

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

Provisions provided in the following ATC permit issued by Clark County Department of Environment and Sustainability for the Apex Plant are hereby incorporated and adopted 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.



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Marci Henson, Director

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: August 3, 2022

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
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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.

A handwritten signature in blue ink that reads "Theodore A. Lendis".

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), which is designated as an attainment area for 8-hour ozone (regulated through NO_x 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, PM_{2.5}, NO_x, CO, SO₂, and a 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 NO_x). The current SIP revision is for the second implementation period (2018–2028), and relies on the findings from the four-factor analysis to achieve reasonable progress in 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 NO_x emissions with this ATC.~~

~~The table below summarizes the source potential to emit (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 ¹~~

Pollutant	PM₁₀	PM_{2.5}	NO_x	CO	SO₂	VOC	HAP²	HAP² (HCl)	GHG³
Tons/year	335.90	203.13	1,905.45	974.30	1,646.77	9.40	22.97	21.12	697,459
			1,399.45⁴						

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. GHG = greenhouse gas pollutants.

⁴ New NO_x PTE will be effective no later than two years after the EPA’s approval of the control determination. NO_x 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 HH; 40 CFR Part 63, Subpart ZZZZ; and 40 CFR Part 63, Subpart AAAAA. By meeting the requirements of 40 CFR Part 60, Subpart IIII, the source also meets the requirements of 40 CFR Part 63, Subpart ZZZZ. The source is also subject to 40 CFR Part 51, Subpart P (“Protection of Visibility”).~~

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Common Acronyms and Abbreviations

(These terms may be seen in the permit)

Acronym	Term
AQR	Clark County Air Quality Regulation
ATC	Authority to Construct
CEMS	Continuous Emissions Monitoring System
CFR	Code of Federal Regulations
CO	carbon monoxide
CO ₂	carbon dioxide
DAQ	Division of Air Quality
DES	Department of Environment and Sustainability
DOM	date of manufacture
dscf	dry standard cubic feet
dscm	dry standard cubic meter
EPA	U.S. Environmental Protection Agency
EU	emission unit
g/gr	gram
HAP	hazardous air pollutant
hp	horsepower
kW	kilowatts
LNB	low-NO _x burner
NAICS	North American Industry Classification System
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO _x	nitrogen oxides
NRS	Nevada Revised Statutes
NSPS	New Source Performance Standard
NSR	New Source Review
OP	Operating Permit
PM _{2.5}	particulate matter less than 2.5 microns in diameter
PM ₁₀	particulate matter less than 10 microns in diameter
PSD	Prevention of Significant Deterioration
PTE	potential to emit
SIC	Standard Industrial Classification
SIP	Nevada Regional Haze State Implementation Plan for the second implementation period
SO ₂	sulfur dioxides
tlp	tons of lime produced
tpd	tons per day
U.S.C.	United States Code
VMT	vehicle miles traveled
VOC	volatile organic compound

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

EU	Source EU Identifier	Description	Rating
K102	KN-01	Rotary Kiln 1	81.25 MMBtu/hr
K202	KN-02	Rotary Kiln 2	81.25 MMBtu/hr
K302	KN-03	Rotary Kiln 3	91.10 MMBtu/hr
K402	K4-KN-305	Rotary Kiln 4	281.25 MMBtu/hr

2.0 CONTROLS

2.1 CONTROL DEVICES

1. Effective no later than two years after Environmental Protection Agency (EPA) 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) & 40 CFR Part 51.308]*

Table 2-1: Add-on Controls for NO_x Reduction on Kilns

EU	Description	Control
K102	Kiln 1	LNB and SNCR
K302	Kiln 3	LNB and SNCR
K402	Kiln 4	LNB and SNCR

2.2 CONTROL REQUIREMENTS

1. The control requirements and the NO_x emission reductions proposed in the ATC are permanent and, upon becoming effective, shall not be removed, changed, revised, or modified without the approval of the Nevada Division of Environmental Protection and EPA.
2. Effective no later than two years after EPA's approval of the controls determination associated with the SIP, the permittee shall install and maintain low-NO_x burners (LNB) on Kilns 1, 3, and 4 to achieve a reduction of NO_x emissions (EU: K102, K302, and K402). *[AQR 12.4 ATC Application (5/23/2022) & 40 CFR Part 51.308]*
3. Effective no later than two years after 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_x emissions. *[AQR 12.4 ATC Application (5/23/2022) & 40 CFR Part 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 12-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 12-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 12-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 EPA approval of the controls determination associated with the SIP, the permittee shall limit total NO_x 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) & 40 CFR Part 51.308]
2. Effective no later than two years after EPA approval of the controls determination associated with the SIP, the permittee shall limit the combined total NO_x emissions from all operating kilns to 3.59 lb/tp based on a consecutive 12-month average (EUs: K102, K202, K302, and K402). [AQR 12.4 ATC Application (5/23/2022) & 40 CFR Part 51.308]

4.0 PROVISIONAL OPERATING CONDITIONS

4.1 MONITORING

1. Effective no later than two years after EPA approval of the controls determination associated with the SIP, in order to demonstrate continuous, direct compliance with the Kilns 1–4 (EUs: K102, K202, K302, and K402) emissions limits for NO_x specified in Sections 3.2.1 and 3.2.2, the permittee shall calibrate, maintain, operate, and certify the continuous emissions monitoring system (CEMS). [AQR 12.4.3.4(a)(10)]
2. Effective no later than two years after EPA approval of the controls determination associated with the SIP, the permittee shall operate the CEMS according to the provisions of 40 CFR Part 60, Subpart A, Appendices B & F, as applicable at all times that Kilns 1-4 (EUs: K102, K202, K302, and K402) are in use except during malfunctions, maintenance, calibration, and repairs of the CEMS. [AQR 12.4.3.4(a)(10)]
 - a. The CEMS shall include a data acquisition and handling system. [AQR 12.4.3.4(a)(10)]
3. The permittee shall develop and implement a quality control program with written procedures, as required by 40 CFR Part 60, Appendix F.
4. Effective no later than two years after EPA 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_x;
 - b. Diluent gas, if applicable;
 - c. Exhaust gas flow rate;
 - d. Hourly emissions of NO_x;
 - e. Hours of CEMS operation; and
 - f. Dates and hours of CEMS downtime.
5. The permittee shall conduct Relative Accuracy Test Audits (RATA) and other periodic checks of NO_x—and, if applicable, checks of diluent gas—on the CEMS at least annually, as required by 40 CFR Part 60. [AQR 12.4.3.4(a)(10)]
6. Effective no later than two years after EPA 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_x emission limit of 3.75 tons per day. Each rolling kiln's 30-operating-day average will be calculated using the following procedure: [AQR 12.4.3.4(a)(10)]

- a. The permittee shall measure NO_x emissions from each kiln using the CEMS and sum the hourly pounds of NO_x emitted from Kilns 1, 2, 3, and 4 during the current kiln operating day and during the preceding 29 kiln operating days to obtain the total pounds of NO_x emitted for 30 kiln operating days.
 - b. The permittee shall divide the total pounds of NO_x by 2,000 to calculate total tons of NO_x emitted over the most recent 30 kiln operating days.
 - c. The permittee shall divide the total tons of NO_x by 30 to calculate the rolling 30-operating-day NO_x emission rate from all kilns.
 - d. The permittee shall address data during periods when the CEMS is out of control in accordance with 40 CFR Part 60, Appendix F.
7. Effective no later than two years after EPA approval of the controls determination associated with the SIP, the permittee shall monitor each kiln to demonstrate compliance with the NO_x emission limit of 3.59 lb/tp (EUs: K102, K202, K302, and K402). Each 12-month rolling NO_x emission rate will be calculated within 30 days following the end of each calendar month using the following procedure: *[AQR 12.4.3.4(a)(10)]*
- a. The permittee shall measure NO_x emissions using the CEMS and sum the hourly pounds of NO_x emitted from each kiln for the month just completed and the 11 months preceding to calculate the total pounds of NO_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 prior 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_x by the total tons of lime product to calculate the 12-month rolling NO_x emission rate in lb/tp.
 - d. The permittee shall address data during periods when CEMS is out of control in accordance with 40 CFR Part 60, Appendix F.
8. Effective no later than two years after EPA 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. If multiple readings are taken in an hour, an hourly average may be recorded. (EUs: K102, K302, and K402). *[AQR 12.4.3.4(a)(10)]*

4.2 TESTING

~~No performance testing requirements have been identified.~~

4.3 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. ~~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 40 CFR Part 64.9(b). [AQR 12.4.3.4(a)(1)]~~
4. ~~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]~~
5. ~~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)]~~
6. The permittee shall maintain the following records on-site and include, at a minimum: [AQR 12.4.3.4(a)(10)]
 - a. Hourly records of the amount of reagent used for the SNCR for each kiln (EUs: K102, K302, and K402);
 - b. CEMS data for each kiln (EUs: K102, K202, K302, and K402); and
 - c. Written procedures for the quality control program.
7. The permittee shall maintain the following records on-site that require semiannual reporting, including, at a minimum: [AQR 12.4.3.4(a)(10)]
 - a. Daily, consecutive 30-day average of total NO_x in tpd from all kilns (EUs: K102, K202, K302, and K402);
 - b. Monthly, consecutive 12-month average of total NO_x in lb/tpd from all kilns (EUs: K102, K202, K302, and K402);
 - c. Magnitude and duration of excess emissions (reported as required by Section 4.4 of this permit), notifications, monitoring system performance, malfunctions, corrective actions taken, and other data required by 40 CFR Part 60; and
 - d. CEMS audit results or accuracy checks, as required by 40 CFR Part 60.

4.4 REPORTING AND NOTIFICATIONS

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

- ~~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)]~~
7. The permittee shall submit semiannual monitoring reports to DAQ. [AQR 12.4.3.4(a)(10)]
8. The following requirements apply to semiannual reports: [AQR 12.4.3.4(a)(10)]
 - a. The report shall include the items listed in Section 4.3 for semiannual reporting.
 - b. The report shall be based on a calendar semiannual period, which shall include partial reporting periods.
 - c. The report shall be received by DAQ within 30 calendar days after the semiannual period.
- ~~9. 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 12.5.2.6(d)(4)(B)]~~
10. Upon commencing operation of the controls required by this ATC, the permittee shall submit compliance certifications annually in writing to the Control Officer (4701 W. Russell Rd., Suite 200, Las Vegas, NV 89118) and the Region 9 Administrator (Director, Air and Radiation Division, 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 12.5.2.8(e)]
 - ~~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 status of compliance with each permit 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 Item b above, and each deviation shall be identified and taken 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.~~
- ~~11. 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]~~
- ~~12. 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 12.5.2.6(1)]~~
- ~~13. The permittee shall submit annual emissions inventory reports based on the following: [AQRs 18.6.1 & 12.9.2]~~
- ~~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).~~
- ~~14. Stationary sources that emit 25 tons or more of NO_x and/or 25 tons or more of VOC from 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_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., the emissions inventory). [AQR 12.9.1]~~
- ~~15. 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)]~~

16. ~~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 4-1: Required Submission Dates¹

Required Report	Applicable Period	Due Date
Semiannual report for 1st six-month period	January, February, March, April, May, June	July 30 each year¹
Semiannual report for 2nd six-month period and any additional annual records required	July, August, September, October, November, December	January 30 each year¹
Annual Compliance Certification	Calendar year	January 30 each year¹
Annual Emissions Inventory Report	Calendar year	March 31 each year¹
Annual Emissions Statement²	Calendar year	March 31 each year¹
Notification of Malfunctions, Startup, Shutdowns or Deviations with Excess Emission	As required	Within 24 hours of when permittee learns of event
Report of Malfunctions, Startup, Shutdowns or Deviations with Excess Emission	As required	Within 72 hours of DAQ notification
Deviation Report without Excess Emissions	As required	With semiannual reports¹
Excess Emissions that Pose a Potential Imminent and Substantial Danger	As required	Within 12 hours of when permittee learns of event
Performance Testing Protocol	As required	No less than 45 days, but no more than 90 days, before anticipated test date¹
Performance Testing	As required	Within 60 days of end of test¹

¹~~If the due date falls on a Saturday, Sunday, or federal or Nevada holiday, the submittal is due on the next regularly scheduled business day.~~

²~~Required only for stationary sources that emit 25 tons or more of NO_x and/or 25 tons or more of VOC during a calendar year.~~

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

4.5 MITIGATION

~~The source has no federal offset requirements. [AQR 12.7]~~

5.0 ADMINISTRATIVE REQUIREMENTS

5.1 GENERAL

1. ~~This ATC does not modify, consolidate, supersede, and/or 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 or 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 AQR 12.4.1.1(b)(1) or (b)(2) 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. ~~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: [AQR 12.4.3.4(a)(8)]~~
 - 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.~~
7. ~~This ATC does not convey any property rights or exclusive privilege. [AQR 12.4.3.4(a)(6)]~~
8. ~~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]~~
9. ~~The permittee shall pay all fees assessed pursuant to AQR 18. [AQR 12.4.3.4(a)(17)]~~
10. ~~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)]~~
11. ~~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 an 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)]~~

5.2 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 Items 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 the 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)]~~

5.3 COMPLIANCE REQUIREMENTS

1. ~~Each of the conditions and requirements of this ATC is severable. If any are held invalid, the remaining conditions and requirements shall 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 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@clarkecountynv.gov.~~
 - b. ~~Within 72 hours of the notification required by Item 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 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

Provisions provided in the following air quality operating permit issued by the Nevada Division of Environmental Protection for the Pilot Peak Plant are hereby incorporated and adopted 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.



NEVADA DIVISION OF
**ENVIRONMENTAL
PROTECTION**

STATE OF NEVADA
Department of Conservation & Natural Resources

Steve Sisolak, Governor
Bradley Crowell, Director
Greg Lovato, Administrator

August 3, 2022

Terry McIntyre
Pilot Peak Plant Manager
Graymont Western US Inc.
P.O. Box 2520
Wendover, Nevada 89883

**RE: Notification of Issuance of the Reopened and Revised Class I Air Quality Operating Permit
AP3274-1329.03, FIN A0367, Air Case 11108 – Pilot Peak Plant**

Dear Mr. McIntyre:

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 Graymont Western US Inc. – Pilot Peak Plant 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,

FOI: Jamie Mara
Supervisor, Permitting Branch
Bureau of Air Pollution Control

JM/mt
Enclosure: Class I Air Quality Operating Permit AP3274-1329.03
Certified Mail No. 9171 9690 0935 0241 5437 83
E-Copy: Nate Stettler, Graymont Western US Inc.
John Maitland, Graymont Western US Inc.



Bureau of Air Pollution Control

901 SOUTH STEWART STREET SUITE 4001

CARSON CITY, NEVADA 89701-5249

p: 775-687-9349 • www.ndep.nv.gov/bapc

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-3

S2.010.1 Conveyor C-7 Transfer to Conveyor C-4

S2.010.2 Hopper/Feeder F-1 Transfer to Conveyor C-1

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



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

Emission Unit List:(continued)

~~E. System 06 - Lime Plant Conveyance Transfers~~

- ~~PF1.008 Stockpile Transfer to Conveyor C-10 (F214)~~
- ~~PF1.009 Stockpile Transfer to Conveyor C-10 (F213)~~
- ~~PF1.010 Stockpile Transfer to Conveyor C-10 (F12)~~
- ~~PF1.011 Stockpile Transfer to Conveyor C-10 (F11)~~
- ~~PF1.012 Stockpile Transfer to Conveyor C-10 (F10)~~
- ~~PF1.013 Stockpile Transfer to Conveyor C-10 (F215)~~
- ~~PF1.014 Stockpile Transfer to Conveyor C-10 (F216)~~
- ~~PF1.015 Stockpile Transfer to Conveyor C-10 (F217)~~
- ~~PF1.016 Stockpile Transfer to Conveyor C-10 (F218)~~
- ~~PF1.017 Stockpile Transfer to Conveyor C-311 (F310)~~
- ~~PF1.018 Stockpile Transfer to Conveyor C-311 (F311)~~
- ~~PF1.019 Stockpile Transfer to Conveyor C-312 (F312)~~
- ~~PF1.020 Stockpile Transfer to Conveyor C-312 (F313)~~
- ~~PF1.021 Stockpile Transfer to Conveyor C-312 (F314)~~
- ~~PF1.022 Stockpile Transfer to Conveyor C-312 (F315)~~
- ~~PF1.023 Stockpile Transfer to Conveyor C-312 (F316)~~
- ~~PF1.024 Conveyor C-313 Transfer to Fines Stockpile~~
- ~~PF1.025 Conveyor C-11 Transfer to Fines Stockpile~~
- ~~PF1.026 Conveyor C-311 Transfer to Conveyor C-312~~

~~F. System 07 - Lime Plant Stone Dressing Screen (Kilns 1 and 2) (D-10)~~

- ~~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))~~

~~G. System 08 - Lime Plant Stone Dressing Screen~~

- ~~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))~~

~~H. System 09 - Lime Plant Stone Surge Bins N-19 (Kiln 1) and N-219 (Kiln 2) (D-19)~~

- ~~S2.024 Conveyor C-12 Transfer to Stone Surge Bins N-19 and N-219~~
- ~~S2.026 Stone Surge Bin N-19 (S2.025) Transfer to Conveyor C-19~~
- ~~S2.027 Conveyor C-19 transfer to Kin #1 Pre-heater PH-20~~
- ~~S2.029 Stone Surge Bin N-219 (S2.028) Transfer to Conveyor C-219~~
- ~~S2.030 Conveyor C-219 Transfer to Kiln #2 Pre-heater PH-220~~

~~I. System 10 - Kiln #1 Circuit (D-85) (Revised August 2022, Air Case 11108)~~

- ~~S2.031 Kiln #1 Pre-heater PH-20~~
- ~~S2.032 Kiln #1 (K-20) and Associated Coal Mill R-92~~
- ~~S2.033 Kiln #1 Lime Cooler N-21~~

~~J. System 11 - Kiln #1 Coal Handling Circuit~~

- ~~PF1.027 Truck Dump to Coal Hopper N-90~~
- ~~PF1.028 Coal Hopper N-90 transfer to Conveyor C-90~~
- ~~PF1.029 Coal Silo T-90 Discharge to Conveyor C-92 (followed by fully enclosed transfer to Coal Mill R-92 (PF1.030))~~

~~K. System 12 - #1 Coal Silo T-90 (D-91)~~

- ~~S2.035 Conveyor C-90 Transfer to Coal Silo T-90~~



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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 August 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 August 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~~



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

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-231~~
- ~~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)~~



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CLASS II AIR QUALITY OPERATING PERMIT

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

Emission Unit List:(continued)

~~V. System 22 - Product Lime Loadout from Kiln #2 (DC 30)~~

- ~~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))~~
- ~~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))~~
- ~~S2.076 Conveyor C-41 Transfer to Kiln Run Silo T-41 (Silo T-41 Discharges Through Fully Enclosed Transfers to Either Conveyor C-51 or Conveyor C-52 (S2.102 or S2.105))~~
- ~~S2.081 Bucket Elevator E-32 Transfer to Gate G-38~~
- ~~S2.082 Screen S-31 and Associated Transfers (IN from Gate G-38 and Gate G-37 (S2.091); OUT to Screw Conveyor C-42 (S2.094), Gate G-44 (S2.096), and Gate G-43 (S2.100))~~
- ~~S2.083 Gate G-38 to Gate G-39~~
- ~~S2.084 Gate G-38 Transfer to Conveyor C-42~~
- ~~S2.085 Gate G-35 Transfer to Gate G-36 OR Gate G-35 Transfer to Screen S-31~~
- ~~S2.086 Bucket Elevator E-30 Transfer to Gate G-35~~
- ~~S2.087 Gate G-39 Transfer to Kiln Run Silo T-41~~
- ~~S2.090 Bucket Elevator E-31 Transfer to Gate G-37~~
- ~~S2.097 Gate G-44 Transfer to Screw Conveyor C-42 (Screw Conveyor C-42 Transfers to Conveyor C-44 via Fully Enclosed Transfer (S2.066))~~
- ~~S2.098 Gate G-44 Transfer to Conveyor C-43~~
- ~~S2.101 Gate-43 Transfer to Conveyor C-41~~

~~W. System 23 - Kiln #1 and Kiln #2 Cyclone/Baghouse Fines Silo Discharge~~

- ~~PF1.038 Fine Dust Silo T-89 to Pugmill (includes discharge of saturated material from pugmill into truck (PF1.038.1))~~

~~X. System 24 - Kiln #1 and Kiln #2 Cyclone/Baghouse Product Loadout (D-89)~~

- ~~S2.113 Process Baghouse Transfer to Fine Dust Silo T-89 via Conveyor C-285 and Conveyor C-85~~

~~Y. System 25 - Kiln #1 and Kiln #2 Baghouse Fines Silo Discharge System (D-11)~~

- ~~S2.224 Fines Silo T-89 Discharge to Truck via Retractable Spout~~

~~Z. System 26 - Kiln #3 Baghouse Collection Product Loadout (D-388)~~

- ~~S2.115 Process Baghouse Transfer to Fine Dust Silo T-388 via Conveyor C-385~~

~~AA. System 27 - Kiln #3 Baghouse Fines Discharge System (D-389)~~

- ~~S2.116 Fine Dust Silo T-388 Discharge to Truck (Vaculoader System)~~

~~AB. System 28 - Kiln #3 Baghouse Fines Discharge System~~

- ~~PF1.042 Fines Dust Silo T-388 Transfer to Pugmill (includes transfer of fully saturated material from pugmill to truck (PF1.042.1))~~

~~AC. System 29 - Hydrate Plant Surge Bin~~

- ~~S2.117 Conveyor C-1105 Transfer to Surge Bin N-1101~~
- ~~S2.117.1 Product Lime Silo T-44 Transfer to Gate G-1105~~
- ~~S2.117.2 Gate G-1105 Transfer to Conveyor C-1105~~
- ~~S2.118 Surge Bin N-1101 transfer to Conveyor C-1102~~
- ~~S2.118.1 Conveyor C-1102 Transfer to Conveyor C-1104~~
- ~~S2.119 Conveyor C-1104 Transfer to Hydrator Package~~



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Permit No. AP3274-1329.03

CLASS II AIR QUALITY OPERATING PERMIT

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

Emission Unit List:(continued)

~~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-331.1~~
- ~~S2.145 Gate G-331.1 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-332.1~~
- ~~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~~



Bureau of Air Pollution Control

Facility ID No. A0367

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CLASS II AIR QUALITY OPERATING PERMIT

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

Emission Unit List:(continued)

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

- ~~S2.139 Kiln #3 Lime Cooler N-322 Transfer to Gate G-326~~
- ~~S2.140 Gate G-326 Transfer to Conveyor C-331~~
- ~~S2.141 Gate G-326 Transfer to Conveyor C-332~~
- ~~S2.142 Conveyor C-331 Transfer to Bucket Elevator E-331~~
- ~~S2.143 Conveyor C-332 Transfer to Bucket Elevator E-332~~
- ~~S2.151 Gate G-353 Transfer to Conveyor C-332~~
- ~~S2.152 Gate G-354 Transfer to Conveyor C-332~~
- ~~S2.154 Kiln #3 Run Silo T-331 Transfer via Feeder F-336 to Conveyor C-336~~
- ~~S2.155 Kiln #3 Run Silo T-331 Transfer via Feeder F-337 to Conveyor C-337~~
- ~~S2.156 Conveyor C-336 Transfer to Bucket Elevator E-336~~
- ~~S2.157 Conveyor C-337 Transfer to Bucket Elevator E-337~~
- ~~S2.158 Bucket Elevator E-336 Transfer to Gate G-336~~
- ~~S2.159 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))~~
- ~~S2.160 Gate G-336 Transfer to Conveyor C-341~~
- ~~S2.163 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))~~
- ~~S2.164 Gate G-351 transfer to Conveyor C-342~~
- ~~S2.166 Gate G-353 Transfer to Conveyor C-341~~
- ~~S2.168 Conveyor C-351 Transfer to Bucket Elevator E-336~~
- ~~S2.169 Bucket Elevator E-337 Transfer to Gate G-337~~
- ~~S2.170 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))~~
- ~~S2.171 Gate G-337 Transfer to Conveyor C-341~~
- ~~S2.173 Crusher R-352 and Associated Transfer (IN from Screen S-337 (S2.172) and Gate G-352 (S2.176); OUT to Screw Conveyor C-352)~~
- ~~S2.174 Conveyor C-352 Transfer to Bucket Elevator E-337~~
- ~~S2.177 Gate G-352 Transfer to Conveyor C-342~~
- ~~S2.179 Gate G-354 Transfer to Conveyor C-341~~

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

- ~~S2.182 Conveyor C-341 Transfer to Bucket Elevator E-341~~
- ~~S2.183 Conveyor C-342 Transfer to Bucket Elevator E-342~~
- ~~S2.184 Bucket Elevator E-341 Transfer to Lime Silo T-343~~
- ~~S2.185 Bucket Elevator E-342 Transfer to Lime Silo T-342~~

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

- ~~S2.187 Lime Silo T-343 Loadout to Truck (via Spout U-362 or Transfer to Conveyor C-364)~~
- ~~S2.188 Lime Silo T-342 Loadout to Truck (via Spout U-363 or Transfer to Conveyor C-365)~~
- ~~S2.188.1 Conveyor C-364 and Conveyor C-365 Transfer to Truck via Spout U-364~~

~~AM. System 40 - Gasoline Storage Tank (5,700 gallons)~~

- ~~S2.189 Gasoline Storage Tank (5,700-gallon capacity)~~

~~AN. System 41 - Kiln #1 Auxiliary Drive Motor~~

- ~~S2.190 Kiln #1 Auxiliary Drive Motor (76.5 hp, Deutz, model F3L912, manufactured pre-1988)~~



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CLASS II AIR QUALITY OPERATING PERMIT

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

Emission Unit List:(continued)

~~AQ. 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~~

~~PF1.043 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~~

~~PF1.044 Fine Dust Surge Bin N-80 transfer to Truck~~

~~AU. System 48 - Fine Dust Surge Bin N-280 Transfer to Truck~~

~~PF1.045 Fine Dust Surge Bin N-280 transfer to Truck~~

~~AV. System 49 - Fine Dust Surge Bin N-381 Transfer to Truck~~

~~PF1.046 Fine Dust Surge Bin N-381 transfer to Truck~~

End of Emission Unit List



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CLASS I AIR QUALITY OPERATING PERMIT

Issued to: GRAYMONT WESTERN US INC. (AS PERMITTEE)

Section IV. Specific Operating Conditions (continued)

I. Emission Units S2.031 through S2.033

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

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-NO_x 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 shut down 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.~~

3. Emission Limits (NAC 445B.305, NAC 445B.3405, 40 CFR Part 51.308)
 - 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 45.1 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 59.6 tons per 12-month rolling period.~~
 - (3) ~~The discharge of PM_{2.5} (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 59.6 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 NO_x (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.22047 – The maximum allowable discharge of sulfur to the atmosphere from baghouse (D-85) shall not exceed 91.0 pounds per MMBtu.~~
 - (11) ~~NAC 445B.22033 – The maximum allowable discharge of PM₁₀ to the atmosphere from baghouse (D-85) shall not exceed 35.4 pounds per hour.~~



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Section IV. Specific Operating Conditions (continued)

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

3. Emission Limits (NAC 445B.305, NAC 445B.3405, 40 CFR Part 51.308) (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 NO_x 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.~~



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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(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:

$$E_n = K * C_{hp} * Q_{hs} * \left(\frac{100 - \%H_2O}{100} \right)$$

where:

E_n ≡ Hourly SO2 mass emission rate during unit operation, lb/hr.

K = 1.660×10^{-7} for SO2, (lb/secf)/ppm.

C_{hp} ≡ 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.



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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 NO_x 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 NO_x 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 NO_x mass emission rate during unit operation, lb/hr.

K = 1.194×10⁻⁷ for NO_x, (lb/scf)/ppm.

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

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

%H₂O = 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 1.5.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 PM_{2.5} per ton of lime production (lbs-PM_{2.5}/ton-lime production)~~
- ~~(4) Pounds of NO_x per ton of lime production (lbs-NO_x/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, PM_{2.5}, CO, and VOC's from the Kiln #1 Circuit will be calculated based on the testing contained in 1.5. 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 NO_x 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.



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Section IV. Specific Operating Conditions (continued)

L. Emission Units S2.036 through S2.038

System 13 - Kiln #2 Circuit (D-285) (Revised August 2022, Air Case 11108)		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.036	Kiln #2 Pre-heater PH-220	4,522,713	731,369
S2.037	Kiln #2 (K-220) and Associated Coal Mill R-292		
S2.038	Kiln #2 Lime Cooler N-221		

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-NO_x 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.~~

3. Emission Limits (NAC 445B.305, NAC 445B.3405, 40 CFR Part 51.308)
 - 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 PM_{2.5} (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 NO_x (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 410.0 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.~~



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Section IV. Specific Operating Conditions (continued)

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

3. Emission Limits (NAC 445B.305, NAC 445B.3405, 40 CFR Part 51.308) (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 NO_x 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.~~



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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.
- (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:

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

where:

E_h ≡ Hourly SO₂ mass emission rate during unit operation, lb/hr.

K = 1.660 × 10⁻⁷ for SO₂, (lb/sec)/ppm.

C_{hp} ≡ Hourly average SO₂ concentration during unit operation, ppm (dry).

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

%H₂O ≡ Hourly average stack moisture content during unit operation or constant moisture value, percent by volume.



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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:

Eh = K * C_hp * Q_hs * ((100 - %H2O) / 100)

where:

Eh = Hourly NOx mass emission rate during unit operation, lb/hr.

K = 1.194 x 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).

%H2O = 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.



Bureau of Air Pollution Control

Facility ID No. A0367

Permit No. AP3274-1329.03

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: GRAYMONT WESTERN US INC. (AS PERMITTEE)

Section IV. Specific Operating Conditions (continued)

Q. Emission Units S2.042 through S2.044

System 17 - Kiln #3 Circuit (D-385) (Revised August 2022, Air Case 11108)		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.042	Kiln #3 Pre-heater PH-321	4,522,532	731,431
S2.043	Kiln #3 (K-321) and Associated Coal Mill R-392		
S2.044	Kiln #3 Lime Cooler N-332		

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 shut down 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

(1) S2.042 through S2.044, each, may operate a total of 24 hours per day.

3. Emission Limits (NAC 445B.305, NAC 445B.3405, 40 CFR Part 51.308)

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:

(1) 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.

(2) 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.

(3) 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.

(4) 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.

(5) 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.

(6) 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.

(7) 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.

(8) NAC 445B.22017 - The opacity from the baghouse (D-385) shall not equal or exceed 20 percent.

(9) NAC 445B.2203 - The maximum allowable discharge of PM10 to the atmosphere from baghouse (D-385) shall not exceed 0.27 pound per MMBtu.

(10) NAC 445B.22047 - The maximum allowable discharge of sulfur to the atmosphere from baghouse (D-385) shall not exceed 187.2 pounds per MMBtu.

(11) NAC 445B.22033 - The maximum allowable discharge of PM10 to the atmosphere from baghouse (D-385) shall not exceed 44.6 pounds per hour.



Bureau of Air Pollution Control

Facility ID No. A0367

Permit No. AP3274-1329.03

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: GRAYMONT WESTERN US INC. (AS PERMITTEE)

Section IV. Specific Operating Conditions (continued)

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

3. Emission Limits (NAC 445B.305, NAC 445B.3405, 40 CFR Part 51.308) (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 NO_x 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.~~



Bureau of Air Pollution Control

Facility ID No. A0367

Permit No. AP3274-1329.03

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: GRAYMONT WESTERN US INC. (AS PERMITTEE)

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:~~

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

where:

E_h = Hourly SO₂ mass emission rate during unit operation, lb/hr.

K = 1.660×10^{-7} for SO₂, (lb/scf)/ppm.

C_{hp} = 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.



Bureau of Air Pollution Control

Facility ID No. A0367

Permit No. AP3274-1329.03

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: GRAYMONT WESTERN US INC. (AS PERMITTEE)

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 NO_x 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 NO_x 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 NO_x mass emission rate during unit operation, lb/hr.

K = 1.194 × 10⁻⁷ for NO_x, (lb/scf)/ppm.

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

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

%H₂O = 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 PM_{2.5} per ton of lime production (lbs-PM_{2.5}/ton-lime production)~~
- ~~(4) Pounds of NO_x per ton of lime production (lbs-NO_x/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, PM_{2.5}, 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 NO_x 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.



Bureau of Air Pollution Control

Facility ID No. A0367

Permit No. AP3274-1329.03

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: GRAYMONT WESTERN US INC. (AS PERMITTEE)

Section V. Continuous Emissions Monitoring System (CEMS) Conditions (continued)

- ~~A. SO₂ 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 SO₂ 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. 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 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 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)



Bureau of Air Pollution Control

Facility ID No. A0367

Permit No. AP3274-1329.03

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: GRAYMONT WESTERN US INC. (AS PERMITTEE)

Section V. Continuous Emissions Monitoring System (CEMS) Conditions (continued)

B. 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) (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_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.



Bureau of Air Pollution Control

Facility ID No. A0367

Permit No. AP3274-1329.03

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: GRAYMONT WESTERN US INC. (AS PERMITTEE)

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******

Appendix A.3 - TS Power Plant, Nevada Newmont Energy Investment

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

Provisions provided in the following air quality operating permit issued by the Nevada Division of Environmental Protection for the Tracy Generating Station are hereby incorporated and adopted 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.



NEVADA DIVISION OF
**ENVIRONMENTAL
PROTECTION**

STATE OF NEVADA
Department of Conservation & Natural Resources

Steve Sisolak, Governor
Bradley Crowell, Director
Greg Lovato, Administrator

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

JS/JM/mt
Enclosure:
Certified Mail No.
E-Copy:

Class I Air Quality Operating Permit AP4911-0194.04
9171 9690 0935 0218 7438 26
Starla Lacy, NV Energy
Tony Garcia, NV Energy
Christopher Heintz, NV Energy
Dawn Clevenger, NV Energy
Brigid McHale, NV Energy
Sean Spitzer, NV Energy



Bureau of Air Pollution Control

901 SOUTH STEWART STREET SUITE 4001
CARSON CITY, NEVADA 89701-5249
p: 775-687-9349 • www.ndep.nv.gov/bapc

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 113 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 gal/min Circulating Water Flow Rate)~~



Bureau of Air Pollution Control

Facility ID No. A0029

Permit No. AP4911-0194.04

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: SIERRA PACIFIC POWER COMPANY D/B/A NV ENERGY – TRACY GENERATING STATION (AS PERMITTEE)

Emission Unit List (Continued):

~~H. System 26 = Piñon Pine Unit #4 Cooling Tower System~~

~~S2.054 Piñon Pine #4 Cooling Tower (P027) (Positive Draft Type; Manufactured by Marley; Model W467-4.0-3; Serial 73346-W467-95; 40,000 gal/min Circulating Water Flow Rate)~~

~~I. System 28 = Diesel Fuel Storage Tank System #1~~

~~S2.056 Diesel Fuel Storage Tank System #1 (No. 2 Distillate Fuel Oil; Manufactured by Chicago Bridge & Iron Company; Model Horton Tank; 1,050,000 Gallon Capacity)~~

~~J. System 29 = Diesel Fuel Storage Tank System #2~~

~~S2.057 Diesel Storage Tank #2 (No. 2 Distillate Fuel Oil; Manufactured by Pitt-Des Moines Inc.; 60,000 Gallon Capacity)~~

~~K. System 31 = Gasoline Dispensing Facility~~

~~S2.063 Gasoline Storage Tank #2 (Manufactured by ConVault; Model RN 500 3SF; 1,000 Gallon Capacity)~~

~~L. System 32 – Combined Cycle Combustion Turbine Circuit No. 8 – Pipeline Quality Natural Gas – 254 MW Nominal Output~~

~~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)~~

~~S2.065 Duct Burner #8 (Manufactured by Nooter; Serial DB-22896A; Date 2007; Maximum Heat Input Rate 660.0 MMBtu/hr) & Heat Recovery Steam Generator #8 (Manufactured by General Electric; Serial HRSG8-CP28-08-01; Date 2007)~~

~~M. System 33 – Combined Cycle Combustion Turbine Circuit No. 9 – Pipeline Quality Natural Gas – 254 MW Nominal Output~~

~~S2.066 Combined Cycle Combustion Turbine #9 (Manufactured by General Electric; Serial CT9-298614; Date 2007; Maximum Heat Input Rate 1,862.0 MMBtu/hr)~~

~~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 by General Electric; Serial HRSG9-CP28-09-01; Date 2007)~~

~~N. System 34 = Natural Gas Fired Auxiliary Boiler~~

~~S2.068 Auxiliary Boiler (Manufactured by Superior Boiler Works, Inc.; Model 4-X-4502-S150-ICCF-G; Serial 16151; Date 2007; Maximum Heat Input Rate 42.0 MMBtu/hr)~~

~~O. System 35 = Emergency Diesel Generator for Combustion Turbine No. 8 and 9~~

~~S2.069 Emergency Diesel Generator (Manufactured by Cummins Power Generation; Model DQGAA-5791509; Serial C070032064; Date 2007; Maximum Heat Input Rate 12.7 MMBtu/hr; 1,848 hp)~~

~~P. System 36 = Emergency Diesel Generator for Switchyard~~

~~S2.070 Emergency Diesel Generator (Manufactured by Cummins Power Generation; Model DSHAE-5867669; Serial F070074477; Date 2007; Maximum Heat Input Rate 1.56 MMBtu/hr; 148 HP)~~

~~Q. System 40 = Emergency Diesel Generator for Boiler No. 3~~

~~S2.074 Emergency Diesel Generator (Manufactured by Detroit Allison Diesel; Model 10437305; Serial 4A0189756; Date 1974; Maximum Heat Input Rate 1.07 MMBtu/hr; 117 hp)~~



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Section IV. Specific Operating Conditions (continued)

B. Emission Unit S2.006

System 05A – Clark Mountain Combustion Turbine Unit #3 – Primary Operating Scenario		Location UTM (Zone 11, NAD 83)	
		m North	m East
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)	4,382,280	283,384

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 PM10 (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 PM10 to the atmosphere from S2.006 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 7.2 pounds per hour, nor more than 31.54 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.



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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.
(3) 115.0 pounds per hour, based on a 60-minute block average.
(4) 205.86 tons per 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 S2.006 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 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 B-1: Acid Rain Allowance Allocations
Table with 7 columns: S2.006, Phase H (Years 2010 and Beyond) Utility Boilers > 25 MW Output Capacity, 2015, 2018, 2019, 2020, 2021. All values are 0.

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. 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 S2.006 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.



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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 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 B.5.e. of this section.

Sample Calculation:

(scf Natural Gas/hr)(Btu/scf) = Btu/hr or MMBtu/hr

- g. The hourly emission rate of PM, PM₁₀, 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.e. of this section, and the emission factor derived in B.6.1. of this section.

Sample Calculation:

(scf/hr)(lbs pollutant/scf) = lbs pollutant/hr

or

(MMBtu/hr)(lbs pollutant/MMBtu) = lbs pollutant/hr

- h. The hourly emission rate of PM, PM₁₀, 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.6.1. of this section.

Sample Calculation:

(scf/Btu)(lb pollutant/scf) = lbs pollutant/Btu or lbs pollutant/MMBtu

- i. Calculate annually the SO₂ 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 SO₂ emission factor for Pipeline Quality Natural Gas combusted from 40 CFR Part 75 Appendix D.



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Section IV. Specific Operating Conditions (continued)

B. Emission Unit S2.006 (continued)

6. Performance and Compliance Testing (NAC 445B.3405, (NAC 445B.252(1))

~~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 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(5))~~
- ~~b. Testing shall be conducted on the exhaust stack of S2.006.~~
- ~~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 PM₁₀ 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 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 51.100(s). Each Method 25A test will be run for a minimum of one hour.~~
- ~~j. The performance tests required in B.6.c. through B.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 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/scf) for each performance test event.~~



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Section IV. Specific Operating Conditions (continued)

B. Emission Unit S2.006 (continued)

6. ~~Performance and Compliance Testing (NAC 445B.3405, (NAC 445B.252(1)) (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:~~

~~1. 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 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.~~
- ~~(4) 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.~~
- ~~(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

~~a. Standards of Performance for New Stationary Sources 40 CFR Part 60 Subpart GG Standards of Performance for Stationary Gas Turbines~~

~~(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 NO_x and O₂ monitors. As an alternative, a CO₂ monitor may be used to adjust the measured NO_x 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))~~



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Section IV. Specific Operating Conditions (continued)

D. Emission Unit S2.007

System 06A – Clark Mountain Combustion Turbine Unit #4 – Primary Operating Scenario		Location UTM (Zone 11, NAD 83)	
		m North	m East
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)	4,382,268	283,329

1. Air Pollution Control Equipment (NAC 445B.3405)

- a. Emissions from S2.007 shall be controlled by **Dry Low NO_x Burners** while combusting Pipeline 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 D.2.c. of this section. Note, these controls are not add-on controls.
- ~~b. Descriptive Stack Parameters
Stack Height: 55.0 feet
Stack Dimensions: 9.5 x 18.33 feet
Stack Temperature: 1,000 °F~~

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 “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 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 S2.007 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 **31.54** 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 **7.2** pounds per hour, nor more than **31.54** 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 **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 **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.~~



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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.
g. 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) 115.0 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 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 B-1: Acid Rain Allowance Allocations
Table with 6 columns: S2.006, Phase H (Years 2010 and Beyond) Utility Boilers > 25 MW Output Capacity, 2017, 2018, 2019, 2020, 2021. All values are 0.

- 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 S2.007 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.



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Section IV. Specific Operating Conditions (continued)

D. Emission Unit S2.007 (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 S2.007 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:

~~(scf Natural Gas/hr)(Btu/scf) = Btu/hr or MMBtu/hr~~

- ~~g. The hourly emission rate of PM, PM₁₀, 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.e. of this section, and the emission factor derived in D.6.1. of this section.~~

Sample Calculation:

~~(scf/hr)(lbs pollutant/scf) = lbs pollutant/hr~~

or

~~(MMBtu/hr)(lbs pollutant/MMBtu) = lbs pollutant/hr~~

- ~~h. The hourly emission rate of PM, PM₁₀, 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.6.1. of this section.~~

Sample Calculation:

~~(scf/Btu)(lb pollutant/scf) = lbs pollutant/Btu or lbs pollutant/MMBtu~~

- ~~i. Calculate annually the SO₂ 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 SO₂ emission factor for Pipeline Quality Natural Gas combusted from 40 CFR Part 75 Appendix D.~~



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Issued to: SIERRA PACIFIC POWER COMPANY D/B/A NV ENERGY – TRACY POWER GENERATING STATION (AS PERMITTEE)

Section IV. Specific Operating Conditions (continued)

D. Emission Unit S2.007 (continued)

6. Performance and Compliance Testing (NAC 445B.3405, (NAC 445B.252(1)))

~~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 PM₁₀ 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 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 51.100(s). 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 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/sef) for each performance test event.~~



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Section IV. Specific Operating Conditions (continued)

D. Emission Unit S2.007 (continued)

6. Performance and Compliance Testing (NAC 445B.3405, (NAC 445B.252(1)) (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. 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 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.~~
- ~~(4) 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.~~
- ~~(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

~~a. Standards of Performance for New Stationary Sources = 40 CFR Part 60 Subpart GG = Standards of Performance for Stationary Gas Turbines~~

~~(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 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 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 NO_x and O₂ monitors. As an alternative, a CO₂ monitor may be used to adjust the measured NO_x 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))~~



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Section IV. Specific Operating Conditions (continued)

F. Emission Units S2.009 and S2.009.1

System 07C – Tracy Unit #4 Piñon Pine Combustion Turbine/Duct Burner – Pipeline Quality Natural Gas		Location UTM (Zone 11, NAD 83)	
		m North	m East
S2.009	Combustion Turbine/HRSB (Manufactured by General Electric; Model MS6001FA; Serial 1646; Maximum Heat Input 763.9 MMBtu/hr; Nominal Output 107 MW)	4,382,292	283,159
S2.009.1	Duct Burner (Manufactured by Forney; Maximum Heat Input 156.464 MMBtu/hr; Nominal Output 23 MW)	4,382,292	283,159

1. Air Pollution Control Equipment (NAC 445B.3405)
 - a. Emissions from **S2.009** shall be controlled by a **Steam Injection** for control of NO_x.
 - b. Emissions from **S2.009.1** shall be controlled by **Dry Low NO_x Burners**. Note, these are not add-on controls.
 - ~~c. Emissions from **S2.009** and **S2.009.1** are discharged through the same exhaust stack.~~
 - ~~d. Descriptive Stack Parameters
Stack Height: 225.0 feet
Stack Diameter: 12.0 feet
Stack Temperature: 366.5 °F~~

2. Operating Parameters (NAC 445B.3405)
 - ~~a. **S2.009** and **S2.009.1** may consume only Pipeline Quality Natural Gas.~~
 - ~~b. 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.~~
 - ~~c. Hours
(1) **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:

 - ~~a. 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.~~
 - ~~b. The discharge of **PM₁₀** (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.~~
 - ~~c. NAC 445B.2203 – The maximum allowable discharge of **PM₁₀** to the atmosphere from the exhaust **S2.009** and **S2.009.1** 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 20.1 pounds per hour, nor more than 19.9 tons per 12-month rolling period.~~
 - ~~e. The discharge of **SO₂** (sulfur dioxide) to the atmosphere shall not exceed 0.54 pound per hour, nor more than 2.42 tons per 12-month rolling period.~~
 - ~~f. The discharge of **NO_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.~~
 - ~~g. The discharge of **CO** (carbon monoxide) to the atmosphere shall not exceed 34.4 pounds per hour, nor more than 118.8 tons per 12-month rolling period.~~
 - ~~h. 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.~~
 - ~~i. NAC 445B.22017 – The opacity from the exhaust stack of **S2.009** and **S2.009.1** shall not equal or exceed 20 percent.~~



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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.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):~~

S2.007	Phase H (Years 2010 and Beyond) Utility Boilers > 25 MW Output Capacity	2017	2018	2019	2020	2021
		0	0	0	0	0

~~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 calorific 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 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.~~



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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.~~

~~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 F.5.e. of this section.~~

Sample Calculation:

~~(scf Natural Gas/hr)(Btu/scf) = Btu/hr or MMBtu/hr~~

~~g. The hourly emission rate of PM, PM₁₀, 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:

~~(scf/hr)(lbs pollutant/scf) = lbs pollutant/hr~~

or

~~(MMBtu/hr)(lbs pollutant/MMBtu) = lbs pollutant/hr~~

~~h. The hourly emission rate of PM, PM₁₀, 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:

~~(scf/Btu)(lb pollutant/scf) = lbs pollutant/Btu or lbs pollutant/MMBtu~~

~~i. Calculate annually the SO₂ 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 SO₂ emission factor for Pipeline Quality Natural Gas combusted from 40 CFR Part 75 Appendix D.~~



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Section IV. Specific Operating Conditions (continued)

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

6. Performance and Compliance Testing (NAC 445B.3405, (NAC 445B.252(1))

- 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, 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:
- (1) All performance tests must comply with the advance notification, protocol review, operational conditions, reporting, and other requirements of Section 1.1, 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 PM₁₀ 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 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.
 - (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 not 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 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.
 - (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-PM₁₀/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.



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Section IV. Specific Operating Conditions (continued)

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

6. Performance and Compliance Testing (NAC 445B.3405, (NAC 445B.252(1)) (continued)

~~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 1.1. 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

~~a. Standards of Performance for New Stationary Sources – 40 CFR Part 60 Subpart GG – Standards of Performance for Stationary Gas Turbines~~

- ~~(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 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. (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 NO_x and O₂ monitors. As an alternative, a CO₂ monitor may be used to adjust the measured NO_x 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))~~~~



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Issued to: SIERRA PACIFIC POWER COMPANY D/B/A NV ENERGY – TRACY POWER GENERATING STATION (AS PERMITTEE)

Section IV. Specific Operating Conditions (continued)

L. Emission Units S2.064 and S2.065

System 32 – Combined Cycle Combustion Turbine Circuit No. 8 – Pipeline Quality Natural Gas – 254 MW Nominal Output		Location UTM (Zone 11, NAD 83)	
		m North	m East
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)	4,382,139	283,145
S2.065	Duct Burner #8 (Manufactured by Nooter; Serial DB-22896A; Date 2007; Maximum Heat Input Rate 660.0 MMBtu/hr) & Heat Recovery Steam Generator #8 (Manufactured by General Electric; Serial HRSG8-CP28-08-01; Date 2007)	4,382,139	283,145

1. Air Pollution Control Equipment (NAC 445B.3405)
 - a. NO_x 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: 173 °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
(t) 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 PM_{2.5} (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 NO_x (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 NO_x 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.~~



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Section IV. Specific Operating Conditions (continued)

L. Emission Units S2.064 and S2.065 (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 S2.064 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.2203 - 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 delivery 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 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 L.5.e. of this section.

Sample Calculation:

(scf Natural Gas/hr)(Btu/scf) = Btu/hr or MMBtu/hr

- g. The hourly emission rate of PM, PM10, PM2.5, 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 L.5.e. of this section, and the emission factor derived in L.6.m. of this section.

Sample Calculation:

(scf/hr)(lbs pollutant/scf) = lbs pollutant/hr

or

(MMBtu/hr)(lbs pollutant/MMBtu) = lbs pollutant/hr



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Section IV. Specific Operating Conditions (continued)

L. Emission Units S2.064 and S2.065 (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 the end of the final day of operation for the month, as appropriate.~~

~~h. The hourly emission rate of PM, PM₁₀, 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:

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

~~f. Calculate annually the SO₂ 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 SO₂ emission factor for Pipeline Quality Natural Gas combusted from 40 CFR Part 75 Appendix D.~~

5. Performance and Compliance Testing (NAC 445B.3405, (NAC 445B.252(1))

~~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 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(5))~~

~~b. Testing shall be conducted on the exhaust stack of S2.064 and S2.065.~~

~~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 PM₁₀ 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 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-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.~~



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Section IV. Specific Operating Conditions (continued)

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

5. Performance and Compliance Testing (NAC 445B.3405; (NAC 445B.252(1)) (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(s). 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 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.
 - ~~(4)~~ 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.
 - ~~(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

~~α.~~ Standards of Performance for New Stationary Sources = 40 CFR Part 60 Subpart KKKK = Standards of Performance for Stationary Combustion Turbines

~~(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 NO_x 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 60.4430)

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/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))



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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)	
		m North	m East
S2.066	Combined Cycle Combustion Turbine #9 (Manufactured by General Electric; Serial CT9-298614; Date 2007; Maximum Heat Input Rate 1,862.0 MMBtu/hr)	4,382,090	283,144
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. NO_x 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 (dscfm)

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 PM_{2.5} (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 NO_x (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 NO_x 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 3.50 ppmv by volume at 15 percent oxygen and on a dry basis, per 3-hour rolling period.~~



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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:

- 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 4.00 ppmv by volume at 15 percent oxygen and on a dry basis, per 3-hour rolling period.
l. 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 equal or exceed 20 percent.
n. NAC 445B.2203 - The maximum allowable discharge of PM10 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 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.

- 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.
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 M.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 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.e. of this section.

Sample Calculation:

(scf Natural Gas/hr)(Btu/scf) = Btu/hr or MMBtu/hr

- g. The hourly emission rate of PM, PM10, PM2.5, 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.e. of this section, and the emission factor derived in M.6.m. of this section.

Sample Calculation:

(scf/hr)(lbs pollutant/scf) = lbs pollutant/hr

or

(MMBtu/hr)(lbs pollutant/MMBtu) = lbs pollutant/hr



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Section IV. Specific Operating Conditions (continued)

~~M. Emission Units S2.066 and S2.067 (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 the end of the final day of operation for the month, as appropriate.~~

~~h. The hourly emission rate of PM, PM₁₀, 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 M.5.e. of this section, and the emission factor derived in M.6.m. of this section.~~

Sample Calculation:

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

~~i. Calculate annually the SO₂ emissions in tons based on 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.~~

5. ~~Performance and Compliance Testing (NAC 445B.3405, (NAC 445B.252(1))~~

~~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 S2.066 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 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 PM₁₀ 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 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-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.~~



Bureau of Air Pollution Control

Facility ID No. A0029

Permit No. AP4911-0194.04

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: SIERRA PACIFIC POWER COMPANY D/B/A NV ENERGY – TRACY POWER GENERATING STATION (AS PERMITTEE)

Section IV. Specific Operating Conditions (continued)

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

5. Performance and Compliance Testing (NAC 445B.3405, (NAC 445B.252(1)) (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(s). Each Method 25A test will be run for a minimum of one hour.~~
- ~~k. The performance tests required in M.5.e. 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/sec) 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 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.~~
 - ~~(4) 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.~~
 - ~~(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

~~a. Standards of Performance for New Stationary Sources = 40 CFR Part 60 Subpart KKKK = Standards of Performance for Stationary Combustion Turbines~~

~~(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 NO_x 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 60.4430)~~

~~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/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))~~



Bureau of Air Pollution Control

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CLASS I AIR QUALITY OPERATING PERMIT

Issued to: SIERRA PACIFIC POWER COMPANY D/B/A NV ENERGY – TRACY POWER GENERATING STATION (AS PERMITTEE)

Section V. Continuous Emissions Monitoring System (CEMS) Conditions

A. 40 CFR Part 60 Appendix B and Appendix F – Oxides of Nitrogen (NO_x) Continuous Emissions Monitoring System (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)

1. On or before the date of start-up of S2.003, S2.006, S2.007, S2.009/S2.009.1, S2.064/S2.065, and S2.066/S2.067, each, the Permittee shall install, calibrate, operate, and maintain a NO_x CEMS in the exhaust stacks of S2.003, S2.006, S2.007, S2.009/S2.009.1, 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 NO_x (in ppmv) from S2.003, S2.006, S2.007, S2.009/S2.009.1, 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 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 NO_x 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 NO_x 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 NO_x-Diluent Continuous Emission Monitoring Systems:

 - (1) The relative accuracy for NO_x-diluent continuous emission monitoring systems shall not exceed 10.0 percent.
 - (2) For affected units where the average of the reference method measurements of NO_x 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, wherever the relative accuracy specification of 10.0 percent is not achieved.
 - d. Bias (40 CFR Part 75 Appendix A Section 3.4):

NO_x Concentration Monitoring Systems and NO_x-Diluent Continuous Emission Monitoring Systems:

 - (1) NO_x-diluent continuous emission monitoring systems and NO_x concentration monitoring systems used to determine NO_x 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 NO_x emission rate using the heat input rate and the NO_x/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.



Bureau of Air Pollution Control

Facility ID No. A0029

Permit No. AP4911-0194.04

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: SIERRA PACIFIC POWER COMPANY D/B/A NV ENERGY – TRACY POWER GENERATING STATION (AS PERMITTEE)

Section V. Continuous Emissions Monitoring System (CEMS) Conditions (continued)

A. 40 CFR Part 60 Appendix B and Appendix F – NO_x 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)

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 NO_x 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 NO_x missing data period.



Bureau of Air Pollution Control

Facility ID No. A0029

Permit No. AP4911-0194.04

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: SIERRA PACIFIC POWER COMPANY D/B/A NV ENERGY – TRACY POWER GENERATING STATION (AS PERMITTEE)

Section V. Continuous Emissions Monitoring System (CEMS) Conditions (continued)

A. 40 CFR Part 60 Appendix B and Appendix F – NO_x 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)



Bureau of Air Pollution Control

Facility ID No. A0029

Permit No. AP4911-0194.04

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: SIERRA PACIFIC POWER COMPANY D/B/A NV ENERGY – TRACY POWER GENERATING STATION (AS PERMITTEE)

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 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)~~
 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)~~



Bureau of Air Pollution Control

Facility ID No. A0029

Permit No. AP4911-0194.04

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: SIERRA PACIFIC POWER COMPANY D/B/A NV ENERGY – TRACY POWER GENERATING STATION (AS PERMITTEE)

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 (S2.006), System 06A/06C (S2.007), System 32 (S2.064/S2.065), and System 33 (S2.066/S2.067) (NAC 445B.3405) (continued)~~

- ~~10. 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 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 1 Section 5.2.3(2))~~
- ~~H. 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. 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****



Bureau of Air Pollution Control

Facility ID No. A0029

Permit No. AP4911-0194.04

CLASS I AIR QUALITY OPERATING PERMIT

Issued to: SIERRA PACIFIC POWER COMPANY D/B/A NV ENERGY – TRACY POWER GENERATING STATION (AS PERMITTEE)

Section VIII. Schedules of Compliance

- A. 40 CFR Part 51.308, NAC 445B.305, NAC 445B.315, NAC 445B.3405
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 are hereby incorporated and adopted 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.



NEVADA DIVISION OF
**ENVIRONMENTAL
PROTECTION**

STATE OF NEVADA
Department of Conservation & Natural Resources

Steve Sisolak, Governor
Bradley Crowell, Director
Greg Lovato, Administrator

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,

Jamie Mara
Supervisor, Permitting Branch
Bureau of Air Pollution Control

JM/mt
Enclosure: Class I Air Quality Operating Permit AP4911-0457.03
Certified Mail No. 9171 9690 0935 0218 7438 19
E-Copy: Starla Lacy, NV Energy
Tony Garcia, NV Energy
Sean Spitzer, NV Energy
Brigid McHale, NV Energy
Dawn Clevenger, NV Energy
Christopher Heintz, NV Energy



Bureau of Air Pollution Control

901 SOUTH STEWART STREET SUITE 4001

CARSON CITY, NEVADA 89701-5249

p: 775-687-9350 • www.ndep.nv.gov/bapc

Facility ID No. A0375

Permit No. AP4911-0457.03

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)~~



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Emission Unit List (continued):

J. Reserved

~~**K. System 04A – Circulating Water Treatment System A (Soda Ash Storage 20' (H) x 12' (W)) (REVISED 05/2015)**~~

~~S2.013 Unit #1 Soda Ash Storage Bin Loading
PF1.001 Unit #1 Soda Ash Storage Bin Unloading~~

~~**L. System 04B – Circulating Water Treatment System A (Magnesium Oxide Storage Bin, 20' (H) x 12' (W)) (REVISED 05/2015)**~~

~~S2.014 Unit #1 Magnesium Oxide Storage Bin Loading
PF1.002 Unit #1 Magnesium Oxide Storage Bin Unloading~~

~~**M. System 05A – Circulating Water Treatment System B (Soda Ash Storage Bin, 26' (H) x 12' (W)) (REVISED 05/2015)**~~

~~S2.015 Unit #2 Soda Ash Storage Bin Loading
PF1.003 Unit #2 Soda Ash Storage Bin Unloading~~

~~**N. System 05B – Circulating Water Treatment B (Magnesium Oxide Storage Bin, 26' (H) x 12' (W)) (REVISED 05/2015)**~~

~~S2.016 Unit #2 Magnesium Oxide Storage Bin Loading
PF1.004 Unit #2 Magnesium Oxide Storage Bin Unloading~~

~~**O. System 06 – Fly Ash Handling System (Unit #1 Fly Ash Silo, 64' (H) x 35' (W)) (REVISED 05/2015)**~~

~~S2.017 Unit #1 Fly Ash Silo Loading
PF1.005 Unit #1 Fly Ash Silo Unloading~~

~~**P. System 06A – Fly Ash Handling System: Alternate Operating Scenario Dust Collector Unloading (Unit #1 Fly Ash Silo, 64' (H) x 35' (W)) (REVISED 05/2015)**~~

~~S2.017 Unit #1 Fly Ash Silo Loading
PF1.005 Unit #1 Fly Ash Silo Unloading~~

~~**Q. System 07 – Fly Ash Handling System (Unit #2 Fly Ash Silo, 64' (H) x 35' (W)) (REVISED 05/2015)**~~

~~S2.018 Unit #2 Fly Ash Silo Loading
PF1.006 Unit #2 Fly Ash Silo Unloading~~

~~**R. System 07A – Fly Ash Handling System: Alternate Operating Scenario Dust Collector Unloading (Unit #2 Fly Ash Silo, 64' (H) x 35' (W)) (REVISED 05/2015)**~~

~~S2.018 Unit #2 Fly Ash Silo Loading
PF1.006 Unit #2 Fly Ash Silo Unloading~~

~~**S. System 08A – Unit #2 Lime Scrubber System A (Scrubber - Loop 1 Day Storage Bin, 35 ton capacity) (REVISED 05/2015)**~~

~~S2.019 Loop 1 Lime Day Storage Bin Loading
PF1.007 Loop 1 Lime Day Storage Bin Unloading~~

~~**T. System 08B – Unit #2 Lime Scrubber System A (Scrubber - Loop 2 Lime Day Storage Bin, 35 ton capacity) (REVISED 05/2015)**~~

~~S2.020 Loop 2 Lime Day Storage Bin Loading
PF1.008 Loop 2 Lime Day Storage Bin Unloading~~



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Emission Unit List (continued):

~~U. System 09A – Unit #2 Lime Scrubber System B (Scrubber – Loop 1 Recycle Ash Day, 50 ton capacity) (REVISED 05/2015)~~

- ~~S2.021 Loop 1 Recycle Ash Day Storage Bin Loading~~
- ~~PF1.009 Loop 1 Recycle Ash Day Storage Bin Unloading~~

~~V. System 09B – Unit #2 Lime Scrubber System B (Scrubber – Loop 2 Recycle Ash Day Storage Bin, 50 ton capacity) (REVISED 05/2015)~~

- ~~S2.022 Loop 2 Recycle Ash Day Storage Bin Loading~~
- ~~PF1.010 Loop 2 Recycle Ash Day Storage Bin Unloading~~

~~W. System 10A – Unit #2 Lime Scrubber System C (West Lime Storage Silo, 50' (H) x 20' (W), 500 ton capacity) (REVISED 05/2015)~~

- ~~S2.023 West Lime Storage Silo Loading~~
- ~~PF1.011 West Lime Storage Silo Unloading~~

~~X. System 10B – Unit #2 Lime Scrubber System C (East Lime Storage Silo, 50' (H) x 20' (W), 500 ton capacity) (REVISED 05/2015)~~

- ~~S2.024 East Lime Storage Silo Loading~~
- ~~PF1.012 East Lime Storage Silo Unloading~~

~~X. System 11 – Cooling Tower System for Unit #1 Boiler~~

- ~~PF1.015 SPX 8-Cell Cooling Tower; Wet-Draft, Cross-Flow~~

~~Z. System 12 – Cooling Tower System (REVISED 09/2019)~~

- ~~PF1.014 Unit #2 Cooling Tower, Manufactured by SPX (6-Celled, Wet-Draft, Counter-Flow)~~

~~AA. System 13 – Fuel Oil Storage Tank~~

- ~~S2.025 Fuel Oil Storage Tank, Vertical Fixed Roof, 150,000 gallon capacity~~

~~AB. System 14 – Auxiliary Boiler~~

- ~~S2.026 Babcock & Wilcox oil-fired package boiler, model # FM 103-88, serial # NA~~

~~AC. System 15 – Emergency Diesel Fire Pumps~~

- ~~S2.027 Emergency Diesel Fire Pump, 227 HP Output~~
- ~~S2.028 Emergency Diesel Fire Pump, 227 HP Output~~

~~AD. System 16 – Emergency Diesel Generator #1~~

- ~~S2.029 Emergency Diesel Generators, 375 HP Output~~

~~AE. System 17 – Emergency Diesel Generator #2~~

- ~~S2.030 Emergency Diesel Generators, 600 HP Output~~



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Emission 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*****



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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.



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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 PM₁₀ and SO₂ 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 designees. 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.~~



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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 PM₁₀ 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: PM₁₀, 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 PM₁₀ monitoring utilizes high-volume samplers, at least one of the PM₁₀ monitoring stations shall have collocated PM₁₀ 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: PM₁₀ and PM_{2.5} concentrations, SO₂ concentrations, NO_x concentrations, 10-meter wind speed, 10-meter wind direction, and 2-meter temperature.~~

~~If PM₁₀ monitoring utilizes high-volume samplers, at least one of the PM₁₀ monitoring stations shall have collocated PM₁₀ 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: PM₁₀ and PM_{2.5} concentrations, SO₂ concentrations, NO_x concentrations, 10-meter wind speed, 10-meter wind direction, and 2-meter temperature.~~

~~If PM₁₀ monitoring utilizes high-volume samplers, at least one of the PM₁₀ monitoring stations shall have collocated PM₁₀ 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*****



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Section VI. Specific Operating Conditions

A. Emission Unit S2.001

System 01 – Unit #1 Boiler (REVISED 05/2015)		Location UTM (Zone 11, NAD 83)	
		m North	m East
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	4,525,590	487,130

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_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 **PM₁₀** (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 **PM₁₀** (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_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_x** (nitrogen oxides) to the atmosphere will not exceed **7,849** tons per year, based on a 12-month rolling average.~~
- g. ~~NAC 445B.22047 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 **SO₂** (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 **SO₂** (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.~~



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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 UUUUU 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-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.~~
- ~~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]:~~

Pollutant	Calendar Year	2015	2016	2017	2018	2019
SO₂ (sulfur dioxide)	Acid Rain Allowance	6,569	6,569	6,569	6,569	6,569
NO_x (nitrogen oxides)	Acid Rain Emission Limit (lb/MMBtu, annual average)*	0.46	0.46	0.46	0.46	0.46

*Note: the NO_x 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).~~



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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 NO_x acid rain permit application signed December 16, 2014 entitled “Acid Rain Permit Application” and all references contained therein, including the Phase II NO_x Compliance Plan and the Phase II NO_x 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 d/b/a NV Energy 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.



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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 SO₂ 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_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.~~



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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 PM₁₀, SO₂, NO_x, CO, VOC, and Pb must be converted to emissions of PM₁₀, SO₂, 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 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 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, SO₂ emissions, NO_x emissions, and either carbon dioxide (CO₂) or oxygen (O₂) 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 SO₂ 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 SO₂ 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).~~



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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 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.~~
- (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.~~



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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.~~



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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:

$$HI = Q_w * (1/F_c) * (\%CO_{2w}/100)$$

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 caloric value of the fuel combusted (F), and a factor representing a ratio of the volume of CO₂ 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 1: F and F_c Factors¹

Fuel	F-factor (dscf/MMBtu)	F _c -factor (scf CO ₂ /MMBtu)
Coal (as defined by ASTM D388–99):		
Anthracite	10,100	1,970
Bituminous	9,780	1,800
Sub-bituminous	9,820	1,840
Lignite	9,860	1,910
Oil	9,190	1,420

¹Determined at standard conditions: 20 °C (68 °F) and 29.92 inches of mercury.



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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 CO₂/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.

GCV is the gross calorific value (Btu/lb) of the fuel combusted determined by ASTM D5865-01a, Standard Test Method for Gross Calorific Value of Coal and Coke, and 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 of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter (Precision Method) for oil; and ASTM D3588-98, Standard Practice for Calculating Heat Value, Compressibility Factor, and Relative Density of Gaseous Fuels, ASTM D4891-89 (Reapproved 2006), Standard Test Method for Heating Value of Gases in Natural Gas Range by Stoichiometric Combustion, GPA Standard 2172-96 Calculation of Gross Heating Value, Relative Density and Compressibility Factor for Natural Gas Mixtures from Compositional Analysis, GPA Standard 2261-00 Analysis for Natural Gas and Similar Gaseous Mixtures by Gas Chromatography, or ASTM D1826-94 (Reapproved 1998), Standard Test Method for Calorific (Heating) Value of Gases in Natural Gas Range by Continuous Recording Calorimeter, for gaseous fuels, as applicable.



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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 A.4.d.(4)(i) or A.4.d.(4)(ii).

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 PM₁₀ 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 SO₂ 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 SO₂ emissions measured.~~
- ~~(ii) The Sulfur and SO₂ 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).~~



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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 NO_x 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 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.



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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)	
		m North	m East
S2.002	Foster Wheeler balanced draft, dry bottom, single wall fired geometry boiler, model # Monowall, serial # 85-8051, Commencement of Construction: April 11, 1979	4,525,660	487,220

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 NO_x 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 **NO_x** (nitrogen oxides) to the atmosphere will not exceed **6,309** tons per year, based on a 12-month rolling average.~~



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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 d/b/a 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 SO₂ (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.



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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:

~~p. 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 UUUUU 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-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]:~~

Pollutant	Calendar Year	2015	2016	2017	2018	2019
SO ₂ (sulfur dioxide)	Acid Rain Allowance	3,966	3,966	3,966	3,966	3,966
NO _x (nitrogen oxides)	Acid Rain Emission Limit (lb/MMBtu, annual average)*	0.46	0.46	0.46	0.46	0.46

*Note: the NO_x 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 NO_x acid rain permit application signed December 16, 2014 entitled “Acid Rain Permit Application” and all references contained therein, including the Phase II NO_x Compliance Plan and the Phase II NO_x 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).~~



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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 NO_x 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.~~



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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, NO_x, CO, VOC, and Pb must be converted to emissions of PM₁₀, SO₂, 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 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.



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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, NO_x emissions and the CO₂ (or O₂) content of the flue gas at each location where SO₂ and NO_x 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, NO_x 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 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 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 NO_x concentration at the same location as the NO_x 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.



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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.~~



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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.~~
- ~~(ii) 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.~~



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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)

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:

$$HI = Q_w * (1/F_c) * (\%CO_{2w}/100)$$

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 caloric value of the fuel combusted (F), and a factor representing a ratio of the volume of CO₂ 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 1: F and F_c Factors¹

	F-factor (dscf/MMBtu)	F_c-factor (scf CO₂/MMBtu)
efined by ASTM D388–99):		
Anthracite	10,100	1,970
Bituminous	9,780	1,800
Sub-bituminous	9,820	1,840
Lignite	9,860	1,910
Oil	9,190	1,420

¹Determined at standard conditions: 20 °C (68 °F) and 29.92 inches of mercury.



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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) (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 CO₂/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.

GCV is the gross calorific value (Btu/lb) of the fuel combusted determined by ASTM D5865–01a, Standard Test Method for Gross Calorific Value of Coal and Coke, and 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 of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter (Precision Method) for oil; and ASTM D3588–98, Standard Practice for Calculating Heat Value, Compressibility Factor, and Relative Density of Gaseous Fuels, ASTM D4891–89 (Reapproved 2006), Standard Test Method for Heating Value of Gases in Natural Gas Range by Stoichiometric Combustion, GPA Standard 2172–96 Calculation of Gross Heating Value, Relative Density and Compressibility Factor for Natural Gas Mixtures from Compositional Analysis, GPA Standard 2261–00 Analysis for Natural Gas and Similar Gaseous Mixtures by Gas Chromatography, or ASTM D1826–94 (Reapproved 1998), Standard Test Method for Calorific (Heating) Value of Gases in Natural Gas Range by Continuous Recording Calorimeter, for 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.



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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 F_c 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 F_c 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 F_c factor as described in section B.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 PM₁₀ 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 SO₂ 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 SO₂ emissions measured.
- (ii) The Sulfur and SO₂ 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, 24-hour and 30-day rolling average periods and percent reduction).



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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 NO_x 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 the 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.~~



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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.
- C. 40 CFR Part 51.308, NAC 445B.305, NAC 445B.315, NAC 445B.3405 (NAC 445B.316) Part 70 Program
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*****