

**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)

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**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

**COMPANY 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:**

Name: Kevin Geraghty  
Title: Vice President Generation, NV Energy  
Phone: (702) 402-5662  
Fax Number: (702) 402-0835

**Permit Issuance:** October 20, 2009  
**Permit Revision Date:** August 26, 2011

**Expiration Date:** October 19, 2014

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



Lewis Wallenmeyer  
Director, Clark County DAQEM

## EXECUTIVE SUMMARY

The Sunrise Station, owned by Nevada Power Company, dba NV Energy (NVE), is a major source for NO<sub>x</sub> and CO; and a minor source for PM<sub>10</sub>, SO<sub>x</sub>, 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, PM<sub>10</sub>, and ozone (8-hour), and attainment for all other regulated air pollutants. The 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 SIC 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 390 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<sub>x</sub>, CO, SO<sub>x</sub>, PM<sub>10</sub>, and VOC, while DAQEM-regulated portion is only major for NO<sub>x</sub> 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 OP:

<b>PM<sub>10</sub></b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>SO<sub>x</sub></b>	<b>VOC</b>	<b>HAP</b>
<b>46.00</b>	<b>1,760.38</b>	<b>155.34</b>	<b>10.42</b>	<b>13.30</b>	<b>1.33</b>

Pursuant to AQR 12.5, all terms and conditions in Sections I through V and the Attachment in this permit are federally enforceable unless explicitly denoted otherwise.

An administrative revision was issued on January 15, 2010. This administrative revision of the permit addresses specific minor corrections and changes as specified in the TSD.

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## I. ACRONYMS

**Table I-1: List of Acronyms**

<b>Acronym</b>	<b>Term</b>
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 <sub>x</sub>	Nitrogen Oxides
NOV	Notice of Violation
NRS	Nevada Revised Statutes
NSPS	New Source Performance Standards
NSR	New Source Review
OP	Operating Permit
PM <sub>10</sub>	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 <sub>x</sub>	Sulfur Oxides
TCS	Toxic Chemical Substance
TSD	Technical Support Document
VOC	Volatile Organic Compound

## **II. GENERAL CONDITIONS**

### **A. General Requirements**

1. The Permittee must comply with all conditions of the Part 70 Operating Permit. Any permit noncompliance may constitute a violation of the AQRs, Nevada law, and the Act, and is grounds for any of the following: enforcement action; permit termination; revocation and re-issuance; revision; or denial of a permit renewal application. *[AQR 12.5.2.6(g)(1)]*
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 12.5.2.6(f)]*
3. The Permittee shall pay all permit fees pursuant to AQR Section 18. *[AQR 12.5.2.6(h)]*
4. The permit does not convey any property rights of any sort, or any exclusive privilege. *[AQR 12.5.2.6(g)(4)]*
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 5.1.1]*
6. The Permittee shall allow the Control officer, or an authorized representative, upon presentation of credentials and other documents as may be required by law, to enter the Permittee's premises where a Part 70 source is located or emissions related activity is conducted and to: *[AQR 12.5.2.8(b)]*
  - a. Have access to and copy any records that must be kept under the conditions of the permit;
  - b. Inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;
  - c. Sample or monitor substances or parameters for the purpose of assuring compliance with the permit or applicable requirements; and
  - d. Document alleged violations using devices such as cameras or video equipment.
7. 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]*
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 12.5.2.2]*

### **B. Modification, Revision, Renewal Requirements**

1. No person shall begin actual construction of a New Part 70 source, or modify or reconstruct an existing Part 70 source that falls within the preconstruction review applicability criteria, without first obtaining an Authority to Construct Permit from the Control Officer *[AQR 12.4.1.1(a)]*
2. The permit may be revised, revoked, reopened and reissued, or terminated for cause. The filing of a request by the Permittee for a permit revision, revocation, reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. *[AQR 12.5.2.6(g)(3)]*

3. A permit, permit revision, or renewal may be approved only if all of the following conditions have been met: *[AQR 12.5.2.10(a)]*
  - a. The Control Officer has received a complete application for a permit, permit revision, or permit renewal, except that a complete application need not be received before a Part 70 general permit is issued pursuant to Section 12.5.2.20;
  - b. Except for revisions qualifying as administrative or minor permit revisions under Section 12.5.2.13 or paragraphs (a) and (b) of Section 12.5.2.14, the Control Officer has complied with the applicable requirements for public participation in Section 12.5.2.17;
  - c. The Control Officer has complied with the requirements for notifying and responding to EPA and affected states under paragraph (b) of Section 12.5.2.18;
  - d. The conditions of the permit provide for compliance with all applicable requirements and the requirements of Section 12.5; and
  - e. EPA has received a copy of the proposed permit or permit revision and any notices required under paragraphs (a) and (b) of Section 12.5.2.18, and has not objected to issuance of the permit under paragraph (c) of Section 12.5.2.18 within the time period specified therein.
4. 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. *[AQR 12.5.2.6(i)]*
5. Permit expiration terminates the Permittee's right to operate unless a timely and complete renewal application has been submitted. *[AQR 12.5.2.11(b)]*
6. For purposes of permit renewal, a timely application is a complete application that is submitted at least six (6) months and not greater than eighteen (18) months prior to the date of permit expiration. If a source submits a timely application under this provision, it may continue operating under its current Part 70 Operating Permit until final action is taken on its application for a renewed Part 70 Operating Permit. *[AQR 12.5.2.1(a)(2)]*

### **C. Reporting/Notifications/Providing Information Requirements**

1. The Permittee shall submit all compliance certifications to the Control Officer. *[AQR 12.5.2.8(e)(4)]*
2. Any application form, report, or compliance certification submitted pursuant to the permit or AQRs shall contain certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required under AQR 12.5 shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. *[AQR 12.5.2.6(l)]*
3. 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 revising, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. Upon request, the Permittee shall also furnish to the Control Officer copies of records required to be kept by the permit or, for information claimed to be confidential, the Permittee may furnish such records directly to the Administrator along with a claim of confidentiality. *[AQR 12.5.2.6(g)(5)]*
4. 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 the 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]

5. The Permittee shall submit annual emissions inventory reports based on the following: [AQR 18.6.1]
  - a. The annual emissions inventory must be submitted to DAQEM by March 31 of each calendar year; and
  - 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.
6. The Permittee shall make all production, emission and monitoring calculations available to the Control Officer for inspection within 30 days from the end of each month. [AQR12.5.2.8]
7. The Permittee who has been issued a permit under Section 12.5 shall post such permit in a location which is clearly visible and accessible to the facility's employees and representatives of the department. [AQR 12.5.2.6(m)]

#### **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 in order to maintain compliance with the conditions of this permit. [AQR 12.5.2.6(g)(2)]
2. Any person who violates any provision of AQR, 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 and/or the 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 Section 9 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(b)(8)]
6. Permittee shall submit compliance certification with terms and conditions contained in the Operating Permit, including emission limitations, standards, or work practices, as follows: [AQR 12.5.2.8(e)]
  - 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 on January 30th of the following year;
  - b. annual submission of compliance certification, or more frequently if specified in the applicable requirement or by the Control Officer;

- c. a means for monitoring the compliance of the source with its emission limitations, standards, and work practices;
  - d. compliance certification shall include all of the following:
    - i. the identification of each term or condition of the permit that is the basis of the certification;
    - ii. the identification of the methods or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period;
    - iii. the status of compliance with the terms and conditions of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent;
    - iv. such other facts as the Control Officer may require to determine the compliance status of the source.
7. 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 12.5.2.6(d)(4)(B) and AQR 25.6.1]*
- a. within twenty-four (24) hours of the time the Permittee learns of the event, the report shall be communicated by phone (702) 455-5942, fax (702) 383-9994, or email.
  - b. within seventy-two (72) hours of the notification required by paragraph (a) above, the detailed written report containing the information required by AQR Section 25.6.3 shall be submitted.
8. The Permittee shall report to the Control Officer deviations that do not result in excess emissions, with the semi-annual reports. Such reports shall include the probable cause of deviations and any corrective actions or preventative measures taken. *[AQR 12.5.2.6(d)(4)(B)]*

## **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 12.5.2.8]*
- 4. The Permittee shall submit to EPA for approval any alternative test methods that are not already approved by EPA. *[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 12.5.2.8]*

### 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.

**Table III-A-1: List of Emission Units**

EU	Description	Rating	Make	Model #	Serial #
801	Single Shaft, Simple Cycle Turbine	76 MW	Westinghouse	501-B5	27A1111-1
A02	Emergency Generator	250 kW	Onan	250 ODFM-17R50331N	ES70899164
	Diesel Engine	390 hp	Cummins	NT855-G3	11403347
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<sub>x</sub> emissions for the combustion turbine (EU: 801) associated with water injection shall not exceed 0.34 pounds per MMBtu. *[NO<sub>x</sub> 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 year)**

EU	PM <sub>10</sub>	NO <sub>x</sub>	CO	SO <sub>x</sub>	VOC
801	45.99	1,760.23	155.31	10.41	10.87
A02	0.01	0.15	0.03	0.01	0.01
A03	0.00	0.00	0.00	0.00	2.42

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

EU	PM <sub>10</sub>	NO <sub>x</sub>	CO	SO <sub>x</sub>	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 <sup>1,2</sup>**

EU	PM <sub>10</sub>		NO <sub>x</sub>		CO		SO <sub>x</sub>		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

<sup>1</sup> 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.

<sup>2</sup> 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	Diesel Generator (EU: A02) at 26 Hours per Year	Diesel Tank (EU: A03) at 8,760 Hours per Year	All Emission Units
lbs/hour	---	0.017	0.053	---
ton/year	1.10	0.0002	0.23	1.33

## 2. Production Limits

- 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)]*
- The Permittee shall limit operation of 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)]*
- The Permittee shall combust only low sulfur (less than 0.05 percent sulfur by weight) fuel in the emergency generator. *[NSR ATC/OP 8, Modification 1, Revision 4, (10/07/08)]*
- The Permittee shall not use emergency generator for dispatchable peak shaving. *[NSR ATC/OP 8, Modification 1, Revision 4, (10/07/08)]*

- e. The Permittee shall not test the 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<sub>x</sub> 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<sub>x</sub> and PM<sub>10</sub> 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 operate the 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<sub>x</sub>. 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 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 12.5.2.6(d)]*
  - b. The Permittee shall continuously monitor the water injection rate within the turbine all times when the turbine load is over 55 MW. (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 monitoring time. *[AQR 12.5.2.6(d)]*
  - c. The Permittee shall submit the monitoring system performance report or summary report to the Control Officer, if the total downtime of the continuous monitoring system is five (5) percent or greater of the total monitoring time of the reporting period as defined in conditions III-C-1-a and b. *[AQR 12.5.2.6(d)]*
  - d. The Permittee shall calculate NO<sub>x</sub> 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)]*
  - e. 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<sub>x</sub> can be accurately recorded and reported. *[AQR 12.5.2.6(d)]*

**Table III-C-1: Monitoring Approach<sup>1</sup>**

Criteria	Indicator
Indicator and Measurement Approach	Natural gas flow rate, turbine load, and water injection rate are monitored as the indicators of NO <sub>x</sub> 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 <sub>x</sub> 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.

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

2. For purpose of CAM, an exceedance of NO<sub>x</sub> 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<sub>x</sub> 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 12.5.2.6(d)]
6. The Permittee shall use hourly and annual natural gas fuel consumption rates by the turbine (EU: 801); results of NO<sub>x</sub> and CO performance testing; and information from the data

logging system as a measure of compliance with the turbine's CO and NO<sub>x</sub> annual emission limits. This does not, however, preclude the use of other credible evidence in determining or showing compliance. [AQR 12.5.2.6(d)]

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 PM<sub>10</sub> and SO<sub>x</sub> annual emission limits for natural gas firing. This does not, however, preclude the use of other credible evidence in determining or showing compliance. [AQR 12.5.2.6(d)]
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 12.5.2.6(d)]
9. The Permittee shall perform at least one visual emissions check on a plant-wide level each calendar quarter. Quarterly visual checks shall include the diesel-fired emergency generator (EU: A02) while operating, to demonstrate compliance with the opacity limit. If the 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 12.5.2.6(d) 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 12.5.2.6(d)]
11. Sulfur content of diesel fuel shall be certified by the supplier with each fuel delivery. [AQR 12.5.2.6(d)]

### C. 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 12.5.2.6(d)]
2. Table III-D-1 summarizes performance test methods [AQR 12.5.2.6(d)]:

**Table III-D-1: Performance Testing Requirements**

Test Point	Pollutant	Fuel(s)	Method
Turbine Exhaust Outlet Stack	NO <sub>x</sub>	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)]*

#### **D. Record Keeping**

1. The Permittee shall maintain records and logs shall contain, at minimum, the following information *[AQR 12.5.2.6(d)]*:
  - 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<sub>x</sub> 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 12.5.2.6(d)]*
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]*
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 12.5.2.6(d)]*
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 12.5.2.6(d)]*

7. The Control Officer reserves the right to require additional requirements concerning records and record keeping for this source. [AQR 12.5.2.6(d)]

**E. 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 12.5.2.6(d)]:
  - 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 12.5.2.6(d)]
4. The following requirements apply to quarterly reports: [AQR 12.5.2.6(d)]
  - a. The report shall include a quarterly summary of each item listed in Section III-E-1(a through k).
  - b. The report shall be based on a calendar quarter, which includes partial calendar quarters.
  - c. 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 <sup>1</sup>
Quarterly Report for 1 <sup>st</sup> Calendar Quarter	January, February, March	April 30 each year
Quarterly Report for 2 <sup>nd</sup> Calendar Quarter	April, May, June	July 30 each year
Quarterly Report for 3 <sup>rd</sup> Calendar Quarter	July, August, September	October 30 each year
Quarterly Report for 4 <sup>th</sup> Calendar Quarter, Any additional annual records required.	October, November, December	January 30 each year
Annual Compliance Certification Report	12 Months	January 30 each year
Annual Emission Inventory Report	Calendar Year	March 31 each year
Notification of Malfunctions, Startup, Shutdowns or Deviations with Excess Emissions	As Required	Within 24 hours of the Permittee learns of the event
Report of Malfunctions, Startup, Shutdowns or Deviations with Excess Emissions	As Required	Within 72 hours of the notification
Deviation Report without Excess Emissions	As Required	Along with semi-annual reports
Performance Testing	As Required	Within 60 days from the end of the test

<sup>1</sup> 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.

5. 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 AQR 12.5.2.6(d)(4)]

**IV. ACID RAIN REQUIREMENTS**

1. EU: 801 is a simple cycle combustion turbine that commenced commercial operation before November 15, 1990 and is not subject to Acid Rain Regulations. [40 CFR 72.6 b.4]

**V. OTHER REQUIREMENTS**

1. 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]
2. 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 12.2	Permit Requirements For Major Sources in Attainment Areas
AQR Section 12.3	Permit Requirements For Major Sources in Nonattainment Areas
AQR Section 12.4	Authority to Construct Application and Permit Requirements for Part 70 Sources
AQR Section 12.5	Part 70 Operating Permit Requirements
AQR Section 14.1.1 Subpart A	New Source Performance Standards (NSPS) General Provisions
AQR Section 18	Permit and Technical Service Fees
AQR Section 25	Affirmative Defense for Excess Emissions due to Malfunctions, Startup, and Shutdown
AQR Section 26	Emissions of Visible Air Contaminants
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 60	Evaporation and Leakage
AQR Section 70	Emergency Procedures
AQR Section 80	Circumvention

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:

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