

TECHNICAL SUPPORT DOCUMENT
(STATEMENT of BASIS)
for Permit Issuance

TECHNICAL INFORMATION PRESENTED IN REVIEW OF AN
APPLICATION FOR A PART 70 OPERATING PERMIT RENEWAL

SUBMITTED BY

NEVADA POWER COMPANY, dba, NV Energy

for

Silverhawk Generating Station

Part 70 Operating Permit Number: 1584

SIC Code - 4911: Electric Utility Services

NAICS Code – 221112: Fossil Fuel Electric Power Generation



Clark County
Department of Air Quality
Permitting Section

July 2016

EXECUTIVE SUMMARY

NV Energy’s Silverhawk Generating Station (SGS) is an electrical power generating station located at 15111 Apex Power Parkway, Las Vegas, Nevada. The legal description of the source location is as follows: portions of T18S, R63E, Section 5, in Apex Valley, County of Clark, Nevada. The source is situated in hydrographic area 216 (Garnet Valley). Garnet Valley is designated as an attainment area for all regulated air pollutants.

The source falls under SIC Code 4911: Electrical Services and NAICS Code 221112: Fossil Fuel Electric Power generation. SGS is a categorical stationary source as defined by AQR 12.2.2(j)(1). The source is a major source for PM₁₀, PM_{2.5}, NO_x, and CO, and a minor source for SO_x, VOC and HAP pollutants. SGS is also a source of GHG pollutants.

The following table summarizes the source PTE, for information only, for each regulated air pollutant for all emission units addressed by this Part 70 Operating Permit:

| Pollutant | PM ₁₀ | PM _{2.5} | NO _x | CO | SO ₂ | VOC | HAP | GHG ² |
|------------------------------------|------------------|-------------------|-----------------|--------|-----------------|-------|--------------------|------------------|
| Tons/year | 148.95 | 148.95 | 310.91 | 561.32 | 10.34 | 85.38 | 5.37 | 1,955,240 |
| Major Source Thresholds (Title V) | 100 | 100 | 100 | 100 | 100 | 100 | 10/25 ¹ | - |
| Major Stationary Source Thresholds | 250 | 250 | 250 | 250 | 250 | 250 | 10/25 ¹ | - |

¹Ten tons for any individual HAP or 25 tons for combination of all HAPs.

²Metric tons per year, CO_{2e}

Clark County Department of Air Quality (Air Quality) has received delegated authority from the United States Environmental Protection Agency to implement the requirement of the Part 70 OP. The initial Part 70 OP was issued on May 30, 2006, amended permits issued on August 23, 2006 and December 5, 2006 with a renewal issued on July 6, 2011. Based on the information submitted by the applicant and supplemental information provided to the application and a technical review performed by the Air Quality staff, the draft Part 70 OP renewal to SGS is proposed.

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I. ACRONYMS

Table I-1: List of Acronyms

| Acronym | Term |
|-------------------|--|
| Air Quality | Clark County Department of Air Quality |
| AQR | Clark County Air Quality Regulations |
| ASTM | American Society for Testing Materials |
| ATC | Authority to Construct |
| CAAA | Clean Air Act, as amended, or Clean Air Act Amendments |
| CAM | Compliance Assurance Monitoring |
| CEMS | Continuous Emissions Monitoring System |
| CFC | Chlorofluorocarbon |
| CFR | United States Code of Federal Regulations |
| CO | Carbon Monoxide |
| CO ₂ | Carbon Dioxide |
| COMS | Compliance Opacity Monitoring System |
| CTG | Combustion Turbine Generator |
| dscf | Dry Standard Cubic Feet |
| EPA | United States Environmental Protection Agency |
| EU | Emission Unit |
| GHG | Greenhouse Gases |
| HAP | Hazardous Air Pollutant |
| HCFC | Hydrochlorofluorocarbon |
| HHV | Higher Heating Value |
| HRSG | Heat Recovery Steam Generator |
| hp | Horse Power |
| LHV | Lower Heating Value |
| LPG | Propane |
| MACT | Maximum Achievable Control Technology |
| MMBtu | Millions of British Thermal Units |
| MW | Megawatt |
| NAC | Nevada Administrative Code |
| NAICS | North American Industry Classification System |
| NED | National Elevation Dataset |
| NO _x | Nitrogen Oxides |
| 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 |
| ppmvd | Parts per Million, Volumetric Dry |
| PSD | Prevention of Significant Deterioration |
| PTE | Potential to Emit |
| QA | Quality Assurance |
| QA/QC | Quality Assurance/Quality Control |
| RATA | Relative Accuracy Test Audit |
| SIC | Standard Industrial Classification |
| SIP | State Implementation Plan |
| SO _x | Sulfur Oxides |
| SGS | NV Energy's Silverhawk Generating Station |
| TDS | Total Dissolved Solids |
| U.S.C. | United States Code |
| USGS | United States Geological Survey |
| UTM | Universal Transverse Mercator |
| VOC | Volatile Organic Compound |

II. SOURCE INFORMATION

A. General

| | |
|--------------------------|--|
| Permittee | Nevada Power Company, dba, NV Energy – Silverhawk Generating Station |
| Mailing Address | 6226 West Sahara Avenue, Las Vegas, Nevada 89146 |
| Responsible Official | Kevin Geraghty |
| Phone Number | (702) 402-5662 |
| Fax Number | (702) 402-0835 |
| Contacts | Kim Williams |
| Phone Number | (702) 402-2184 |
| Fax Number | (702) 402-0835 |
| Source Location | 15111 Apex Power Parkway Las Vegas, Nevada 89124 |
| Hydrographic Area | 216 |
| Township, Range, Section | T18S, R63E, S5 |
| SIC Code | 4911 – Electric Services |
| NAICS Code | 221112 – Fossil Fuel Electric Power Generation |

B. Description of Process

SGS consists of two, 175 MW natural-gas-fired combustion turbine generators, two heat recovery steam generators with natural gas-fired duct burners, one steam turbine generator, one 3-cell, 6,600 gpm cooling tower, one 100 hp LPG-fired emergency generator, and one 250 hp diesel-powered fire pump.

1. CTG

The source operates two natural gas-fired CTG units capable of producing up to 175 MW of electricity each. Each of these units has a heat rating of 1,980 MMBtu/hr based on HHV. The CTGs generate electricity by transforming the thermal energy of combustion gasses into rotating mechanical energy as the gases expand through the turbine section. The rotational energy is converted into electrical energy via a shaft in the CTG that is connected to an electrical generator.

2. HRSG

Each CTG unit is connected to a dedicated HRSG. The exhaust gasses from the CTGs are routed to the HRSGs, which use the residual heat to produce steam. The heat is transferred, via conduction, to piping that transverses each HRSG. The hot gases convert the water in the piping to steam. The steam flow is then routed to a single steam turbine generator which provides additional electrical output.

Each HRSG is equipped with natural gas-fired duct burners with a heat rating of 530 MMBtu/hr, based on HHV.

C. Permitting History

There was no significant revision issued to the source after the previous renewal of the Part 70 OP; however, permit revisions occurred during the current permit term. The following represents permitting activities during the term of the current permit:

None.

D. Current Permitting Action

This permitting action is for the renewal of the Title V operating permit for the SGS. The current Title V operating permit is due to expire on July 5, 2016. In accordance with AQR requirements, the Permittee submitted a timely Title V renewal application on November 3, 2015. The application did not identify any change that would trigger any NSR analysis. However, the application identified the following changes and/or corrections that need attention:

- Condition III-B1 references 40 CFR Part 60, Subpart Db. This reference is not applicable to this facility. NV Energy requests that this reference be removed from the permit. This request has been honored. SGS is not subject to this regulation.
- Condition III-C-3 requires the monitoring of emissions of NH₃ either by use of a NH₃ CEMS or NH₃ parametric emission monitoring system (PEMS). NV Energy notes that NH₃ is not a regulated pollutant under AQR and no emission limit is identified in the permit. NV Energy respectfully requests this condition be removed from the permit. This request has been honored. Air Quality no longer regulates ammonia. Therefore, Air Quality will remove the permit conditions and limits that regulate ammonia. However, NV Energy shall monitor and keep records of the use of ammonia for SCR operation.

On November 30, 2015, Air Quality requested the following information from the source:

- Emission calculations for GHG's;
- Emission calculations for HAP's; and
- Capacities of the Genset LPG tank, the fire pump diesel tank, and the portable gas fired pump.

On December 8, 2015, Air Quality received the supplemental information requested on November 30, 2015. Recalculations of HAPs indicate 5.37 tons replacing the 7.10 tons.

E. Operating Scenario

No alternate operating scenarios have been submitted for this source.

III. EMISSIONS INFORMATION

A. Source-wide Potential to Emit

SPS is a major source of NO_x, PM₁₀, PM_{2.5}, and CO and a minor source of SO₂, VOC and HAP emissions.

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

| PM ₁₀ | PM _{2.5} | NO _x | CO | SO ₂ | VOC | HAP | GHG ¹ |
|------------------|-------------------|-----------------|--------|-----------------|-------|------|------------------|
| 148.95 | 148.95 | 310.91 | 561.32 | 10.34 | 85.38 | 5.37 | 1,955,240 |

¹Metric tons per year, CO_{2e}

B. Emission Units and PTE

The following tables summarize the emission units and the PTE for each emission unit.

Table III-B-1: List of Emission Units

| EU | Description | Rating | Make | Model # | Serial # | SCC |
|-----|---|--------------|-----------------------------|-----------|-------------------|----------|
| A01 | Natural Gas-Fired Turbine | 175 MW | Westinghouse | 501FD | 37A-8193-1 | 20100201 |
| A02 | Duct-Burner Heat Recovery Steam Generator (associated with A01) | 530 MMBtu/hr | Alstom | N/A | N/A | 10100601 |
| A03 | Natural Gas-Fired Turbine; | 175 MW | Westinghouse | 501FD | 37A-8194-1 | 20100201 |
| A04 | Duct-Burner Heat Recovery Steam Generator (associated with A03) | 530 MMBtu/hr | Alstom | N/A | N/A | 10100601 |
| A05 | Diesel-Powered Fire Pump; DOM: 2004 | 250 hp | Clarke | JU6H | PE6068TF234110 | 20200102 |
| A06 | LPG-Fired Emergency Generator DOM: 2004 | 100 hp | Generac | SG060 | 2072892 | 20201012 |
| A07 | Three-Cell Cooling Tower; Drift Loss: 0.001%; TDS: 8,144 ppm | 6,600 gpm | International Cooling Tower | FCC-12-03 | FCC-12-03-8434-03 | 38500101 |

The units in Table III-B-2 are present at this source, but are insignificant activities pursuant to AQR Section 12.5. The emissions from these units or activities, when added to the PTE of the source, will not make the source major for any additional pollutant.

Table III-B-2: Summary of Insignificant Activities

| Description |
|---|
| Mobile Combustions Sources |
| Station Maintenance Activities |
| Maintenance Shop Activities (e.g., part washers, sand blasters, etc.) |
| Steam Cleaning Operations |
| LPG Tank, 500 gallons |
| Diesel Tank, 280 gallons |
| Lube oil sumps and vents |
| Portable gas-fired pump, 3.5 hp |

Table III-B-3: Emission Unit PTE, Including Startup and Shutdowns

| EU | PM ₁₀ | | NO _x | | CO | | SO ₂ | | VOCs | | HAP |
|----------------------|------------------|---------------|-----------------|---------------|--------------|---------------|-----------------|--------------|--------------|--------------|-------------|
| | lbs/hr | tpy | lbs/hr | tpy | lbs/hr | tpy | lbs/hr | tpy | lbs/hr | tpy | tpy |
| A01+A02 ¹ | 19.80 | 73.80 | 23.00 | 154.10 | 22.40 | 280.40 | 1.50 | 5.10 | 6.40 | 42.60 | 2.67 |
| A03+A04 ¹ | 19.80 | 73.80 | 23.00 | 154.10 | 22.40 | 280.40 | 1.50 | 5.10 | 6.40 | 42.60 | 2.67 |
| A05 | 0.55 | 0.14 | 7.75 | 1.94 | 1.67 | 0.42 | 0.51 | 0.13 | 0.63 | 0.16 | 0.01 |
| A06 | 0.01 | 0.01 | 3.06 | 0.77 | 0.42 | 0.10 | 0.01 | 0.01 | 0.09 | 0.02 | 0.01 |
| A07 | 0.27 | 1.20 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Totals | 40.43 | 148.95 | 56.81 | 310.91 | 46.89 | 561.32 | 3.52 | 10.34 | 13.52 | 85.38 | 5.37 |

¹Annual emissions for turbine/duct burner pairs (A01/A02) and (A03/A04) are based on normal operations including 2,000 hours of turbines operating with duct firing at 100 percent load and 900 hours of start-up/shut-down cycles. (See Table III-B-5)

- The factors outlined in Table III-B-4 are being used by Air Quality to more accurately determine HAP emissions and possible source subjectivity to MACT standards per the March 2004 promulgated rule. No single turbine HAP emission shall exceed ten (10) tons per year and total single turbine HAP emissions shall not exceed 25 tons per year. This facility is not subject to 40 CFR 63 Subpart YYYY for combustion turbines.

Table III-B-4: Itemized List of HAP Compounds

See Table IX-5 in the Attachments section.

- The startup/shutdown PTE is based on the number of events and duration listed in Table III-B-5. [NSR ATC/OP, Modification 0, Amendment 3, Condition II-B-5 (12/04/06)]

Table III-B-5: Startup and Shutdown PTE for each Turbine (pounds per event)

| Condition | Events/Year | Event Duration | PM ₁₀ | NO _x | CO | SO _x | VOC |
|------------------|-------------|----------------|------------------|-----------------|-------|-----------------|------|
| Cold Startup | 45 | 3 hours | 54 | 585 | 2,706 | 3.3 | 137 |
| Warm/Hot Startup | 240 | 2 hours | 36 | 325 | 1,000 | 2.2 | 91.4 |
| Shutdown | 285 | 1 hour | 18 | 163 | 160 | 1.1 | 45.7 |

- The Permittee shall not allow the emission limits for NO_x and CO outlined in Table III-B-6, to be exceeded for any three (3) hour rolling averaging period as determined by the Continuous Emissions Monitor System (CEMS) or PEMS as described in Section III-E, excluding any startup or shutdown periods. [NSR ATC/OP 1584 Modification 0, Amendment 3, Condition III-B-7 (12/04/06)]

Table III-B-6: Emission Rates for Each Turbine and Duct Burner¹

| | NO _x @ 15% O ₂ | CO @ 15% O ₂ | VOC @ 15% O ₂ |
|---------------------|--------------------------------------|-------------------------|--------------------------|
| With Duct firing | 2.5 ppmvd | 4 ppmvd | 2.0 ppmvd |
| Without Duct Firing | 2.5 ppmvd | 4 ppmvd | 2.0 ppmvd |

¹Limits based on normal operations, 3-hour averaging period.

C. Performance Testing

Performance testing is subject to 40 CFR 60 Subparts A, GG, Da, 40 CFR Part 72; and Air Quality's Guideline of Performance Testing. Required testing will be performed using the following methods:

Table V-1: Performance Testing Requirements for Stationary Gas Turbines

| Test Point | Pollutant | Test Frequency | Method (40 CFR 60, Appendix A) |
|------------------------------|-----------------|----------------|---|
| Turbine Exhaust Outlet Stack | VOC | Initial Only | Method 25A |
| Turbine Exhaust Outlet Stack | NO _x | Initial Only | Chemiluminescence Analyzer (EPA Method 7E) or Method 20 |
| Turbine Exhaust Outlet Stack | CO | Initial Only | EPA Method 10 |
| Turbine Exhaust Outlet Stack | Opacity | Initial Only | EPA Method 9 |
| Stack Gas Parameters | --- | As applicable | EPA Methods 1, 2, 3, 4 |

On May 7, 2014, Air Quality established a practice that subsequent performance testing for PM₁₀ and VOC for natural gas combusting emission units is not required unless a standard or regulation requires ongoing compliance demonstration. This practice was made based on the fact that PM₁₀ and VOC emissions are insignificant for natural gas combustion units. Additionally, the practice stated that no subsequent performance testing is needed for NO_x and CO emissions if NO_x and CO are continuously monitored using CEMS and relative accuracy of the monitoring system is demonstrated annually. The practice also removed the requirements for Method 9 opacity testing, provided the permit included conditions for periodic visible emission checks.

The Permittee shall conduct RATA of the CO, NO_x and diluents of O₂ CEMS at least annually.

D. Continuous Emissions Monitoring

To demonstrate continuous direct compliance with all emission limitations for NO_x and CO specified in this permit, the source operates a CEMS for NO_x, CO and O₂ on each stationary gas turbine unit in accordance with 40 CFR Parts 60 and 75. The CEMS monitors and records the following parameters for each individual stationary gas turbine:

1. exhaust gas concentrations of NO_x, CO, and diluent O₂ including periods of startup and shutdown;
2. exhaust gas flow rate (by direct or indirect methods);
3. fuel flow rate;
4. hours of operation;
5. 3-hour rolling averages of NO_x and CO concentrations (in ppm);
6. hourly, daily and quarterly accumulated mass emissions of NO_x and CO; and
7. hours of downtime of the CEMS.

Compliance with all emission limitations for SO_x shall be demonstrated in accordance with the testing requirements of 40 CFR 60.334(h). The sulfur content shall not exceed a rolling 12-month average of 0.75 grains/100 dscf as determined by any four consecutive quarterly verifications.

Required periodic audit procedures and QA/QC procedures for CEMS shall conform to the provisions of 40 CFR Part 60, Appendix F. RATA of the CO, NO_x and O₂ CEMS shall be conducted at least annually.

These RATAs of the NO_x, CO and O₂ CEMS as required at least every four calendar quarters, except in the case where the affected facility is off-line (does not operate) in the fourth calendar quarter since the quarter of the previous RATA. In that case, the RATA shall be performed in the quarter in which the unit recommences operation. [40 CFR Part 60, Appendix F 5.1.1 and 5.1.4]

By complying with 40 CFR Part 60, Appendix F 5.1.1 and 5.1.4, the source will meet the requirements of 40 CFR Part 75 which requires semiannually, *i.e.*, once every two successive QA operating quarters for each primary and redundant backup SO₂ pollutant concentration monitor, flow monitor, CO₂ emissions concentration monitor (including O₂ monitors used to determine CO₂ emissions), O₂ diluent monitor used to determine heat input, moisture monitoring system, NO_x concentration monitoring system, or NO_x-diluent CEMS. A calendar quarter that does not qualify as a QA operating quarter shall be excluded in determining the deadline for the next RATA. No more than eight successive calendar quarters shall elapse after the quarter in which a RATA was last performed without a subsequent RATA having been conducted. If a RATA has not been completed by the end of the eighth calendar quarter since the quarter of the last RATA, then the RATA must be completed within a 720 unit (or stack) operating hour grace period following the end of the eighth successive elapsed calendar quarter, or data from the CEMS will become invalid in accordance with 40 Part 75 Appendix B 2.3.1.1.

IV. REGULATORY REVIEW

A. Local Regulatory Requirements

Air Quality has determined that the following public law, statutes and associated regulations are applicable:

1. CAAA, Authority: 42 U.S.C. § 7401, et seq.;
2. Title 40 of the CFR; including 40 CFR 70 and others;
3. NRS, Chapter 445; Sections 401 through 601;
4. Portions of the AQR included in the SIP for Clark County, Nevada. SIP requirements are federally enforceable. All requirements from ATC permits issued by Air Quality are federally enforceable because these permits were issued pursuant to SIP-included sections of the AQR; and
5. Portions of the AQR not included in the SIP. These locally applicable requirements are locally enforceable only.

B. Federally Applicable Regulations

40 CFR 60-STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES:

Subpart A - General Provisions

40 CFR Part 60.7-Notification and record keeping

Discussion: This regulation requires notification to Air Quality of modifications, opacity testing, records of malfunctions of process equipment and/or continuous monitoring device, and performance test data. These requirements are found in the Part 70 OP in Sections III-B and III-C. Air Quality requires records to be maintained for five years, a more stringent requirement than the two (2) years required by 40 CFR Part 60.7.

40 CFR Part 60.8 - Performance tests

Discussion: These requirements are found in the Part 70 OP in Section III-D. Notice of intent to test, the applicable test methods, acceptable test method operating conditions, and the requirement for three runs are outlined in this regulation. Air Quality requirements for initial performance testing is identical to 40 CFR Part 60.8. Air Quality also requires periodic performance testing on emission units based upon throughput or usage.

40 CFR Part 60.11 - Compliance with standards and maintenance requirements

Discussion: 40 CFR Part 60, Subpart GG requires fuel monitoring and sampling to meet a standard, applicable to the turbines. 40 CFR Part 60, Subpart GG establishes NO_x and SO₂ limitations, applicable to the turbines. 40 CFR Part 60, Subpart GG requirements are in the Part 70 OP.

At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected source including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

These requirements have been included in the Part 70 OP.

40 CFR Part 60.12 - Circumvention

Discussion: This prohibition is addressed in the Part 70 OP. This is also local rule AQR Section 80.1.

40 CFR Part 60.13 - Monitoring requirements

Discussion: This section requires that CEMS meet Appendix B and Appendix F standards of operation, testing and performance criteria. Section III-C of the Part 70 OP contains the CEMS conditions and citations to Appendix B and F. In addition, the QA plan approved for the CEMS follows the requirements outlined including span time, recording time, RATA waivers and malfunctions.

Subpart Da-Standards of Performance for Electric Utility Steam Generating Units for which construction is commenced after September 18, 1978

40 CFR 60.40Da – Applicability

Discussion: The duct burners (EUs: A02 and A04) are subject to the provisions of this subpart. They each have a rated capacity of 530 MMBtu/hr. Construction of the Silverhawk generating Station commenced prior to February 28, 2005. All regulations corresponding to this construction date are applicable to the source.

40 CFR 60.42Da – Standard for Particulate Matter

Discussion: Gaseous emissions derived from the combustion of solid, liquid, or gaseous fuels shall not contain particulate matter in excess of 0.03 pounds per million Btu of heat input. In addition, opacity shall not exceed 20 percent (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.

40 CFR 60.43Da – Standard for Sulfur Dioxide

Discussion: The Permittee shall not discharge into the atmosphere any gases that contain SO₂ in excess of 1.2 pounds per million Btu heat input.

40 CFR 60.44Da – Standard for Nitrogen Oxides

Discussion: The Permittee shall not discharge into the atmosphere any gases that contain NO_x in excess of 0.20 pounds per million Btu heat input.

40 CFR 60.48Da – Compliance Provisions

Discussion: The Permittee has separate emission standards during startup and shutdown. They are outlined in the Part 70 operating permit. The Permittee has completed all compliance demonstrations and has demonstrated compliance with all applicable emission standards for NO_x and SO₂. They also employ the use of CEMS on each of the stationary gas turbine stacks to monitor NO_x emissions. The measurements to be taken are outlined in the Part 70 OP.

40 CFR 60.49Da – Emissions Monitoring

Discussion: The duct burners combust only natural gas; therefore, COMS and SO₂ CEMS are not required. The Permittee is subject to the requirements of 40 CFR 75; therefore, the data acquired by the NO_x CEMS are allowed to be used to show compliance with both 40 CFR 60 Subpart Da and 40 CFR 75. The reporting requirements are outlined in the Part 70 OP. Also, the source has installed a diluent oxygen CEMS. The duct burners exhaust through the same stack as the combustion turbines; therefore, the monitors required for monitoring stationary gas turbine emissions will also monitor duct burner emissions. Monitoring requirements are outlined in the Part 70 OP.

40 CFR 60.50Da – Compliance Determination Procedures and Methods

Discussion: The compliance demonstration for this source is discussed in the Part 70 OP.

40 CFR 60.51Da – Reporting Requirements

Discussion: Reporting requirements are discussed in the Part 70 OP.

Subpart GG-Standards of Performance for Stationary Gas Turbines

40 CFR Part 60.330 - Applicability and designation of affected facility

Discussion: The provisions of this subpart are applicable to the following affected facilities: All stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules per hour, based on the lower heating value of the fuel fired. Any facility under paragraph (a) of this section which commences construction, modification, or reconstruction after October 3, 1977, is subject to the requirements of this part except as provided in paragraphs (e) and (j) of 40 CFR Part 60.332. [44 FR 52798, Sept. 10, 1979, as amended at 52 FR 42434, Nov. 5, 1987]

All turbine units (EU: A01 and A03) are subject to Subpart GG in its entirety.

40 CFR Part 60.332-Standard for nitrogen oxides (NO_x limits using the F formula)

Discussion: SGS is permitted such that combustion turbine shall not discharge into the atmosphere any gases that contain NO_x in excess of 75 ppmvd at 15 percent oxygen on a dry basis.

40 CFR Part 60.333-Standard for sulfur dioxide

Discussion:

- (a) The Permittee shall discharge into the atmosphere, from any stationary gas turbine, any gases which contain sulfur dioxide in excess of 0.015 percent by volume at 15 percent oxygen and on a dry basis.
- (b) The Permittee shall not burn, in any stationary gas turbine, any fuel which contains total sulfur in excess of 0.8 percent by weight

40 CFR Part 60.334 - Monitoring of operations

Discussion: The source installed, calibrated, maintains and operates a continuous monitoring system.

40 CFR Part 60.335 - Test methods and procedures.

Discussion: The source has passed initial performance testing. These requirements are found in the conditions for performance testing found in the Part 70 OP.

40 CFR Part 63 – NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES:

Subpart A - General Provisions

40 CFR Part 63.4 – Prohibited activities and circumvention

Discussion: This prohibition is addressed in the Part 70 OP. This is also local rule AQR Section 80.1.

Subpart ZZZZ- National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

40 CFR Part 63.6585 Am I subject to this subpart

Discussion: Subpart ZZZZ applies to the 250 hp diesel-powered fire pump and 100 hp propane-powered emergency generator.

Pursuant to 63.6590(c), an affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR Part 60 subpart IIII, for compression ignition engines or 40 CFR Part 60, Subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

The fire pump and emergency generator are subject to the provisions of 40 CFR Part 63, Subpart ZZZZ and shall comply with the following requirements no later than May 3, 2013:

- a. Change the oil and filter every 500 hours of operation or annually whichever comes first;
- b. Inspect air cleaner every 1,000 hours of operation or annually whichever comes first;
- c. Inspect all hoses and belts every 500 hours of operation or annually whichever comes first and replace if needed;
- d. Operate the emergency generator up to 50 hours per year for nonemergency situations, but those hours count towards the 100 hours provided for testing and

- maintenance. The 50 hours per year for nonemergency situations cannot be used for peak shaving or to generate income for the facility; and
- e. Operate the emergency generator with a nonresettable hour meter.

The fire pump and emergency generator at this source are subject to 40 CFR Part 63, Subpart ZZZZ, and therefore must meet the fuel requirements referenced therein from 40 CFR Subpart I, §80.510(b) for nonroad diesel fuel. The source must purchase diesel fuel that meets the per-gallon standard of 15 ppm maximum sulfur content, a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent. As all refiners and importers of non-road diesel fuel are also subject to these federal standards pursuant to 40 CFR §80.510, it is reasonable to assume the operators of the engines do not have the opportunity to acquire fuel that violates these standards. Therefore, the Permittee is not being required by the operating permit to monitor or keep records of the sulfur content, cetane index, or aromatic content of the diesel fuel used in their fire pump and emergency generator.

40 CFR Part 64 – COMPLIANCE ASSURANCE MONITORING

40 CFR Part 64.2 – Applicability

Discussion: The CAM rule is not applicable based on the applicability statement outlined in 40 CFR 64.2(a)(2), i.e., no control devices (other than inherent process equipment) are used on these units to achieve compliance with any emission limitation or standard for a regulated air pollutant.

Stationary Gas Turbines/Duct Burners (EUs: A01/A02 and A03/A04)

Pursuant to 40 CFR 64.2(b)(1)(iii), NO_x emissions are exempt from CAM requirements because acid rain program requirements are applicable. Pursuant to 40 CFR 64.2(b)(1)(vi), CO emissions are exempt because CO CEMS requirements are included in the Title V permit. EUs: A01/A02 and A03/A04 do not have any control device for PM₁₀ or SO₂ and the uncontrolled potential VOC emissions are less than the major source threshold. Therefore, EUs: A01/A02 and A03/A04 do not meet the CAM applicability criteria described above for PM₁₀, VOC or SO₂.

Emergency Generator, Fire Pump, and Cooling Tower (EUs: A05, A06 and A07)

The uncontrolled potential emissions of each regulated air pollutant from the emergency generator, fire pump, and cooling tower are less than the major source threshold. Therefore, the CAM requirements do not apply for any regulated pollutant.

40 CFR Part 72-ACID RAIN PERMITS REGULATION

Subpart A – Acid Rain Program General Provisions

40 CFR Part 72.6 – Applicability

Discussion: The Silverhawk Generating Station is defined as a utility unit in the definitions of 40 CFR 72; therefore, the provisions of this regulation apply.

40 CFR 72.9 – Standard Requirements

Discussion: The permittee has applied for all of the proper permits under this regulation.

Subpart B – Designated Representative

Discussion: A Certificate of Representation for a Designated Representative for Silverhawk Generating Station is on file. All requirements of this Subpart have been met.

Subpart C – Acid Rain Permit Applications

Discussion: The Permittee has applied for an acid rain permit for Silverhawk Generating Station.

Subpart D – Acid Rain Compliance Plan and Compliance Options

Discussion: This Subpart discusses the individual requirements necessary for a complete compliance plan. A compliance plan exists for each stationary combustion turbine.

Subpart E – Acid Rain Permit Contents

Discussion: Silverhawk Generating Station has applied for an acid rain permit and it will contain all information necessary to demonstrate compliance with this Subpart.

40 CFR Part 73 – ACID RAIN SULFUR DIOXIDE ALLOWANCE SYSTEM

Discussion: SGS is an affected source pursuant to 40 CFR 72.6 because it fits the definition of a utility unit; therefore, this regulation shall apply.

Subpart B – Allowance Allocations

Discussion: Silverhawk Generating Station is not listed on either Phase I or Phase II tables. Therefore, it will not have an initial allocation per 40 CFR 73.10.

Subpart F – Energy Conservation and Renewable Energy Reserve

Discussion: There are no qualified conservation measures or renewable energy generation processes at this source; therefore, this Subpart does not apply.

40 CFR Part 75 – CONTINUOUS EMISSION MONITORING

Discussion: SGS is an affected facility subject to the Acid Rain emission limitations of 40 CFR Part 72; therefore, the source is subject to the monitoring, record keeping, and reporting requirements of this regulation.

Each stationary gas turbine/duct burner has been equipped with a NO_x CEMS and a diluent oxygen monitor. Each stationary gas turbine is also equipped with a fuel flow monitor. The data from the CEMS is used to provide quarterly acid rain reports to both EPA and Air Quality.

All required monitoring plans, RATA testing protocols and certification testing reports have been provided to EPA and Air Quality. The CEMS Quality Assurance Plan was submitted to Air Quality on December 30, 2003 and the initial CEMS certification testing was completed on May 7, 2004.

V. COMPLIANCE

A. Compliance Certification

12.5.2.8 Requirements for compliance certification:

- (a) Regardless of the date of issuance of this Part 70 OP, the schedule for the submittal of reports to the Air Quality shall be as follows:

Table V-A-1: Reporting Schedule¹

| Required Report | Applicable Period | Due Date |
|---|--|---|
| Semiannual Report for 1st half of the year. | January, February, March, April, May, June | July 30 th each year ² |
| Semiannual Report for 2nd half of the year. Any additional annual records required. | July, August, September, October, November, December | January 30 th each year ² |
| Annual Compliance Certification Report | Calendar Year | January 30 th each year ² |
| Annual Emission Inventory Report | Calendar Year | March 31 st each year ² |
| Excess Emission Notification | As Required | Within 24 hours of the onset of the event |
| Excess Emission Report | As Required | As soon as practicable but not to exceed 72 hours from notification |
| Deviation Report | As Required | Along with semiannual ² reports |
| RATA Testing | As Required | Within 45 days from the end of the test ² |

¹Note the source is required to comply in accordance with reporting of the deviations from the CEMS for the Acid Rain Program.

²If 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.

- (b) A statement of methods used for determining compliance, including a description of monitoring, record keeping, and reporting requirements and test methods.
- (c) A schedule for submission of compliance certifications during the permit term.
- (d) A statement indicating the source's compliance status with any applicable enhanced monitoring and compliance certification requirements of the Act.

B. Compliance Summary

Table V-B-1: Applicable Regulations

| Citation | Title | Applicability | Applicable Test Method | Compliance Status |
|---------------|-----------------|--|---|--|
| AQR Section 0 | Definitions | Applicable – NV Energy will comply with all applicable definitions as they apply. | NV Energy will meet all applicable test methods should new definitions apply. | NV Energy complies with applicable requirements. |
| AQR Section 4 | Control Officer | Applicable – The Control Officer or his representative may enter into SGS property, with or without prior notice, at any reasonable time for purpose of establishing compliance. | NV Energy will allow Control Officer to enter Station property as required. | NV Energy complies with applicable requirements. |

| Citation | Title | Applicability | Applicable Test Method | Compliance Status |
|------------------|---|---|---|--|
| AQR Section 5 | Interference with Control Officer | Applicable – NV Energy shall not hinder, obstruct, delay, resist, or interfere with the Control Officer. | NV Energy will allow Control Officer to operate as needed. | NV Energy complies with applicable requirements. |
| AQR Section 8 | Persons Liable for Penalties | Applicable – NV Energy and employees will be individually and collectively liable to any penalty or punishment from Air Quality. | NV Energy will adhere to the rules stipulated in applicable AQR. | NV Energy complies with applicable requirements. |
| AQR Section 9 | Civil Penalties | Applicable – The rule stipulates penalties for AQR violations. | NV Energy will adhere to the rules stipulated in applicable AQR. | NV Energy complies with applicable requirements. |
| AQR Section 10 | Compliance Schedule | Applicable – Any existing source not in compliance with emission limitations shall submit a compliance schedule. | NV Energy will adhere to emission limitations and submit a compliance schedule if those limits are exceeded. | NV Energy complies with applicable requirements. |
| AQR Section 12.0 | Applicability, General Requirements and Transition | Applicable – NV Energy as a whole is not subject to these requirements. Rule outlines source applicability, requirements for a source to obtain a permit and transition for sources that received a permit prior to rulemaking. | NV Energy will applied for and received ATC permits for Air Quality prior to commercial operation. NV Energy will comply with the requirements of the ATCs. | NV Energy complies with applicable requirements. |
| AQR Section 12.1 | Permit Requirements for Minor Sources | Not Applicable. | Not Applicable. | Not Applicable. |
| AQR Section 12.2 | Permit Requirements for Major Sources in Attainment Areas (PSD) | Applicable – NV Energy is a major source and located in an area in attainment for PM ₁₀ , PM _{2.5} , CO, and the 1997 8-hour ozone standard (major source for NO _x and VOC). | . NV Energy will applied for and received ATC permits for Air Quality prior to commercial operation. NV Energy will comply with the requirements of the ATCs. | NV Energy complies with applicable requirements. |
| AQR Section 12.3 | Permit Requirements for Major Sources in Nonattainment Areas | Not Applicable. | Not Applicable. | Not Applicable. |

| Citation | Title | Applicability | Applicable Test Method | Compliance Status |
|--------------------------------------|--|--|--|--|
| AQR Section 12.4 | ATC application and Permit Requirements for Part 70 Sources | Applicable – NV Energy applied for an ATC from Air Quality. | NV Energy applied for, and received, ATC permits from Air Quality. SGS shall comply with the requirements for ATCs. | NV Energy complies with applicable requirements. |
| AQR Section 12.5 | Part 70 Operating Permit Requirements | Applicable – NV Energy as a whole is applicable. | NV Energy complies with the requirements for Title V permits outlined in this AQR and with the current Title V permit. | NV Energy complies with applicable requirements. |
| AQR Section 12.9 | Annual Emissions Inventory | Applicable – NV Energy shall complete and submit an annual emissions inventory. | Annual emission inventories shall be submitted by March 31 each year. | NV Energy complies with applicable requirements. |
| AQR Section 12.10 | Continuous Monitoring Requirements | Applicable – NV Energy NO _x and CO CEMS installed on all applicable stacks of the turbines and meets provisions of 40 CFR Part 60 and 40 CFR Part 75. | NV Energy submitted all required protocols/test plans per the issued ATC permit prior to CEMS certification. CEMS certification was approved by Air Quality. | NV Energy complies with applicable requirements. |
| AQR Section 13.2(b)(1) Subpart A | MACT – General Provisions | Applicable – NV Energy emits hazardous air pollutants. | NV Energy complies with the applicable requirements of 40 CFR Part 61 and Part 63. | NV Energy complies with applicable requirements. |
| AQR Section 13.2(b)(82) Subpart ZZZZ | National Emission Standard for Hazardous Air Pollutants – Stationary Reciprocating Internal Combustion Engines | Applicable – as of May 3, 2013. | Applicable compliance, monitoring, record keeping, and reporting requirements. | NV Energy complies with applicable requirements. |
| AQR Section 14.1(b)(1) Subpart A | NSPS – General Provisions | Applicable – NV Energy is an affected source under the regulations. AQR Section 14 is locally enforceable; however, the NSPS standards they reference are federally enforceable. | Applicable monitoring, record keeping and reporting requirements on these turbines. | NV Energy complies with applicable requirements. |

| Citation | Title | Applicability | Applicable Test Method | Compliance Status |
|-------------------------------------|--|---|---|--|
| AQR Section 14.1(b)(3) Subpart Da | NSPS – Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced after September 18, 1978 | Applicable – NV Energy turbine units are fired with heat input greater than 250 MMBtu/hr. | All duct burners meet the applicable PM, SO ₂ and NO _x emission standards. The duct burners also meet the opacity requirements. | NV Energy complies with applicable requirements. |
| AQR Section 14.1.(b)(40) Subpart GG | NSPS – Standards of Performance for Stationary Gas Turbines | Applicable –NV Energy turbine units are natural gas fired (or #2 diesel fired) units with heat input greater than 10 MMBtu/hr. | All stationary gas turbines meet the applicable NO _x emission standard. When firing on natural gas, NO _x emissions shall not exceed 42 ppmv (dry, corrected to 15 percent oxygen). When firing on #2 diesel oil, NO _x emissions shall not exceed 65 ppmv (dry, corrected to 15 percent oxygen). NO _x emissions determined by EPA Method 7E. | NV Energy complies with applicable requirements. |
| AQR Section 18 | Permit and Technical Service Fees | Applicable – NV Energy will be required to pay all required/applicable permit and technical service fees. | NV Energy is required to pay all required/applicable permit and technical service fees. | NV Energy complies with applicable requirements. |
| AQR Section 21 | Acid Rain Permits | Applicable – NV Energy is an affected facility. The stationary combustion turbines are applicable under the Acid Rain Program. | NV Energy submitted the required acid rain permit forms/applications. | NV Energy complies with applicable requirements. |
| AQR Section 22 | Acid Rain Continuous Emission Monitoring | Applicable - NV Energy is an affected facility and is required to meet the requirements for monitoring , record keeping, and reporting for SO ₂ , NO _x , CO ₂ emissions. SGS has to be compliant with 40 CFR Part 75 conditions. | NV Energy submitted all required protocols/test plans. CEMS certification. CEMS certification was approved by Air Quality and EPA CAMD. SGS will perform all certification activities. | NV Energy complies with applicable requirements. |

| Citation | Title | Applicability | Applicable Test Method | Compliance Status |
|----------------|---|---|--|--|
| AQR Section 25 | Upset/Breakdown, Malfunctions | Applicable – Any upset, breakdown, emergency condition, or malfunction which causes emissions of regulated air pollutants in excess of any permit limits shall be reported to Control Officer. Section 25.1 is locally and federally enforceable. | Any upset, breakdown, emergency condition, or malfunction in which emissions exceed any permit limit shall be reported to the Control Officer within twenty (24) hours of the time that the Permittee learns of the event. | NV Energy complies with applicable requirements. |
| AQR Section 26 | Emissions of Visible Air Contaminants | Applicable – Opacity for the NV Energy combustion turbines must not exceed 20 percent for more than 6 consecutive minutes. | Compliance determined by EPA Method 9. | NV Energy complies with applicable requirements. |
| AQR Section 27 | Particulate Matter from Process Weight Rate | Not Applicable. | Not Applicable. | Not Applicable. |
| AQR Section 28 | Fuel Burning Equipment | Applicable – The PM emission rate for the combustion the turbines is well below those established based on Section 28 requirements. | Maximum allowable PM emission rate determined from equation in Section 28. | NV Energy complies with applicable requirements. |
| AQR Section 40 | Prohibition of Nuisance Conditions | Applicable – No person shall cause, suffer or allow the discharge from any source whatsoever such quantities of air contaminants or other material which cause a nuisance. Section 40 is locally enforceable only. | NV Energy air contaminant emissions controlled by pollution control devices or good combustion in order not to cause a nuisance. | NV Energy complies with applicable requirements. |
| AQR Section 41 | Fugitive Dust | Applicable – NV Energy shall take necessary actions to abate fugitive dust from becoming airborne. | Station utilizes appropriate best practices to not allow airborne fugitive dust. | NV Energy complies with applicable requirements. |

| Citation | Title | Applicability | Applicable Test Method | Compliance Status |
|------------------|--|--|---|--|
| AQR Section 42 | Open Burning | Applicable – In event NV Energy burns combustible material in any open areas, such burning activity will have been approved by Control Officer in advance. Section 42 is a locally enforceable rule only. | NV Energy will contact the Air Quality and obtain approval in advance for applicable burning activities as identified in the rule. | NV Energy complies with applicable requirements. |
| AQR Section 43 | Odors in the Ambient Air | Applicable – An odor occurrence is a violation if the Control Officer is able to detect the odor twice within a period of an hour, if the odor causes a nuisance, and if the detection of odors is separated by at least fifteen minutes. Section 43 is a locally enforceable rule only. | NV Energy will not operate its source in a manner which will cause odors. SGS is a natural gas fired source and is not expected to cause odors. | NV Energy complies with applicable requirements. |
| AQR Section 70.4 | Emergency Procedures | Applicable – NV Energy submitted an emergency standby plan for reducing or eliminating air pollutant emissions in the Section 12.5 Operating Permit Application. | NV Energy submitted an emergency standby plan and received the Section 12.5 Operating Permit. | NV Energy complies with applicable requirements. |
| AQR Section 80 | Circumvention | Applicable – NV Energy shall not conceal emissions in any way. | NV Energy will disclose all emissions as required by state and federal regulations. | NV Energy complies with applicable requirements. |
| AQR Section 94 | Permitting and Dust Control for Construction Activities. | Applicable – NV Energy shall apply for a dust control permit in the event of engaging in a construction activity greater than 0.25 acre. | Applicable – NV Energy shall apply for a dust control permit in the event of engaging in a construction activity greater than 0.25 acre. | NV Energy complies with applicable requirements. |
| NRS Chapter 445B | Nevada Revised Statutes, Air pollution | Applicable – NV Energy shall comply with applicable regulations. | NV Energy complies with applicable regulations. | NV Energy complies with applicable requirements. |

| Citation | Title | Applicability | Applicable Test Method | Compliance Status |
|-----------------------------|---|---|---|--|
| 40 CFR Part 52.21 | Prevention of Significant Deterioration | Applicable – NV Energy is a categorical minor source for PSD. | NV Energy complies with the regulations of the Section and with the requirements of AQR 12.2. BACT analysis. Air quality analysis, and visibility and additional impact analysis performed for the original permit. | NV Energy complies with applicable requirements. |
| 40 CFR Part 52.1470 | State Implementation Plan Rules | Applicable – NV Energy is subject to the Nevada SIP. | NV Energy shall continue to comply with the federally enforceable monitoring, testing, record keeping, and reporting requirements stipulated in the SIP. | NV Energy complies with applicable requirements. |
| 40 CFR Part 60 Subpart A | Standards of Performance for New Stationary Sources – General provisions | Applicable – NV Energy is an affected facility under NSPS Subparts Da and GG. Therefore, Subpart A provisions are applicable. | NV Energy shall continue to adhere to applicable monitoring , testing, record keeping, and reporting regulations. | NV Energy complies with applicable requirements. |
| 40 CFR Part 60 Subpart Da | Standards of Performance for Electric Utility Steam Generating Units for Which Construction Is Commenced After September 18, 1978 | Applicable – NV Energy turbine units are fired with heat input greater than 250 MMBtu/hr. | All duct burners meet the applicable PM, SO ₂ and NO _x emission standards. The duct burners also meet the opacity requirements. | NV Energy complies with applicable requirements. |
| 40 CFR Part 60 Subpart GG | Standards of Performance for Stationary Gas Turbines | Applicable – NV Energy turbine units are natural gas fired (or #2 diesel fired) units with heat input greater than 10 MMBtu/hr. | NV Energy shall continue to adhere to applicable monitoring , testing, record keeping, and reporting regulations for the turbines, In addition, the turbines shall meet the applicable NO _x and SO ₂ emission limits. | NV Energy complies with applicable requirements. |
| 40 CFR Part 63 Subpart ZZZZ | National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines | Applicable – The fire pump and emergency generator are subject to this subpart. | NV Energy shall continue to adhere to the applicable emission limitations, operating and maintenance requirements, record keeping, reporting, and general provisions. | NV Energy complies with applicable requirements. |

| Citation | Title | Applicability | Applicable Test Method | Compliance Status |
|-----------------|---|--|--|--|
| 40 CFR Part 64 | Compliance Assurance Monitoring | Not Applicable – The source is exempt to the CAM rule. . | Not Applicable. | Not Applicable. |
| 40 CFR Part 68 | Chemical Accident Prevention Provisions | Not Applicable. | Not Applicable. | Not Applicable. |
| 40 CFR Part 70 | Federally Mandated Operating Permits | Applicable – The regulations provide for the establishment of State air quality permitting systems consistent with the requirements of Title V of the Clean Air Act. | NV Energy complies with this regulation by maintaining an updated Title V federal operating permit. | NV Energy complies with applicable requirements. |
| 40 CFR Part 72 | Acid Rain Permit Regulations | Applicable – The turbine are subject to acid rain regulations. | NV Energy complies with all applicable regulations. An acid rain permit was submitted with the renewal application. | NV Energy complies with applicable requirements. |
| 40 CFR Part 73 | Acid Rain Sulfur Dioxide Allowance System | Applicable – The regulations stipulate the allocation, exchange, etc. of acid rain SO ₂ allowances. | NV Energy complies with all applicable requirements and obtains required acid rain SO ₂ allowances. | NV Energy complies with applicable requirements. |
| 40 CFR Part 75 | Acid Rain Continuous Emission Monitoring | Applicable – NV Energy is an affected facility and must meet the requirements for monitoring, record keeping, and reporting of flow rate, SO ₂ , NO _x , and CO ₂ emissions. | NV Energy shall continue to adhere to the CEMS requirements for monitoring, record keeping, and reporting. | NV Energy complies with applicable requirements. |
| 40 CFR Part 82 | Protection of Stratospheric Ozone | Applicable – NV Energy is subject to the applicable rules regarding protection of stratospheric ozone. | NV Energy does not use or sell a substitute material for a device designated to use a CFC or HCFC and keeps records applicable to the rule onsite. | NV Energy complies with applicable requirements. |

C. Summary of Monitoring for Compliance

Table V-C-1: Compliance Monitoring

| Emission Unit | Process Description | Monitored Pollutants | Applicable Subsection Title | Requirements | Compliance Monitoring |
|---------------|-------------------------------|--|---|--|--|
| A01 & A03 | Stationary Gas Turbines | CO, NO _x , SO ₂ , VOC, HAPs | AQR Sections 12.1, 12.5 40 CFR Part 60, Subpart GG | Annual and short-term emission limits. | CEMS for NO _x and CO. Stack testing for VOC and opacity as outlined in Part 70 OP. Compliance for SO ₂ and HAPs shall be based on sole use of natural gas as fuel and emission factors. Recording is required for compliance demonstration. |
| A01 & A03 | Stationary Gas Turbines | Opacity | AQR Section 26 | Less than twenty percent opacity. | Use of natural gas as fuel and good combustion practices as well as EPA Method 9 performance testing upon the request of the Control Officer. |
| A05 | Diesel Fire Pump | CO, NO _x , SO ₂ , PM ₁₀ , VOC, HAPs | AQR Sections 12.1 40 CFR Part 63, Subpart ZZZZ | Annual and short-term emission limits. | Compliance for regulated pollutants shall be based on sole use of low-sulfur diesel fuel and emission factors. Recording is required for compliance demonstration. |
| A06 | LPG-Fired Emergency Generator | Opacity | AQR Section 26 | Less than twenty percent opacity. | Sole use of liquid propane gas and quarterly visual emission checks as outlined in Part 70 OP. |
| A07 | Cooling Tower | Opacity | AQR Section 26 | Less than twenty percent opacity. | The Permittee shall limit the flow rate of the circulation water to a maximum of 6,600 gallons per minute with a maximum TDS of 8,144 ppm. |

D. Permit Shield

Table V-D-1: 40 CFR 60 Subparts Da and GG Streamlining Permit Shielded Requirements

| EU | Regulation (40 CFR) | Regulatory Standard | Permit Limit | Value Comparison (in Units of the Permit Limit) | | | Averaging Period Comparison | | | Streamlining Statement for Shielding Purposes |
|--------------------|---------------------|--|---|---|--------------------|--|-----------------------------|-------------------------------|--|--|
| | | | | Standard Value | Permit Limit Value | Is Permit Limit Equal or More Stringent? | Standard Averaging Period | Permit Limit Averaging Period | Is Permit Limit Equal or More Stringent? | |
| A01/A02 A03/A04 | 60.332 (GG) | 75 ppmvd NO _x @ 15% O ₂ ⁽¹⁾ | 2.5 ppmvd NO _x @ 15% O ₂ | 75 ⁽¹⁾ | 2.5 | Yes | 4 hour | 3 hour | Yes | The permit limits are more stringent than the standard based upon both concentration and averaging time. Compliance with the permit demonstrates compliance with the |
| A01/A02 A03/A04 | 60.333 (GG) | .15% by volume SO ₂ @ 15% O ₂ | 1.5 lbs/hr SO _x @ 15% O ₂ (natural gas) | 428 ² | 1.5 | Yes | 4 hour | 1 hour | Yes | |
| A01/A02 A03/A04 | 60.333 (GG) | 0.8% Sulfur by weight (280 gr/100 scf) | 0.75 gr/100 scf | 280 | 0.75 | Yes | 4 hour | rolling 12-month | Yes | |
| A01/A02 A03/A04 | 60.42 (Da) | 20% Opacity | 20% Opacity | 20 | 20 | Yes | 6 minute block | 6 minute rolling | Yes | |

| EU | Regulation (40 CFR) | Regulatory Standard | Permit Limit | Value Comparison (in Units of the Permit Limit) | | | Averaging Period Comparison | | | Streamlining Statement for Shielding Purposes |
|--------------------|---------------------|--------------------------------|--|---|--------------------|--|-----------------------------|-------------------------------|--|---|
| | | | | Standard Value | Permit Limit Value | Is Permit Limit Equal or More Stringent? | Standard Averaging Period | Permit Limit Averaging Period | Is Permit Limit Equal or More Stringent? | |
| A01/A02 A03/A04 | 60.43 (Da) | 0.20 lb SO ₂ /MMBtu | 1.5 lb/hr SO ₂ | 106 ² | 1.5 | Yes | 30-day rolling | 1 hour | Yes | standard. |
| A01/A02 A03/A04 | 60.44 (Da) | 0.20 lb NO _x /MMBtu | 2.5 ppmvd NO _x @ 15% O ₂ | 54 | 2.5 | Yes | 4 hour | 3 hour | Yes | |
| A01/A02 A03/A04 | 60.44 (Da) | 1.6 lb NO _x /MW-hr | 23 lb/hr NO _x | 248 ³ | 23 | Yes | 30-day rolling | 1 hour | Yes | |

¹ The 40 CFR 60.332 NO_x standard is the following formula: $STD = 0.0075 * (14.4)/Y + F$; the calculated value (75 ppmvd) is the minimum possible value of the standard for any emission unit.

Where:

STD = allowable ISO corrected NO_x emission concentration (percent by volume at 15 percent oxygen and on a dry basis);

Y = manufacturer's rated heat at manufacturer's rated load or actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour (for the purposes of obtaining the minimum possible value of the standard, Y = 14.4; and

F = NO_x emission allowance for fuel-bound nitrogen (N = the nitrogen content of the fuel). For the purposes of obtaining the minimum possible value of the standard, F = 0.

| Fuel-bound nitrogen (percent by weight) | F (NO _x percent by volume) |
|---|---------------------------------------|
| N ≤ .015 | 0 |
| 0.015 < N ≤ 0.1 | 0.04 (N) |
| 0.1 < N ≤ 0.25 | 0.004+0.0067(N-0.1) |
| N > 0.25 | 0.005 |

² Heat input to calculate SO₂ standard value (in units of the permit) is the permit limit of 1,980 MMBtu/hr.

³ Energy output of the steam turbine used to calculate standard value (in units of permit limit) is 155 MW.

VI. EMISSION REDUCTION CREDITS (OFFSETS)

The source is subject to offset requirements in accordance with AQR Section 12.7. All offset requirements have been met.

VII. ADMINISTRATIVE REQUIREMENTS

AQR Section 12.5 requires that Air Quality identify the original authority for each term or condition in the Part 70 OP. Such reference of origin or citation is denoted by [italic text in brackets] after each Part 70 OP condition.

Air Quality proposes to issue the Part 70 OP conditions on the following basis:

Legal:

On December 5, 2001 in Federal Register Volume 66, Number 234 Federal Register 30097 the EPA fully approved the Title V Operating Permit Program submitted for the purpose of complying with the Title V requirements of the 1990 CAAA and implementing 40 CFR Part 70.

Factual:

NPC-Silverhawk Station has supplied all the necessary information for Air Quality to draft Part 70 OP conditions encompassing all applicable requirements and corresponding compliance.

Conclusion:

Air Quality has determined that NPC-Silverhawk Station will continue to determine compliance through the use of CEMS, RATA testing, quarterly reporting, daily record keeping, coupled with annual certifications of compliance. Air Quality proceeds with the decision that a Part 70 OP should be issued as drafted to NPC-Silverhawk Station for a period not to exceed five years.

VIII. MODELING

Silverhawk Generating Station is a major source in Hydrographic Area 216 (Garnet Valley). Permitted emission units include two turbines, one fire pump, one generator and one cooling tower. Since minor source baseline dates for PM₁₀ (December 31, 1980), NO₂ (January 24, 1991) and SO₂ (December 31, 1980) have been triggered, PSD increment analysis is required.

Air Quality modeled the source using AERMOD to track the increment consumption. Stack data submitted by the applicant were supplemented with information available for similar emission units. Five years (1999 to 2003) of meteorological data from the McCarran Station and Desert Rock Station were used in the model. USGS NED terrain data was used to calculate elevations. Table VIII-1 presents the results of the modeling.

Table VIII-1: PSD Increment Consumption

| Pollutant | Averaging Period | PSD Increment Consumption by the Source (µg/m ³) | Location of Maximum Impact | |
|------------------|------------------|--|----------------------------|-----------|
| | | | UTM X (m) | UTM Y (m) |
| SO ₂ | 3-hour | 27.75 ¹ | 683100 | 4031600 |
| SO ₂ | 24-hour | 7.89 ¹ | 683061 | 4031511 |
| SO ₂ | Annual | 1.71 | 683061 | 4031511 |
| NO _x | Annual | 2.15 | 683069 | 4031559 |
| PM ₁₀ | 24-hour | 9.29 ¹ | 683061 | 4031511 |
| PM ₁₀ | Annual | 2.30 | 683061 | 4031511 |

¹Second High Concentration

Table VIII-1 shows the location of the maximum impact and the potential PSD increment consumed by the source at that location. The impacts are below the PSD increment limits.

IX. ATTACHMENTS

Table IX-1: PTE for Turbines with Limitations

No changes from previous permit.

Table IX-2: PTE for Fire Pump

No changes from previous permit.

Table IX-3: PTE for Diesel Engine

No changes from previous permit.

Table IX-4: PTE for Greenhouse Gas for Combustion Turbines and Emergency Generator

Total GHG presented in Table IX-3 is the total tonnage of all compounds identified as GHG. It does not represent CO_{2e}.

Calculations for Table IX-4

| NV Energy - Silverhawk Greenhouse Gas | | | | | | | | | | |
|--|-------------|-----------------|-----------------|------------------|-------------------------------|------------------|-----------------|----------------------|------------------------|----------------------------------|
| Natural Gas Combustion | | | | | | | | | | |
| EU | Description | Rating | Operation | HHV | Fuel Usage | Pollutant | EF | GHG Emissions | | |
| | | <i>MMBtu/hr</i> | <i>hrs/year</i> | <i>MMBtu/scf</i> | <i>scf/year¹</i> | | <i>kg/MMBtu</i> | <i>GHG tons/year</i> | <i>GWP²</i> | <i>CO_{2e} tons/year</i> |
| A01 | Turbine | 1980 | 8,760 | 1.026E-03 | 1.691E+10 | CO ₂ | 53.06 | 920,315 | 1 | 920,315 |
| | | | | | | CH ₄ | 1.0E-03 | 17.34 | 25 | 434 |
| | | | | | | N ₂ O | 1.0E-04 | 1.73 | 298 | 517 |
| A02 | Duct-Burner | 530 | 2,000 | 1.026E-03 | 1.033E+09 | CO ₂ | 53.06 | 56,244 | 1 | 56,244 |
| | | | | | | CH ₄ | 1.0E-03 | 1.06 | 25 | 27 |
| | | | | | | N ₂ O | 1.0E-04 | 0.11 | 298 | 32 |
| A03 | Turbine | 1980 | 8,760 | 1.026E-03 | 1.691E+10 | CO ₂ | 53.06 | 920,315 | 1 | 920,315 |
| | | | | | | CH ₄ | 1.0E-03 | 17.34 | 25 | 434 |
| | | | | | | N ₂ O | 1.0E-04 | 1.73 | 298 | 517 |
| A04 | Duct-Burner | 530 | 2,000 | 1.026E-03 | 1.033E+09 | CO ₂ | 53.06 | 56,244 | 1 | 56,244 |
| | | | | | | CH ₄ | 1.0E-03 | 1.06 | 25 | 27 |
| | | | | | | N ₂ O | 1.0E-04 | 0.11 | 298 | 32 |
| ¹ Fuel usage calculation: (hours/year * MMBtu/hr) / 1.026E-03 MMBtu/scf = scf/year. | | | | | | | | | | |
| ² Global Warming Potential (GWP) is used to compare the abilities of different greenhouse gases to trap heat in the atmosphere. GWP is based on the heat-absorbing ability of each gas relative to that of carbon dioxide (CO ₂). Once the individual GHG emissions are calculated, they have to be multiplied by the GWP to obtain the CO _{2e} value. | | | | | | | | | | |
| Emergency Engines | | | | | | | | | | |
| EU | Description | Rating | Operation | HHV | Fuel Usage | Pollutant | EF | GHG Emissions | | |
| | | <i>hp</i> | <i>hrs/year</i> | <i>MMBtu/gal</i> | <i>gal/year^{1,2}</i> | | <i>kg/MMBtu</i> | <i>GHG tons/year</i> | <i>GWP³</i> | <i>CO_{2e} tons/year</i> |
| A05 | Engine | 250 | 500 | 0.138 | 6,250 | CO ₂ | 73.96 | 70.17 | 1 | 70.17 |
| | | | | | | CH ₄ | 3.0E-03 | 2.85E-03 | 25 | 0.07 |
| | | | | | | N ₂ O | 6.0E-04 | 5.69E-04 | 298 | 0.17 |
| A06 | Engine | 100 | 500 | 0.091 | 5,476 | CO ₂ | 62.87 | 34.46 | 1 | 34.46 |
| | | | | | | CH ₄ | 3.0E-03 | 1.64E-03 | 25 | 0.04 |
| | | | | | | N ₂ O | 6.0E-04 | 3.29E-04 | 298 | 0.10 |
| ¹ Diesel usage calculation: (0.35 lb/hp-hr x hp x 500 hr/year) / 7 lb/gal = gal/year. | | | | | | | | | | |
| ² LPG usage calculation: (0.46 lb/hp-hr x hp x 500 hr/year) / 4.2 lb/gal = gal/year. | | | | | | | | | | |
| ³ Global Warming Potential (GWP) is used to compare the abilities of different greenhouse gases to trap heat in the atmosphere. GWP is based on the heat-absorbing ability of each gas relative to that of carbon dioxide (CO ₂). Once the individual GHG emissions are calculated, they have to be multiplied by the GWP to obtain the CO _{2e} value. | | | | | | | | | | |
| NV Energy - Silverhawk Greenhouse Gas PTE | | | | | | | | | | |
| Pollutant | | | CO ₂ | CH ₄ | N ₂ O | CO _{2e} | | | | |
| Potential to Emit (tpy) | | | 1,953,222 | 36.81 | 3.68 | 1,955,240 | | | | |

**Table IX-5: PTE for HAPs
Calculations for Table IX-5**

Turbines

| Hazardous Air Pollutants Emission Factors and Emissions for Stationary Gas Turbines | | | | | | | |
|---|-----------|-------------------------|-----------|---------------------------|-----------|---------------|-------------------|
| Emission Unit | Emission | Heat Input | Hours of | Emission Factor | | HAP Emissions | Total Turbine HAP |
| Description | Unit | (mmBtu/yr) ¹ | Operation | HAP Species | lbs/MMBtu | Tons | Tons |
| Stationary Gas Turbines | A01 & A03 | 15,840,000 | 8760 | 1,3 Butadiene | 4.30E-07 | 3.41E-03 | 6.81E-03 |
| | | | | Acetaldehyde | 4.00E-05 | 3.17E-01 | 6.34E-01 |
| | | | | Acrolein | 6.40E-06 | 5.07E-02 | 1.01E-01 |
| | | | | Benzene | 1.30E-06 | 1.03E-02 | 2.06E-02 |
| | | | | Ethyl Benzene | 3.20E-05 | 2.53E-01 | 5.07E-01 |
| | | | | Formaldehyde | 1.53E-05 | 1.21E-01 | 2.42E-01 |
| | | | | Naphthalene | 1.30E-06 | 1.03E-02 | 2.06E-02 |
| | | | | Propylene Oxide | 2.90E-05 | 2.30E-01 | 4.59E-01 |
| | | | | Toluene | 2.10E-05 | 1.66E-01 | 3.33E-01 |
| | | | | Xylenes (all) | 6.40E-05 | 5.07E-01 | 1.01E+00 |
| | | | | PAH | 2.20E-06 | 1.74E-02 | 3.48E-02 |
| | | | | Total Turbine HAPs | | 1.69 | 3.37 |

¹ Based on HHV equivalent of heat inputs

² Most emission factors from AP-42, Volume 1, Chapter 3, Table 3.1-3 Supplement F, except benzene, formaldehyde, 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.

Hazardous Air Pollutants Emission Factors and Emissions for Duct Burners

| Emission Unit | Emission | Heat Input | Hours of | Emission Factor | | HAP Emissions | Total Duct Burner HAP |
|------------------|-----------|-------------------------|-----------|-------------------------------|------------------------|-------------------|-----------------------|
| Description | Unit | (mmBtu/yr) ¹ | Operation | HAP Species | lbs/MMscf ² | Tons ⁴ | Tons |
| Duct Burners | A02 & A04 | 1,060,000 | 2000 | Benzene | 2.10E-03 | 1.09E-03 | 2.18E-03 |
| | | | | Dichlorobenzene | 1.20E-03 | 6.24E-04 | 1.25E-03 |
| | | | | Formaldehyde | 7.50E-02 | 3.90E-02 | 7.79E-02 |
| | | | | n-Hexane | 1.80E+00 | 9.35E-01 | 1.87E+00 |
| | | | | Naphthalene | 6.10E-04 | 3.17E-04 | 6.34E-04 |
| | | | | Toluene | 3.40E-03 | 1.77E-03 | 3.53E-03 |
| | | | | Arsenic | 2.00E-04 | 1.04E-04 | 2.08E-04 |
| | | | | Beryllium | 1.20E-05 | 6.24E-06 | 1.25E-05 |
| | | | | Cadmium | 1.10E-03 | 5.72E-04 | 1.14E-03 |
| | | | | Chromium | 1.40E-03 | 7.27E-04 | 1.45E-03 |
| | | | | Cobalt | 8.40E-05 | 4.36E-05 | 8.73E-05 |
| | | | | Manganese | 3.80E-04 | 1.97E-04 | 3.95E-04 |
| | | | | Mercury | 2.60E-04 | 1.35E-04 | 2.70E-04 |
| | | | | Nickel | 2.10E-03 | 1.09E-03 | 2.18E-03 |
| | | | | Selenium | 2.40E-05 | 1.25E-05 | 2.49E-05 |
| POM ³ | 0.00E+00 | 0.00E+00 | 0.00E+00 | | | | |
| | | | | Total Duct Burner HAPs | | 0.98 | 1.96 |

¹ Based on HHV equivalent of heat inputs

² Emission factors obtained from AP-42, Chapter 1.4, Tables 1.4-3

³ Total Polycyclic Organic Matter (POM) from AP-42 Table 1.4-3, excluding naphthalene.

⁴ Convert from scf to btu by multiplying by 1020 btu/scf (HHV of Natural Gas).

HAPs Emissions

| HAP Pollutant | Maximum Potential Emissions (tpy) |
|--|-----------------------------------|
| Turbines and Duct Burners (EUs A01 - A04)^{1,2} | |
| 1,3 Butadiene | 6.81E-03 |
| Acetaldehyde | 6.34E-01 |
| Acrolein | 1.01E-01 |
| Benzene | 2.28E-02 |
| Ethylbenzene | 5.07E-01 |
| Formaldehyde | 3.20E-01 |
| Naphthalene | 2.12E-02 |
| Propylene Oxide | 4.59E-01 |
| Toluene | 3.36E-01 |
| Xylene | 1.01E+00 |
| PAHs | 3.48E-02 |
| Dichlorobenzene | 1.25E-03 |
| n-Hexane | 1.87E+00 |
| Arsenic | 2.08E-04 |
| Beryllium | 1.25E-05 |
| Cadmium | 1.14E-03 |
| Chromium | 1.45E-03 |
| Cobalt | 8.73E-05 |
| Manganese | 3.95E-04 |
| Mercury | 2.70E-04 |
| Nickel | 2.18E-03 |
| Selenium | 2.49E-05 |
| Diesel Fire Pump Engine (EU A05)³ | |
| 1,3 Butadiene | 1.71E-05 |
| Acetaldehyde | 1.02E-02 |
| Acrolein | 0.00 |
| Benzene | 4.58E-04 |
| Formaldehyde | 5.24E-04 |
| Toluene | 1.75E-03 |
| Xylene | 1.09E-03 |
| PAHs | 7.55E-05 |
| LPG Emergency Engine (EU A06)⁴ | |
| 1,1,2,2-Tetrachloroethane | 7.50E-06 |
| 1,1,2-Trichloroethane | 5.96E-06 |
| 1,3 Butadiene | 5.01E-05 |
| 1,3-Dichloropropene | 4.95E-05 |
| 2-Methylnaphthalene | 6.23E-06 |
| 2,2,4-Trimethylpentane | 4.69E-05 |
| Acenaphthene | 2.34E-07 |
| Acenaphthylene | 1.04E-06 |

| | |
|----------------------|----------|
| Acetaldehyde | 1.57E-03 |
| Acrolein | 9.64E-04 |
| Benzo(b)fluoranthene | 3.11E-08 |
| Benzo(e)pyrene | 7.78E-08 |
| Benzo(g,h,i)perylene | 7.76E-08 |
| Biphenyl | 3.98E-05 |
| Carbon Tetrachloride | 6.88E-06 |
| Chlorobenzene | 5.70E-06 |
| Chloroform | 5.34E-06 |
| Chrysene | 1.30E-07 |
| Ethyl Benzene | 7.44E-06 |
| Ethylene Dibromide | 8.31E-06 |
| Fluoranthene | 2.08E-07 |
| Fluorene | 1.06E-06 |
| Formaldehyde | 9.90E-03 |
| Methanol | 4.69E-04 |
| Methylene Chloride | 3.75E-06 |
| n-Hexane | 2.08E-04 |
| Naphthalene | 1.40E-05 |
| Phenanthrene | 1.95E-06 |
| Phenol | 4.50E-06 |
| Pyrene | 2.55E-07 |
| Styrene | 4.43E-06 |
| Tetrachloroethane | 4.01E-07 |
| Toluene | 7.65E-05 |
| Vinyl Chloride | 2.79E-06 |
| Xylenes (all) | 3.45E-05 |
| PAH | 5.04E-06 |
| Total | 5.37 |

¹ Emission factors for turbines from AP-42, Table 3.1-3, except benzene, formaldehyde, 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.

² Emission factors for duct burners from AP-42, Tables 1.4-3 and 1.4-4

³ Emission factors from AP-42, Table 3.3-2

⁴ Emission factors from AP-42, Table 3.2-2

Clark County Department of Air Quality– Air Quality Regulations and SIP status

| Applicable Section – Title | Applicable Subsection - Title | SIP | Affected Emission Unit |
|---|---|------------|-------------------------------|
| 0. Definitions | applicable definitions | yes | entire source |
| 1. Definitions | “Affected Facility”, “Dust”, “Existing Gasoline Station”, “Fumes”, “Mist”, “New Gasoline Stations”, “New Source”, “Single Source”, “Standard Conditions”, “Uncombined Water”. | Yes | entire source |
| 4. Control Officer | all subsections 4.7.3 and 4.12.1 through 4.12.3 in SIP | partial | entire source |
| 5. Interference with Control Officer | all subsections | yes | entire source |
| 6. Injunctive Relief | all subsections | yes | entire source |
| 7. Hearing Board and Hearing Officer | all subsections | no | entire source |
| 8. Persons Liable for Penalties - Punishment: Defense | all subsections | yes | entire source |
| 9. Civil Penalties | all subsections | no | entire source |
| 10. Compliance Schedule | when applicable; applicable subsections | yes | entire source |
| 12.0. Applicability, General Requirements and Transition Procedures | all subsections | yes | entire source |
| 12.2 Prevention of Significant Deterioration in Attainment Areas | all subsections | yes | entire source |
| 12.3 Permit Requirements for Major Sources in Nonattainment Areas | all subsections | no | entire source |
| 12.4 Authority to Construct Permit Requirements for Part 70 Sources | all subsections | yes | entire source |
| 12.5 Part 70 Operating Permit Requirements | all subsections | yes | entire source |
| 12.6 Confidentiality | all subsections | yes | entire source |
| 12.7 Emission Reduction Credits | all subsections | yes | entire source |
| 12.9 Annual Emission Inventory Requirements | all subsections | yes | entire source |
| 12.10 Continuous Monitoring Requirements for Stationary Sources | all subsections | yes | entire source |

| | | | |
|---|---|---------|----------------|
| 13. Emission Standards for Hazardous Pollutants | Delegated Program AQR Section 13.2(b)(82): Subpart ZZZZ National Emission Standards for Hazardous Air Pollutant for Stationary Reciprocating Internal Combustion Engines | No | Diesel Engines |
| 14. New Source Performance Standards | Delegated Program AQR Section 14.1(b)(3): Subpart Da Standards of Performance for Calciners and Dryers in Mineral Industries | No | Burners |
| | AQR Section 14.1(b)(40): Subpart GG Standards of Performance for Stationary Reciprocating Internal Combustion Engines | No | Turbines |
| 18. Permit and Technical Service Fees | all subsections 18.1 through 18.5.2 and 18.6 through 18.12 in SIP | partial | entire source |
| 24. Sampling and Testing - Records and Reports | § 24.1 Requirements for installation and maintenance of sampling and testing facilities § 24.2 Requirements for emissions record keeping § 24.3 Requirements for the record format § 24.4 Requirements for the retention of records by the emission sources (Note: Repealed from SIP on Oct 17, 2014) | No | entire source |
| 25.1 Upset/Breakdown, Malfunctions (1981) | § 25.1 Requirements for the excess emissions caused by upset/breakdown and malfunctions | No | entire source |
| 25.2 Upset/Breakdown, Malfunctions (1981) | § 25.2 Reporting and Consultation | yes | entire source |
| 26. Emission of Visible Air Contaminants (1981) | § 26.1 Limit on opacity (\leq an average of 20 percent for a period of more than 6 consecutive minutes) | yes | entire source |
| 27. Particulate Matter from Process Weight Rate | all subsections | no | entire source |
| 28. Fuel Burning Equipment | Emission Limitations for PM | yes | entire source |
| 29. Sulfur Contents of Fuel Oil | Repealed by County | yes | entire source |
| 30. Incinerators | Repealed by County | yes | entire source |
| 40. Prohibitions of Nuisance Conditions | § 40.1 Prohibitions | no | entire source |
| 41. Fugitive Dust | § 41.1 Prohibitions | yes | entire source |
| 42. Open Burning | § 42.2 | no | entire source |
| 43. Odors In the Ambient Air | § 43.1 Prohibitions coded as Section 29 | no | entire source |
| 52. Gasoline Dispensing Facilities | Repealed by County | yes | entire source |

| | | | |
|-----------------------------|--|-----|---------------|
| 60. Evaporation and Leakage | all subsections Repealed by County and from SIP in 2011 | no | entire source |
| 70. Emergency Procedures | all subsections | yes | entire source |
| 80. Circumvention | all subsections | yes | entire source |