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# **PART 70**

## **TECHNICAL SUPPORT DOCUMENT**

### **(STATEMENT of BASIS)**

APPLICATION FOR:  
**Part 70 OP Significant Revision**

SUBMITTED BY:  
NV Energy

FOR:  
Silverhawk Generating Station

**Source ID: 01584**

LOCATION:  
15111 Apex Power Parkway  
Las Vegas, Nevada 89165

SIC code 4911, "Electric Services"  
NAICS code 221112, "Fossil Fuel Electric Power Generation"

**June 12, 2025**

## EXECUTIVE SUMMARY

NV Energy's Silverhawk Generating Station (SGS) is an electrical power generating station located at 15111 Apex Power Parkway in Las Vegas, Nevada. The legal description of the source location is as follows: portions of Township 18S, Range 63E, Section 5 in Apex Valley, County of Clark, State of Nevada. The source is situated in Hydrographic Area 216 (Garnett Valley). Garnett Valley is currently designated attainment for all regulated pollutants.

SGS is a major stationary source for PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>x</sub>, CO, and VOC and a minor source for SO<sub>2</sub> and HAPs. The generating station operates two natural gas-fired combustion turbine generators, two heat recovery steam generators (HRSGs) with natural gas-fired duct burners associated with each turbine, two natural gas-fired peaker turbines, one 3-cell, 6,600-gpm cooling tower, one 100-hp LPG-fired emergency generator, one 2,206-hp diesel emergency generator, and one 205 hp diesel-fired fire pump. As a fossil fuel-fired steam electric plant of more than 250 MMBtu/hr heat input, the source is a categorical source, as defined by Section 12.2.2(j)(1) of the Clark County Air Quality Regulations (AQRs). SGS is also a source of greenhouse gas (GHG) pollutants.

The turbines and HRSGs are subject to the requirements of 40 CFR Part 60, Subparts A, KKKK, and TTTT. The LPG-fired emergency generator is subject to 40 CFR Part 63, Subpart ZZZZ; the 2019 diesel emergency generator is subject to 40 CFR Part 60, Subpart IIII (by complying with 40 CFR Part 60, Subpart IIII, the emergency generator meets the requirements of 40 CFR Part 63, Subpart ZZZZ); and the facility is subject to 40 CFR Parts 72 and 75.

The following table summarizes SGS's potential-to-emit (PTE) for each regulated air pollutant for all emission units identified by this Part 70 OP and the peaker turbine units currently permitted by an Authority to Construct (ATC) permit.

**Table 1: Emission Units PTE Summary (TPY)**

Pollutant	PM <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>x</sub>	CO	SO <sub>2</sub>	VOCs	HAPs	GHG <sup>1</sup>
Peaker Turbines (ATC issued 08/16/2023)	9.49	9.49	23.31	75.16	3.21	15.63	0.62	235,878.58
New Peaker Turbine PTE	9.49	9.49	31.29	82.91	4.69	16.73	0.90	345,303.21
Updated Source Part 70 OP PTE	158.36	158.36	348.54	645.00	14.92	102.15	6.28	2,301,164.07
Major Source Thresholds (Title V)	100	100	100	100	100	100	10/25 <sup>2</sup>	—
Major Stationary Source Thresholds (PSD) (Categorical)	100	100	100	100	100	100	10/25 <sup>2</sup>	—

<sup>1</sup>Metric tons per year, CO<sub>2</sub>e.

<sup>2</sup>Ten tons for any individual hazardous air pollutant, or 25 tons for the combination of all hazardous air pollutants.

The Department of Environment and Sustainability (DES), Division of Air Quality (DAQ) will continue to require sources to estimate their GHG PTE in terms of each individual pollutant (CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, SF<sub>6</sub>, etc.) during subsequent permitting actions and the TSD includes these PTEs for informational purposes.

DAQ has received delegated authority from the U.S. Environmental Protection Agency to implement the requirements of the Part 70 OP. Based on the information submitted by the applicant and a technical review performed by DAQ staff, the revised Part 70 Operating Permit to NV Energy (NVE) is proposed.

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## ACRONYMS AND ABBREVIATIONS

(These terms may be seen in the Technical Support Document)

AQR	Clark County Air Quality Regulation
ATC	Authority to Construct
CFR	Code of Federal Regulations
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CD	control device
CTUP	combustion turbine upgrade project
DAQ	Division of Air Quality
DES	Department of Environment and Sustainability
DOM	date of manufacture
EPA	U.S. Environmental Protection Agency
EU	emission unit
g/gr	gram
HAP	hazardous air pollutant
hp	horsepower
kW	kilowatts
MSP	Minor Source Permit
NAICS	North American Industry Classification System
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO <sub>x</sub>	nitrogen oxides
NRS	Nevada Revised Statutes
NSPS	New Source Performance Standard
NSR	New Source Review
OP	Operating Permit
PM <sub>2.5</sub>	particulate matter less than 2.5 microns in diameter
PM <sub>10</sub>	particulate matter less than 10 microns in diameter
PSD	Prevention of Significant Deterioration
PTE	potential to emit
ROI	radius of impact
SIC	Standard Industrial Classification
SIL	Significant Impact Level
SO <sub>2</sub>	sulfur dioxides
U.S.C.	United States Code
VMT	vehicle miles traveled
VOC	volatile organic compound

## I. SOURCE INFORMATION

**Responsible Official:** Jason Hammons

**Phone Number:** (702) 402-8225

## II. SOURCE DESCRIPTION

SGS currently operates two natural gas-fired combustion turbine generators, two heat recovery steam generators (HRSGs) with natural gas-fired duct burners associated with each turbine, one 3-cell, 6,600-gpm cooling tower, one 100-hp LPG-fired emergency generator, one 2,206-hp diesel emergency generator, and one 205 hp diesel-fired fire pump.

SGS is a Title V major source for PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>x</sub>, CO, and VOCs and a minor source for SO<sub>2</sub> and HAPs, including GHGs.

The turbines and HRSGs are subject to the requirements of 40 CFR Part 60, Subparts A and KKKK. The LPG-fired emergency generator is subject to 40 CFR Part 63, Subpart ZZZZ; the fire pump and the 2019 diesel emergency generator is subject to 40 CFR Part 60, Subpart IIII (by complying with 40 CFR Part 60, Subpart IIII, the emergency generator meets the requirements of 40 CFR Part 63, Subpart ZZZZ); and the facility is subject to 40 CFR Parts 72 and 75.

## III. PERMITTING HISTORY

This is a significant revision to the Part 70 OP for SGS. The most recent Part 70 OP renewal issued on March 22, 2022, is the current operating permit issued for this source.

**Table III-1: SGS Permitting History**

Date	Permitting Action	Description
02/24/2024	ATC Permit	Addition of a fire pump (EU: A11) and the removal of a fire pump (EU: A05).
08/16/2023	ATC Permit	Addition of two 224 MW peaker turbines.
03/22/2022	Part 70 OP Renewal	Update to permit conditions. No changes to emission units.
10/20/2021	ATC Permit	Combustion Turbine Upgrade Project (CTUP) to increase hourly heat input rates for two existing turbines (EUs: A01 and A03).
01/23/2020	Part 70 OP Revision	Add a new 2,206 hp diesel emergency generator (EU: A08).
07/20/2016	Part 70 OP Renewal	Update to permit conditions. No changes to emission units.

This action is to remove permit conditions that no longer apply now that the CTUP has been completed, add the replacement fire pump (EU: A11), and add the peaker turbine ATC project (EUs: A09 and A10) to the Part 70 OP.

## IV. PERMITTING ACTION

This permitting action involves removing the permit conditions and emission limitations that no longer apply now that the CTUP has been completed. The previous Part 70 OP had conditions that stated if they applied prior to the CTUP or after the CTUP. This request was in an application submitted on May 10, 2023.

See the attachments to this document for a list of the removed conditions.

The CTUP increased the maximum hourly heat input of affected turbines (EUs: A01/A02 and A03/A04) across a range of temperatures and operating conditions. The source operates the units within the existing permitted hourly heat input limit and the existing permitted emission limits. Therefore, no changes were made to the permitted heat input limit or emission limits, neither concentrations nor pounds per hour.

Due to the CTUP, the turbines became subject to 40 CFR 60, Subpart KKKK, and not applicable to 40 CFR Part 60, Subpart GG.

Per 40 CFR Part 60, Subpart KKKK, a modified or reconstructed turbine firing natural gas with a heat input rate at peak load greater than 850 MMBtu/hr shall meet the NO<sub>x</sub> emission standard of 15 ppm at 15% O<sub>2</sub> or 54 ng/J (0.43 lb/MWh) of useful output. Subpart KKKK also requires turbines operating at less than 75% peak load to meet the alternate NO<sub>x</sub> emission limit of 96 ppm at 15% O<sub>2</sub> or 590 ng/J of useful output (4.7 lb/MWh) if they are combustion turbines firing natural gas with an output greater than 30 MW. The Subpart GG NO<sub>x</sub> concentration standard of 103 ppmvd is removed from the Part 70 OP.

The permittee requested to remove the permit shield as it is no longer applicable due to the incorporation of the 40 CFR Part 60, Subpart KKKK, NO<sub>x</sub> standard in the Part 70 OP's Table 3-4.

The permittee submitted an application on December 11, 2023, for a significant revision to the Part 70 OP to add the new fire pump (EU: A11), authorized in the ATC issued on February 14, 2024.

On January 23, 2025, the permittee submitted a supplemental application to incorporate the new peaker units (EUs: A09 and A10), permitted in the ATC issued on August 16, 2023. Condition 4.2.4(d) in the ATC allows NV Energy to establish lb/MMBtu emission factors based on the results of a performance test. This test was conducted November 12, 2024. This updated emission factor allows the peaker turbines to operate longer without exceeding the AQR 12.2.2(uu) significant level for PM<sub>2.5</sub>, which is 10 tpy, or affecting the original controls analysis.

After reviewing the information provided by the source, DAQ concludes that the increase in operating hours and the combined annual heat input does not trigger a new control analysis for the new peaker units (EUs: A09 and A10).

The emission units added to the Part 70 OP are listed in the following table.



**Table VI-2: New Emission Units**

EU	Description	Rating	Manufacturer	Model No.	Serial No.
A09	Natural Gas-Fired Stationary Combustion Turbine	224 MW	GE	7FA.05	299706
A10	Natural Gas-Fired Stationary Combustion Turbine	224 MW	GE	7FA.05	299707
A11	Fire Pump			3512C	LYH00428
	Diesel Engine; DOM: 2023		Pentair	Aurora Horizontal Splitcare 6-481-18B	23-2646029
		205 hp	Cummins	CFP7E-F30	36796830

## V. CALCULATION OF EMISSIONS

The CTUP did not affect the annual PTE of the source. In the ATC for the CTUP, an analysis was conducted that showed that the projected emissions increase, based on the projected actual emissions, baseline actual emissions, and the excludable emissions, was below the significant emission rates defined in AQR 12.2.2(uu) for all regulated NSR pollutants.

The replacement fire pump (EU: A11) has less or equal potential emissions than the removed unit (EU: A05) for all criteria pollutants.

The new peakers (EUs: A09 and A10) increased the PTE for PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>x</sub>, and CO emissions above the AQR 12.4.2.1(d) significance thresholds when originally permitted.

NV Energy is proposing an emission factor of 7.72 lb/hr for PM<sub>10</sub> and PM<sub>2.5</sub> based on the performance test. This is the average of the lb/hr emission rates from both peaker units. This results in an emission factor of 3.43E<sup>-3</sup> lb/MMBtu, based on the higher heat value at 67°F.

The PTE and applicability emissions are listed in the attachments.

### Emissions Increase

The new fire pump (EU: A11) has an equal or lower PTE for all criteria pollutants than the removed unit (EU: A05). The peaker units' (EUs: A09 and A10) emission increase analysis was conducted in the ATC. The peakers were subject to a RACT analysis for PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>x</sub>, and CO. With the lower PM emission factor and increase in hours of operation, the emissions increase does not trigger a new controls analysis.

The increase in PTE for the peakers units is shown below.

**Table V-1: Peaker Units (EUs: A09 and A10) PTE (tons per year)**

Pollutant	Condition	PM <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>x</sub>	CO	SO <sub>2</sub>	VOCs	HAPs
Peaker Units ATC PTE	1,339.2 hr/yr	9.49	9.49	23.31	75.16	3.21	15.63	0.62
Peaker Units Part 70 OP PTE	2099.1 hr/yr	9.49	9.49	31.29	82.91	4.69	16.73	0.90
Emissions Increase		0.00	0.00	7.98	7.75	1.48	1.10	0.28
AQR 12.4 minor NSR Thresholds		7.5	5	20	50	20	20	-
AQR 12.2 Significant Emission Rates		15	10	40	100	40	40	-

## VI. CONTROL TECHNOLOGY

A controls analysis is not required for this permitting action. The CTUP did not affect the controls required for the affected emission units. A controls analysis was not required when the fire pump (EU: A11) was permitted in an ATC.

The peaker turbines (EUs: A09 and A10) are subject to the control techniques specified in 40 CFR Part 60, Subpart KKKK, including NO<sub>x</sub> control technologies and fuel sulfur restrictions. Subpart KKKK has a NO<sub>x</sub> emission limit of 15 ppm. The permittee has installed SCR which will limit NO<sub>x</sub> emissions to 2.5 ppm, which satisfies RACT and is in compliance with the NSPS limit.

The permittee reviewed the RACT/BACT/LAER Clearinghouse (RBLC) for recent CO determinations for similar-sized simple cycle natural gas-fired turbines. The lowest entry was for 5 ppm CO utilizing an oxidation catalyst. The permittee is using an oxidation catalyst resulting in a 4 ppm CO emissions concentration. This satisfies current RACT for CO.

The permittee found in the RBLC that recent determinations were for firing pipeline quality national gas and good combustion practices were available control techniques for PM<sub>10</sub> and PM<sub>2.5</sub> emissions. BACT limits were found to be 12 – 12.09 lb/hr for similar-sized turbines. The peakers have PM<sub>10</sub> and PM<sub>2.5</sub> emissions rates at 12.1 lb/hr. This satisfies current RACT for PM<sub>10</sub> and PM<sub>2.5</sub>.

After reviewing the information provided by the source, DAQ concludes that the increase in emissions for NO<sub>x</sub>, VOC, CO, SO<sub>2</sub>, and HAP, due to the increase in operating hours and the combined annual heat input, do not trigger a new control analysis for the new peaker units (EUs: A09 and A10). All original control analysis and conclusions are acceptable and valid.

## VII. OPERATIONAL LIMITS

No new operational limits were established in the ATC for the CTUP. The fire pump is subject to the standard operational limits of 100 hours per year for testing and maintenance for diesel emergency equipment.

The peaker turbines (EUs: A09 and A10) together are limited to a maximum heat input of 4,968,133.94 MMBtu per any consecutive 12-month period, 2099.1 hours per any consecutive 12-month period, and 250 SU/SD events per consecutive 12-month period. Startups are limited to 30 minutes each and shutdowns to 12 minutes each.

## VIII. REVIEW OF APPLICABLE REGULATIONS

### Local

Additional local requirements are not triggered by this permitting action.

### Federal Regulations

The affected turbines (EUs: A01/A02 and A03/A04) are subject to 40 CFR Part 60, Subpart KKKK, as the turbines have a heat input greater than 10 MMBtu/hr and modification will commence after the applicability date of February 18, 2005.

40 CFR Part 60, Subpart GG does not apply as the turbines are subject to 40 CFR Part 60, Subpart KKKK. The requirements of Subpart KKKK are already in the Part 70 OP.

The fire pump (EU: A11) is subject to the requirements of 40 CFR Part 60, Subpart IIII, and 40 CFR Part 63, Subpart ZZZZ. By meeting the requirements of Subpart IIII, the source will be in compliance with the requirements of Subpart ZZZZ.

The peaker turbines are subject to 40 CFR Part 60, Subpart KKKK, as the turbines have a heat input greater than 10 MMBtu/hr and construction commenced after the applicability date of February 18, 2005.

The requirements of Subpart KKKK are listed in the following table.

**Table VII-3: 40 CFR Part 60, Subpart KKKK, Requirements**

Citation	Summary of Requirements	Compliance Strategy
40 CFR 60.4320(a) 40 CFR 60.4350 (h)	Comply with the NO <sub>x</sub> emission limit of 15 parts per million (ppm) at 15 percent oxygen on a thirty (30) unit operating day rolling average basis for new turbines > 850 MMBtu/hr per Table 1 of NSPS Subpart KKKK. Comply with the NO <sub>x</sub> emission limit of 96 parts per million (ppm) at 15 percent oxygen on a thirty (30) unit operating day rolling average basis for turbines operating at less than 75% of peak load per Table 1 of NSPS Subpart KKKK.	The turbines will be equipped with an SCR limiting NO <sub>x</sub> emissions to 2.5 ppm. NV Energy will monitor emissions during periods of SU/SD, when the SCR is not operational, to ensure these limits are met.
40 CFR 60.4330(a) 40 CFR 60.4360 40 CFR 60.4365	Comply with either of the following SO <sub>2</sub> emission limits: (1) You must not cause to be discharged into the atmosphere from the subject stationary combustion turbine any gases which contain SO <sub>2</sub> in excess of 110 nanograms per Joule (ng/J) (0.90 pounds per megawatt-hour (lb/MWh)) gross output; (2) You must not burn in the subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO <sub>2</sub> /J (0.060 lb SO <sub>2</sub> /MMBtu) heat input. If your turbine simultaneously fires multiple fuels, each fuel must meet this requirement;	As shown in Appendix A the turbine will operate at a maximum SO <sub>2</sub> emission rate of 4 lb/hr corresponding to a heat input of 2365.1 MMBtu/hr HHV or 0.0017 lb SO <sub>2</sub> /MMBtu. Therefore, the turbines will comply with the emission limits in this part. The requirement to monitor fuel sulfur for SO <sub>2</sub> monitoring does not apply if potential sulfur emissions expressed as SO <sub>2</sub> are less than 0.060 lb/MMBtu. NV Energy proposes to use fuel tariff sheet or purchase contract information or representative fuel sampling performed per 40 CFR 75 Appendix D to show that fuel sulfur will comply with the applicable limit.

40 CFR 60.4333(a)	You must operate and maintain your stationary combustion turbine, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction.	NV Energy will operate and maintain the stationary combustion turbines, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices and will minimize emissions at all times including SU/SD.
40 CFR §60.4340(b)(l) 40 CFR 60.4345(a)	Option to use a NO <sub>x</sub> continuous emissions monitoring system (CEMS).	NV Energy will install and operate a NO <sub>x</sub> CEMS in accordance with the requirements of 40 CFR Part 75 Appendix A.
40 CFR 60.4405	Initial performance testing requirements if a NO <sub>x</sub> -diluent CEMS is installed.	NV Energy proposes to use NO <sub>x</sub> CEMS RATA as the initial NO <sub>x</sub> performance test.
40 CFR 60.4375	Reporting requirements for excess emissions and monitor downtime.	NV Energy will comply with the requirements to report excess emissions and monitor downtime in accordance with 40 CFR 60.7(c). Excess emissions will be reported for all periods of unit operations, including start-up, shutdown, and malfunction.

40 CFR Part 60, Subpart TTTT, is applicable to any steam generating unit, integrated gasification combined cycle facility (IGCC), or stationary combustion turbine that commences construction after January 8, 2014, with a base load rating greater than 250 MMBtu/hr of fossil fuels and serves a generator capable of selling greater than 25 MW of electricity. The proposed turbines are considered stationary combustion turbines and will be subject to the requirements of NSPS Subpart TTTT. Pursuant to 40 CFR 60.5520(d)(1) a stationary combustion turbine that is permitted to only burn fuel with a consistent chemical composition (i.e., natural gas) that results in an emission of 160 lb CO<sub>2</sub>/MMBtu or less are only required to maintain purchase records for the permitted fuels. The proposed turbines will only combust natural gas, therefore NV Energy will comply with the requirements of this subpart by maintaining purchase records of the permitted fuel.

As SGS is an area source of HAPs emissions, 40 CFR Part 63, Subpart YYYY, is not applicable.

## IX. MONITORING

The permittee requested to remove the RATA condition requiring RATA of the NO<sub>x</sub>, CO, and O<sub>2</sub> CEMS every four calendar quarters. The condition requiring annual RATA remains in the permit as this is more restrictive than once every four calendar quarters. Once “every four calendar quarters” allows up to 14 months between RATA. An annual frequency only allows up to 12 months.

The permittee is required to monitor the sulfur content of the diesel fuel used in the fire pump (EU: A11) and monitor the hours of operation of the unit. These are standard requirements for this type of emission unit.

The permittee shall monitor and record the natural gas fuel flow to peaker turbine (EU: A09 and A10), occurrence and duration of SU/SD, and the duration of testing/turning events for the turbines. The permittee shall monitor the fuel sulfur content by maintaining records of the fuel purchase contracts, tariff sheets, or transportation contracts.

As documented in the ATC for the peaker turbines, the units are not subject to the CAM requirements in 40 CFR 64.

## X. PERFORMANCE TESTING

The permittee was required to conduct initial performance testing after the CTUP. That testing was conducted on April 12 and 13, 2023, and submitted to DES on May 17, 2023, therefore the initial testing requirements have been removed from the Part 70 OP.

For the peaker turbines (EUs: A09 and A10), initial performance testing for NO<sub>x</sub> was required in accordance with 40 CFR Part 60, Subparts A and KKKK, and the Air Quality Source Testing Guidelines (9/19/2019).

The permittee elected to conduct testing for PM<sub>2.5</sub> and PM<sub>10</sub> emissions in order to establish a representative emission factor. The permittee will be required to conduct additional performance testing on these pollutants every 5 years.

The testing for PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>x</sub>, CO, and total hydrocarbons/VOC was conducted on October 17 and 18, 2024, (EU: A09) and October 15 and 16, 2024, (EU: A10) to establish the PM<sub>10</sub> and PM<sub>2.5</sub> emission factors.

## XI. MODELING AND INCREMENT ANALYSIS

Since minor source baseline dates for PM<sub>10</sub> (December 31, 1980), NO<sub>2</sub> (January 24, 1991) and SO<sub>2</sub> (December 31, 1980) have been triggered, Prevention of Significant Deterioration (PSD) increment analysis is required.

DAQ reviewed the modeling submitted by Trinity Consultants in the November 9, 2022, ATC application and modeled the source using AERMOD to track the increment consumption. Meteorological data (2014) collected at the Harry Allen Generating Station was used in the model. U.S. Geological Survey National Elevation Dataset terrain data were used to calculate elevations. Table XI-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.

**Table XI-1: PSD Increment Consumption**

Pollutant	Averaging Period	Source's PSD Increment Consumption (µg/m <sup>3</sup> )	Location of Maximum Impact	
			UTM X (m)	UTM Y (m)
SO <sub>2</sub>	3-hour	4.70 <sup>1</sup>	683600	4030400
SO <sub>2</sub>	24-hour	1.20 <sup>1</sup>	683600	4030400
SO <sub>2</sub>	Annual	0.10	683600	4030400
NO <sub>x</sub>	Annual	1.85	683600	4030400
PM <sub>10</sub>	24-hour	15.44 <sup>1</sup>	683600	4030400
PM <sub>10</sub>	Annual	1.18	683600	4030400

<sup>1</sup> Highest Second High Concentration.

## XII. PUBLIC PARTICIPATION

Incorporating the requirements of an ATC is a significant revision and public participation is required for a significant revision per AQR 12.5.2.17.

## XIII. ENVIRONMENTAL JUSTICE

As this permitting action does not increase the PTE or relax any monitoring requirements, an environmental justice analysis is not necessary. EPA's EJ Screen was used in the previous permitting action that did increase the PTE, which was for the peaker turbine ATC issued on August 16, 2023.

## XIV. ATTACHMENTS

**Table XIV-1: Removed and Replacement Operating Permit Conditions**

Removed Condition	Existing Replacement Condition																	
Emission Limits																		
Prior to the completion of the CTUP, the permittee shall not allow the sulfur content of the natural gas fuel to exceed an average concentration of 0.75 grains per 100 dry standard cubic feet (gr/dscf) from the combustion turbines (EUs: A01 and A03). The permittee shall verify compliance with the fuel sulfur in accordance with 40 CFR Part 60.334(h). [NSR ATC/OP Modification 0, Amendment 3, Condition III-C-5 (12/04/06)]	The permittee shall not burn any fuel containing total potential SO <sub>2</sub> emissions from the combustion turbines (EUs: A01 and A03) and duct burners (EUs: A02 and A04), combined, in excess of 0.060 lb per MMBtu of heat input. [12.4 ATC issued 10/20/2021 and 40 CFR 60.4330(a)(2)]																	
Prior to the CTUP, the permittee shall not allow actual emissions from each emission unit to exceed the emission concentrations during testing/tuning listed in Table III-C-4. [Part 70 Operating Permit Renewal Application (10/20/2020)]	The permittee shall not allow actual emissions from each emission unit to exceed the emission concentrations listed in Table 3-5 during testing/tuning. [Part 70 Operating Permit Significant Revision Application (12/22/2020)]																	
Table III-C-4: Applicable NO <sub>x</sub> Concentration Standard for Subpart GG1 (ppmvd)	Table 3-5: Applicable NO <sub>x</sub> Concentration Standard for Subpart KKKK1 (ppmvd)																	
<table><tr><th>EU</th><th>NO<sub>x</sub> @ 15% O<sub>2</sub><sup>2</sup>, NSPS GG</th></tr><tr><td>A01/A02 (Turbine Unit 5)</td><td>103</td></tr><tr><td>A03/A04 (Turbine Unit 6)</td><td>103</td></tr></table> <p><sup>1</sup> Although the Subpart GG standard applies only to combustion turbines, it is applied here to all emissions from the turbine stack. <sup>2</sup> Based on a 4-hour rolling average.</p>	EU	NO <sub>x</sub> @ 15% O <sub>2</sub> <sup>2</sup> , NSPS GG	A01/A02 (Turbine Unit 5)	103	A03/A04 (Turbine Unit 6)	103	<table><tr><th rowspan="2">EU</th><th colspan="2">NO<sub>x</sub> (ppmvd @ 15% O<sub>2</sub>), 30-Day Rolling Average</th></tr><tr><th>For Turbine Loads Greater Than or Equal To 75% of Peak Load</th><th>For Turbine Loads Less Than 75% of Peak Load</th></tr><tr><td>A01/A02 (Turbine Unit 5)</td><td>15</td><td>96</td></tr><tr><td>A03/A04 (Turbine Unit 6)</td><td>15</td><td>96</td></tr></table>	EU	NO <sub>x</sub> (ppmvd @ 15% O <sub>2</sub> ), 30-Day Rolling Average		For Turbine Loads Greater Than or Equal To 75% of Peak Load	For Turbine Loads Less Than 75% of Peak Load	A01/A02 (Turbine Unit 5)	15	96	A03/A04 (Turbine Unit 6)	15	96
EU	NO <sub>x</sub> @ 15% O <sub>2</sub> <sup>2</sup> , NSPS GG																	
A01/A02 (Turbine Unit 5)	103																	
A03/A04 (Turbine Unit 6)	103																	
EU	NO <sub>x</sub> (ppmvd @ 15% O <sub>2</sub> ), 30-Day Rolling Average																	
	For Turbine Loads Greater Than or Equal To 75% of Peak Load	For Turbine Loads Less Than 75% of Peak Load																
A01/A02 (Turbine Unit 5)	15	96																
A03/A04 (Turbine Unit 6)	15	96																
Monitoring																		
Prior to the CTUP, this source is subject to 40 CFR Part 60, Subparts A, Da, and GG; 40 CFR Part 70; 40 CFR Part 72; and 40 CFR Part 75. It is the permittee's responsibility to know and comply with all requirements within the applicable parts of	The modified combustion turbines and duct burners (EUs: A01/A02 and A03/A04) are subject to 40 CFR Part 60, Subpart KKKK. It is the permittee's responsibility to know and comply with all requirements within the applicable parts of these																	

these federal regulations. <i>[NSR ATC/OP Modification 0, Amendment 3, Condition III-B-2 (12/04/06) and AQR 12.5.2.6(d)]</i>	federal regulations. <i>[AQR 12.4 ATC issued 10/20/2021 and AQR 12.5.2.6(d)]</i>
The permittee shall conduct relative accuracy test audits (RATA) of the NO <sub>x</sub> , CO, and O <sub>2</sub> CEMS as required—and at least every four calendar quarters—except 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. <i>[40 CFR Part 60, Appendix F 5.1.1 and 5.1.4]</i>	The permittee shall conduct RATA of the CO, NO <sub>x</sub> , and diluent O <sub>2</sub> CEMS at least annually, or at the frequency specified in 40 CFR Parts 60 and 75 (as applicable). <i>[AQR 12.5.2.6(d)]</i>
Prior to the completion of the CTUP, when operating with natural gas, the permittee shall verify compliance with the SO <sub>2</sub> emission limitations specified in the permit by utilizing fuel that meets the definition of natural in 40 CFR Part 60.331(u). The maximum total sulfur content of the fuel must be 0.75 gr/100 scf or less in accordance with 40 CFR Part 60.334(h). <i>[NSR ATC/OP Modification 0, Amendment 3, Condition III-C-5 (12/04/06)]</i>	<p>The permittee must monitor the total sulfur content of the fuel being fired in the turbine, except as provided in 40 CFR Part 60.4365, using the total sulfur methods described in 40 CFR Part 60.4415. <i>[40 CFR Part 60.4360]</i></p> <p>The permittee may elect not to monitor the total sulfur content of the fuel combusted in the turbines if the fuel is demonstrated not to exceed potential sulfur emissions of 0.060 lb SO<sub>2</sub>/MMBtu heat input. The permittee shall use one of the following sources of information to make the required demonstration: <i>[12.4 ATC issued 10/20/2021 and 40 CFR 60.4365]</i></p> <ul style="list-style-type: none"> <li>a. The gas quality characteristics in a current, valid purchase contract, tariff sheet, or transportation contract for the fuel specifying that the maximum total sulfur content of the fuel is 20 gr/100 scf or less, and documentation that potential sulfur emissions are less than 0.060 lb SO<sub>2</sub>/MMBtu heat input; or</li> <li>b. Representative fuel sampling data showing that the sulfur content of the fuel does not exceed 0.060 lb SO<sub>2</sub>/MMBtu heat input. At a minimum, the amount of fuel sampling data specified in 40 CFR Part 75, Appendix D, Sections 2.3.1.4 or 2.3.2.4 is required.</li> </ul>
<b>Testing</b>	
Upon completion of the CTUP, the permittee shall conduct initial performance tests on the modified combustion turbines (EUs: A01 and A03) and associated duct burners (EUs: A02 and A04) for NO <sub>x</sub> according to the following conditions: <i>[12.4 ATC issued 10/20/2021; 40 CFR Parts 60.4400 &amp; 60.4405]</i>	N/A
c. The permittee shall conduct initial performance tests within 60 days of achieving the maximum production rate at which the source will be operated, but no later than 180 days after initial startup.	

d. Alternatively, the permittee may use the CEMS RATA procedures under 40 CFR Part 60.4405 to fulfill the requirements for performance testing under 40 CFR Part 60.8. [40 CFR Parts 60.4400 & 60.4405]	
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**Table XIV-2: Applicability Emissions and PTE (tons per year)**

Pollutant	PM <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>x</sub>	CO	SO <sub>2</sub>	VOCs	HAPs
Applicability Emissions of the ATC Peaker Units (EUs: A09 and A10)	69.44	69.44	3,500.13	299.15	34.87	528.21	6.74
Applicability Emissions of OP Emission Units <sup>1</sup>	149	149	318.91	562.38	10.35	85.57	5.39
Source Applicability Emissions	254.88	254.88	3,810.07	800.16	44.63	124.31	12.02

<sup>1</sup>The Applicability Emissions of the existing units was calculated to be equal to the PTE and is based on 8,000 hours of normal operation, including 2,000 hours of the turbines operating with duct firing at 100% load and 900 hours of startup/shutdown cycles.

**Table XIV-3: PTE (tons per year)**

Pollutant	PM <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>x</sub>	CO	SO <sub>2</sub>	VOCs	HAPs
PTE of the ATC Peaker Units (EUs: A09 and A10)	9.49	9.49	31.29	82.91	4.69	16.73	0.90
PTE of New Fire Pump (EU: A11)	0.01	0.01	0.28	0.13	0.01	0.01	0.01
Source PTE	158.36	158.36	348.54	645.00	14.92	102.15	6.28