

Appendix A.2 - 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
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Sean Spitzer, NV Energy



Bureau of Air Pollution Control

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CARSON CITY, NEVADA 89701-5249

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Facility ID No. A0029

Permit No. AP4911-0194.04

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

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

Mailing Address: P.O. BOX 98910, M/S 25, LAS VEGAS, NEVADA 89151

Physical Address: 1799 WALTHAM WAY, SPARKS, NEVADA 89437

Driving Directions: 17 MILES EAST OF SPARKS, NV TAKE THE USA PARKWAY EXIT SOUTH OFF INTERSTATE 80.
TURN WEST ON WALTHAM WAY FOR APPROXIMATELY 1.5 MILES

General Facility Location:

SECTION 28, T 20 N, R 22 E, MDB&M

SECTION 29, T 20 N, R 22 E, MDB&M

SECTION 32, T 20 N, R 22 E, MDB&M

SECTION 33, T 20 N, R 22 E, MDB&M

HA 83 – TRACY SEGMENT / STOREY COUNTY

NORTH 4,382,107 M, EAST 283,338 M, UTM ZONE 11, NAD 83

Emission Unit List:

A. System 03A – Tracy Unit #3 Steam Boiler

S2.003 Steam Boiler (Manufactured by Babcock & Wilcox; Model B&W; Serial 3474; Date Aug 1970; Maximum Heat Input 1,150 MMBtu/hr; Nominal Output 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

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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)~~

**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)****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 NO_x 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 **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.~~



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 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 **NO_x** (oxides of nitrogen) to the atmosphere shall not exceed:

- (1) **9** parts per million by volume (ppmv) at 15 percent oxygen and on a dry basis, based on a 24-hour rolling period;
- (2) **42.0** pounds per hour, based on a 720-hour rolling period;
- (3) **122.64** tons per year, based on a 12-month rolling period.

~~g. The discharge of **CO** (carbon monoxide) to the atmosphere shall not exceed:~~

- ~~(1) **25** ppmv, based on a 24-hour rolling period.~~
- ~~(2) **54.0** pounds per hour, based on a 720-hour rolling period.~~
- ~~(2) **115.0** pounds per hour, based on a 60-minute block average.~~
- ~~(3) **205.86** tons per 12-month rolling period.~~

~~h. The discharge of **VOCs** (volatile organic compounds) to the atmosphere shall not exceed **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 **1.Y.2.** of this Operating Permit and pursuant to 40 CFR Part 72.9, and specified in Table 2 of 40 CFR Part 73.10(b)(2).~~

Table B-1: Acid Rain Allowance Allocations						
S2.006	Phase II (Years 2010 and Beyond) Utility Boilers > 25 MW Output Capacity	2015	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. 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/sef. If the supplier certification is used to verify the GCV, the supplier must provide documentation identifying the test method(s) used to determine the GCV.~~

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

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

~~**Sample Calculation:**~~

$$\text{(~~sef Natural Gas/hr~~)(~~Btu/sef~~) = ~~Btu/hr or MMBtu/hr~~}$$

~~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.i.** of this section.~~

~~**Sample Calculation:**~~

$$\text{(~~sef/hr~~)(~~lbs pollutant/sef~~) = ~~lbs pollutant/hr~~}$$

~~or~~

$$\text{(~~MMBtu/hr~~)(~~lbs pollutant/MMBtu~~) = ~~lbs pollutant/hr~~}$$

~~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.i.** of this section.~~

~~**Sample Calculation:**~~

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

~~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 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 S2.006.~~
- ~~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.e. 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/sef) 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 sef (lbs PM/sef) of Pipeline Quality Natural Gas, or pounds of PM per MMBtu (lbs PM/MMBtu) of Pipeline Quality Natural Gas.~~
- ~~(2) Pounds of PM₁₀ per sef (lbs PM₁₀/sef) 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 sef (lbs PM_{2.5}/sef) of Pipeline Quality Natural Gas, or pounds of PM_{2.5} per MMBtu (lbs PM₁₀/MMBtu) of Pipeline Quality Natural Gas.~~
- ~~(4) Pounds of NO_x per sef (lbs NO_x/sef) 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 sef (lbs CO/sef) of Pipeline Quality Natural Gas, or pounds of CO per MMBtu (lbs CO/MMBtu) of Pipeline Quality Natural Gas.~~
- ~~(6) Pounds of VOC per sef (lbs VOC/sef) 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))~~

**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)****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 **NO_x** (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 **1.Y.2.** of this Operating Permit and pursuant to 40 CFR Part 72.9, and specified in Table 2 of 40 CFR Part 73.10(b)(2).~~

Table B-1: Acid Rain Allowance Allocations						
S2.006	Phase II (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 **S2.007** 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:~~

$$\text{(~~scf Natural Gas/hr~~)(~~Btu/scf~~) = ~~Btu/hr or MMBtu/hr~~}$$

~~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.i. of this section.~~

~~Sample Calculation:~~

$$\text{(~~scf/hr~~)(~~lbs pollutant/scf~~) = ~~lbs pollutant/hr~~}$$

~~or~~

$$\text{(~~MMBtu/hr~~)(~~lbs pollutant/MMBtu~~) = ~~lbs pollutant/hr~~}$$

~~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.i. of this section.~~

~~Sample Calculation:~~

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

~~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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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:~~

~~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 sec (lbs PM/sec) of Pipeline Quality Natural Gas, or pounds of PM per MMBtu (lbs PM/MMBtu) of Pipeline Quality Natural Gas.~~
- ~~(2) Pounds of PM₁₀ per sec (lbs PM₁₀/sec) 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 sec (lbs PM_{2.5}/sec) of Pipeline Quality Natural Gas, or pounds of PM_{2.5} per MMBtu (lbs PM₁₀/MMBtu) of Pipeline Quality Natural Gas.~~
- ~~(4) Pounds of NO_x per sec (lbs NO_x/sec) 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 sec (lbs CO/sec) of Pipeline Quality Natural Gas, or pounds of CO per MMBtu (lbs CO/MMBtu) of Pipeline Quality Natural Gas.~~
- ~~(6) Pounds of VOC per sec (lbs VOC/sec) 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.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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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/HRSR (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)

- Emissions from **S2.009** shall be controlled by a **Steam Injection** for control of NO_x.
- Emissions from **S2.009.1** shall be controlled by **Dry Low NO_x Burners**. Note, these are not add-on controls.
- ~~Emissions from S2.009 and S2.009.1 are discharged through the same exhaust stack.~~
- ~~Descriptive Stack Parameters~~
~~Stack Height: 225.0 feet~~
~~Stack Diameter: 12.0 feet~~
~~Stack Temperature: 366.5 °F~~

2. ~~Operating Parameters (NAC 445B.3405)~~

- ~~S2.009 and S2.009.1 may consume only Pipeline Quality Natural Gas.~~
- ~~The maximum allowable heat input rate for S2.009 and S2.009.1, combined, shall not exceed 920.36 million Btu (MMBtu) per any one hour period.~~
- ~~Hours~~
~~(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:~~

- ~~The discharge of PM (particulate matter) to the atmosphere shall not exceed 20.1 pounds per hour, nor more than 29.9 tons per 12 month rolling period.~~
- ~~The discharge of 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.~~
- ~~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.~~
- ~~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.~~
- ~~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.~~
- ~~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.~~
- ~~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.~~
- ~~The discharge of VOCs (volatile organic compounds) to the atmosphere shall not exceed 5.40 pounds per hour, nor more than 54.47 tons per 12 month rolling period.~~
- ~~NAC 445B.22017 The opacity from the exhaust stack of S2.009 and S2.009.1 shall not 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):~~

Table F-1: Acid Rain Allowance Allocations						
S2.007	Phase II (Years 2010 and Beyond) Utility Boilers > 25 MW Output Capacity	2017	2018	2019	2020	2021
		θ	θ	θ	θ	θ

- ~~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/sef. 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:**~~

$$\text{(scf Natural Gas/hr)(Btu/scf) = Btu/hr or MMBtu/hr}$$

~~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:**~~

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

~~or~~

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

~~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:**~~

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

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

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 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))~~
- ~~(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 dsem (60 dsef). 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/sef) 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 sef (lbs PM/sef) of Pipeline Quality Natural Gas, or pounds of PM per MMBtu (lbs PM/MMBtu) of Pipeline Quality Natural Gas.~~
 - ~~(b) Pounds of PM₁₀ per sef (lbs PM₁₀/sef) 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 sef (lbs PM_{2.5}/sef) 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 sef (lbs NO_x/sef) 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 sef (lbs CO/sef) of Pipeline Quality Natural Gas, or pounds of CO per MMBtu (lbs CO/MMBtu) of Pipeline Quality Natural Gas.~~
 - ~~(f) Pounds of VOC per sef (lbs VOC/sef) of Pipeline Quality Natural Gas, or pounds of VOC per MMBtu (lbs VOC/MMBtu) of Pipeline Quality Natural Gas.~~



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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)

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 **I.I.** 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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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)

- 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.
- ~~CO and VOC emissions from S2.064 and S2.065 shall be controlled by an Oxidation Catalyst for control.~~
- ~~Emissions from S2.064 and S2.065 are discharged through the same exhaust stack.~~
- ~~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)

- ~~S2.064 and S2.065 may consume only Pipeline Quality Natural Gas.~~
- ~~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.~~
- ~~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.~~
- ~~Hours~~
~~(1) 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:

- ~~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.~~
- ~~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.~~
- ~~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.~~
- ~~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.~~
- ~~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.~~
- ~~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.~~
- ~~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.~~
- ~~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.~~
- ~~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:

$$\text{(scf Natural Gas/hr)(Btu/scf) = Btu/hr or MMBtu/hr}$$

- ~~g. The hourly emission rate of PM, PM₁₀, PM_{2.5}, VOC, and Sulfuric Acid Mist, each, in pounds per hour (lbs/hr) will be calculated from the hourly quantity of Pipeline Quality Natural Gas combusted determined in L.5.e. of this section, and the emission factor derived in L.6.m. of this section.~~

Sample Calculation:

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

or

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



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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.c. of this section, and the emission factor derived in L.6.m. of this section.~~

Sample Calculation:

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

~~i. Calculate annually the SO₂ emissions in tons based on quantity of Pipeline Quality Natural Gas determined in L.5.c. 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 S2.064 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 dsef). 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.e. 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/secf) 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 secf (lbs PM/secf) of Pipeline Quality Natural Gas, or pounds of PM per MMBtu (lbs PM/MMBtu) of Pipeline Quality Natural Gas.~~

~~(2) Pounds of PM₁₀ per secf (lbs PM₁₀/secf) 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 secf (lbs PM_{2.5}/secf) 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 secf (lbs NO_x/secf) 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 secf (lbs CO/secf) of Pipeline Quality Natural Gas, or pounds of CO per MMBtu (lbs CO/MMBtu) of Pipeline Quality Natural Gas.~~

~~(6) Pounds of VOC per secf (lbs VOC/secf) 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 60.4330)~~

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

~~(a) Not cause to be discharged into the atmosphere from the subject stationary combustion turbine any gases which contain SO₂ in excess of 110 ng/J (0.90 lb/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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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)

- 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.
- ~~CO and VOC emissions from S2.066 and S2.067 shall be controlled by an Oxidation Catalyst for control.~~
- ~~Emissions from S2.066 and S2.067 are discharged through the same exhaust stack.~~
- ~~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)

- ~~S2.066 and S2.067 may consume only Pipeline Quality Natural Gas.~~
- ~~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.~~
- ~~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.~~
- ~~Hours~~
~~(1) 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:

- ~~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.~~
- ~~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.~~
- ~~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.~~
- ~~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.~~
- ~~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.~~
- ~~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.~~
- ~~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.~~
- ~~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.~~
- ~~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:

$$\text{(scf Natural Gas/hr)(Btu/scf) = Btu/hr or MMBtu/hr}$$

- ~~g. The hourly emission rate of PM, PM₁₀, PM_{2.5}, VOC, and Sulfuric Acid Mist, each, in pounds per hour (lbs/hr) will be calculated from the hourly quantity of Pipeline Quality Natural Gas combusted determined in M.5.e. of this section, and the emission factor derived in M.6.m. of this section.~~

Sample Calculation:

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

or

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



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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:

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

~~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 II.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 dsem (60 dsef). 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)

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/secf) 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 secf (lbs PM/secf) of Pipeline Quality Natural Gas, or pounds of PM per MMBtu (lbs PM/MMBtu) of Pipeline Quality Natural Gas.~~

~~(2) Pounds of PM₁₀ per secf (lbs PM₁₀/secf) 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 secf (lbs PM_{2.5}/secf) 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 secf (lbs NO_x/secf) 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 secf (lbs CO/secf) of Pipeline Quality Natural Gas, or pounds of CO per MMBtu (lbs CO/MMBtu) of Pipeline Quality Natural Gas.~~

~~(6) Pounds of VOC per secf (lbs VOC/secf) 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 60.4330)~~

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

~~(a) Not cause to be discharged into the atmosphere from the subject stationary combustion turbine any gases which contain SO₂ in excess of 110 ng/J (0.90 lb/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 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.



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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.



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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.
 - ~~(e) 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)



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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

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CLASS I AIR QUALITY OPERATING PERMIT

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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))~~
- ~~11. 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*****



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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 (\$2,009, \$2,009.1) no later than December 31, 2031.~~

******End of Schedule of Compliance ******