

CLARK COUNTY
DEPARTMENT OF AIR QUALITY AND
ENVIRONMENTAL MANAGEMENT
500 South Grand Central Parkway, Box 555210, Las Vegas, Nevada 89155
Part 70 Operating Permit
Source: 8
Issued in accordance with the
Clark County Air Quality Regulations (AQR)

ISSUED TO: Nevada Power Company, Sunrise Station

SOURCE LOCATION:

6300 E. Vegas Valley Drive
Las Vegas, NV 89122
T21S, R62E, Section 10
Hydrographic Basin Number: 212

SOURCE ADDRESS:

6226 West Sahara Ave.,
Las Vegas, NV 89146

NATURE OF BUSINESS:

SIC Code 4911 - Electric Services
NAICS: 22112 – Fossil Fuel Electric Power Generation

RESPONSIBLE OFFICIAL:

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Permit Issuance **October 20, 2009**

Expiration Date: **October 19, 2014**

ISSUED BY: CLARK COUNTY DEPARTMENT OF AIR QUALITY AND ENVIRONMENTAL MANAGEMENT



Tina Gingras
Assistant Director, Clark County DAQEM

EXECUTIVE SUMMARY

The Sunrise Station, owned by Nevada Power Company (NPC) is a major source for NO_x and CO; and a minor source for PM₁₀, SO_x, VOC, and HAP. The source is located at 6300 East Vegas Valley Drive, Las Vegas, Nevada 89122, in the Las Vegas Valley airshed, hydrographic basin number 212. Hydrographic basin 212 is nonattainment for CO, PM₁₀, and ozone (8-hour), and attainment for all other regulated air pollutants. The NPC-Sunrise Station is a natural gas-fired electric generating facility consisting of two units that produce electricity. All generating and support processes at the site are grouped under the Standard Industrial Classification 4911 – Electric Services (NAICS: 22111 - Electric Power Generation). NPC-Sunrise Station includes one external combustion steam boiler (Unit Number 1) and one simple cycle natural gas turbine (Unit Number 2).

Clark County Department of Air Quality and Environmental Management (DAQEM) has delegated authority to implement the requirement of the Part 70 operating permit program. The external combustion steam boiler, cooling tower, and its supporting equipment are permitted through the Nevada Department of Environmental Protection (NDEP). DAQEM regulates only the simple cycle gas turbine, its associated emission units, the 380 HP portable generator, and the 5,064,081 gallon diesel storage tank. The entire co-regulated NPC-Sunrise Station is a major source for NO_x, CO, SO_x, PM₁₀, and VOC, while DAQEM-regulated portion is only major for NO_x and CO. The terms facility and source, used in Part 70 OP, signify only DAQEM-regulated units.

The following table summarizes the source PTE for each regulated air pollutant for all emission units addressed by this Part 70 operating permit:

PM₁₀	NO_x	CO	SO_x	VOC	HAP
46.00	1,760.38	155.34	10.42	13.30	1.33

All general and specific conditions in the permit are federally enforceable unless explicitly denoted otherwise [AQR 19.4.2].

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I. ACRONYMS

Table I-1: List of Acronyms

Acronym	Term
AQR	Clark County Air Quality Regulations
ATC	Authority to Construct
ATC/OP	Authority to Construct/Operating Permit
BCC	Clark County Board of County Commissioners
BHP	Brake Horse Power
CAO	Field Corrective Action Order
CE	Control Efficiency
CF	Control Factor
CFR	United States Code of Federal Regulations
CO	Carbon Monoxide
CPI	Urban Consumer Price Index
DAQEM	Clark County Department of Air Quality & Environmental Management
EF	Emission Factor
EPA	United States Environmental Protection Agency
EU	Emission Unit
HAP	Hazardous Air Pollutant
HP	Horse Power
kW	kiloWatt
MMBtu	Millions of British Thermal Units
NAC	Nevada Administrative Code
NAICS	North American Industry Classification System
NEI	Net Emission Increase
NO _x	Nitrogen Oxides
NOV	Notice of Violation
NRS	Nevada Revised Statutes
NSPS	New Source Performance Standards
NSR	New Source Review
OP	Operating Permit
PM ₁₀	Particulate Matter less than 10 microns
ppm	Parts per Million
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
scf	Standard Cubic Feet
SCC	Source Classification Codes
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO _x	Sulfur Oxides
TCS	Toxic Chemical Substance
TSD	Technical Support Document
VOC	Volatile Organic Compound

II. GENERAL CONDITIONS

A. General Requirements

1. The Permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Air Act (Act) and is grounds for enforcement action; for permit termination, revocation and reissuance or modification; or for denial of a permit renewal application. *[AQR 19.4.1.6.a]*
2. If any term or condition of this permit becomes invalid as a result of a challenge to a portion of this permit, the other terms and conditions of this permit shall not be affected and shall remain valid. *[AQR 19.4.1.5]*
3. The Permittee shall pay all permit fees pursuant to AQR Section 18. Failure to pay Part 70 permit fees may result in citations or suspensions or revocation of the Part 70 Permit. *[AQR 19.4.1.7]*
4. The permit does not convey any property rights of any sort, or any exclusive privilege. *[AQR 19.4.1.6.d]*
5. The Permittee shall not hinder, obstruct, delay, resist, interfere with, or attempt to interfere with the Control Officer, or any individual to whom authority has been duly delegated for the performance of any duty by the AQR. *[AQR 5.1]*
6. The Permittee owning, operating, or in control of any equipment or property who shall cause, permit, or participate in any violation of the AQR shall be individually and collectively liable to any penalty or punishment imposed by and under the AQR. *[AQR 8.1]*
7. The Permittee shall continue to comply with applicable requirements for which the Permittee is in compliance. *[AQR 19.3.3.8.b]*
8. Any Permittee who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information. *[AQR 19.3.2]*
9. The Permittee may request confidential treatment of any records in accordance with AQR Section 19. Emission data, standards or limitations [all terms as defined in 40 CFR 2.301(a)] or other information as specified in 40 CFR 2.301 shall not be considered eligible for confidential treatment. The Administrator and the Control Officer shall each retain the authority to determine whether information is eligible for confidential treatment on a case-by-case basis. *[AQR 19.3.1.3 and 40 CFR 2.301]*

B. Modification, Revision, Renewal Requirements

1. The Permittee shall not make a modification, as defined in AQR Section 0, to the existing source prior to receiving an ATC from the Control Officer. *[AQR 12.1.1.1]*
2. The permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the Permittee for the permit modification, revocation, reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. *[AQR 19.4.1.6.c]*
3. Any request for a permit revision must comply with the requirements of AQR Section 19. *[AQR 19.5]*

4. The Permittee shall not build, erect, install or use any article, machine, equipment or process, the use of which conceals an emission, which would otherwise constitute a violation of an applicable requirement. *[AQR 80.1 and 40 CFR 60.12]*
5. No permit revisions shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in the permit, provided the Permittee conforms to the applicable requirements of AQR Sections 12 and 58. *[AQR 19.4.1.11]*
6. For purposes of permit renewal, the Permittee shall submit a timely and complete application. A timely application is one submitted between six (6) months and 18 months prior to the date of permit expiration. *[AQR 19.3.1.1.c]*
7. Permit expiration terminates the Permittee's right to operate unless a timely and complete renewal application has been submitted consistent with AQR Subsections 19.3.1.1.c and 19.5.2 in which case the permit shall not expire and all terms and conditions of the permit shall remain in effect until the renewal permit has been issued or denied. *[AQR 19.5.3.2]*

C. Reporting/Notifications/Providing Information Requirements

1. The Permittee shall furnish to the Control Officer, within a reasonable time, any information that the Control Officer may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the Permittee shall also furnish to the Control Officer copies of records required to be kept by the permit or, for information claimed to be confidential, the Permittee may furnish such records directly to the Control Officer along with a claim of confidentiality. *[AQR 19.4.1.6]*
2. The Permittee shall allow the Control Officer or an authorized representative, upon presentation of credentials:
 - a. entry upon the Permittee's premises where the source is located, or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;
 - b. access to inspect and copy, at reasonable times, any records that must be kept under conditions of the permit;
 - c. access to inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
 - d. access to sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or applicable requirements. *[AQR 4.3 and 19.4.3.2]*
3. Upon request of the Control Officer, the Permittee shall provide such information or analyses as will disclose the nature, extent, quantity or degree of air contaminants which are or may be discharged by such source, and type or nature of control equipment in use, and the Control Officer may require such disclosures be certified by a professional engineer registered in the state. In addition to such report, the Control Officer may designate an authorized agent to make an independent study and report as to the nature, extent, quantity or degree of any air contaminants which are or may be discharged from source. An authorized agent so designated is authorized to inspect any article, machine, equipment, or other contrivance necessary to make the inspection and report. *[AQR 4.4]*

D. Compliance Requirements

1. The Permittee shall not use as a defense in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the terms and conditions of this permit. *[AQR 19.4.1.6.b]*
2. Any person who violates any provision of this Operating Permit, including, but not limited to, any application requirement; any permit condition; any fee or filing requirement; any duty to allow or carry out inspection, entry or monitoring activities or any requirements by DAQEM is guilty of a civil offense and shall pay civil penalty levied by the Air Pollution Control Hearing Board/Hearing Officer of not more than \$10,000. Each day of violation constitutes a separate offense. *[AQR 9.1]*
3. Any person aggrieved by an order issued pursuant to AQR 9.1 is entitled to review as provided in Chapter 233B of NRS. *[AQR 9.12]*
4. The Permittee of any stationary source or emission unit that fails to demonstrate compliance with the emissions standards or limitations shall submit a compliance plan to the Control Officer pursuant to AQR Section 10. *[AQR 10.1]*
5. The Permittee shall comply with the requirements of 40 CFR 61, Subpart M, of the National Emission Standard for Asbestos for all demolition and renovation projects. *[AQR 13.1.7]*
6. Requirements for compliance certification with terms and conditions contained in the Operating Permit, including emission limitations, standards, or work practices, are as follows:
 - a. the Permittee shall submit compliance certifications annually in writing to the Control Officer (500 Grand Central Parkway, Box 555210, Las Vegas, NV 89155) and the Administrator at USEPA Region IX (Director, Air and Toxics Divisions, 75 Hawthorne St., San Francisco, CA 94105). A compliance certification for each year will be due 30 days after the Operating Permit issuance anniversary date;
 - b. compliance shall be determined in accordance with the requirements detailed in AQR 19.4.1.3, record of periodic monitoring, or any credible evidence; and
 - c. the compliance certification shall include:
 - i. identification of each term or condition of the permit that is the basis of the certification;
 - ii. the Permittee's compliance status and whether compliance was continuous or intermittent;
 - iii. methods used in determining the compliance status of the source currently and over the reporting period consistent with Subsection 19.4.1.3;
 - iv. identification as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 occurred *[40 CFR 64.7]*; and
 - v. other specific information required by the Control Officer to determine the compliance status of the source. *[AQR 19.4.3.5]*
7. The Permittee shall submit annual emissions inventory reports based on the following: *[AQR 18.6.1]*
 - a. The annual emissions inventory shall be received by DAQEM no later than March 31 after the reporting year.

- b. The report shall include the emission factors and calculations used to determine the emissions from each permitted emission unit, even when an emission unit is not operated.
8. The Permittee shall report to the Control Officer (500 Grand Central Parkway, Box 555210, Las Vegas, NV 89155) any upset, breakdown, malfunction, emergency or deviation which cause emissions of regulated air pollutants in excess of any limits set by regulation or by this permit. The report shall be in two parts as specified below [AQR 25.2]:
 - a. within one (1) hour of the onset of the event, the report shall be communicated by phone (702) 455-5942, or by fax (702) 383-9994.
 - b. as soon as practicable but not exceeding ten (10) calendar days from the onset of the event, the detailed written report shall be submitted. Such reports shall include the probable cause of the excess emissions, emission calculations and any corrective actions taken.
 9. The Permittee shall report to the Control Officer deviations that do not result in excess emission, with the quarterly reports. Such reports shall include the probable cause of deviations and any corrective actions or preventative measures taken. [AQR 19.4.1.3]
 10. The Permittee shall include a certification of truth, accuracy, and completeness by a responsible official when submitting any application form, report, or compliance certification pursuant to this Operating Permit. This certification and any other certification required shall state, "Based on the information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete." This statement shall be followed by the signature and printed name of the responsible official certifying compliance and the date of signature. [AQR 19.3.4]

E. Performance Testing Requirements

1. Upon request of the Control Officer, the Permittee shall test or have tests performed to determine the emissions of air contaminants from any source whenever the Control Officer has reason to believe that an emission in excess of that allowed by the DAQEM regulations is occurring. The Control Officer may specify testing methods to be used in accordance with good professional practice. The Control Officer may observe the testing. All tests shall be conducted by reputable, qualified personnel. [AQR 4.5]
2. Upon request of the Control Officer, the Permittee shall provide necessary holes in stacks or ducts and such other safe and proper sampling and testing facilities, exclusive of instruments and sensing devices, as may be necessary for proper determination of the emission of air contaminants. [AQR 4.6]
3. The Permittee shall submit for approval a performance testing protocol which contains testing, reporting, and notification schedules, test protocols, and anticipated test dates to the Control Officer (500 Grand Central Parkway, Box 555210, Las Vegas, NV 89155) not less than 45 nor more than 90 days prior to the anticipated date of the performance test. [AQR 14.10]
4. The Permittee shall submit to EPA for approval any alternative test methods that are not already approved by EPA. [AQR 14.1 and 40 CFR 60.8(b)]
5. The Permittee shall submit a report describing the results of each performance test to the Control Officer within 60 days from the end of the performance test. [AQR 14.12]
6. The Control Officer may require additional or more frequent performance testing. [AQR 4.5]

III. EMISSION UNITS AND APPLICABLE REQUIREMENTS

A. Emission Units

The stationary source covered by this Part 70 Operating Permit (OP) is defined to consist of the emission units and associated appurtenances summarized in Table III-A-1. *[NSR ATC 8, Modification 1, Revision 4 (10/07/2008)]*

Table III-A-1: List of Emission Units

EU	Description	Rating	Make	Model #	Serial #
801	Single Shaft, Simple Cycle Turbine	76MW	Westinghouse	501-B5	27A1111-1
A02	Diesel Emergency Generator	250 kW	Onan	250 ODFM-17R50331N	ES70899164
A09	Diesel Number 2 Fuel Storage Tank	5,064,081 Gallon	Chicago Bridge and Iron Co.	N/A	N/A

B. Emission Limitations and Standards

1. Emission Limits

- a. Emission limitations in this permit refer to pounds per MMBtu, pounds per hour, and tons per year. The terms “year” and “annual” in this permit refer to any consecutive 12-month period. Actual and allowable short-term and annual emissions from EUs A02 and A03 shall not exceed the applicable PTE listed in Tables III-B-1 and III-B-3. *[NSR ATC/OP 8, Modification 1, Revision 4, (10/07/08)]*
- b. Actual and allowable annual emissions of the turbine (EU 801) shall not exceed the applicable PTE listed in Tables III-B-1. Actual and allowable annual emissions of EU 801 shall include emissions from turbine start-up and shut-down cycles using emission factors in Table III-B-2. Actual and allowable annual HAP emissions of EU 801 shall not exceed the annual emission limit as listed in Table III-B-3. Actual and allowable HAP emissions of EUs A02 and A03 shall not exceed any applicable emission limit of Table III-B-3. *[NSR ATC/OP 8, Modification 1, Revision 4, (10/07/08)]*
- c. The Permittee shall not discharge into the atmosphere, from any emission unit, any air contaminant in excess of an average of 20 percent opacity for a period of more than 6 consecutive minutes. *[AQR 26.1 and NSR ATC/OP 8, Modification 1, Revision 4, (10/07/08)]*
- d. Actual and allowable NO_x emissions for the combustion turbine (EU: 801) associated with water injection shall not exceed 0.34 pounds per MMBtu. *[NO_x Reduction Plan agreement between the Nevada Power Company and Clark County Health District (05/24/90)]*
- e. The Permittee shall use emission factors presented in Table III-B-3 or more representative emission factors developed by the Permittee to estimate the emissions for any clock hour in which a start-up/shut-down event occurs. *[NSR ATC/OP 8, Modification 1, Revision 4, (10/07/08)]*

Table III-B-1: Emission Unit PTE, Including Startup and Shutdowns (tons per rolling 12-months)

EU	PM ₁₀	NO _x	CO	SO _x	VOC
801 ¹	45.99	1,760.23	155.31	10.41	10.87
A02 ²	0.01	0.15	0.03	0.01	0.01
A03 ³	0.00	0.00	0.00	0.00	2.42

¹EU: 801 NO_x emissions based on maximum heat input rating of 1,182 MMBtu/hr; 8,760 hours of operation per year; and the May 24, 1990 NO_x Reduction Plan agreement with the Clark County Health District.

²EU: A02 emissions based on 380 hp; 26 hours per year testing and maintenance.

³EU: A03 VOC emissions from American Petroleum Institute Tanks Program.

Table III-B-2: Emission Unit PTE, Excluding Startup and Shutdowns (pounds per hour)

EU	PM ₁₀	NO _x	CO	SO _x	VOC
A02	0.84	11.78	2.54	0.78	0.96
A03	0.00	0.00	0.00	0.00	0.55

f. The start-up and shut-down PTE listed in Table III-B-3 are not enforceable short term emission limitations. The Permittee shall use these emission factors for calculations of the start-up and shut-down emissions of turbine (EU: 801) for compliance with the annual emission limitations of the turbine. *[NSR ATC/OP 8, Modification 1, Revision 4, (10/07/08)]*

Table III-B-3: Turbine Start-up and Shut-down PTE ^{1,2}

EU	PM ₁₀		NO _x		CO		SO _x		VOC	
	lbs/MMBtu	lbs/hr	lbs/MMBtu	lbs/hr	lbs/MMBtu	lbs/hr	lbs/MMBtu	lbs/hr	lbs/MMBtu	lbs/hr
801	0.0089	3.77	0.3800	174.90	0.37	107.7	0.0020	0.85	0.0021	0.89

¹ Annual emission limits for EU: 801 in Table III-B-1 include start-up and shut-down emissions shown in Table III-B-3. The EFs listed in Table III-B-3 will be used unless the source will develop more representative EFs.

² PTE represents emissions for one (1) hour of startup/shutdown.

g. Actual and allowable HAP emissions shall not exceed any applicable emission limits of Table III-B-4 *[NSR ATC/OP 8, Modification 1, Revision 4, (10/07/08)]* :

Table III-B-4: Source HAP Emission Limits

	Turbine (EU: 801) Gas-fired at 8,760 Hours per Year ^{1,2}	Diesel Generator (EU: A02) at 26 Hours per Year ³	Diesel Tank (EU: A03) at 8,760 Hours per Year ⁴	All Emission Units ⁵
lbs/hour	---	0.017	0.053	---
ton/year	1.10	0.0002	0.23	1.33

¹ Formaldehyde, benzene, and toluene emission factors from Gas-fired Boiler and Turbine Air Toxics Summary Report, prepared by Carnot Technical Services, Tustin, CA, for the Gas Research Institute and The Electric Power Research Institute, August 1996; remaining emission factors from AP-42 Section 3.1 Stationary Gas Turbines, Table 3.1-3. Symbol "----" indicates no enforceable short term emission limits.

² Based on heat inputs of 899 MMBtu/hr (LHV) for natural gas.

³ Emission factors from AP-42, Volume 1, Chapter 3, Table 3.3-2.

⁴ HAPs at concentrations found in #2 diesel fuel oil (per MSDS) applied to VOC emission limit.

2. Production Limits

- a. Turbine startup shall be defined as the 60 minute period immediately following the commencement of combustion of fuel. Turbine shutdown shall be defined as the 60 minute period immediately preceding cessation of combustion of fuel. *[NSR ATC/OP 8, Modification 1, Revision 4, (10/07/08)]*
- b. The Permittee shall limit operation of diesel emergency generator to 26 hours per any rolling 12-month period for testing and maintenance purposes. Emergency use as defined in AQR Section 0 is excluded from limits of hours of operation or emissions. *[NSR ATC/OP 8, Modification 1, Revision 4, (10/07/08)]*

- c. The Permittee shall combust only low sulfur (less than 0.05 percent sulfur by weight) fuel in the diesel emergency generator. *[NSR ATC/OP 8, Modification 1, Revision 4, (10/07/08)]*
- d. The Permittee shall not use diesel emergency generator for dispatchable peak shaving. *[NSR ATC/OP 8, Modification 1, Revision 4, (10/07/08)]*
- e. The Permittee shall not test the diesel-powered emergency generator (EU: A02) during wintertime carbon monoxide advisory periods without the prior written approval of the Control Officer. *[NSR ATC/OP 8, Modification 1, Revision 4, (10/07/08)]*

3. Emission Controls

- a. The Permittee shall control NO_x emissions from turbine (EU 801) during gas firing, by using water injection for loads over 55 MW. *[NSR ATC/OP 8, Modification 1, Revision 4, (10/07/08)]*
- b. The Permittee shall control SO_x and PM₁₀ exhaust emissions from the turbine (EU 801) by exclusive use of pipeline quality natural gas and good combustion practice. *[NSR ATC/OP 8, Modification 1, Revision 4, (10/07/08)]*
- c. The Permittee shall use natural gas fuel with sulfur content not to exceed natural gas pipeline quality sulfur limit specified by Federal Energy Regulatory Commission (FERC) as an annual average of 0.75 grains per 100 dscf as determined by averaging the four (4) most recent consecutive quarterly verifications. *[NSR ATC/OP 8, Modification 1, Revision 4, (10/07/08)]*
- d. The Permittee shall equip diesel emergency generator with turbocharger and aftercooler. *[NSR ATC/OP 8, Modification 1, Revision 4, (10/07/08)]*

C. Monitoring

- 1. EU 801 is subject to the requirements of 40 CFR 64 for NO_x. The Permittee shall use turbine load, fuel flow and water injection requirements to demonstrate compliance with 40 CFR 64, Compliance Assurance Monitoring (CAM) *[40 CFR 64.3(c)]*:
 - a. The Permittee shall continuously monitor the natural gas fuel flow and water injection rate within the turbine all times when the turbine is operating. (Continuous monitoring is defined as data recorded at least every fifteen (15) minutes with one hour average). This monitoring frequency requirement is not applicable during periods of monitor downtime including calibration, maintenance, and malfunction of the meter, with such downtime not to exceed (5) five percent of the total operating time. *[AQR 19.4.1.3 and 40 CFR 60.7(d)(2)]*
 - b. The Permittee shall submit the monitoring system performance report or summary report to the Control Officer, if the total downtime of the continuous operating system is five (5) percent or greater of the total operating time of the reporting period. *[40 CFR 60.7(d)(2)]*
 - c. The Permittee shall calculate NO_x and CO emissions at all times when the turbine (EU: 801) is operating at loads over 55 MW by a data logging system that monitors and logs, at least hourly, the rate of water injection and the water-to-fuel ratio within the turbine. *[NSR ATC/OP 8, Modification 1, Revision 4, (10/07/08)]*
 - d. The Permittee shall establish, maintain and monitor the rate of water injection and the water-to-fuel ratio within the turbine (EU: 801) so that annual emissions of NO_x can be accurately recorded and reported. *[AQR 19.4.1.3]*

Table III-C-1: Monitoring Approach¹

Criteria	Indicator
Indicator and Measurement Approach	Natural gas flow rate, turbine load, and water injection rate are monitored as the indicators of NO _x emissions compliance.
Indicator Range	The water injection rate curve is used to determine the required water injection rate based on the turbine load An excursion is defined as a three-hour average water injection rate lower than specified in by the water injection rate curves. The water injection system is monitored continuously (data recorded at least every fifteen minutes, with one hour average) and alarms are activated if the three-hour average water injection rate is less than the required flow. Excursions trigger an investigation, corrective actions and a reporting requirement. More than 6 excursions within a 6-month period require a quality improvement plan (QIP).
Performance Criteria Data Representativeness	The turbine emissions are tested annually using EPA Method 7E to ensure the NO _x emissions are below the emission rate predicted by the water injection curve and listed in the permit.
Verification of Operational Status	Compliance with Part 70 OP conditions
QA/QC Practices and Criteria	Annual calibration of flow meters (or calibration based on manufacturer's specification). Annual Source testing using EPA Method 7E.
Monitoring Frequency	The natural gas fuel flow rate and water injection flow rate are measured continuously using flow meters. Turbine load is also measured continuously. (Continuous measurement is defined as data recorded at least every fifteen (15) minutes with one hour average). See condition III-C-1-a for additional details.
Data Collection Procedures	A data logger records the natural gas fuel flow, turbine load, and water injection rates measured by the flow meters.
Averaging Period	A three-hour fixed block averaging period is used. All reported emissions are based on rolling hour average.

¹ Except during periods of startup, shutdown, calibration, maintenance/planned outage, or malfunction. Neither short term permit limits nor NO_x controls are applicable to turbine startup and shutdown periods. Per permit conditions, no NO_x emission control are required at loads of 55 MW or less; therefore, no NO_x emission controls are required during startup and shutdown. The startup and shutdown emissions are calculated using the NO_x emission factor listed in the permit and the measured fuel flow rate.

2. For purpose of CAM, an exceedance of NO_x is deemed to occur if the data logging system records a three-hour average water injection rate lower than the optimum water injection rate or performance test records a NO_x result higher than the 0.34 lb/MMBtu limit. [40 CFR 64.6(c)(2)]
3. In the event of an exceedance as defined in Condition 2 above, the Permittee shall restore operation of the unit, including the control device, to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. [40 CFR 64.7(a)]
4. In the event of an exceedance as defined in Condition 2 above, the Permittee shall comply with the applicable CAM reporting and recordkeeping requirements of 40 CFR 64.9(a). [40 CFR 64.9(a)]
5. The Permittee shall install a properly operating and regularly maintained alarm system on turbine (EU: 801) to indicate breakdown or malfunction of the water injection pump. The Permittee shall monitor and record the system breakdowns and malfunctions. [AQR 19.4.1.3]

6. The Permittee shall use hourly and annual natural gas fuel consumption rates by the turbine (EU: 801); results of NO_x and CO performance testing; and information from the data logging system as a measure of compliance with the turbine's CO and NO_x annual emission limits. This does not, however, preclude the use of other credible evidence in determining or showing compliance. [AQR 19.4.1.3]
7. The Permittee shall use hourly and annual natural gas fuel consumption rates by the turbine, along with turbine emission factors, including those in Table III-B-2, as a measure of compliance with the turbine's PM₁₀ and SO_x annual emission limits for natural gas firing. This does not, however, preclude the use of other credible evidence in determining or showing compliance. [AQR 19.4.1.3]
8. The Permittee shall use hourly and annual natural gas consumption rates by the turbine, along with emission factors, including those in Table III-B-2, as a measure of compliance with the turbine's VOC and HAP annual emission limits for operating on natural gas. This does not, however, preclude the use of other credible evidence in determining or showing compliance. [AQR 19.4.1.3]
9. The Permittee shall perform at least one visual emissions observation on a plant-wide level each calendar quarter. Quarterly visual observations shall include the diesel-fired emergency generator (EU: A02) while operating, to demonstrate compliance with the opacity limit. If the diesel-fired emergency generator does not operate during the calendar quarter, then no observation shall be required. If visible emissions are observed, then corrective actions shall be taken to minimize the emissions and, if practicable, the opacity of emissions shall be visually determined in accordance with 40 CFR 60 Appendix A: Reference Method 9. [AQR 19.4.1.3(a) and 40 CFR 70.6]
10. Sulfur content of natural gas fuel shall be verified at least quarterly and verifications shall be based on reports or written data from the gas supplier or by sampling and analysis. [AQR 19.4.1.3]
11. Sulfur content of diesel fuel shall be certified by the supplier with each fuel delivery. [AQR 19.4.1.3]

D. Testing

1. The Permittee shall conduct performance testing for turbine operation using natural gas annually and within 60 days of the anniversary date of the previous performance test. [AQR 19.4.1.3]
2. Table III-D-1 summarizes performance test methods [AQR 19.4.1.3]:

Table III-D-1: Performance Testing Requirements

Test Point	Pollutant	Fuel(s)	Method
Turbine Exhaust Outlet Stack	NO _x	Natural Gas	EPA Method 7E
Turbine Exhaust Outlet Stack	CO	Natural Gas	EPA Method 10
Turbine Exhaust Outlet Stack	Opacity	Natural Gas	EPA Method 9
Turbine Exhaust Outlet Stack	---	Natural Gas	EPA Methods 1, 2, 3 and 4

3. The Permittee shall conduct performance testing while firing at least 80 percent of nominal capacity. [NSR ATC/OP 8, Modification 1, Revision 4, (10/07/08)]
4. During performance testing, the Permittee shall track and record the amount of natural gas used during each test run in cubic feet per hour and MMBtu per hour corrected to standard conditions. [NSR ATC/OP 8, Modification 1, Revision 4, (10/07/08)]

5. The Permittee shall use DAQEM-approved performance test results to verify and/or revise the optimum water injection ratios with respect to ensuring compliance with annual emission limits affected by water injection and water-to-fuel ratio. *[NSR ATC/OP 8, Modification 1, Revision 4, (10/07/08)]*

E. Record Keeping

1. The Permittee shall maintain records and logs shall contain, at minimum, the following information *[AQR 19.4.1.3]*:
 - a. any and all deviations from permit requirements, including, but not limited to, emission limits, upsets, emergencies, malfunctions, breakdowns, the durations and probable causes of such deviations, and the corrective and/or preventative actions taken to restore and maintain compliance;
 - b. dates, times and daily hours of operation of EU 801;
 - c. monthly and annual (rolling 12-month total) quantities of natural gas consumed by EU 801;
 - d. dates, times, and durations of each start-up and shut-down cycle;
 - e. daily hours of operation of EU A02 when used for testing and maintenance;
 - f. daily hours of operation of EU A02 when used for emergencies that involve loss of grid power;
 - e. hourly, daily, monthly and annual quantity of diesel fuel consumed by EU A02 for testing and maintenance;
 - f. hourly, daily, monthly and annual quantities of diesel fuel consumed by EU A02 during emergencies that involve loss of grid power;
 - g. monthly and annual quantity of diesel stored in and withdrawn from EU A03;
 - h. the data logging system output files and monitoring methods, based on optimum water-injection to fuel curves and other data that ensure EU 801 remains continuously in compliance with its respective NO_x and CO annual emission limits in Table III-B-1;
 - i. hourly water injection and fuel flow data;
 - j. quarterly reports of sulfur contents of natural gas;
 - k. sulfur content of diesel fuel as certified by the supplier with each fuel delivery; and
 - l. results of the last performance test conducted in addition to any other performance tests conducted within the last five (5) years.
3. For all inspections, visible emission checks, and testing required under monitoring, logs, reports, and records shall include at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective action taken (if required). *[AQR 19.4.1.3(b)]*
4. Records and data required by this operating permit to be maintained by Permittee may, at the Permittee's expense, be audited at any time by a third party selected by the Control Officer. *[AQR 4.4 and 19.4.3.2]*
5. Should this stationary source, as defined in 40 CFR 68.3, become subject to the accidental release prevention regulations in Part 68, then the Permittee shall submit an RMP by the date specified in Section 68.10 and shall certify compliance with the requirements of Part 68

as part of the annual compliance certification as required by 40 CFR 70 or 71. [AQR 19.4.1.3]

6. All records and logs, or a copy thereof, shall be kept on-site for a minimum of five (5) years from the date the measurement was taken or data was entered and shall be made available to DAQEM upon request. [AQR 19.4.1.3(b)]
7. The Control Officer reserves the right to require additional requirements concerning records and record keeping for this source. [AQR 19.4.1.3]

F. Reporting

1. All report submissions shall be addressed to the attention of the Control Officer. [AQR 14.3, 21.4, and 22.4]
2. All reports shall contain the following [AQR 19.4.1.3(c) and 19.3.4]:
 - a. a certification statement on the first page, i.e., “I certify that, based on information and belief formed after reasonable inquiry, the statements contained in this document are true, accurate and complete.” (A sample available from DAQEM); and
 - b. a certification signature from a responsible official of the company and the date certification.
3. The Permittee shall submit quarterly reports to DAQEM. [AQR 19.4.1.3(c)]
4. The following requirements apply to quarterly reports: [AQR 19.4.1.3(c)]
 - a. The report shall include a quarterly summary of each item listed in Section III-E-1(a through k).
 - b. For each CEMS with total “out-of-control” periods greater than two percent of the time that its associated turbine operated during the calendar quarter, the report shall include the item listed in Section III-E-1(l).
 - c. The report shall include the item listed in Section III-E-1(o) if different from the previous quarter.
 - d. The report shall be based on a calendar quarter, which includes partial calendar quarters.
 - e. The report shall be received by DAQEM within 30 calendar days after the calendar quarter. Regardless of the date of issuance of this permit, the source shall comply with the schedule for report submissions outlined in Table III-F-1:

Table III-F-1: Reporting Schedule

Required Report	Applicable Period	Due Date ¹
Quarterly Report for 1 st Calendar Quarter	January, February, March	April 30 each year
Quarterly Report for 2 nd Calendar Quarter	April, May, June	July 30 each year
Quarterly Report for 3 rd Calendar Quarter	July, August, September	October 30 each year
Quarterly Report for 4 th Calendar Quarter, Any additional annual records required.	October, November, December	January 30 each year
Annual Compliance Certification Report	12 Months	30 days after the Operating Permit issuance anniversary date
Annual Emission Inventory Report	Calendar Year	March 31 each year
Excess Emission Notification	As Required	Within one (1) hour of the onset of the event

Required Report	Applicable Period	Due Date ¹
Excess Emission Report	As Required	As soon as practicable but not to exceed ten (10) calendar days from onset of the event
Deviation Report	As Required	Along with quarterly reports
Performance Testing	As Required	Within 60 days from the end of the test

¹ Each report shall be received by DAQEM on or before the due date listed. If the due date falls on a Saturday, Sunday or a Federal or Nevada holiday, then the submittal is due on the next regularly scheduled business day.

- The Control Officer reserves the right to require additional reports and reporting to verify compliance with permit conditions, permit requirements and requirements of applicable regulations. [AQR 4.4 and 19.4.1.3]

IV. ACID RAIN REQUIREMENTS

- Emission unit 801 is a simple cycle combustion turbine that commenced commercial operation before November 15, 1990. It is not subject to Acid Rain Regulations. [40 CFR 72.6 b.4]

V. OTHER REQUIREMENTS

- The Permittee has submitted an Emergency Episode Plan to the Control Officer. This Emergency Episode Plan is an enforceable element of this Part 70 permit. [AQR 70]
- The Permittee shall not use, sell, or offer for sale any fluid as a substitute material for any motor vehicle, residential, commercial, or industrial air conditioning system, refrigerator freezer unit, or other cooling or heating device designated to use a CFC or HCFC compound as a working fluid, unless such fluid has been approved for sale in such use by the Administrator. The Permittee shall keep record of all paperwork relevant to the applicable requirements of 40 CFR 82 on site. [40 CFR 82]

VI. ATTACHMENTS

APPLICABLE REGULATIONS

REQUIREMENTS SPECIFICALLY IDENTIFIED AS APPLICABLE:

1. Nevada Revised Statutes (NRS), Chapter 445B.
2. Clark County Air Quality Regulations (AQR) Applicable AQR Sections:

Citation	Title
AQR Section 0	Definitions
AQR Section 2	Air Pollution Control Board
AQR Section 4	Control Officer
AQR Section 5	Interference with Control Officer
AQR Section 6	Injunctive Relief
AQR Section 8	Persons Liable for Penalties – Punishment: Defense
AQR Section 9	Civil Penalties
AQR Section 10	Compliance Schedule
AQR Section 11	Ambient Air Quality Standards
AQR Section 12	Preconstruction Review for New or Modified Stationary Sources
AQR Section 12.5	Air Quality Models
AQR Section 17	Dust Control Permit for Construction Activities Including Surface Grading and Trenching
AQR Section 18	Permit and Technical Service Fees
AQR Section 19	40 CFR Part 70 Operating Permits
AQR Section 24	Sampling and Testing - Records and Reports
AQR Section 25	Upset/Breakdown, Malfunctions
AQR Section 26	Emissions of Visible Air Contaminants
AQR Section 29	Sulfur Contents of Fuel Oil
AQR Section 35	Diesel Engine Powered Electrical Generating Equipment
AQR Section 40	Prohibition of Nuisance Conditions
AQR Section 41	Fugitive Dust
AQR Section 42	Open Burning
AQR Section 43	Odors in the Ambient Air
AQR Section 55.5	Preconstruction review for New or Modified Stationary Sources in the 8-Hour Ozone Nonattainment Area
AQR Section 60	Evaporation and Leakage
AQR Section 70	Emergency Procedures
AQR Section 80	Circumvention
AQR Section 90	Fugitive Dust from Open Areas and Vacant Lots
AQR Section 91	Fugitive Dust from Unpaved Roads, Unpaved Alleys, and Unpaved Easement Roads
AQR Section 92	Fugitive Dust from Unpaved Parking Lots

3. Clean Air Act, as amended (CAAA), Authority: 42 U.S.C. § 7401, et seq.
4. Title 40 of the Code of Federal Regulations (40 CFR) Applicable 40 CFR Subsections:

Citation	Title
40 CFR Part 52.21	Prevention of Significant Deterioration (PSD)
40 CFR Part 52.1470	SIP Rules
40 CFR Part 60, Subpart A	Standards of Performance for New Stationary Sources (NSPS) – General Provisions
40 CFR Part 60	Appendix A, Method 9 or equivalent, (Opacity)

Citation	Title
40 CFR Part 64	Compliance Assurance Monitoring (CAM)
40 CFR Part 70	Federally Mandated Operating Permits
40 CFR 82	Protection of Stratospheric Ozone