DAQEM
DEPARTMENT OF AIR QUALITY & ENVIRONMENTAL MANAGEMENT
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AUTHORITY TO CONSTRUCT FOR AN ELECTRIC UTILITY OPERATION

Source: **393**
Modification: **8**
Revision: **0**
Permitting Action: **Modification (DAQEM Official Use Only)**

Company Name:	Saguaro Power Company
Company Address:	P.O. Box 90849, Henderson, Nevada 89009-0849
Source Name:	Saguaro Power Company
Source Address:	435 Fourth Street, Henderson, Nevada 89015
Airshed Name:	Las Vegas Valley (LV)
Hydrographic Area:	212
Township, Range, Section:	T22S, R62E, Sections 11, 12, 13, 14
Telephone Numbers:	(702) 558-1134 Larry Flashberg
	(702) 564-2753 FAX
SIC Code:	4931: Electric and Other Services, Combined (cogeneration)
NAICS Code:	221112: Fossil Fuel Electric Power Generation
Description:	Modification of the existing ATC including: addition of three simple cycle combustion turbines, ammonia storage and injection units, and additional one cell on the existing cooling tower.
Issuance Date:	December 30, 2010

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

Richard Beckstead
Permitting Manager, Clark County DAQEM

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I. ACRONYMS

Table I-1: List of Acronyms

Acronym	Term
AQR	Clark County Air Quality Regulations
ATC	Authority to Construct Certificate or Authority to Construct
ATC/OP	Authority to Construct/Operating Permit
CAO	Field Corrective Action Order
CE	Control Efficiency
CEM	Continuous Emissions Monitoring System
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
$PM_{2.5}$	Particulate Matter less than 2.5 microns
PM_{10}	Particulate Matter less than 10 microns
ppm	Parts per Million
PTE	Potential to Emit
scf	Standard Cubic Feet
SCC	Source Classification Codes
SCR	Selective Catalytic Reduction
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. ADMINISTRATIVE CONDITIONS

A. GENERAL REQUIREMENTS

1. This Authority to Construct Permit (ATC) does not modify, consolidate, supersede, or replace any ATC previously issued for this facility from the date of issuance of this permit forward.
2. This ATC does not supersede or replace any Part 70 Operating Permit (OP) requirements, including any permit conditions, compliance requirements and/or emission limitations outlined in the Part 70 OP.
3. 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 ATC from the Control Officer. *[AQR 12.4.1.1(a)]*
4. The Permittee shall post the permit in a location which is clearly visible and accessible to the facility's employees and representatives of the department. *[AQR 12.4.3.1(e) (16) and AQR 12.13]*
5. The Permittee shall commence the construction, modification, or reconstruction of this source within eighteen (18) months after the date of issuance of this ATC and construction shall not discontinued for a period greater than twelve (12) months. *[AQR 12.4.1.1(b)]*
6. The Permittee shall submit an application for a Part 70 OP within twelve (12) months after commencing operation. If the source submits a timely application under this condition, it may continue operating under its ATC until final action is taken on its application for a new Part 70 OP. *[AQR 12.4.1.1(b) and AQR 12.5.2.1(a)(1)]*
7. The Permittee shall submit an application for a Part 70 OP within twelve (12) months after commencing operation of the modification or reconstruction authorized by the ATC, or on or before such earlier date that the Control Officer may establish. However, where an existing Part 70 OP would prohibit such construction or change in operation, the source must obtain a Part 70 OP revision before commencing operation. *[AQR 12.5.2.1(a)(3)]*
8. Notwithstanding the provisions of requirement 10, if an existing Part 70 OP would prohibit such construction or change in operation, the source must obtain a Part 70 OP revision pursuant to Section 12.5.2.14 before commencing operation. [*AQR 12.4.1.1(c)].*
9. This ATC does not convey any property rights or any exclusive privilege. *[AQR 12.4.3.1(e)(6)]*
10. The Permittee shall pay all fees assessed pursuant to AQR Section 18. *[AQR 12.4.3.1(e)(17)]*

B. MODIFICATION, REVISION, RENEWAL REQUIREMENTS

1. The Permittee shall file an application for any change in the Responsible Official of the source and may implement the change immediately upon submittal of the request. *[AQR 12.4.3.4(a)(1)(D) and 12.4.3.4(a)(2)(C)]*

2. The Permittee shall file an application for a transfer of ownership at least 30 days prior to the date of a change in ownership or operational control of the source and such application shall constitute a temporary ATC under the conditions of the existing permit. *[AQR 12.12.2(c) and (d)]*
3. The Control Officer may revise, revoke and re-issue, re-open and revise, or terminate the permit for cause. *[AQR 12.4.3.1 (e)(5)]*
4. The Control Officer reserves the right, upon reasonable cause, to modify existing conditions and impose additional new compliance, monitoring and control requirements. *[AQR 12.4.3.1(e)(10)(B) and (C)]*

C. REPORTING/NOTIFICATIONS/PROVIDING INFORMANTION REQUIREMENTS

1. The Permittee shall report start of construction, construction interruptions exceeding nine (9) months, and completion of construction to the Control Officer in writing not later than fifteen (15) working days after occurrence of the event. *[AQR 12.4.3.1(e) (12)]*
2. The Permittee shall provide written notification of the actual date of commencing operation, received by the Control Officer, within fifteen (15) calendar days after such date. *[AQR 12.4.3.1(e)(13)]*
3. The Permittee shall provide separate written notification for commencing operation for each unit of phased construction, which may involve a series of units commencing operation at different times. *[AQR 12.4.3.1(e)(14)]*
4. The Permittee shall retain records of all required monitoring and performance demonstration data and supporting information for five (5) years after the date of the sample collection, measurement, report, or analysis. Supporting information includes all records regarding calibration and maintenance of the monitoring equipment, all original strip-chart recordings for continuous monitoring instrumentation, and if applicable, all other records required to be maintained pursuant to 40 CFR 64.9(b). *[AQR 12.4.3.1(e)(1)]*
5. The Permittee shall allow the Control Officer or any authorized representative of the Control Officer upon presentation of credentials to enter the permittee's' premises where the source is located or emissions related activity is conducted to: *[AQR 12.4.3.1(e) (8)]*
    a. Have access to and copy during normal business hours any records that are kept pursuant to the conditions of the permit;
    b. Inspect any facilities, equipment (including monitoring and air pollution control equipment), practices or operations regulated or required under this permit;
    c. Sample or monitor substances or parameters to determine compliance with the conditions of the permit or applicable requirements; and
    d. Document alleged violations using devices such as cameras or video equipment.
6. The Permittee shall provide the Control Officer, within a reasonable time, with any information that the Control Officer requests in writing to determine whether cause exists for revising, revoking and re-issuance or terminating the permit, or to determine compliance with the conditions of the permit. Upon request the Permittee shall also furnish to the Control Officer copies of any 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 12.4.3.1(e)(7)]*

D. COMPLIANCE REQUIREMENTS

1. The Permittee shall comply with all conditions contained in this ATC. Any noncompliance constitutes a violation and is grounds for an action for non-compliance, revocation and re-issuance or the termination of the permit by the Control Officer, or the re-opening or revising of the permit by the Permittee as directed by the Control Officer. *[AQR 12.4.3.1(e)(3)]*
2. Each of the conditions and requirements of this permit are severable and if any are held invalid, the remaining conditions and requirements continue in effect. *[AQR 12.4.3.1(e)(2)]*
3. The need to halt or reduce activity to maintain compliance with the conditions of the permit is not a defense to noncompliance with any condition of the permit. *[AQR 12.4.3.1(e)(4)]*
4. The Permittee shall promptly report to the Control Officer (500 Grand Central Parkway, Box 555210, Las Vegas, NV 89155) upon the commencement of operation deviations from permit requirements, including those attributable to malfunction, startup, or shut-down. All reports of deviations shall identify the probable cause of the deviations and any corrective actions or preventative measures taken. *[AQR 12.5.2.6(d)(4)(B) and (C)]*
5. A responsible official of the source shall certify that, based on information and belief formed after a reasonable inquiry, the statements made in any document required to be submitted by any condition of the permit are true, accurate, and complete. *[AQR 12.4.3.1(e)(9)]*

III. SOURCE-WIDE PTE SUMMARY

1. Saguaro Power Company is a major source for NO_x. a synthetic minor source for CO; and a minor source for SO_x, VOC, and HAP, as summarized in Table III-1:

Table III-1: Source-wide PTE (tons per year)

Pollutant	PM_{10}	NO_x	CO	SO_x	VOC	HAP
PTE Totals	**50.65**	**120.18**	**18.84**	**9.68**	**19.12**	**9.84**
Major Source Thresholds	**70**	**50**	**100**	**100**	**50**	**25[1]**

[1]25 tons for combination of all HAPs (no single HAP exceeds 10 tons).

IV. EMISSION UNITS AND APPLICABLE REQUIREMENTS

A. EMISSION UNITS

1. The stationary source covered by this ATC is defined to consist of the emission units and associated appurtenances summarized in Table IV-A-1.

Table IV-A-1: List of Emission Units

EU	Description	Rating	Make	Model #	Serial #
A01	Combustion Turbine Generator # 1 with HRSG, Natural Gas-fired; SCR and Oxidation Catalyst	447 MMBtu/hr; 35 MW	General Electric	PG6541B	295525
A02	Combustion Turbine Generator # 2 with HRSG, Natural Gas-fired; SCR and Oxidation Catalyst	447 MMBtu/hr; 35 MW	General Electric	PG6541B	295524
A06	Auxiliary Boiler	86 MMBtu/hr	Nebraska	NOS 2A/S-55	032-88
A09a	4-cell cooling tower, 3,800 ppm TDS, 0.0006% drift loss; Cell 1	7,666 gpm	Thermal-Dynamics Towers, Inc.	TD-3030-3-2424CF	N/A
A09b	4-cell cooling tower, 3,800 ppm TDS, 0.0006% drift loss; Cell 2	7,666 gpm	Thermal-Dynamics Towers, Inc.	TD-3030-3-2424CF	N/A
A09c	4-cell cooling tower, 3,800 ppm TDS, 0.0006% drift loss; Cell 3	7,666 gpm	Thermal-Dynamics Towers, Inc.	TD-3030-3-2424CF	N/A
A09d	4-cell cooling tower, 3,800 ppm TDS, 0.0006% drift loss; Cell 4	7,666 gpm	Thermal-Dynamics Towers, Inc.	TD-3030-3-2424CF	N/A
A10	Simple Cycle Combustion Turbine, Unit 1	366 MMBtu/hr; 44.2 MW	General Electric	LM-6000	TBD
A11	Simple Cycle Combustion Turbine, Unit 2	366 MMBtu/hr; 44.2 MW	General Electric	LM-6000	TBD

EU	Description	Rating	Make	Model #	Serial #
A12	Simple Cycle Combustion Turbine, Unit 3	366 MMBtu/hr; 44.2 MW	General Electric	LM-6000	TBD
F11	Ammonia Storage and Injection	12,000 gallons	N/A	N/A	N/A

B. EMISSION LIMITATIONS AND STANDARDS

1. Emission Limits

a. Neither the actual nor the allowable emissions from each emission unit shall exceed the calculated PTE listed in Table IV-B-1.

Table IV-B-1: Emission Unit PTE, Including Startup and Shutdowns (tons per year

EU	PM_{10}	NO_x	CO	SO_x	VOC	HAP	NH_3
A01[1]	11.87	72.19	4.27	1.28	4.37	2.19	23.57
A02[1]							
A06[2]	1.29	9.34	0.38	0.15	1.38	0.48	0.00
A09a,b,c,d	0.72	0.00	0.00	0.00	0.00	0.00	0.00
A10[3]	28.41	20.93	12.75	7.48	7.27	2.69	39.12
A11[3]							
A12[3]							
F11	0.00	0.00	0.00	0.00	0.00	0.00	1.39

[1]Annual emissions are based on 4,246,500 MMBtu/year of natural gas combustion between EU: A01 and A02.
[2]Emissions from the Nebraska boiler (EU: A06) after installation of the CO oxidation catalyst.
[3]Annual emissions are based on 5,215,500 MMBtu/year of combined natural gas combustion for EU: A10, A11 and A12.

b. Neither the actual nor the allowable emissions from each emission unit shall exceed the calculated PTE listed in Table IV-B-2.

Table IV-B-2: Emission Unit PTE, Excluding Startup and Shutdowns (lbs/hr)

EU	PM_{10}	NO_x	CO	SO_x	VOC	HAP	NH_3
A01[1]	2.50	15.20	0.90	0.27	0.92	0.46	4.96
A02[1]	2.50	15.20	0.90	0.27	0.92	0.46	4.96
A06	0.43	3.11	0.13	0.05	0.46	0.16	0.00
A10[2]	3.99	2.94	1.79	1.05	1.02	0.38	5.49
A11[2]	3.99	2.94	1.79	1.05	1.02	0.38	5.49
A12[2]	3.99	2.94	1.79	1.05	1.02	0.38	5.49

[1]The average fuel flow rate is 447 MMBtu/hr (LHV).
[2]The average fuel flow rate is 366 MMBtu/hr (LHV).

c. Neither the actual nor the allowable emissions from each emission unit shall exceed the calculated PTE listed in Table IV-B-3.

Table IV-B-3: Enforceable Emissions Limitations (ppmvd)[1]

EU	O_2 Standard	NO_X	CO	NH_3
A01	15%	10	2.0	10
A02	15%	10	2.0	10
A10	15%	2.0	2.0	10
A11	15%	2.0	2.0	10
A12	15%	2.0	2.0	10
A06	3%	30	2.0	---

[1] Emissions from the combustion of natural gas are calculated using a three-hour rolling average not to include startup or shutdown.

d. Neither the actual nor the allowable emissions from a startup or shutdown event shall exceed the calculated PTE listed in Table IV-B-4.

Table IV-B-4: Startup and Shutdown Emissions per EU (pounds/hour) [1]

EU	PM_{10}	NO_X	CO	SO_x	VOC	HAP	NH_3
A01, A02	2.5	65.00	9.00	0.27	0.94	0.46	2.04
A10, A11, A12	2.5	4.60	2.60	0.27	0.96	0.46	2.04

[1]Start-up and shut-down emission rates are to be used to calculate compliance with annual emissions limits. These emission factors will be used when CEMS data is not available.

e. The Permittee shall operate the Nebraska boiler (EU: A06) such that it emits neither more than 30 ppmvd NO_X nor 2.0 ppmvd CO, corrected to three (3) percent O_2 during an three-hour rolling average not to include startup or shutdown.

f. 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 26.1.1]*

g. Emissions from startup and shutdown events, as provided in Table IV-B-4, when combined with the turbine emissions during normal operations, shall not exceed the annual limits outlined in Table IV-B-1.

2. Production Limits

a. Neither the actual nor the allowable fuel usage shall exceed the limits listed in Table IV-B-5.

Table IV-B-5: Enforceable Fuel Limitations for Combustion Equipment

Equipment	Fuel Type	Max. Hourly MMBtu	Max. Annual MMBtu
Combustion Turbines A01 and A02	Natural gas	447	4,246,500 (combined)
Combustion Turbines A10, A11 and A12	Natural gas	366	5,215,500 (combined)
Each Duct Burner	Natural gas	25	219,000
Nebraska Auxiliary Boiler	Natural gas	85	510,000

b. The Permittee shall limit the natural gas fuel rate to 447 MMBtu/hour and 4,246,500 MMBtu/year (combined) for two GE combustion turbines (EUs: A01 and A02), based on an annual average, the lower heating value (LHV), and standard conditions. Standard conditions shall be defined as 105 degrees F, 13.78 psia at 16 percent relative humidity.

c. The Permittee shall limit the natural gas fuel rate to 366 MMBtu/hour and 5,215,500 MMBtu/year (combined) for three GE LM-6000 combustion turbines (EUs: A10, A11 and A12), based on an annual average, the lower heating value (LHV), and standard conditions. Standard conditions shall be defined as 105 degrees F, 13.78 psia at 16 percent relative humidity.
d. A startup period for all turbines is defined as the period of time of no more than one (1) hour following the commencement of combustion of fuel. Startup periods for all turbines shall be included in determining compliance with annual emissions limits.
e. A shutdown period for all turbines shall begin when heat input falls below 50 percent of nameplate capacity and ends when combustion has ceased, the duration of the shutdown period should not exceed 60 minutes. Shutdown periods for all turbines shall be included in determining compliance with annual emissions limits.
f. The Permittee shall use the emission factors presented in Table IV-B-4 for any clock hour in which a start-up/shut-down event occurs.
g. The Permittee shall limit the natural gas fuel rate to 510,000 MMBtu/year for Nebraska boiler (EU: A06).
h. The Permittee shall limit maximum water flow of the cooling tower (EU: A09a through A09d) to 30,666 gallons per minute.

3. Emission Controls

a. The Permittee shall install a Selective Catalytic Reduction (SCR) system on each of the turbine units (EUs: A01, A02, A10, A11 and A12).
b. The Permittee shall further control NO_X exhaust emissions from each of the turbine units with steam injection and good combustion practice (EUs: A01, A02, A10, A11 and A12).
c. The Permittee shall maintain and operate each SCR system on all turbine units in accordance with manufacturer's specifications. SCR shall be operated at all times the associated turbine unit is operating excluding periods of startup and shutdown.
d. The Permittee shall install a CO Oxidation Catalyst on each of the five turbine units (EUs: A01, A02, A10, A11 and A12).
e. The Permittee shall maintain and operate each CO Oxidation Catalyst system on all turbine units in accordance with manufacturer's specifications. The CO oxidation catalyst shall be operated at all times the associated turbine unit is operating excluding periods of startup and shutdown.
f. The Permittee shall operate each SCR system such that NO_X and NH_3 emissions do not exceed the limitations listed in Tables IV-B-1 and IV-B-2, excluding startups and shutdowns.
g. The Permittee shall operate each of the GE turbines (EUs: A01 and A02) and duct burner combination such that NO_X emissions do not exceed concentrations greater than 10 ppmvd NO_X at 15 percent O_2 while combusting natural gas during a three-hour rolling average not to include startup or shutdown.
h. The Permittee shall operate each of the GE LM-6000 turbines (EUs: A10, A11 and A12) such that NO_X emissions do not exceed concentrations greater than 2.0

ppmvd NO_x at 15 percent O_2 while combusting natural gas during a three-hour rolling average not to include startup or shutdown.

i. The Permittee shall operate each of the turbines (EUs: A01, A02, A10, A11 and A12) such that they do not emit CO in concentrations greater than 2.0 ppmvd CO at 15 percent O_2 while combusting natural gas during a three-hour rolling average not to include startup or shutdown.

j. The Permittee shall control SO_x exhaust emissions from each turbine (EUs: A01, A02, A10, A11 and A12) by exclusive use of pipeline quality natural gas as defined by Federal Energy Regulatory Commission (0.75 grains/100 dscf of sulfur) and good combustion practice.

k. Per manufacturer's specifications and good operating practice, PM_{10} exhaust emissions from each turbine (EUs: A01, A02, A10, A11 and A12) shall be controlled by properly maintained and periodically replaced inlet air filters preceding each turbine.

l. The Permittee shall combust only natural gas, hydrogen gas, or a combination of natural gas and hydrogen fuel in Nebraska boiler (EU: A06).

m. The Permittee shall maintain the cooling tower drift rate at or below 0.0006 percent of the circulating water flow rate. The Permittee shall maintain total dissolved solids (TDS) concentration in the cooling tower process water at or below 3,800 ppm at all times (EUs: A09a through A09d).

n. The Permittee shall maintain and operate all cooling tower per manufacturer's specifications. No chromium-containing compounds shall be used in the cooling tower process water. *[40 CFR 63, Subpart Q]*

o. The Permittee shall not discharge from any source whatsoever quantities of air contaminants or other material which cause a nuisance.

p. The Permittee must comply with control requirements contained in this section. If there is inconsistency between standards or requirements, the most stringent standard or requirement shall apply.

q. Failure to comply with conditions contained in this section may result in revocation of this ATC.

C. MONITORING

1. To demonstrate continuous, direct compliance with the emission limitations for NO_X and CO specified in this permit, the Permittee shall install, calibrate, maintain, operate, and certify CEMS on all combustion turbines (EUs: A01, A02, A10, A11 and A12). The system shall include an automated data acquisition and handling system. The CEMS shall monitor and record at least the following data in addition to meeting the requirements of 40 CFR 60 Subpart GG and applicable parts of 40 CFR 75: *[AQR 12.5.2.6(d)/AQR 19.4.1.3(a)]*
   a. hours of operation;
   b. electrical load;
   c. fuel consumption and type;
   d. water injection rate;
   e. exhaust gas flow rate (by direct or indirect methods);
   f. exhaust gas concentration of NO_X, CO and O_2;

g. one-hour average CO concentration;
h. three-hour average NO_X concentration;
i. the mass flow rate of NO_X and CO; and
j. daily and quarterly accumulated mass emissions of NO_X and CO.

2. CEMS (EUs: A01, A02, A10, A11 and A12).shall be initially certified and tested pursuant to 40 CFR 75, Appendix A: CEMS Specifications and Test Procedures and 40 CFR 60 Appendices B and F. Subsequent CEMS certifications must be conducted with representative sampling of the stack. *[AQR 12.5.2.6(d)/AQR 19.4.1.3(a)]*
3. CEMS certification and recertification procedures shall be met as required in 40 CFR 75.20 for (EUs: A01, A02, A10, A11 and A12). *[AQR 12.5.2.6(d)/AQR 19.4.1.3(a)]*
4. CEMS QA/QC procedures shall conform to the provisions of 40 CFR 75 Appendix B (EUs: A01, A02, A10, A11 and A12). *[AQR 12.5.2.6(d)/AQR 19.4.1.3(a)]*
5. Any exceedance of the hourly or annual NO_X and/or CO emission limitations as determined by the CEMS shall be considered a violation of the emission limit imposed and may result in enforcement action. *[AQR 12.5.2.6(d)/AQR 19.4.1.3(a)]*
6. Relative accuracy test audits (RATA) of the CO, NO_X and O_2 CEMS and NH_3 PEMS shall be conducted at least annually. *[AQR 12.5.2.6(d)/AQR 19.4.1.3(a)]*
7. Emissions of NH_3 from the each combined cycle unit stack shall be monitored by use of an NH_3 CEMS. The NH_3 parametric emission monitoring system (PEMS) can be used as an optional measurement method.
8. If CEMS is not used, an ammonia parametric emission monitoring system (PEMS) shall be used to monitor compliance with ammonia pound-per-hour and ton-per-year limits. The PEMS data shall be reported quarterly and annually. The PEMS calculates the mass emissions by multiplying an ammonia emission factor (AEF) by each turbine's annual actual operating hours. The AEF, in pounds per hour, is determined for each turbine during its required periodic performance test. This factor shall be used until the next performance test. *[AQR 12.5.2.6(d)/AQR 19.4.1.3(a)]*
9. The equation used for NH_3 PEMS shall only be modified if indicated by the RATA test results. If the equation used for NH_3 PEMS is changed without indication from the RATA test results, then a new RATA test may be required by the Control Officer. *[AQR 12.5.2.6(d)/AQR 19.4.1.3(a)]*
10. A Quality Assurance Plan for all CEMS required by this permit shall be submitted to the Control Officer at least 45 days prior to performance testing of the turbines. The Quality Assurance Plan shall include auditing schedules, reporting schedules, design specifications, and other quality assurance requirements for each CEMS. The DAQEM recommends submittal no less than 180 days prior to anticipated performance test to preclude any delays in startup or performance testing. The Quality Assurance Plan must be approved by the Control Officer (after comment by EPA) prior to the issuance of an operating permit. *[AQR 12.5.2.6(d)/AQR 19.4.1.3(a)]*
11. Required periodic audit procedures shall conform to the provisions of 40 CFR 60 Appendix F and 40 CFR 75 Appendix B. For linearity and RATA testing schedules

and linearity ranges the Permittee shall follow 40 CRF 75 Appendix B. *[AQR 12.5.2.6(d)/AQR 19.4.1.3(a)]*

12. The Permittee shall perform visual emissions checks each calendar quarter on a plant-wide level for each emission unit. The quarterly visual checks shall include the diesel starter engines (EUs: A03 and A04) while operating, not necessarily simultaneously, to demonstrate compliance with the opacity limit. If any of the diesel-fired emergency generators or fire pump does not operate during the calendar quarter, then no observation of that unit shall be required. If visible emissions are observed, then opacity of emissions shall be visually determined in accordance with 40 CFR 60 Appendix A: Reference Method 9. *[AQR 12.5.2.6(d)/AQR 19.4.1.3(a) and 40 CFR 70.6]*
13. The Permittee shall monitor the TDS in the cooling tower circulating water weekly. The Permittee shall use the conductivity measurement for TDS monitoring or equivalent method approved in advance by the Control Officer. *[AQR 12.5.2.6(d)/AQR 19.4.1.3]*
14. The Permittee shall verify the fuel gas sulfur content 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)/AQR 19.4.1.3]*
15. Sulfur content of diesel fuel shall be certified by the supplier with each fuel delivery. *[AQR 12.5.2.6(d)/AQR 19.4.1.3]*

D. TESTING

1. To demonstrate initial compliance with the CO, NO_X, PM_{10}, and VOC emissions limitations in this permit, the Permittee shall conduct a performance test on the turbines (EUs: A01, A02, A10, A11 and A12) no later than 180 days after initial startup and within 60 days after achieving the maximum production rate at which the affected facility will be operated. *[AQR 12.5.2.6(d)/AQR 19.4.3.1]*
2. To demonstrate initial compliance with the CO and NO_x emissions limitations in this permit, the Permittee shall conduct a performance test on the auxiliary boilers (EU: A06) no later than 180 days after initial startup and within 60 days after achieving the maximum production rate at which the affected facility will be operated. This testing has been completed for EU: A06. *[AQR 12.5.2.6(d)/AQR 19.4.3.1]*
3. Following initial performance testing, the Permittee shall conduct subsequent performance tests for PM_{10}, NO_x, CO, and VOC every five years. *[AQR 12.5.2.6(d)/AQR 19.4.3.1]*
4. The Permittee shall use test methods listed in Table IV-D-1 or equivalent methods approved by EPA for NO_X, CO, VOC, PM_{10}, and opacity performance test methods for turbine units. *[AQR 12.5.2.6(d)/AQR 19.4.3.1]*

Table IV-D-1: Performance Testing Requirements for Turbine Units

Test Point	Pollutant	Method
Turbine/HRSG Exhaust Outlet Stack	NO_X	Chemiluminescence Analyzer (EPA Method 7E)
Turbine/HRSG Exhaust Outlet Stack	CO	EPA Method 10
Turbine/HRSG Exhaust Outlet Stack	VOCs	EPA Methods 18 and 25a
Turbine/HRSG Exhaust Outlet Stack	Opacity	EPA Method 9
Turbine/HRSG Exhaust Outlet Stack	PM_{10}	EPA Methods 5/201a and 202

Test Point	Pollutant	Method
Stack Gas Parameters	---	EPA Methods, 1, 2, 3, 4, or Method 19

5. Performance testing shall be conducted on auxiliary boiler (EUs: A06) once every five years. Performance testing shall demonstrate compliance with the emission limits of NO_X and CO set forth in this permit. Table IV-D-2 summarizes performance test methods for the boilers. *[AQR 12.5.2.6(d)/AQR 19.4.3.1]*

Table IV-D-2: Performance Testing Requirements for Boilers

Test Point	Pollutant	Method
Boiler Exhaust Outlet Stack	NO_X	Chemiluminescence Analyzer (EPA Method 7E)
Boiler Exhaust Outlet Stack	CO	EPA Method 10 analyzer
Stack Gas Parameters	-	EPA Methods 1, 2, 3, 4, or Method 19

6. Pursuant to AQR Subsection 49.5, the Permittee shall conduct a burner efficiency test (boiler tune-up) and inspection on the auxiliary boiler (EU: A06) semi-annually. The burner efficiency test is to be conducted in accordance with the manufacturer's recommendations and specifications for good combustion practices. The Permittee may use an alternative method to determine burner efficiency upon prior approval from the Control Officer. *[AQR 49.5]*
7. The Permittee shall submit for approval a performance testing protocol which contains test, reporting, and notification schedules, test protocols, and anticipated test dates to the Control Officer at least 45 days prior to the anticipated test date but not less 45 or more than 90 days prior to the anticipated test date. *[AQR 12.5.2.6(d)/AQR 19.4.1.3]*
8. 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)]*
9. 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]*
10. The Control Officer may require additional or more frequent performance testing. *[AQR 4.5]*

E. RECORD KEEPING

1. The Permittee shall maintain records on site that require semi-annual reporting and include, at a minimum *[AQR 12.5.2.6(d)/AQR 19.4.1.3(b)]*:
   a. the magnitude and duration of excess emissions, notifications, monitoring system performance, malfunctions, corrective actions taken, etc., as required by 40 CFR 60.7;
   b. CEMS audit results or accuracy checks, corrective actions, etc., as required by 40 CFR 60, Appendix F, and the CEMS quality assurance plan;

   <u>Gas Turbines (EUs: A01, A02, A10, A11, A12):</u>
   c. hours of operation of each turbine and, as applicable, each duct burner;
   d. dates, times, and duration of each startup and shutdown cycle;

e. startup and shutdown short-term total emissions per turbine in pounds per hour and annual emissions in tons per year (12-month rolling total);
f. daily, monthly, quarterly and annual quantity (12-month rolling total) of natural gas consumed in each gas turbine;

Boiler (EU: A06):

g. monthly, quarterly and annual quantity (12-month rolling total) of natural gas fuel used for Nebraska boiler;

Cooling Tower (EUs: A09a through A09d):

h. weekly TDS test results of the cooling tower.

2. The Permittee shall maintain records on site that include, at a minimum *[AQR 12.5.2.6(d)/AQR 19.4.1.3(b)]*:
   a. sulfur content of natural gas;
   b. log of visual emissions checks;
   c. Certificates of Representation for the designated representative and the alternate designated representative that meet all requirements of 40 CFR 72.24;
   d. copies of all records, reports, compliance certifications, and submissions made or required under the Acid Rain Program;
   e. copies of all documents used to complete an Acid Rain Permit application and any other submission under the Acid Rain Program to demonstrate compliance with the requirements of the Acid Rain Program;
   f. all CEMS and/or PEMS information required by the CEMS and/or PEMS monitoring plan as specified in 40 CFR 75 Subpart F;
   g. manufacturer's operation specifications for SCR and Oxidation Catalyst controls;
   h. quality assurance plan approved by the Control Officer. The quality assurance plan shall contain auditing schedules, reporting schedules, and design specifications for the CEMS. The CEMS shall conform to all provisions of 40 CFR 60 Subpart GG and 40 CFR 75;
   i. log that include, at minimum: the date of stationary gas turbine replacement, the manufacturer, model number, and serial number of both replaced and replacement turbine;
   j. results of burner efficiency test for boiler; and
   k. summary of results of all performance testing.

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)/AQR 19.4.1.3(b)]*
4. Records and data required by this permit and maintained by the Permittee maybe audited, at the Permittee's expense, at any time by a third party selected by the Control Officer. *[AQR 12.5.2.6(d)/AQR 19.4.1.3(b)]*

5. All records and logs, or a copy thereof, shall be kept on site for a minimum of 5 years from the date the measurement or data was entered and shall be made available to DAQEM upon request. *[AQR 12.5.2.6(d)/AQR 19.4.1.3(b)]*
6. The Control Officer reserves the right to require additional requirements concerning records and record keeping for this source. *[AQR 12.5.2.6(d)/AQR 19.4.1.3(b)]*

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, including those related to compliance and RATA performance testing shall contain the following: *[AQR 12.5.2.6(d)/AQR 19.4.1.3(c)]*
   a. a certification statement on the first page, i.e., "I certify that, based on information and beliefs formed after reasonable inquiry, the statements contained in this document are true, accurate and complete." (A sample form is available from DAQEM); and
   b. a certification signature from a responsible official of the company and the date certification.
3. The Permittee shall submit semi-annual reports to the Control Officer. *[AQR 12.5.2.6(d)/AQR 19.4.1.3(c)]*
4. The following requirements apply to semi-annual reports*: [AQR 12.5.2.6(d)/AQR 19.4.1.3(c)]*
   a. The report shall include a semi-annual summary of each item listed in Section IV-E-1.
   b. The report shall include semi-annual summaries of any permit deviations, their probable cause, and corrective or preventative actions taken.
   c. The report shall be submitted to DAQEM within 30 calendar days after the due date.
5. The Permittee shall submit annual emissions inventory reports based on the following: *[AQR 18.6.1]*
   a. The annual emissions inventory shall be submitted to 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.
6. 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 25.6.1]*:
   a. within twenty-four (24) hours of the time the Permittee first learns of the excess emissions, 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.

7. The Permittee shall report to the Control Officer deviations that do not result in excess emission, 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/AQR 19.4.1.3]*
8. Regardless of the date of issuance of this permit, the schedule for the submittal of reports to the Control Officer, shall be as outlined in Table IV-F-1 *[AQR 12.5.2.6(d)/AQR 19.4.1.3(c)]*:

Table IV-F-1: Reporting Schedule

Required Report	Applicable Period	Due Date1
Semi-annual Report for 1st half of the year.	January, February, March, April, May, June	July 30 each year
Semi-annual Report for 2nd half of the year. Any additional annual records required.	July, August, September, October, November, December	January 30 each year
Annual Compliance Certification	Calendar Year	January 30 each year
Annual Emission Inventory Report	Calendar Year	March 31 each year
Excess Emission Notification	As Required	Within 24 hours of the time the Permittee first learns of the excess emissions
Excess Emission Report	As Required	Within 72 hours of the notification
Deviation Report	As Required	Along with semi-annual reports
Performance Testing	As Required	Within 60 days from the end of the test

[1]If the due date falls on a Saturday, Sunday or a Federal or Nevada holiday, then the submittal are due on the next regularly scheduled business day.

9. The release of one (1) gallon or more of ammonia during transfer operations (from tanker truck to injection port) shall be considered an upset/breakdown.
10. 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)/AQR 19.4.1.3]*
11. The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR 72 and 40 CFR 75.

G. MITIGATION

1. The source is subject to federal offset requirements. *[AQR 59.1.1]*

V. OTHER REQUIREMENTS

1. The source is subject to 40 CFR 60 Subpart A, Db, Dc, GG and KKKK, 40 CFR 72, 40 CFR 75 and Title IV-Acid Rain Regulations. It is the Permittee's responsibility to know and follow all requirements within these federal regulations.
2. The Permittee shall, under all conditions, maintain and operate the source in a manner consistent with good air pollution control practice for minimizing emissions as required by 40 CFR 60.11.