2$ emissions (in lb/hr), determined in A.4.b.(3) of this section, shall be divided by 2 to obtain the average sulfur emissions (in lb/hour).
Section VI. Specific Operating Conditions (continued)

A. Emission Unit S2.001 (continued)

4. NAC 445B.3405 (NAC 445B.316) *Part 70 Program*
   Compliance, Monitoring, Recordkeeping and Reporting (continued)
   b. Monitoring (continued)
      The *Permittee*, upon startup of S2.001, will:
      (9) Install, calibrate, operate and maintain a fuel flow meter to continuously measure the volume of No. 2 distillate fuel oil and “on-spec” used oil (in gallons) combusted in S2.001. The fuel flow meter will be installed at an appropriate location in the fuel delivery system to accurately and continuously measure the fuel combusted in S2.001 in accordance with the requirements prescribed in 40 CFR Part 75.
      (10) Data from a continuous flow monitoring system and moisture monitoring system as applicable as required in A.4.b.(3), certified according to the requirements of 40 CFR Part 75.20(c) and appendix A to Part 75, and continuing to meet the applicable quality control and quality assurance requirements of 40 CFR Part 75.21 and appendix B to Part 75 of this chapter, may be used to show continual compliance with the heat input rate in MMBtu/hr as required in A.3.a. Flow rate data and moisture data as applicable, reported to meet the requirements of this permit shall not include substitute data values derived from the missing data procedures in subpart D of Part 75, nor shall the data have been bias adjusted according to the procedures of Part 75. Other methods of determining the heat input rate may be used with the approval of the Director.
      (11) Using either the *Flow Proportional* or *Manual Method* described in 40 CFR Part 75, Appendix D 2.2.1, 2.2.3, or 2.2.4 prepare a sample representative of the No. 2 distillate fuel oil and “on-spec” used oil combusted in S2.001 for each day (or a composite sample representative of the entire tank upon delivery of No. 2 distillate fuel oil and “on-spec” used oil to the tank) while combusting that fuel. The sulfur content of the fuel oil sample shall be determined in accordance with the requirements prescribed in 40 CFR Part 75, Appendix D or the CEMS required in A.4.b.(3). The gross calorific value of this sample will be determined in accordance with ASTM D240-00 “Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter” or ASTM D4809-00, “Standard Test Method for Heat or Combustion of Hydrocarbon Fuels by Bomb Calorimeter (High Precision Method)” and the requirements prescribed in 40 CFR Part 75, Appendix E, Section 3.3.6.2. Alternatively, an estimated maximum gross calorific value of 20,000 Btu per pound (Btu/lb) @ 7.4 pounds per gallon (lb/gal) for No. 2 distillate fuel oil may be used.
      (12) Monitor the hours of operation of S2.001 on a daily basis.
   c. 40 CFR Part 64 Compliance Assurance Monitoring Program
      On and after the date of initial startup, *Permittee* will:
      (1) Install, calibrate, operate and maintain devices for the measurement of the internal pressure drop across the baghouse controlling emissions from S2.001.
      (2) Conduct and record a reading of the baghouse pressure drop across the inlet and outlet of the baghouse controlling emissions from S2.001 four or more data values equally spaced over each hour and averaged the values as specified in 40 CFR Part 64.3(b)(4)(ii). Record any monitored excursions from the indicator range and record any corrective actions taken.
      (3) The indicator range for the baghouse internal pressure drop shall not exceed 9.5 inches of water for the baghouse controlling emissions from S2.001. Excursions shall be defined as anytime the baghouse pressure drop exceeds this indicator range.
      (4) On an annual basis, perform an inspection of the baghouse system for S2.001 including a visual inspection of the bags and all connecting points. Annual baghouse inspection records must show that observations were made and include records of any corrective actions taken.
Section VI. Specific Operating Conditions (continued)

A. Emission Unit S2.001 (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
   Compliance, Monitoring, Recordkeeping and Reporting (continued)
   c. 40 CFR Part 64 Compliance Assurance Monitoring Program
       On and after the date of initial startup, Permittee will:
       (5) The required monitoring established in A.4.c.(1) through (4) above, will be maintained in a contemporaneous log containing at a minimum, the following recordkeeping for each week, or part of the week that S2.001 is operating:
           (i) Results of the reading of the internal pressure drop across the baghouse controlling emissions from S2.001, each week that S2.001 is in operation.
           (ii) Results of any excursions of the internal pressure drop across the baghouse and any corrective actions taken.
           (iii) Results and verification of the annual baghouse inspection and documentation of the inspection date of the baghouse controlling emissions from S2.001, and any corrective actions taken.
       (6) Report excursions as required in 40 CFR Part 64.9 and Section V.C.3 of this operating permit.

d. Recordkeeping
   The Permittee will maintain a contemporaneous log containing at a minimum, the following recordkeeping for each day, or part of a day that S2.001 is operating:
   (1) Follow the notification and recordkeeping provisions of 40 CFR Part 60.7 and 60.19.
   (2) The total hourly quantity of:
       (i) Coal (in tons) combusted, for each hour of operation based on the data recorded by the CDCS as required in A.4.b.(2) of this section.
       (ii) No. 2 distillate fuel oil and “on-spec” used oil (in gallons) combusted, for each day of operation, as provided by the fuel flow meter required in A.4.b.(9) of this section.
   (3) Daily hours of operation:
       (i) The total daily hours of operation for the corresponding date.
       (ii) For boiler start-up, flame stabilization, and shut-down, record the total hours of start-up, flame stabilization, and shut-down operations for the corresponding date.
Section VI. Specific Operating Conditions (continued)

A. Emission Unit S2.001 (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
   Compliance, Monitoring, Recordkeeping and Reporting (continued)
   d. Recordkeeping (continued)
      The Permittee will maintain a contemporaneous log containing at a minimum, the following recordkeeping for each day, or part of a day that S2.001 is operating:
      (4) (i) The average hourly heat input of the coal, fuel oil, or “on-spec” used oil combusted, in MMBtu per hour. The hourly heat inputs will be calculated as follows and as described in A.4.b.(10) of this section:

\[
HI = Q_w \times (1/F) \times (%CO_2/100)
\]

Where:
HI = Hourly heat input rate during unit operation, MMBtu/hr
Q_w = Hourly average volumetric flow rate during unit operation, wet basis, scfh
F, F_c = factor representing a ratio of the volume of dry flue gases generated to the calorific value of the fuel combusted (F), and a factor representing a ratio of the volume of CO_2 generated to the calorific value of the fuel combusted (F_c), respectively. Table 1 lists the values of F and F_c for different fuels.

<table>
<thead>
<tr>
<th>Fuel</th>
<th>F-factor (dscf/MBtu)</th>
<th>Fc-factor (scf CO_2/MMBtu)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal (as defined by ASTM D388–99):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anthracite</td>
<td>10,100</td>
<td>1,970</td>
</tr>
<tr>
<td>Bituminous</td>
<td>9,780</td>
<td>1,800</td>
</tr>
<tr>
<td>Sub-bituminous</td>
<td>9,820</td>
<td>1,840</td>
</tr>
<tr>
<td>Lignite</td>
<td>9,860</td>
<td>1,910</td>
</tr>
<tr>
<td>Oil</td>
<td>9,190</td>
<td>1,420</td>
</tr>
</tbody>
</table>

1Determined at standard conditions: 20 °C (68 °F) and 29.92 inches of mercury.
Section VI. Specific Operating Conditions (continued)

A. Emission Unit S2.001 (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
   Compliance, Monitoring, Recordkeeping and Reporting (continued)
   d. Recordkeeping (continued)
      (4) (ii) Equations F–7a and F–7b may be used in lieu of the F or \( F_c \) factors specified in the table above to calculate a site-specific dry-basis F factor (dscf/MMBtu) or a site-specific \( F_c \) factor (scf CO\(_2\)/MMBtu), on either a dry or wet basis. At a minimum, the site-specific F or \( F_c \) factor must be based on 9 samples of the fuel. Fuel samples taken during each run of a RATA are acceptable for this purpose. The site-specific F or \( F_c \) factor must be re-determined at least annually, and the value from the most recent determination must be used in the emission calculations. Alternatively, the previous F or \( F_c \) value may continue to be used if it is higher than the value obtained in the most recent determination. The owner or operator shall keep records of all site-specific F or \( F_c \) determinations, active for at least 3 years. (Calculate all F and \( F_c \) factors at standard conditions of 20 °C (68 °F) and 29.92 inches of mercury).

   Eq. F-7a:
   \[
   F = \frac{3.64(\%H) + 1.53(\%C) + 0.57(\%S) + 0.14(\%N) - 0.46(\%O)}{GCV} \times 10^6
   \]

   Eq. F-7b:
   \[
   F_c = \frac{321 \times 10^3(\%C)}{GCV}
   \]

   Where:
   H, C, S, N, and O are content by weight of hydrogen, carbon, sulfur, nitrogen, and oxygen (expressed as percent), respectively, as determined on the same basis as the gross calorific value (GCV) by ultimate analysis of the fuel combusted using ASTM D3176–89 (Reapproved 2002), Standard Practice for Ultimate Analysis of Coal and Coke, (solid fuels), ASTM D5291–02, Standard Test Methods for Instrumental Determination of Carbon, Hydrogen, and Nitrogen in Petroleum Products and Lubricants, (liquid fuels) or computed from results using ASTM D1945–96 (Reapproved 2001), Standard Test Method for Analysis of Natural Gas by Gas Chromatography, or ASTM D1946–90 (Reapproved 2006), Standard Practice for Analysis of Reformed Gas by Gas Chromatography, (gaseous fuels) as applicable.

Section VI. Specific Operating Conditions (continued)

A. Emission Unit S2.001 (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
   Compliance, Monitoring, Recordkeeping and Reporting (continued)
   d. Recordkeeping (continued)
   The Permittee will maintain a contemporaneous log containing at a minimum, the following recordkeeping for each
   day, or part of a day that S2.001 is operating:
   (4) (iii) For affected units that combust a combination of a fuel (or fuels) listed in Table 1 above with any fuel(s)
   not listed in Table 1, the F or F_c value is subject to the Administrator's approval.
   (iv) For affected units that combust combinations of fuels listed in Table 1 above, prorate the F or F_c factors
   determined by section A.4.d.(4)(i) or A.4.d.(4)(ii) in accordance with the applicable formula as follows:

   \[ F = \sum_{i=1}^{n} X_i F_i \quad F_c = \sum_{i=1}^{n} X_i (F_c)_i \]

   Where,
   \( X_i \) = Fraction of total heat input derived from each type of fuel (e.g., bituminous coal, sub-bituminous
   coal). Each \( X_i \) value shall be determined from the best available information on the quantity of fuel
   combusted and the GCV value, over a specified time period. The owner or operator shall explain the
   method used to calculate \( X_i \) in the hardcopy portion of the monitoring plan for the unit. The \( X_i \) values
   may be determined and updated either hourly, daily, weekly, or monthly. In all cases, the prorated F
   factor used in the emission calculations shall be determined using the \( X_i \) values from the most recent
   update.
   \( F_i \) or \( (F_c)_i \) = Applicable F or F_c factor for each fuel type determined in accordance with section
   \( n \) = Number of fuels being combusted in combination.
   (v) As an alternative to prorating the F or F_c factor as described in section A.4.d.(4)(iv), a “worst-case” F or
   F_c factor may be reported for any unit operating hour. The worst-case F or F_c factor shall be the highest F
   or F_c value for any of the fuels combusted in the unit.

(5) The hourly emission rate of PM and PM_{10} each:
   (i) In pounds per hour (lbs/hr). The hourly emission rates will be calculated from the hourly heat input rate,
   as determined in A.4.d.(4) of this section, and the emission factor derived in A.4.a.(14) of this section.

(6) The emission rates of sulfur and SO_2 each, in pounds per hour (lbs/hr) and pounds per million Btu
   (lbs/MMBtu) measured by the CEMS required in A.4.b.(3) of this section for each averaging period described
   below:
   (i) The sulfur emissions in pounds per hour (lbs/hr) for each 1-hour period. Sulfur emissions will be one-
   half of the SO_2 emissions measured.
   (ii) The Sulfur and SO_2 emissions in pounds per million Btu (lbs/MMBtu).

The compliance determination procedures established in 40 CFR Part 60 will be used to convert the continuous
monitoring data into units of the applicable standards (e.g. lb/MMBtu and lbs/hr, 1-hour, and 3-hour average
periods).
Section VI. Specific Operating Conditions (continued)

A. Emission Unit S2.001 (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
   Compliance, Monitoring, Recordkeeping and Reporting (continued)
   d. Recordkeeping (continued)
      The Permittee will maintain a contemporaneous log containing at a minimum, the following recordkeeping for each day, or part of a day that S2.001 is operating:
      (7) The annual emissions rate of NOx in tons per year (tons/yr) and pounds per million Btu (lbs/MMBtu) measured by the CEMS required in A.4.b.(3) of this section. Total monthly emissions will be added to the previous 11 months in order to determine the 12-month rolling average. The compliance determination procedures established in 40 CFR Part 60 will be used to convert the continuous monitoring data into units of the applicable standard (e.g. ton/yr, lb/MMBtu, 3-hour, monthly, and 12-month rolling average).
      (8) The measured opacity (in percent opacity) from the continuous opacity monitoring system required in A.4.b.(5) of this section. The opacity will be determined from reducing all data from the successive 10-second readings and recorded for the following:
         (i) Each 6-minute average, except for one 6-minute period per hour of up to 27 percent opacity as established in NAC 445B.22017.3 and as set forth in 40 CFR Part 60.13.
         (ii) Each 6-minute average, except for one 6-minute period per hour of up to 27 percent opacity as established in 40 CFR Part 60.42(a)(2).
      (9) Observations made and any corrective actions taken as a result of the baghouse inspection required in A.4.c.(4).
      (10) Retain all records of laboratory analyses performed to show that all “on-spec” used oil is nonhazardous as defined by the requirements of 40 CFR Part 279, Standards for the Management of Used Oil.
      (11) Retain recordkeeping which documents that the all of the “on-spec” used oil burned in S2.001 is generated only in Sierra Pacific Power Company d/b/a NV Energy facilities.
      (12) Retain all required records in accordance with Section V.A of this operating permit.
   e. Reporting
      Permittee will:
      (1) Report all excess emissions from S2.001 as required in Section III.B and III.C of this operating permit.
      (2) Report excess emissions and monitoring system performance (MSP) to the Director and to the Administrator of U.S. EPA each calendar quarter. The quarterly reports will be postmarked by the 30th day following the end of each calendar quarter. Each excess emission and MSP report will include the information required in 40 CFR Part 60.7(c). Periods of excess emissions and monitoring systems (MS) downtime to be reported will be in accordance with 40 CFR Part 60.45(g)(1) through (3). [40 CFR Part 60.45(g)]
      (3) Report all deviations as required in Sections V.C and V.F. of this operating permit.
      (4) Report all excursions as required in section VI.A.4.c.(6) of this operating permit.
      (5) Submit semi-annual monitoring reports as required in Section V.C of this operating permit.
      (6) Certify compliance with all applicable requirements as required in Section V.E of this operating permit.
      (7) Report the results of the performance tests required in A.4.a of this section.

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Section VI. Specific Operating Conditions (continued)

A. Emission Unit S2.001 (continued)

5. NAC 445B.3405 (NAC 445B.316) Part 70 Program

National Emission Standards for Hazardous Air Pollutants (NESHAP) for Source Categories (Federal Only Requirement)

NESHAP for Coal and Oil-Fired Utility Steam Generating Units (EGU), 40 CFR Part 63, Subpart UUUU (40 CFR 63.9980, et. seq.) — Existing stationary EGU (40 CFR 63.9982(a)(1))

a. Permittee will be required to comply with the applicable requirements as required in Section VIII. of this operating permit.
Section VI. Specific Operating Conditions (continued)

B. Emission Unit S2.002

System 02 – Unit #2 Boiler (REVISED 05/2015)

| Location UTM (Zone 11, NAD 83) |
|-----------------|------------------|
| Facility ID No. | Permit No.       |
| A0375           | AP4911-0457.03   |

Foster Wheeler balanced draft, dry bottom, single wall fired geometry boiler, model # Monowall, serial # 85-8051, Commencement of Construction: April 11, 1979

1. NAC 445B.3405 (NAC 445B.316) Part 70 Program

Air Pollution Control Equipment

   a. Control system consisting of:
      (1) Baghouse to control particulate matter emissions.
      (2) Spray dryer using a lime slurry with a rated 70% minimum sulfur dioxide removal efficiency.
      (3) Air atomized ignitors to control particulates and opacity during startup and for flame stabilization.
      (4) Multi-stage combustion to control nitrogen oxides emissions through the use of Low NOx Burners and Over Fired Air.

   b. Descriptive Stack Parameters

      Stack Height: 450.2 ft
      Stack Diameter: 17.0 ft
      Nominal Exhaust Temperature: 203.0 °F
      Nominal Volumetric Flowrate: 663,991.0 dscfm

2. NAC 445B.3405 (NAC 445B.316) Part 70 Program

Emission Limits

On and after the date of startup of S2.002, Permittee will not discharge or cause the discharge into the atmosphere from the exhaust stack of S2.002, the following pollutants in excess of the following specified limits:

   a. NAC 445B.2203 Federally Enforceable SIP Requirement – The discharge of PM10 (particulate matter less than 10 microns in diameter) to the atmosphere will not exceed 0.162 pound per million Btu.

   b. 40 CFR Part 60.42Da(a) Federally Enforceable New Source Performance Standard Requirement – On and after the date on which the performance test required to be conducted under 40 CFR Part 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility for which construction, reconstruction, or modification commenced before or on February 28, 2005, any gases that contain particulate matter in excess of:

      (1) 13 ng/J (0.03 lb/million Btu) heat input derived from the combustion of solid, liquid, or gaseous fuel;
      (2) 1 percent of the potential combustion concentration (99 percent reduction) when combusting solid fuel;
      (3) and 30 percent of potential combustion concentration (70 percent reduction) when combusting liquid fuel.

   c. NAC 445B.305 Part 70 Program – The discharge of PM10 (particulate matter less than 10 microns in diameter) to the atmosphere will not exceed 86.43 pounds per hour.

   d. NAC 445B.305 Part 70 Program – The discharge of PM (particulate matter) to the atmosphere will not exceed 86.43 pounds per hour.

   e. 40 CFR Part 60.44Da(a) Federally Enforceable New Source Performance Standard Requirement – On and after the date on which the initial performance test required to be conducted under 40 CFR Part 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility, except as provided under 40 CFR Part 60.44Da(a), any gases which contain nitrogen oxides (expressed as NO2) in excess of the following emission limits, based on a 30-day rolling average, except as provided under 40 CFR Part 60.48Da(j)(1):

      (1) 210 ng/J (0.50 lb/million Btu) heat input derived from the combustion of Sub-bituminous coal;
      (2) 260 ng/J (0.60 lb/million Btu) heat input derived from the combustion of Bituminous coal;
      (3) 65 percent reduction of potential combustion concentration when combusting solid fuel.

   f. NAC 445B.305 Part 70 Program – The discharge of NOX (nitrogen oxides) to the atmosphere will not exceed 6,309 tons per year, based on a 12-month rolling average.
Section VI. Specific Operating Conditions (continued)

B. Emission Unit S2.002 (continued)

2. NAC 445B.3405 (NAC 445B.316) Part 70 Program
   Emission Limits (continued)
   On and after the date of startup of S2.002, Permittee will not discharge or cause the discharge into the atmosphere from the exhaust stack of S2.002, the following pollutants in excess of the following specified limits:
   g. NAC 445B.22047 Federally Enforceable SIP Requirement — The discharge of sulfur to the atmosphere will not exceed 1,728.6 pounds per hour.
   h. NAC 445B.22063 State-Only Requirement — The allowable emission of sulfur from fossil fuel-fired power generating unit Number 2 Sierra Pacific Power Company dba NV Energy’s North Valmy Station, located in Air Quality Control Region 147, Basin 64, Clovers Area, must not be greater than 0.3 pounds per million Btu's (0.540 kilograms per million kg-cal). The efficiency of the capture of sulfur must be maintained at a minimum of 70 percent, based on a 30-day rolling average.
   i. 40 CFR Part 60.43Da(a) and (g) Federally Enforceable New Source Performance Standard Requirement — On and after the date on which the initial performance test required to be conducted under 40 CFR Part 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility which combusts solid fuel or solid-derived fuel and for which construction, reconstruction, or modification commenced before or on February 28, 2005, except as provided under paragraphs 40 CFR Part 60.43Da(c), (d), (f) or (h), any gases that contain sulfur dioxide in excess of:
      (1) 520 ng/J (1.20 lb/million Btu) heat input and 10 percent of the potential combustion concentration (90 percent reduction), or
      (2) 30 percent of the potential combustion concentration (70 percent reduction), when emissions are less than 260 ng/J (0.60 lb/million Btu) heat input.
   Compliance with the emission limitation and percent reduction requirements under this section are both determined on a 30-day rolling average basis except as provided under paragraph (c) of this section.
   j. NAC 445B.305 Part 70 Program — The discharge of SO\(_2\) (sulfur dioxide) to the atmosphere will not exceed 1,728.61 pounds per hour.
   k. NAC 445B.305 Part 70 Program — The discharge of CO (carbon monoxide) to the atmosphere will not exceed 8,340.0 pounds per hour.
   l. NAC 445B.305 Part 70 Program — The discharge of VOC (volatile organic compounds) to the atmosphere will not exceed 55.0 pounds per hour.
   m. NAC 445B.305 Part 70 Program — The discharge of Pb (lead) to the atmosphere will not exceed 23.0 pounds per hour.
   n. NAC 445B.22017 Federally Enforceable SIP Requirement — The opacity from S2.002 will not equal or exceed 20%. The opacity must be determined as set forth in 445B.22017.1(a) or (b). S2.002 is allowed one 6-minute period per hour of not more than 27 percent opacity as set forth in 40 CFR part 60.42Da(b).
   o. 40 CFR Part 60.42Da(b) Federally Enforceable New Source Performance Standard Requirement — The opacity from S2.002 will not exceed 20% for a period of 6 minutes in any one hour, except for one 6-minute period per hour of not more than 27% opacity.
Section VI. Specific Operating Conditions (continued)

B. Emission Unit S2.002 (continued)

2. NAC 445B.3405 (NAC 445B.316) Part 70 Program

Emission Limits (continued)

On and after the date of startup of S2.002, Permittee will not discharge or cause the discharge into the atmosphere from the exhaust stack of S2.002, the following pollutants in excess of the following specified limits:

(1) Filterable particulate matter (PM) will not exceed 3.0E-2 lb/MMBtu or 3.0E-1 lb/MWh (gross electric output), total non-Hg HAP metals will not exceed 5.0E-5 lb/MMBtu or 5.0E-1 lb/GWh, OR the following individual HAP metals:
   (i) Antimony (Sb) will not exceed 8.0E-1 lb/TBtu or 8.0E-3 lb/GWh,
   (ii) Arsenic (As) will not exceed 1.1 lb/TBtu or 2.0E-2 lb/GWh,
   (iii) Beryllium (Be) will not exceed 2.0E-1 lb/TBtu or 2.0E-3 lb/GWh,
   (iv) Cadmium (Cd) will not exceed 3.0E-1 lb/TBtu or 3.0E-3 lb/GWh,
   (v) Chromium (Cr) will not exceed 2.8 lb/TBtu or 3.0E-2 lb/GWh,
   (vi) Cobalt (Co) will not exceed 8.0E-1 lb/TBtu or 8.0E-3 lb/GWh,
   (vii) Lead (Pb) will not exceed 1.2 lb/TBtu or 2.0E-2 lb/GWh,
   (viii) Manganese (Mn) will not exceed 4.0 lb/TBtu or 5.0E-2 lb/GWh,
   (ix) Nickel (Ni) will not exceed 3.5 lb/TBtu or 4.0E-2 lb/GWh,
   (x) Selenium (Se) will not exceed 5.0 lb/TBtu or 6.0E-2 lb/GWh;

(2) Hydrogen chloride (HCl) will not exceed 2.0E-3 lb/MMBtu or 2.0E-2 lb/MWh OR sulfur dioxide (SO2) will not exceed 2.0E-1 lb/MMBtu or 1.5 lb/MWh; and

(3) Mercury (Hg) will not exceed 1.2 lb/TBtu or 1.3E-2 lb/GWh.

q. Specific Acid Rain Requirements

(1) Sierra Pacific Power Company d/b/a NV Energy – North Valmy Generating Station will not exceed the SO2 emission levels (acid rain allowances) for S2.002 in the indicated years as shown in the following table without holding the required acid rain allowances in accordance with the Acid Rain provisions [40 CFR Part 72.9]:

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Calendar-Year</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>SO2 (sulfur dioxide)</td>
<td>Acid-Rain-Allowance</td>
<td>3,966</td>
<td>3,966</td>
<td>3,966</td>
<td>3,966</td>
<td>3,966</td>
</tr>
<tr>
<td>NOx (nitrogen oxides)</td>
<td>Acid-Rain Emission Limit (lb/MMBtu, annual average)*</td>
<td>0.46</td>
<td>0.46</td>
<td>0.46</td>
<td>0.46</td>
<td>0.46</td>
</tr>
</tbody>
</table>

*Note: the NOx emission limit is effective through December 31, 2019.

(2) Sierra Pacific Power Company d/b/a NV Energy – North Valmy Generating Station will comply with the SO2 acid rain permit application signed December 16, 2014 entitled “Acid Rain Permit Application” and all references contained therein, which is hereby incorporated by reference into this operating permit as Attachment 1 (NAC 445B.305).

(3) Sierra Pacific Power Company d/b/a NV Energy – North Valmy Generating Station will comply with the NOx acid rain permit application signed December 16, 2014 entitled “Acid Rain Permit Application” and all references contained therein, including the Phase II NOx Compliance Plan and the Phase II NOx Averaging Plan (effective from January 1, 2015 to December 31, 2019), which are hereby incorporated by reference into this operating permit as Attachment 1 (40 CFR Part 72.40, NAC 445B.305).
Section VI. Specific Operating Conditions (continued)

B. Emission Unit S2.002 (continued)

3. NAC 445B.3405 (NAC 445B.316) Part 70 Program Operating Parameters
   a. Maximum allowable heat input for any fuel combusted in S2.002 will not exceed 2,881.02 MMBtu/hr, averaged over a one-hour period.
   b. S2.002 may combust coal as the primary fuel. The use of #2 fuel oil and “on-spec” used oil is designated for boiler startup and flame stabilization purposes during the startup or shutdown of a coal burner. “On-spec” used oil is defined as nonhazardous oil meeting the requirements of 40 CFR Part 279, Standards for the Management of Used Oil.
   c. All “on-spec” used oil combusted in S2.002 will be obtained only from Sierra Pacific Power d/b/a NV Energy facilities.
   d. Hours S2.002 may operate 8,760 hours per calendar year.

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program Compliance, Monitoring, Recordkeeping and Reporting
   a. Compliance/Performance Testing Permittee, will conduct and record the annual compliance test within 90 days of the anniversary date of the previous annual compliance testing. As part of the annual compliance test the Permittee shall:
      (1) Conduct and record a Method 5 performance test for particulate matter (PM) on the exhaust stack of S2.002 consisting of three valid runs. The Method 5 emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A, Method 5, and include the back-half catch. Compliance with the particulate matter standards contained in B.2.a through B.2.d shall be determined by using the dry basis F factor (O2) procedures in Method 19 to compute the emission rate. Method 5 shall be used to determine the particulate matter concentration. The sampling time and sample volume for each run shall be at least 120 minutes and 1.70 dscm (60 dscf). The probe and filter holder heating system in the sampling train may be set to provide an average gas temperature of no greater than 160 +/- 14 °C (320 +/- 25 °F). For each particulate run, the emission rate correction factor, integrated or grab sampling and analysis procedures of Method 3B shall be used to determine the O2 concentration. The O2 sample shall be obtained simultaneously with, and at the same traverse points as, the particulate run. If the particulate run has more than 12 traverse points, the O2 traverse points may be reduced to 12 provided that Method 1 is used to locate the 12 O2 traverse points (40 CFR Part 60.50Da(b)).
      (2) Conduct and record a Method 201A and 202 performance test for PM10 on the exhaust stack of S2.002 consisting of three valid runs. The Method 201A and 202 emissions tests must be conducted in accordance with 40 CFR Part 51, Appendix M, Method 201A and 202. The sample volume for each test run shall be at least 1.7 dscm (60 dscf). Test runs must be conducted for up to two hours in an effort to collect this minimum sample.
      (3) The Method 201A and 202 emissions tests on the exhaust stack of S2.002 may be replaced by the Method 5 performance test with the back-half catch (Method 5 and 202) consisting of three valid runs, provided that all particulate matter captured in the Method 5 and 202 test shall be considered PM10 emissions for determination of compliance with the emission limitations established in this permit. The sample volume for each test run shall be at least 1.7 dscm (60 dscf). Test runs must be conducted for up to two hours in an effort to collect this minimum sample.
      (4) Conduct and record a Method 6 or 6C performance test for SO2 on the exhaust stack of S2.002 consisting of three valid runs. The Method 6 or 6C emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A, Method 6 or 6C.
      (5) Conduct and record a Method 7 or 7E performance test for NOx on the exhaust stack of S2.002 consisting of three valid runs. The Method 7 or 7E emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A, Method 7 or 7E.
      (6) Conduct and record a Method 10 performance test for CO on the exhaust stack of S2.002 consisting of three valid runs. The Method 10 emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A, Method 10.
Issued to: Sierra Pacific Power Company (dba NV Energy) – North Valmy Generating Station, as Permittee
Section VI. Specific Operating Conditions (continued)

B. Emission Unit S2.002 (continued)

4. NAC 445B.3405 (NAC 445B.316) *Part 70 Program*  
Compliance, Monitoring, Recordkeeping and Reporting (continued)

a. Compliance/Performance Testing (continued)

(7) Conduct and record a Method 25 or 25A in conjunction with a Method 18 performance test for VOC on the exhaust stack of **S2.002** consisting of three valid runs. The Method 25, 25A and 18 emissions test(s) must be conducted in accordance with 40 CFR Part 60, Appendix A, Method 25, 25A and 18.

(8) Conduct and record a Method 29 performance test of Pb on the exhaust stack of **S2.002** consisting of three valid runs. The Method 29 emission test must be conducted in accordance with 40 CFR Part 60, Method 29.

(9) If an anticipated major boiler overhaul is to be performed which will coincide with a compliance test, the compliance testing will be performed prior to the overhaul, or as soon as practicable following the overhaul, but not earlier than 60 days following the overhaul.

(10) During each compliance test, record the opacity of the discharge from the exhaust stack of **S2.002** using either a calibrated continuous opacity monitor or a visible emissions evaluation conducted in accordance with 40 CFR Part 60, Appendix A, Method 9. The Method 9 visible emissions test must be conducted by a certified visible emissions reader for a period of at least 60 minutes (recorded as ten 6-minute averages).

(11) The performance tests will be conducted at the maximum operating heat input rate limit established in B.3 of this section for each pollutant required to be tested, unless otherwise approved pursuant to NAC 445B.252.2 & 3. The Permittee shall make available to the director such records as may be necessary to determine the conditions of the test of performance. Operations during periods of startup, shutdown and malfunction must not constitute representative conditions of a test of performance unless otherwise specified in the applicable standard (NAC 445B.252.3).

(12) The Permittee shall give notice to the director 30 days before the test of performance to allow the director to have an observer present. A written testing procedure for the test of performance must be submitted to the director at least 30 days before the test of performance to allow the director to review the proposed testing procedures (NAC 445B.252.4). The alternative to the reference methods and procedures provided in 40 CFR Part 60.48Da(e) may be utilized to the extent that they are applicable to **S2.002**, and must be identified in the testing procedures as alternative methods.

(13) During each performance test required in B.4.a.(1) through (8) of this section, record the quantity (in tons) of coal combusted during each test run, the heat content value of the coal combusted during each test run (in Btu/ton) and include these data in the test results submitted. The emissions results of the Method 5 with the back-half catch or Method 201A and 202, Method 6 or 6C, Method 7 or 7E, Method 10, Method 25A or 25 and 18, and Method 29 performance tests for PM10, SO2, NOx, CO, VOC, and Pb must be converted to emissions of PM10, SO2, sulfur, NOx, CO, VOC, and Pb (lb/hr and lb/MMBtu), each.

(14) As a result of the most recent performance test performed in B.4.a.(1), (2), and (3) of this section, derive emission factors for each of the following:

(i) Pounds of PM per MMBtu (lbs-PM/MMBtu), filterable and condensable.
(ii) Pounds of PM10 per MMBtu (lbs-PM10/MMBtu), filterable and condensable.

These emissions factors will be based on the average of the 3 test runs.

(15) Within 60 days after completing the performance tests and opacity observations contained in B.4.a. of this section, the Permittee shall furnish the director a written report of the results of the performance tests, the opacity observations and the resultant emissions factors. All information and analytical results of testing and sampling must be certified as to the truth and accuracy and as to their compliance with NAC 445B.001 to 445B.3689 (NAC 445B.252.8).

(16) Conduct and record the Relative Accuracy Test Audit (RATA) as specified in Section VII.A.
Section VI. Specific Operating Conditions (continued)

B. Emission Unit S2.002 (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program Compliance, Monitoring, Recordkeeping and Reporting (continued)

   b. Monitoring

   The Permittee, upon startup of S2.002, will:

   (1) Install, calibrate, operate and maintain a coal mass measurement device to continuously measure the amount of coal (in tons) combusted in S2.002. The coal mass measurement device will be installed at an appropriate location in the fuel delivery system to accurately and continuously measure the fuel combusted in S2.002.

   (2) Install, calibrate, operate and maintain a Continuous Data Collection System (CDCS) to continuously record the quantity (in tons) of coal as measured by the coal mass measurement device required in B.4.b.(1) of this section. The CDCS will be installed, calibrated, operated and maintained in accordance with the manufacturer’s specifications.

   (3) Install, calibrate, maintain, and operate a continuous emissions monitoring systems (CEMS), and record the output of the system, for measuring the opacity of emissions, SO₂ emissions, NOₓ emissions and the CO₂ (or O₂) content of the flue gas at each location where SO₂ and NOₓ emissions are monitored as specified in 40 CFR Part 60 Subpart Da and Section VII.A. of this operating permit.

   (4) Install, calibrate, maintain, and operate a CDCS to continuously record the SO₂ concentration, NOₓ concentration, carbon dioxide or oxygen content, as specified in 40 CFR Part 60 Subpart Da and Section VII.A. of this operating permit.

   (5) Install, calibrate, maintain, and operate a Continuous Opacity Monitoring System (COMS) as specified in 40 CFR Part 60 Subpart D and Section VII.B. of this operating permit.

   (6) Install, calibrate, operate and maintain a CDCS to continuously record the opacity (in percent opacity) as specified in 40 CFR Part 60 Subpart D and Section VII.B. of this operating permit.

   (7) The owner or operator shall determine and record the heat input rate, in units of MM Btu/hr, to each affected unit for every hour or part of an hour any fuel is combusted (40 CFR Part 75.10(c)).

   (8) The results of the 1-hour average for SO₂ emissions (in lb/hr), determined in B.4.b.(3) of this section, shall be divided by 2 to obtain the average Sulfur emissions in lb/hour.

   (9) When it becomes necessary to supplement CEMS data to meet the minimum data requirements in 40 CFR Part 60.49Da(f), the owner or operator shall use the reference methods and procedures as specified in 40 CFR Part 60.49Da(h). Acceptable alternative methods and procedures are given in 40 CFR Part 60.49Da(j).

      (i) Method 6 of appendix A of Part 60 shall be used to determine the SO₂ concentration at the same location as the SO₂ monitor. Samples shall be taken at 60-minute intervals. The sampling time and sample volume for each sample shall be at least 20 minutes and 0.020 dscm (0.71 dscf). Each sample represents a 1-hour average.

      (ii) Method 7 of appendix A of Part 60 shall be used to determine the NOₓ concentration at the same location as the NOₓ monitor. Samples shall be taken at 30-minute intervals. The arithmetic average of two consecutive samples represents a 1-hour average.

      (iii) The emission rate correction factor, integrated bag sampling and analysis procedure of Method 3B of appendix A of Part 60 shall be used to determine the CO₂ (or O₂) concentration at the same location as the CO₂ (or O₂) monitor. Samples shall be taken for at least 30 minutes in each hour. Each sample represents a 1-hour average.

      (iv) The procedures in Method 19 of appendix A of Part 60 shall be used to compute each 1-hour average concentration in ng/J (lb/MMBtu) heat input.
Section VI. Specific Operating Conditions (continued)

B. Emission Unit S2.002 (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program Compliance, Monitoring, Recordkeeping and Reporting (continued)

b. Monitoring

The Permittee, upon startup of S2.002, will:

(10) Data from a continuous flow monitoring system and moisture monitoring system as applicable as required in B.4.b.(3) of this section, certified according to the requirements of 40 CFR Part 75.20(c) and appendix A to Part 75, and continuing to meet the applicable quality control and quality assurance requirements of 40 CFR Part 75.21 and appendix B to Part 75 of this chapter, may be used to show continual compliance with the heat input rate in MMBtu/hr as required in B.3.a. of this section. Flow rate data and moisture data as applicable, reported to meet the requirements of this permit shall not include substitute data values derived from the missing data procedures in subpart D of Part 75, nor shall the data have been bias adjusted according to the procedures of Part 75. Other methods of determining the heat input rate may be used with the approval of the Director.

(11) Install, calibrate, operate and maintain a fuel flow meter to continuously measure the volume of No. 2 distillate fuel oil and “on-spec” used oil (in gallons) combusted in S2.002. The fuel flow meter will be installed at an appropriate location in the fuel delivery system to accurately and continuously measure the fuel combusted in S2.002 in accordance with the requirements prescribed in 40 CFR Part 75.

(12) Using either the Flow Proportional or Manual Method described in 40 CFR Part 75, Appendix D 2.2.1, 2.2.3, or 2.2.4 prepare a sample representative of the No. 2 distillate fuel oil and “on-spec” used oil combusted in S2.002 for each day (or a composite sample representative of the entire tank upon delivery of No. 2 distillate fuel oil and “on-spec” used oil to the tank) while combusting that fuel. The sulfur content of the fuel oil sample shall be determined in accordance with the requirements prescribed in 40 CFR Part 75, Appendix D or the CEMS required in B.4.b.(3). The gross calorific value of this sample will be determined in accordance with ASTM D240-00, “Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter” or ASTM D4809-00, “Standard Test Method for Heat or Combustion of Hydrocarbon Fuels by Bomb Calorimeter (High Precision Method)” and the requirements prescribed in 40 CFR Part 75, Appendix F, Section 3.3.6.2. Alternatively, an estimated maximum gross calorific value of 20,000 Btu per pound (Btu/lb) @ 7.4 pounds per gallon (lb/gal) for No. 2 distillate fuel oil may be used.

(13) Monitor the hours of operation of S2.002 on a daily basis.

c. 40 CFR Part 64 Compliance Assurance Monitoring Program

On and after the date of initial startup, Permittee will:

(1) Install, calibrate, operate and maintain devices for the measurement of the internal pressure drop across the baghouse controlling emissions from S2.002.

(2) Conduct and record a reading of the baghouse pressure drop across the inlet and outlet of the baghouse controlling emissions from S2.002 four or more data values equally spaced over each hour and averaged the values as specified in 40 CFR Part 64.3(b)(4)(ii). Record any monitored excursions from the indicator range and record any corrective actions taken.

(3) The indicator range for the baghouse internal pressure drop shall not exceed 9.5 inches of water for the baghouse controlling emissions from S2.002. Excursions shall be defined as anytime the baghouse pressure drop exceeds this indicator range.

(4) On an annual basis, perform an inspection of the baghouse system for S2.002 including a visual inspection of the bags and all connecting points. Annual baghouse inspection records must show that observations were made and include records of any corrective actions taken.
Section VI. Specific Operating Conditions (continued)

B. Emission Unit S2.002 (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
   Compliance, Monitoring, Recordkeeping and Reporting (continued)
   c. 40 CFR Part 64 Compliance Assurance Monitoring Program (continued)
   (5) The required monitoring established in B.4.c.(1) through (4) above, will be maintained in a contemporaneous log containing at a minimum, the following recordkeeping for each week, or part of the week that S2.002 is operating:
      (i) Results of the reading of the internal pressure drop across the baghouse controlling emissions from S2.002, each week that S2.002 is in operation.
      (ii) Results of any excursions of the internal pressure drop across the baghouse and any corrective actions taken.
      (iii) Results and verification of the annual baghouse inspection and documentation of the inspection date of the baghouse controlling emissions from S2.002, and any corrective actions taken.

   (6) Report excursions as required in 40 CFR Part 64.9 and Section V.C.3 of this operating permit.
   d. Recordkeeping
      The Permittee will maintain a contemporaneous log containing at a minimum, the following recordkeeping for each day, or part of a day that S2.002 is operating:
      (1) Follow the notification and recordkeeping provisions of 40 CFR Part 60.7 and 60.19.
      (2) The total hourly quantity of:
         (i) Coal (in tons) combusted, for each hour of operation based on the data recorded by the CDCS as required in B.4.b.(2) of this section.
         (ii) No. 2 distillate fuel oil and “on-spec” used oil (in gallons) combusted, for each day of operation, as provided by the fuel flow meter required in B.4.b.(11) of this section.
      (3) Daily hours of operation:
         (i) The total daily hours of operation for the corresponding date.
         (ii) For boiler start-up, flame stabilization, and shut down, record the total hours of start-up, flame stabilization, and shut down operations for the corresponding date.
Section VI. Specific Operating Conditions (continued)

B. Emission Unit S2.002 (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
   Compliance, Monitoring, Recordkeeping and Reporting (continued)
   d. Recordkeeping (continued)
      The Permittee will maintain a contemporaneous log containing at a minimum, the following recordkeeping for each day, or part of a day that S2.002 is operating:
      (4) (i) The average hourly heat input of the coal, fuel oil, or “on-spec” used oil combusted, in MMBtu per hour. The hourly heat inputs will be calculated as follows and as described in B.4.b.(10) of this section:

      \[ HI = Q_w \times \left( \frac{1}{F_c} \right) \times \left( \frac{\%CO_2w}{100} \right) \]

      Where:
      HI = Hourly heat input rate during unit operation, MMBtu/hr
      Q_w = Hourly average volumetric flow rate during unit operation, wet basis, scfh
      F, F_c = factor representing a ratio of the volume of dry flue gases generated to the caloric value of the fuel combusted (F), and a factor representing a ratio of the volume of CO_2 generated to the calorific value of the fuel combusted (F_c), respectively. Table 1 lists the values of F and F_c for different fuels.

<table>
<thead>
<tr>
<th></th>
<th>F-factor (dscf/MMBtu)</th>
<th>Fc-factor (scf CO_2/MMBtu)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal (as defined by ASTM D388-99):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anthracite</td>
<td>10,100</td>
<td>1,970</td>
</tr>
<tr>
<td>Bituminous</td>
<td>9,780</td>
<td>1,800</td>
</tr>
<tr>
<td>Sub-bituminous</td>
<td>9,820</td>
<td>1,840</td>
</tr>
<tr>
<td>Lignite</td>
<td>9,860</td>
<td>1,910</td>
</tr>
<tr>
<td>Oil</td>
<td>9,190</td>
<td>1,420</td>
</tr>
</tbody>
</table>

1Determined at standard conditions: 20 °C (68 °F) and 29.92 inches of mercury.
Section VI. Specific Operating Conditions (continued)

B. Emission Unit S2.002 (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program Compliance, Monitoring, Recordkeeping and Reporting (continued)

d. Recordkeeping (continued)

The Permittee will maintain a contemporaneous log containing a minimum, the following recordkeeping for each day, or part of a day that S2.002 is operating:

(4) (ii) Equations F–7a and F–7b may be used in lieu of the F or \(F_c\) factors specified in the table above to calculate a site-specific dry-basis F factor (dscf/MMBtu) or a site-specific \(F_c\) factor (scf CO\(_2\)/MMBtu), on either a dry or wet basis. At a minimum, the site-specific F or \(F_c\) factor must be based on 9 samples of the fuel. Fuel samples taken during each run of a RATA are acceptable for this purpose. The site-specific F or \(F_c\) factor must be re-determined at least annually, and the value from the most recent determination must be used in the emission calculations. Alternatively, the previous F or \(F_c\) value may continue to be used if it is higher than the value obtained in the most recent determination. The owner or operator shall keep records of all site-specific F or \(F_c\) determinations, active for at least 3 years. (Calculate all F and \(F_c\) factors at standard conditions of 20 °C (68 °F) and 29.92 inches of mercury).

\[
F = \frac{3.64(\%H) + 1.53(\%C) + 0.57(\%S) + 0.14(\%N) - 0.46(\%O)}{GCV} \times 10^6
\]

\[
F_c = \frac{321 \times 10^3 (\%C)}{GCV}
\]

Where:

\(H\), \(C\), \(S\), \(N\), and \(O\) are content by weight of hydrogen, carbon, sulfur, nitrogen, and oxygen (expressed as percent), respectively, as determined on the same basis as the gross calorific value (GCV) by ultimate analysis of the fuel combusted using ASTM D3176–89 (Reapproved 2002), Standard Practice for Ultimate Analysis of Coal and Coke, (solid fuels), ASTM D5291–02, Standard Test Methods for Instrumental Determination of Carbon, Hydrogen, and Nitrogen in Petroleum Products and Lubricants, (liquid fuels) or computed from results using ASTM D1945–96 (Reapproved 2001), Standard Test Method for Analysis of Natural Gas by Gas Chromatography, or ASTM D1946–90 (Reapproved 2006), Standard Practice for Analysis of Reformed Gas by Gas Chromatography, (gaseous fuels) as applicable.


(4) (iii) For affected units that combust a combination of a fuel (or fuels) listed in Table 1 above with any fuel(s) not listed in Table 1, the F or \(F_c\) value is subject to the Administrator's approval.
Section VI. Specific Operating Conditions (continued)

B. Emission Unit S2.002 (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
   Compliance, Monitoring, Recordkeeping and Reporting (continued)
   d. Recordkeeping (continued)

   The Permittee will maintain a contemporaneous log containing at a minimum, the following recordkeeping for each day, or part of a day that S2.002 is operating:

   (4) (iv) For affected units that combust combinations of fuels listed in Table 1 above, prorate the F or Fc factors determined by section B.4.d.(4)(i) or B.4.d.(4)(ii) in accordance with the applicable formula as follows:

   \[ F = \sum_{i=1}^{n} X_i F_i \quad F_c = \sum_{i=1}^{n} X_i (F_c)_i \]

   Where,
   \( X_i \) = Fraction of total heat input derived from each type of fuel (e.g., natural gas, bituminous coal, wood). Each \( X_i \) value shall be determined from the best available information on the quantity of fuel combusted and the GCV value, over a specified time period. The owner or operator shall explain the method used to calculate \( X_i \) in the hardcopy portion of the monitoring plan for the unit. The \( X_i \) values may be determined and updated either hourly, daily, weekly, or monthly. In all cases, the prorated F factor used in the emission calculations shall be determined using the \( X_i \) values from the most recent update.

   \( F_i \) or \( (F_c)_i \) = Applicable F or Fc factor for each fuel type determined in accordance with section B.4.d.(4)(i) or B.4.d.(4)(ii).

   n = Number of fuels being combusted in combination.

   (4) (v) As an alternative to prorating the F or Fc factor as described in section B.4.d.(4)(iv), a “worst-case” F or Fc factor may be reported for any unit operating hour. The worst-case F or Fc factor shall be the highest F or Fc value for any of the fuels combusted in the unit.

   (5) The hourly emission rate of PM and PM_{10} each:

   (i) In pounds per hour (lbs/hr). The hourly emission rates will be calculated from the hourly heat input rate, as determined in B.4.d.(4) of this section, and the emission factor derived in B.4.a.(14) of this section.

   (6) The emission rates of sulfur and SO_{2} each, in pounds per hour (lbs/hr) and pounds per million Btu (lbs/MMBtu) measured by the CEMS required in B.4.b.(3) of this section for each averaging period described below:

   (i) The sulfur emissions in pounds per hour (lbs/hr) for each 1-hour period. Sulfur emissions will be one-half of the SO_{2} emissions measured.

   (ii) The Sulfur and SO_{2} emissions in pounds per million Btu (lbs/MMBtu)

The compliance determination procedures established in 40 CFR Part 60 will be used to convert the continuous monitoring data into units of the applicable standards (e.g. lb/MBtu and lbs/hr, 24-hour and 30-day rolling average periods and percent reduction).
Section VI. Specific Operating Conditions (continued)

B. Emission Unit S2.002 (continued)

4. NAC 445B.3405 (NAC 445B.316) Part 70 Program
   Compliance, Monitoring, Recordkeeping and Reporting (continued)
   d. Recordkeeping (continued)
      The Permittee will maintain a contemporaneous log containing at a minimum, the following recordkeeping for each day, or part of a day that S2.002 is operating:
      (7) The annual emissions rate of NOx in tons per year (tons/yr) and pounds per million Btu (lbs/MMBtu) measured by the CEMS required in B.4.b.(3) of this section. The compliance determination procedures established in 40 CFR Part 60.48Da(d) will be used to convert the continuous monitoring data into units of the applicable standard (e.g. lb/MMBtu, 24-hour, 30-day, annual rolling average periods, percent reduction and 1-hour average).
      (8) The measured opacity (in percent opacity) from the continuous opacity monitoring system required in B.4.b.(5) of this section. The opacity will be determined from reducing all data from the successive 10-second readings and recorded for the following:
         (i) Each 6-minute average, except for one 6-minute period per hour of up to 27 percent opacity as established in NAC 445B.22017.3 and as set forth in 40 CFR Part 60.13(h).
         (ii) Each 6-minute average, except for one 6-minute period per hour of up to 27 percent opacity as established in 40 CFR Part 60.42Da(b).
      (9) Observations made and any corrective actions taken as a result of the baghouse inspection required in B.4.c.(4).
      (10) Retain all records of laboratory analyses performed to show that all “on-spec” used oil is nonhazardous as defined by the requirements of 40 CFR Part 279, Standards for the Management of Used Oil.
      (11) Retain recordkeeping which documents that all of the “on-spec” used oil burned in S2.002 is generated only in Sierra Pacific Power Company d/b/a NV Energy facilities.
      (12) Retain all required records in accordance with Section V.A of this operating permit.
   e. Reporting Permittee will:
      (1) Report all excess emissions from S2.002 as required in Section III.B and III.C of this operating permit.
      (2) Report excess emissions and monitoring system performance (MSP) to the Director and to the Administrator of U.S. EPA each calendar quarter. The quarterly reports will be postmarked by the 30th day following the end of each calendar quarter. Each excess emission and MSP report will include the information required in 40 CFR Part 60.7(c). Periods of excess emissions and monitoring systems (MS) downtime to be reported will be in accordance with 40 CFR Part 60.51Da(d).
      (3) Report all deviations as required in Sections V.C and V.F. of this operating permit.
      (4) Report all excursions as required in section VI.B.4.c.(6) of this operating permit.
      (5) Submit semi-annual monitoring reports as required in Section V.C of this operating permit.
      (6) Certify compliance with all applicable requirements as required in Section V.E of this operating permit.
      (7) Report the results of the performance tests required in B.4.a of this section.

5. NAC 445B.3405 (NAC 445B.316) Part 70 Program
   National Emission Standards for Hazardous Air Pollutants (NESHAP) for Source Categories (Federal Only Requirement)
   NESHAP for Coal and Oil-Fired Utility Steam Generating Units (EGU), 40 CFR Part 63, Subpart UUUUU (40 CFR 63.9980, et seq.) – Existing stationary EGU (40 CFR 63.9982(a)(1))
   a. Permittee will be required to comply with the applicable requirements as required in Section VIII. of this operating permit.
Issued to: Sierra Pacific Power Company (dba NV Energy) – North Valmy Generating Station, as Permittee

Section XI. Schedules of Compliance

A. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Within 270 days of issuance of this operating permit, the Permittee will install a device to monitor and record PM$_2.5$ and NO$_x$ concentrations as stated in Section V.G. of this operating permit.

B. NAC 445B.3405 (NAC 445B.316) Part 70 Program
Within 180 days of issuance of this operating permit, the Permittee will comply with the monitoring requirements in Section VI.Y.4.a.(1) and VI.Z.4.a.(1) of this operating permit.

As part of Nevada’s Regional Haze State Implementation Plan’s (SIP) Long-Term Strategy to achieve reasonable progress, the Permittee shall shutdown and permanently cease operation of System 01 (S2.001) and System 02 (S2.002) no later than December 31, 2028.

*****End of Schedules of Compliance*****