PRIOR NOTICE FORM

Date: 11/17/21

Requester: Dariusz Rekowski

Source Name: Clark Generating Station

Source ID: 00007

Outstanding Balance (if applicable): $0.00

Action Needed:

- ✓ No Action needed; attach to front page of Permit
- Application needed; send letter
- Other:

Comments:

NVE is requesting the Selective Catalytic Reduction (SCR) Tempering Air Damper Positioner Replacement project associated with Turbine Units 11 through 22 (EU: A27 through EU: A38) at the Clark Generating Station (Clark). The project is to replace the obsolete Clark Peaker SCR tempering air damper positioner with a more reliable positioner in each unit. The project will result in increased unit availability.
Actual emissions of New Source Review (NSR) pollutants are expected to increase slightly due to the project. The project will allow each unit to regain related historic forced outage hours and improve unit availability. The maximum annual emission increase projected from this project is 0.80 tons for all pollutants.
DAQ concur that this project will not impact compliance with the permitted air pollutant emission limits or heat input limit, and no revisions to any existing permit requirements are necessary. This project is not a modification under New Source Performance Standards (NSPS). Moreover, no new applicable requirements will be triggered because of this project.

Therefore, DAQ approves this change under prior notification.

Signature: Santosh Mathew Date: November 22, 2021

PRIOR NOTICE FORM

Date: 11/01/2021

Requester: Dariusz Rekowski

Source Name: Clark Generating Station

Source ID: 00007

Outstanding Balance (if applicable): $0.00

Action Needed:

- ✓ No Action needed; attach to front page of Permit
- Application needed; send letter
- Other:

Comments:

The requested change has been accepted as a prior notification.

In a letter dated May 9, 2019, DAQ stated that:
Regardless of the expected zero emission increase from the project, prior to use of any replacement turbine engine from the Clark Peaker fleet of turbine engines, NVE will perform the required preconstruction emission increase analysis and provide subsequent notification to Air Quality pursuant to AQR 12.2.1.6(b) and 12.3.1.6(b), in combination with the notification required by 12.5.2.12(a) to Air Quality and EPA Region IX.

Signature: Santosh Mathew Date: 11/8/2021

PRIOR NOTICE FORM

Date: 09/23/2021

Requester: Steve Page

Source Name: Clark Generating Station

Source ID: 00007

Outstanding Balance (if applicable): $0.00

Action Needed:

- ✓ No Action needed; attach to front page of Permit
- Application needed; send letter
- Other:

Comments:

The initial review of the letter identified several explanations that led to suspect that the methodology used in the PAE estimation is not accurate. DAQ had a conference call with the source on 9/30/2021. Based on discussions and explanations, DAQ agrees with the conclusion that the peaker turbines are not considered existing facilities and the project cannot meet the definition of a NSPS modification. Also, DAQ concludes that the project is unlikely to result in an emission increase above the Significant Emission Rate in tons per year to trigger AQR 12.2 or 12.3 modifications, even when the PAE is recalculated as indicated above. Additionally, DAQ concludes that the project emission increase will not be exceeding the Minor NSR significance as per AQR 12.4. As the source is not requesting a permit revision to increase the existing emission limits, the current Title V operating permit conditions are sufficient to demonstrate compliance with the emission limits after the project.

Therefore, DAQ is not requesting any additional information at this time in order to approve this prior notification. NV Energy may implement the change without a revision to the Part 70 operating permit.

Santosh Mathew Date 9/30/2021

PRIOR NOTICE FORM

Date: 07/12/021

Requester: Dariusz Rekowski

Source Name: Clark Generating Station

Source ID: 00007

Outstanding Balance (if applicable): $0.00

Action Needed:

- ✓ No Action needed; attach to front page of Permit
- Application needed; send letter
- Other:

Comments:

The requested change has been accepted as a prior notification.

In a letter dated May 9, 2019, DAQ stated that:

Regardless of the expected zero emission increase from the project, prior to use of any replacement turbine engine from the Clark Peaker fleet of turbine engines, NVE will perform the required preconstruction emission increase analysis and provide subsequent notification to Air Quality pursuant to AQR 12.2.1.6(b) and 12.3.1.6(b), in combination with the notification required by 12.5.2.12(a) to Air Quality and EPA Region IX.

Santosh Mathew Date: 7/14/2021

PRIOR NOTICE FORM

Date: 06/30/2021

Requester: Dariusz REkowski

Source Name: Clark Generating Station

Source ID: 7

Outstanding Balance (if applicable): $0.00

Action Needed:

- ✓ No Action needed; attach to front page of Permit
- Application needed; send letter
- Other:

Comments:

The requested change has been accepted as a prior notification.

In a letter dated May 9, 2019, DAQ stated that:
Regardless of the expected zero emission increase from the project, prior to use of any replacement turbine engine from the Clark Peaker fleet of turbine engines, NVE will perform the required preconstruction emission increase analysis and provide subsequent notification to Air Quality pursuant to AQR 12.2.1.6(b) and 12.3.1.6(b), in combination with the notification required by 12.5.2.12(a) to Air Quality and EPA Region IX.

Santosh Mathew Date 7/8/2021

DES
DEPARTMENT OF ENVIRONMENT AND SUSTAINABILITY
air quality desert conservation PROGRAM sustainability

4701 W. Russell Rd Suite 200
Las Vegas, NV 89118-2231
Phone (702) 455-5942
Fax (702) 383-9994

PART 70 OPERATING PERMIT

SOURCE ID: 7

Clark Generating Station
5640 Stephanie St.
Las Vegas, NV 89122

ISSUED ON: October 5, 2020 **EXPIRES ON: October 4, 2025**

REVISED ON: November 30, 2021

Current action: Reopening for Cause

Issued to:
Nevada Power Company
P.O. Box 98910
Las Vegas, Nevada 89151

Responsible Official:
Dariusz Rekowski, Vice President, Generation
PHONE: (702) 402-5762
EMAIL: drekowski@nvenergy.com

NATURE OF BUSINESS:
SIC codes 4911, "Electric Services"
NAICS codes 221112, "Fossil Fuel Electric Power Generation"

Issued by the Clark County Department of Environment and Sustainability/Division of Air Quality in accordance with Section 12.5 of the Clark County Air Quality Regulations.

Theodore A. Lendis, Permitting Manager

EXECUTIVE SUMMARY

Nevada Power Company – Clark Generating Station is an electrical power generating station located at 5640 Stephanie Street in Las Vegas, Nevada. The source is under SIC 4911, "Electric Services" and NAICS 221112, "Fossil Fuel Electric Power Generation." The source is situated in hydrographic area 212 (Las Vegas Valley). Las Vegas Valley is designated attainment for all regulated pollutants except ozone. Hydrographic Area 212 was designated a marginal nonattainment area for ozone on August 3, 2018. The designation has not imposed any new requirements at this time.

Clark Generating Station is a Categorical Stationary Source, as defined by AQR 12.2.2(j)(1). The source is a major stationary source for PM_{10}, $PM_{2.5}$, NO_x, CO, and VOC pollutants and a minor source for SO_2 and HAP pollutants. The source is also a major stationary source for GHG. The generating station operates seventeen natural gas-fired turbines (one 60 MW simple cycle unit, four 85 MW combined cycle units which provide heat for four HRSG turbines with no supplemental duct firing, and 12 simple cycle paired units rated at 57.9 MW per pair), two 54,000 gpm cooling towers, one 474 hp diesel-powered emergency generator, one 460 hp diesel-powered emergency fire pump and one 250 gallon aboveground gasoline storage tank. This Part 70 Operating Permit is issued based on the Title V minor revision application submitted on March 29, 2021.

The source is subject to 40 CFR Part 60, Subparts GG, KKKK, and IIII, and 40 CFR Part 63, Subparts ZZZZ and CCCCCC. Additionally, the source is regulated by 40 CFR Part 72, "Acid Rain Permits Regulation."

The following table summarizes the source PTE for each regulated air pollutant for all emission units addressed by this Part 70 Operating Permit. DAQ will continue to require the sources to estimate their GHG potential to emit in terms of each individual pollutant (CO_2, CH_4, N_2O, SF_6, etc.).

Source PTE (Tons per Year)

PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	HAPs	GHG
755.00	755.00	2,467.22	1,851.70	48.44	216.66	8.10	4,529,427

Pursuant to AQR 12.5.2, all terms and conditions in Sections I through VI and Attachments 1 and 2 in this permit are federally enforceable unless explicitly denoted otherwise.

TABLE OF CONTENTS

LIST OF TABLES

I. ACRONYMS AND ABBREVIATIONS

Acronym	Term
AQR	Clark County Air Quality Regulations
AST	aboveground storage tank
ATC	Authority to Construct
ATC/OP	Authority to Construct/Operating Permit
CAAA	Clean Air Act Amendments
CE	control efficiency
CEMS	Continuous Emissions Monitoring System
CF	control factor
CFR	Code of Federal Regulations
CO	carbon monoxide
CPI	Urban Consumer Price Index
DAHS	Data Acquisition and Handling System
DAQ	Division of Air Quality
DEM	Digital Elevation Model
DES	Department of Environment and Sustainability
EF	emission factor
EO	Executive Order
EPA	U.S. Environmental Protection Agency
EU	emission unit
HAP	hazardous air pollutant
HHV	higher heating value
hp	horsepower
HRSG	Heat Recovery Steam Generating Unit
LHV	lower heating value
MMBtu	Millions of British thermal units
NEI	net emission increase
NL	no limit
NO_X	nitrogen oxides
NOV	Notice of Violation
NRS	Nevada Revised Statutes
NSPS	New Source Performance Standards
NSR	New Source Review
OP	Operating Permit
$PM_{2.5}$	Particulate matter less than 2.5 microns
PM_{10}	Particulate matter less than 10 microns
ppm	parts per million
PSD	Prevention of Significant Deterioration
PTE	potential to emit
RATA	Relative Accuracy Test Audit
RMP	Risk Management Plan
scf	standard cubic feet
SIP	State Implementation Plan
SO_X	Sulfur Oxides
TCS	toxic chemical substance
TDS	total dissolved solids
TSD	Technical Support Document
ULNB	Ultra Low NOx Burner
VOC	volatile organic compound

II. GENERAL CONDITIONS

A. GENERAL REQUIREMENTS

1. The permittee shall comply with all conditions of the Part 70 Operating Permit (OP). Any permit noncompliance may constitute a violation of the Clark County Air Quality Regulations (AQRs), Nevada law, and the Clean Air Act, and is grounds for enforcement action; for permit termination, revocation and reissuance, or revision; or for denial of a renewal application. *[AQR 12.5.2.6(g)(1)]*

2. If any term or condition of this permit becomes invalid as a result of a challenge to a portion of this permit, the other terms and conditions of this permit shall be unaffected and remain valid. *[AQR 12.5.2.6(f)]*

3. The permittee shall pay all permit fees pursuant to AQR 18. *[AQR 12.5.2.6(h)]*

4. This permit does not convey property rights of any sort, or any exclusive privilege. *[AQR 12.5.2.6(g)(4)]*

5. The permittee agrees to allow inspection of the premises to which this permit relates by any authorized representative of the Control Officer at any time during the permittee's hours of operation without prior notice. The permittee shall not obstruct, hamper, or interfere with any such inspection. *[AQR 4.1; AQR 5.1.1; AQR 12.5.2.8(b)]*

6. The permittee shall allow the Control Officer, upon presentation of credentials, to: *[AQR 4.1 & AQR 12.5.2.8(b)]*

    a. Access and copy any records that must be kept under the conditions of the permit;

    b. Inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;

    c. Sample or monitor substances or parameters for the purpose of assuring compliance with the permit or applicable requirements; and

    d. Document alleged violations using such devices as cameras or video equipment.

7. Any permittee who fails to submit relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit the needed supplementary facts or corrected information. In addition, the permittee shall provide additional information as necessary to address any requirements that become applicable to the source after the date a complete application was filed but prior to release of a draft permit. A responsible official shall certify the additional information consistent with the requirements of AQR 12.5.2.4. *[AQR 12.5.2.2]*

8. Anyone issued a permit under AQR 12.5 shall post it in a location where it is clearly visible and accessible to facility employees and DAQ representatives. *[AQR 12.5.2.6(m)]*

B. MODIFICATION, REVISION, AND RENEWAL REQUIREMENTS

1. No person shall begin actual construction of a new Part 70 source, or modify or reconstruct an existing Part 70 source that falls within the preconstruction review applicability criteria, without first obtaining an Authority to Construct (ATC) from the Control Officer. *[AQR 12.4.1.1(a)]*

2. The permit may be revised, revoked, reopened and reissued, or terminated for cause by the Control Officer. The filing of a request by the permittee for a permit revision, revocation, reissuance, or termination, or of a notification of planned changes or anticipated noncompliance, does not stay any permit condition. *[AQR 12.5.2.6(g)(3)]*

3. A permit, permit revision, or renewal may be approved only if all of the following conditions have been met: *[AQR 12.5.2.10(a)]*

    a. The permittee has submitted to the Control Officer a complete application for a permit, permit revision, or permit renewal (except a complete application need not be received before a Part 70 general permit is issued pursuant to AQR 12.5.2.20); and

    b. The conditions of the permit provide for compliance with all applicable requirements and the requirements of AQR 12.5.

4. The permittee shall not build, erect, install, or use any article, machine, equipment, or other contrivance, the use of which, without resulting in a reduction in the total release of air contaminants to the atmosphere, reduces or conceals an emission that would otherwise constitute a violation of an applicable requirement. *[AQR 80.1 and 40 CFR Part 60.12]*

5. No permit revisions shall be required under any approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in the permit. *[AQR 12.5.2.6(i)]*

6. Permit expiration terminates the permittee's right to operate unless a timely and complete renewal application has been submitted. *[AQR 12.5.2.11(b)]*

7. For purposes of permit renewal, a timely application is a complete application that is submitted at least six months, but not more than 18 months, prior to the date of permit expiration. If a source submits a timely application under this provision, it may continue operating under its current Part 70 OP until final action is taken on its application for a renewed Part 70 OP. *[AQR 12.5.2.1(a)(2)]*

C. REPORTING, NOTIFICATIONS, AND INFORMATION REQUIREMENTS

1. The permittee shall submit all compliance certifications to the U.S. Environmental Protection Agency (EPA) and to the Control Officer. *[AQR 12.5.2.8(e)(4)]*

2. Any application form, report, or compliance certification submitted to the Control Officer pursuant to the permit or the AQRs, shall contain a certification by a responsible official, with an original signature, of truth, accuracy, and completeness. This certification, and any other required under AQR 12.5, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. *[AQR 12.5.2.6(l)]*

3. The permittee shall furnish to the Control Officer, in writing and within a reasonable time, any information that the Control Officer may request to determine whether cause exists for revising, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Control Officer copies of records that the permit requires keeping. The permittee may furnish records deemed confidential directly to the Administrator, along with a claim of confidentiality. *[AQR 12.5.2.6(g)(5)]*

4. Upon request of the Control Officer, the permittee shall provide any information or analyses that will disclose the nature, extent, quantity, or degree of air contaminants that are or may be discharged by the source, and the type or nature of control equipment in use. The Control Officer may require such disclosures be certified by a professional engineer registered in the state. In addition to this report, the Control Officer may designate an authorized agent to make an independent study and report on the nature, extent, quantity, or degree of any air contaminants that are or may be discharged from the source. An agent so designated may examine any article, machine, equipment, or other contrivance necessary to make the inspection and report. *[AQR 4.1]*

5. The permittee shall submit annual emissions inventory reports based on the following: *[AQR 18.6.1]*

    a. The annual emissions inventory must be submitted to DAQ by March 31 of each calendar year (if March 31 falls on a Saturday or Sunday, or on a Nevada or federal holiday, the submittal shall be due on the next regularly scheduled business day);

    b. The calculated actual annual emissions from each emission unit shall be reported even if there was no activity, along with the total calculated actual annual emissions for the source based on the emissions calculation methodology used to establish the potential to emit (PTE) in the permit or an equivalent method approved by the Control Officer prior to submittal; and

    c. As the first page of text, a signed certification containing the sentence: "I certify that, based on information and belief formed after reasonable inquiry, the statements contained in this document are true, accurate, and complete." This statement shall be signed and dated by a responsible official of the company (a sample form is available from DAQ).

6. Stationary sources that emit 25 tons or more of nitrogen oxide (NOx) and/or 25 tons or more of volatile organic compounds (VOCs) during a calendar year from emission units, insignificant activities, and exempt activities shall submit an annual emissions statement for both pollutants. This statement must include actual annual NOx and VOC emissions from all activities, including emission units, insignificant activities, and exempt activities. Emissions statements are separate from, and additional to, the calculated annual emissions reported each year for all regulated air pollutants (i.e., the emissions inventory report). *[AQR 12.9.1]*

D. COMPLIANCE REQUIREMENTS

1. The permittee shall not use as a defense in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. *[AQR 12.5.2.6(g)(2)]*

2. Any person who violates any provision of the AQRs, including, but not limited to, any application requirement; any permit condition; any fee or filing requirement; any duty to allow or carry out inspection, entry, or monitoring activities; or any requirements from DAQ is guilty of a civil offense and shall pay a civil penalty levied by the Air Pollution Control Hearing Board and/or the Hearing Officer of not more than $10,000. Each day of violation constitutes a separate offense. *[AQR 9.1; NRS 445B.640]*

3. Any person aggrieved by an order issued pursuant to AQR 9.1 is entitled to review, as provided in Chapter 233B of the NRS. *[AQR 9.12]*

4. The permittee shall comply with the requirements of Title 40, Part 61 of the Code of Federal Regulations (40 CFR Part 61), Subpart M—the National Emission Standard for Asbestos—for all demolition and renovation projects. *[AQR 13.1(b)(8)]*

5. The permittee shall certify compliance with the terms and conditions contained in this Part 70 OP, including emission limitations, standards, work practices, and the means for monitoring such compliance. *[AQR 12.5.2.8(e)]*

6. The permittee shall submit compliance certifications annually in writing to the Control Officer (4701 W. Russell Road, Suite 200, Las Vegas, NV 89118) and the Region 9 Administrator (Director, Air and Toxics Divisions, 75 Hawthorne St., San Francisco, CA 94105). A compliance certification for each calendar year will be due on January 30 of the following year, and shall include the following: *[AQR 12.5.2.8(e)]*

    a. The identification of each term or condition of the permit that is the basis of the certification;

    b. The identification of the methods or other means used by the permittee for determining the compliance status with each term and condition during the certification period. These methods and means shall include, at a minimum, the monitoring and related recordkeeping and reporting requirements described in 40 CFR Part 70.6(a)(3). If necessary, the permittee shall also identify any other material information that must be included in the certification to comply with Section 113(c)(2) of the Clean Air Act, which prohibits knowingly making a false certification or omitting material information; and

    c. The status of compliance with the terms and conditions of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall be based on the methods or means designated in (b) above. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify, as possible exceptions to compliance, any periods during which compliance was required and in which an excursion or exceedance, as defined under 40 CFR Part 64, occurred.

7. The permittee shall report to the Control Officer any startup, shutdown, malfunction, emergency, or deviation that causes emissions of regulated air pollutants in excess of any limits set by regulations or this permit. The report shall be in two parts, as specified below: *[AQR 12.5.2.6(d)(4)(B); AQR 25.6.1]*

    a. Within 24 hours of the time the permittee learns of the event, the permittee shall notify DAQ by phone at (702) 455-5942, by fax at (702) 383-9994, or by email at airquality@clarkcountynv.gov.

b. Within 72 hours of the required notification, the permittee shall submit a detailed written report to DAQ containing the information required by AQR 25.6.3.

8. With the semiannual monitoring report, the permittee shall report to the Control Officer all deviations from permit conditions that do not result in excess emissions, including those attributable to malfunction, startup, or shutdown. Reports shall identify the probable cause of each deviation and any corrective actions or preventative measures taken. *[AQR 12.5.2.6(d)(4)(B)]*

9. The owner or operator of any source required to obtain a permit under AQR 12 shall report to the Control Officer emissions in excess of an applicable requirement or emission limit that pose a potential imminent and substantial danger to public health and safety or the environment as soon as possible, but no later than 12 hours after the deviation is discovered, and submit a written report within two days of the occurrence. *[AQR 25.6.2]*

E. PERFORMANCE TESTING REQUIREMENTS

1. Upon request of the Control Officer, the permittee shall test (or have tests performed) to determine emissions of air contaminants from any source whenever the Control Officer has reason to believe that an emission in excess of those allowed by the AQRs is occurring. The Control Officer may specify testing methods to be used in accordance with good professional practice. The Control Officer may observe the testing. All tests shall be conducted by reputable, qualified personnel. *[AQR 4.2]*

2. Upon request of the Control Officer, the permittee shall provide necessary holes in stacks or ducts and such other safe and proper sampling and testing facilities, exclusive of instruments and sensing devices, as may be necessary for proper determination of the emission of air contaminants. *[AQR 4.2]*

3. The permittee shall submit to the Control Officer for approval a performance testing protocol that contains testing, reporting, and notification schedules, test protocols, and anticipated test dates no less than 45 days, but no more than 90 days, before the anticipated date of the performance test unless otherwise specified in Section III.E of this permit. *[AQR 12.5.2.8]*

4. The permittee shall submit to EPA for approval any alternative test methods EPA has not already approved to demonstrate compliance with a requirement under 40 CFR Part 60. *[40 CFR Part 60.8(b)]*

5. The permittee shall submit a report describing the results of each performance test to the Control Officer within 60 days of the end of the test. *[AQR 12.5.2.8]*

III. EMISSION UNITS AND APPLICABLE REQUIREMENTS

A. EMISSION UNITS, LIMITATIONS, AND STANDARDS

1. The stationary source covered by this Part 70 OP is defined to consist of the emission units and associated appurtenances summarized in Table III-A-1. *[AQR 12.5.3]*

Table III-A-1: List of Emission Units

EU	Description	Rating	Make	Model #
A00704D	Natural Gas-Fired Turbine (Unit 4); Simple Cycle	60 MW	General Electric	7B (7000)
A00701A	Natural Gas-Fired Turbine (Unit 5); Combined Cycle	85 MW	Westinghouse	501B6
A00702B	Natural Gas-Fired Turbine (Unit 6); Combined Cycle	85 MW	Westinghouse	501B6
A00705	Natural Gas-Fired Turbine (Unit 7); Combined Cycle	85 MW	Westinghouse	501B6
A00708	Natural Gas-Fired Turbine (Unit 8); Combined Cycle	85 MW	Westinghouse	501B6
A00709	Lime Silo	3,700 cubic feet		
A00710	Soda Ash Silo (A)	4,160 cubic feet		
A00711	Soda Ash Silo (B)	4,160 cubic feet		
A00712	Cooling Tower; for Unit 9 Steam Turbine Generator	54,000 gpm		
A00713	Cooling Tower; for Unit 10 Steam Turbine Generator	54,000 gpm		
A21	Emergency Genset	474 hp	Kohler	M/N: 300R0ZD71 S/N: 302650
	Diesel Engine; DOM: pre-1993		Detroit Diesel	M/N: 8063-7416 S/N: 6V-92TA
A27	Two (2) Natural Gas-Fired Turbines (Unit 11); Simple Cycle	57.9 MW (Combined)	Pratt and Whitney	FT8-3 Swift Pac
A28	Two (2) Natural Gas-Fired Turbines (Unit 12); Simple Cycle	57.9 MW (Combined)	Pratt and Whitney	FT8-3 Swift Pac
A29	Two (2) Natural Gas-Fired Turbines (Unit 13); Simple Cycle	57.9 MW (Combined)	Pratt and Whitney	FT8-3 Swift Pac
A30	Two (2) Natural Gas-Fired Turbines (Unit 14); Simple Cycle	57.9 MW (Combined)	Pratt and Whitney	FT8-3 Swift Pac
A31	Two (2) Natural Gas-Fired Turbines (Unit 15); Simple Cycle	57.9 MW (Combined)	Pratt and Whitney	FT8-3 Swift Pac
A32	Two (2) Natural Gas-Fired Turbines (Unit 16); Simple Cycle	57.9 MW (Combined)	Pratt and Whitney	FT8-3 Swift Pac
A33	Two (2) Natural Gas-Fired Turbines (Unit 17); Simple Cycle	57.9 MW (Combined)	Pratt and Whitney	FT8-3 Swift Pac
A34	Two (2) Natural Gas-Fired Turbines (Unit 18); Simple Cycle	57.9 MW (Combined)	Pratt and Whitney	FT8-3 Swift Pac
A35	Two (2) Natural Gas-Fired Turbines (Unit 19); Simple Cycle	57.9 MW (Combined)	Pratt and Whitney	FT8-3 Swift Pac

EU	Description	Rating	Make	Model #
A36	Two (2) Natural Gas-Fired Turbines (Unit 20); Simple Cycle	57.9 MW (Combined)	Pratt and Whitney	FT8-3 Swift Pac
A37	Two (2) Natural Gas-Fired Turbines (Unit 21); Simple Cycle	57.9 MW (Combined)	Pratt and Whitney	FT8-3 Swift Pac
A38	Two (2) Natural Gas-Fired Turbines (Unit 22); Simple Cycle	57.9 MW (Combined)	Pratt and Whitney	FT8-3 Swift Pac
A45	Emergency Fire Pump	460 hp	Aurora	M/N: 10-481-18D S/N: 20-2596555
	Diesel Engine; DOM: 2009		Cummins	M/N: CFP15E-F10 S/N: 79347925
A46	Gasoline Dispensing Operation; Aboveground Storage Tank; One Product Nozzle; Regular Unleaded Gasoline	250 Gallon		

Table III-A-2: Summary of Insignificant Activities

Description
Three Ammonia Storage Tanks (Sealed); 19,900 Gallons Each
Diesel Storage Tanks
Maintenance Shop Activities (parts washers, sand blasters, etc.)
Steam Cleaning Operations
Lube Oil Sumps and Vents

B. NONROAD ENGINES

Pursuant to Title 40, Part 1068.30 of the Code of Federal Regulations (40 CFR Part 1068.30), nonroad engines that are portable or transportable (i.e., not used on self-propelled equipment) shall not remain at a location for more than 12 consecutive months; otherwise, the engine(s) will constitute a stationary reciprocating internal combustion engine (RICE) and be subject to the applicable requirements of 40 CFR Part 63, Subpart ZZZZ; 40 CFR Part 60, Subpart IIII; and/or 40 CFR Part 60, Subpart JJJJ. Stationary RICE shall be permitted as emission units upon commencing operation at this stationary source. Records of location changes for portable or transportable nonroad engines shall be maintained, and shall be made available to the Control Officer upon request. These records are not required for engines owned and operated by a contractor for maintenance and construction activities as long as records are maintained demonstrating that such work took place at the stationary source for periods of less than 12 consecutive months.

Nonroad engines used on self-propelled equipment do not have this 12-month limitation or the associated recordkeeping requirements.

C. EMISSION LIMITATIONS AND STANDARDS

1. Emission Limits

a. The permittee shall not allow the actual emissions from each emission unit to exceed the PTE listed in Table III-C-1, except for emission units intended only for use in emergencies. Tons-per-year emission limits of each emission unit include startup, shutdown, and testing/tuning emissions. *[AQR 12.5.2.3, NSR ATC/OP 00007, Modification 4 Revision 1, (03/20/07), Modification 5, (10/1/08), and Modification 6, (04/27/09), and Part 70 OP (10/05/20)]*

Table III-C-1: Emission Unit PTE, Including Startups, Shutdowns, and Testing/Tuning (tons per year)

EU	PM_{10}	NO_x	CO	SO_2	VOC
A00704D	165.4	1,732.6	433.1	7.9	94.5
A00701A	106.9	360[1]	319.7	7.1	21.9
A00702B	106.9		319.7	7.1	21.9
A00705	106.9		319.7	7.1	21.9
A00708	106.9		319.7	7.1	21.9
A00709	8.6	--	--	--	--
A00710	8.6	--	--	--	--
A00711	8.6	--	--	--	--
A00712	13.36	--	--	--	--
A00713	13.36	--	--	--	--
A21	0.26	2.48	1.03	0.01	0.02
A27	9.10	30.96	11.55	1.01	2.86
A28	9.10	30.96	11.55	1.01	2.86
A29	9.10	30.96	11.55	1.01	2.86
A30	9.10	30.96	11.55	1.01	2.86
A31	9.10	30.96	11.55	1.01	2.86
A32	9.10	30.96	11.55	1.01	2.86
A33	9.10	30.96	11.55	1.01	2.86
A34	9.10	30.96	11.55	1.01	2.86
A35	9.10	30.96	11.55	1.01	2.86
A36	9.10	30.96	11.55	1.01	2.86
A37	9.10	30.96	11.55	1.01	2.86
A38	9.10	30.96	11.55	1.01	2.86
A45	0.02	0.62	0.17	0.01	0.11
A46	0.00	0.00	0.00	0.00	0.11

[1]Combined limit per calendar year for all four turbine units.

b. The permittee shall not allow the actual emissions from each emission unit to exceed the PTE listed in Table III-C-2. Pound-per-hour limits are normal operation (exclude startup, shutdown, and testing/tuning) limits only. Neither NO_x nor CO emissions for the stationary gas turbine units shall exceed any one-hour average period as determined by the CEMS. The emission limits do not apply to Turbine Units 5 through 8 (EUs:

A00701A, A00702B, A00705, and A00708) for NO_x during Allowable Exceedances. *[NSR ATC/OP 00007, Modification 4 Revision 1, (03/20/07) and Modification 5, (10/1/08) and Part 70 OP (10/05/20)]*

Table III-C-2: Emission Unit PTE, Excluding Startups, Shutdowns, and Testing/Tuning (pounds per hour)

EU	PM_{10}	NO_x	CO	SO_2	VOC
A00701A	24.4	19.91	50.00	1.621	5.01
A00702B	24.4	19.91	50.00	1.621	5.01
A00705	24.4	19.91	50.00	1.621	5.01
A00708	24.4	19.91	50.00	1.621	5.01
A27	3.61	11.01	2.61	0.36	1.49
A28	3.61	11.01	2.61	0.36	1.49
A29	3.61	11.01	2.61	0.36	1.49
A30	3.61	11.01	2.61	0.36	1.49
A31	3.61	11.01	2.61	0.36	1.49
A32	3.61	11.01	2.61	0.36	1.49
A33	3.61	11.01	2.61	0.36	1.49
A34	3.61	11.01	2.61	0.36	1.49
A35	3.61	11.01	2.61	0.36	1.49
A36	3.61	11.01	2.61	0.36	1.49
A37	3.61	11.01	2.61	0.36	1.49
A38	3.61	11.01	2.61	0.36	1.49

[1]These short-term emission limits are not federally enforceable.

c. The permittee shall not allow actual emissions from each emission unit to exceed the PTE listed in Table III-C-3. The emission limits are normal operation (exclude startup, shutdown, and testing/tuning) limits only. The emission limits do not apply to Turbine Units 5 through 8 (EUs: A00701A, A00702B, A00705, and A00708) for NO_X during allowable exceedances. *[NSR ATC Modification 6, Revision 3, Conditions IV-B-1(a) and (b) (04/16/09) and Part 70 OP (10/05/20)]*

Table III-C-3: Emission Rates Excluding Startup and Shutdown

EU	NO_x		CO		VOC
	ppm[1] @15% O_2	lb/ MMBtu	ppm[1] @15% O_2	lb/ MMBtu	ppm @ 15% O_2
A00704D	--	--	--	--	--
A00701A	5[2]	0.02	--	0.08	--
A00702B	5[2]	0.02	--	0.08	--
A00705	5[2]	0.02	--	0.08	--
A00708	5[2]	0.02	--	0.08	--
A27–A38[3]	5	--	2	--	2

[1] On a one-hour average.
[2] NO_x emission limits are based on the consent decree limit of 5 ppm with ULNB.
[3] These limits are not applicable during periods of testing/tuning.

d. The permittee shall not allow actual emissions from Turbine Units 11-22 (EUs: A27 through A38) to exceed the applicable Subpart KKKK emission concentrations listed in Table III-C-4. *[40 CFR Part 60.4320]*

Table III-C-4: Applicable Subpart KKKK Standards, 4-Hour Rolling Average, Turbine Units 11-22

EU	NO_x (ppmvd @ 15% O2), 4-hour Rolling Average	
	For Turbine Loads Greater Than or Equal To 75% of Peak Load	For Turbine Loads Less Than 75% of Peak Load
Each of A27–A38	25	96

e. The permittee shall comply with the emission limit in Table III-C-5 during periods of testing/tuning. *[Part 70 OP (10/05/20)]*

Table III-C-5: Testing/Tuning Mass Emission Limitations (pounds per hour)

EU	CO
Each of A27–A38	15

f. The permittee shall not discharge into the atmosphere, from any emission unit, any air contaminant in excess of an average of 20 percent opacity for a period of more than 6 consecutive minutes. *[AQR 26.1]*

g. The permittee shall not emit NO_x from Turbine Units 5 through 8 in an amount greater than 360 tons per calendar year. The permittee shall include the pollutants emitted during all periods of operation during the year, including during startup, shutdown and testing/tuning. The permittee shall not use NO_x Allowances to comply with the 360 ton NO_x limit. *[Consent Decree Condition IV-C-38-b, (08/13/07)]*

h. The emission limits for Units 5-8 (EUs: A00701A, A00702B, A00705, and A00708) in Tables III-C-2 and III-C-3 shall not apply to NO_x if the criteria in Condition III-C-1-k are met. *[NSR ATC/OP 00007, Modification 4 Revision 1, (03/20/07), and NSR ATC/OP 00007, Modification 5, Section III-B (10/01/08)]*

i. The permittee shall not exceed the emission limits for each emission unit during Allowable Exceedances, as listed in Table III-C-6. *[NSR ATC/OP 00007, Modification 5 (10/1/08)]*

Table III-C-6: Emission Rates for Turbine Units 5 through 8, Allowable Exceedences[1]

EU	NO_X ppm (at 15% O_2 on a one-hour average)	lb NO_X per MMBtu[2]
A00701A, A00702B, A00705, A00708	32.0 (per unit)	0.12 (per unit)

[1]Allowable Exceedences are subject to the requirements of Condition II-C-1-j.
[2]NO_x EF = (32 ppm/1,000,000)*(1 lb mol/385.3 dscf)*(46.01 lb NO_2/lb mol)*(8,710 dscf/MMBtu)*(20.9/20.9-15)

j. The permittee shall limit the Turbine Units 5 through 8 to a 5 ppm NO_x emission rate during all periods of operation except startup, shutdown, or Allowable Exceedances. Allowable Exceedances are defined as when all of the following are met *[Consent Decree Condition IV-B-35, (08/13/07) and NSR ATC/OP 00007, Modification 5 Revision 0, Condition IV-B-2 (10/01/08)]*:

i. Either of the following:

(1) Rapid combustion turbine load changes due to activation of the Automatic Safety or Equipment Protection Systems which rapidly decrease turbine load; or

(2) A change in the combustion mode of the ULNBs triggered by the Automatic Safety or Equipment Protection Systems;

ii. When the 1-hour average NO_x emissions above the 5 ppm NO_x emission rate did not occur as a result of operator neglect; improper operation or maintenance; or the tampering with, interfering with, altering, or adjusting any equipment in any way which conceals or disguises the type and quantity of emission;

iii. When the operating conditions described in III-C-1-j-i(I) or (II) are recorded in the plant's operating log within 24 hours of the event, and in the CEMS by 5 pm the next business day following the event. The notations in the log and CEMS must describe the data, list the time of entry into the log, and describe the plant operating conditions responsible for the event;

iv. When the 1-hour average NO_x concentration does not exceed 32 ppm, when calculated by the method described in III-D-6; and

v. Within 30 calendar days of the event, the permittee files a report with the EPA and Department of Justice that sets forth the information that demonstrates the applicability to the event of conditions III-C-1-j-i through iv above.

k. The conditions of III-C-1-j shall apply to no more than ten 1-hour averages of NO_x emissions per turbine unit per calendar year. The permittee shall demonstrate that it has met the conditions of III-C-1-j. All NO_x emissions during these 1-hour periods covered by Section III-C-1-j shall be included when calculating the yearly NO_x tonnage. *[Consent Decree Condition IV-B-36, (08/13/07) and NSR ATC/OP 00007, Modification 5 Revision 0, Condition IV-B-3 (10/01/08)]*

2. Operational Limits

a. The permittee shall limit the throughput of the lime silo (EU: A00709) to 8,640 tons per any consecutive 12-month period. *[NSR ATC/OP 00007, Modification 4 Revision 1, Condition III-A-7 (03/20/07)]*

b. The permittee shall limit the throughput of each of the soda ash silos (EUs: A00710 and A00711) to 8,640 tons per any consecutive 12-month period. *[NSR ATC/OP 00007, Modification 4 Revision 1, Condition III-A-8 (03/20/07)]*

c. The permittee shall limit the maximum water flow in each cooling tower to 54,000 gallons per minute (EUs: A00712 and A00713). *[NSR ATC/OP 00007, Modification 4 Revision 1, Conditions III-A-6 and III-B-7 (03/20/07)]*

d. The permittee shall limit the operation of each Turbine, Unit 11 through 22 (EUs: A27 through A38), to 3,500 hours per year. *[NSR ATC/OP 00007, Modification 4 Revision 1, Condition III-A-3 (03/20/07)]*

e. The permittee shall limit the number of startups and shutdowns of each Turbine, Units 11 through 22 (EUs: A27 through A38), to 350 startups and 350 shutdowns per year. *[NSR ATC/OP 00007, Modification 4 Revision 1, Condition III-A-3 (03/20/07)]*

f. The permittee shall limit the operation of the emergency generator (EU: A21) for testing and maintenance purposes to 100 hours per year. The permittee may 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 shavings or demand response, except as provided in 40 CFR Part 63.6640(f)(4). *[40 CFR Part 63.6640]*

g. The permittee shall limit the operation of the emergency fire pump (EU: A45) for testing and maintenance purposes to 100 hours per year. The permittee may operate the emergency fire pump up to 50 hours per year for nonemergency situations, but those hours count towards the 100 hours provided for testing and maintenance. *[40 CFR Part 60.4211]*

h. The permittee shall limit the gasoline throughput (EUs: A46) to 1,000 gallons per month. *[AQR 12.5.2.6]*

i. The permittee shall limit operation of each natural gas turbine unit to the heat input limits listed in Table III-C-7 based on the LHV: *[NSR ATC Modification 4 Revision 1, Condition III-A (02/09/07)]*

Table III-C-7: Natural Gas Turbine Units Heat Input Limits

Emission Unit	Clark Station Designation	Natural Gas
A00704D	Turbine Unit 4	899 MMBtu/hr
A00701A	Turbine Unit 5	1,081 MMBtu/hr
A00702B	Turbine Unit 6	1,081 MMBtu/hr
A00705	Turbine Unit 7	1,081 MMBtu/hr
A00708	Turbine Unit 8	1,081 MMBtu/hr
A27	Turbine Unit 11	541 MMBtu/hr
A28	Turbine Unit 12	541 MMBtu/hr
A29	Turbine Unit 13	541 MMBtu/hr
A30	Turbine Unit 14	541 MMBtu/hr
A31	Turbine Unit 15	541 MMBtu/hr
A32	Turbine Unit 16	541 MMBtu/hr
A33	Turbine Unit 17	541 MMBtu/hr
A34	Turbine Unit 18	541 MMBtu/hr
A35	Turbine Unit 19	541 MMBtu/hr
A36	Turbine Unit 20	541 MMBtu/hr
A37	Turbine Unit 21	541 MMBtu/hr
A38	Turbine Unit 22	541 MMBtu/hr

3. Emission Controls

Turbine Units 5 through 8

a. Turbine Units 5 through 8 are subject to all applicable requirements and limits listed in 40 CFR Part 60, Subpart A and Subpart GG. The permittee shall comply with these requirements by meeting the following conditions and other applicable provisions in 40 CFR Part 60, Subpart A and Subpart GG:

i. The permittee shall use only natural gas in the combustion turbine units at the source. *[Consent Decree Condition IV-B-33 (08/13/07)]*

ii. Sulfur content of natural gas fuel shall not exceed 0.5 grains per 100 dscf as determined by annual verification. *[40 CFR Part 75, Appendix D]*

iii. The permittee shall meet the NO_x limitation under Subpart GG that is based on the formula provided in 40 CFR Part 60.332(a)(1).

b. Per manufacturer's recommendations or good operating practice, the permittee shall control PM_{10} exhaust emissions from each simple cycle system by properly maintaining and periodically replacing inlet air filters for each turbine. *[NSR ATC/OP 00007, Modification 4 Revision 1, Condition III-B-19 (03/20/07)]*

c. A startup period for Turbine Units 5 through 8 (EUs: A00701A, A00702B, A00705 and A00708) is defined as the period immediately following the beginning of the combustion of fuel not to exceed 60 minutes, except during a Cold Steam Turbine Startup of a unit operating in combined cycle mode. Cold Steam Turbine Startup means the startup of a power block when the steam turbine first stage base metal temperatures are below 250 degrees F. A Cold Steam Turbine Startup is defined as the period immediately following the beginning of the combustion of fuel in the first unit to start in that power block, not to exceed 120 minutes. A shutdown period is defined as the period of no more than 60 minutes that immediately precedes the cessation of fuel combustion. *[ATC Modification 5, Condition IV-E-8 (10/1/08)]*

Turbine Units 11 through 22 (Peaker Units)

d. Testing/tuning is defined as planned operation outside of normal emission limitations for the purpose of data collection, diagnostics, or operational adjustment. *[Part 70 OP (10/05/20)]*

e. The permittee shall limit all testing/tuning for Turbines 11 through 22 (EUs: A27 through A38) to a cumulative total of 600 minutes per calendar year per turbine. *[Part 70 OP (10/05/20)]*

f. For Turbines 11 through 22 (EUs: A27 through A38), each startup or shutdown is limited to 60 minutes. A startup for these units shall commence with the combustion of fuel in either or both turbines of the unit, and a shutdown shall terminate with the cessation of fuel combustion in either or both turbines of the unit. *[NSR ATC/OP 00007, Modification 4 Revision 1, Condition III-B-5 (03/20/07)]*

g. Selective Catalytic Reduction (SCR) shall be installed on Turbines 11 through 22 (EUs: A27 through A38). NO_X exhaust emissions shall be further controlled with water injection and good combustion practice. *[NSR ATC/OP 00007, Modification 4 Revision 1, Condition III-B-12 (03/20/07)]*

h. Each SCR system shall be maintained and operated on Turbines 11 through 22 (EUs: A27 through A38) in accordance with manufacturer's specifications. SCR shall be operated at all times the associated turbine unit is operating, excluding periods of startup, shutdown, and testing/tuning. *[NSR ATC/OP 00007, Modification 4 Revision 1, Condition III-B-13 (03/20/07) and Part 70 OP (10/05/20)]*

i. The permittee shall operate each SCR system such that NO_X emission limits for associated turbine units are met. *[NSR ATC/OP 00007, Modification 4 Revision 1, Condition III-B-14 (03/20/07)]*

j. The permittee shall install, operate, and maintain oxidation catalysts to control CO and VOC emissions on Turbines 11 through 22 (EUs: A27 through A38) in accordance with manufacturer's specifications. The catalysts shall be operated at all times the associated turbine units are operating, excluding periods of startup, shutdown, and testing/tuning. *[NSR ATC/OP 00007, Modification 4 Revision 1, Condition III-B-15 (03/20/07) and Part 70 OP (10/05/20)]*

k. The permittee shall operate each oxidation catalyst on Turbine Units 11 through 22 (EUs: A27 through A38) such that CO and VOC emission limits are met. *[NSR ATC/OP 00007, Modification 4 Revision 1, Condition III-B-16 (03/20/07)]*

Silos

l. The permittee shall ensure that the baghouse on the lime silo and soda ash silos (EUs: A00709 through A00711) is in operation during the silo loading. The permittee shall ensure that the baghouse operates at a minimum of 99.9 percent efficiency at all times. [NSR ATC/OP 00007, Modification 4 Revision 1, Condition III-B-9 (03/20/07)]

Cooling Towers (EUs: A00712 and A00713)

m. The permittee shall operate the cooling towers with drift eliminators that have a maximum drift rate of 0.002 percent, based on manufacturer's specifications. *[NSR ATC/OP 00007, Modification 4 Revision 1, Condition III-B-7 (03/20/07)]*

n. The permittee shall limit the TDS concentration in the cooling towers process water to 12,000 ppm on a 30-day rolling average. *[NSR ATC/OP 00007, Modification 4 Revision 1, Conditions III-A-6 and III-B-7 (03/20/07)]*

Diesel Engines

o. The permittee shall combust only diesel fuel with a maximum sulfur content of 15 ppm and either a minimum cetane index of 40 or a maximum aromatic content of 35 percent by volume in the fire pump (EU: A45). *[NSR ATC 00007, Modification 6, Conditions IV-D-4, (04/27/09)]*

p. The permittee shall operate the fire pump (EU: A45) with turbocharger and aftercooler. *[NSR ATC 00007, Modification 6, Conditions IV-D-1, (04/27/09)]*

q. Beginning January 1, 2015, the permittee shall only combust diesel fuel with a maximum sulfur content of 15 ppm and either a minimum cetane index of 40 or a maximum aromatic content of 35 percent by volume in the emergency generator (EU: A21). *[40 CFR Part 63.6604(a)]*

r. The permittee shall inspect and maintain the diesel emergency generator (EU: A21) to comply with the following requirements in accordance to the provisions of 40 CFR Part 63, Subpart ZZZZ:

i. Change the oil and filter every 500 hours of operation or annually whichever comes first;

ii. Inspect air cleaner every 1,000 hours of operation or annually whichever comes first; and

iii. Inspect all hoses and belts every 500 hours of operation or annually whichever comes first and replace if needed.

s. The permittee shall operate and maintain each of the diesel emergency generators in accordance with the manufacturer's specifications. *[AQR 12.5.2.6(a)]*

Gasoline Dispensing

t. From October 1 to March 31 every year in the Las Vegas Valley, the Eldorado Valley, the Ivanpah Valley, the Boulder City limits, and any area within three miles of these areas, no gasoline intended as a final product for fueling motor vehicles shall be supplied or sold by any person; sold at retail; sold to a private or a municipal fleet for consumption; or introduced into any motor vehicle by any person unless the gasoline has at least 3.5 percent oxygen content by weight. *[AQRs 53.1.1 & 53.2.1]*

u. If a gasoline storage tank in the Las Vegas Valley, the Eldorado Valley, the Ivanpah Valley, the Boulder City limits, and any area within three miles of these areas, receives its last gasoline delivery with less than 3.5 percent oxygen content by weight before September 15, gasoline dispensed from that tank will be exempt from enforcement of Section 53.2.1 until the first delivery date after October 1. *[AQR 53.5.1.1]*

v. The permittee shall implement control technology requirements on gasoline dispensing equipment. *[40 CFR Part 63, Subpart CCCCCC & AQR 12.5.2.6(a)]*

w. The permittee shall not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following:

i. Minimize gasoline spills;

ii. Clean up spills as expeditiously as practicable; and

iii. Cover all open gasoline containers and all storage tank fill-pipes with a gasketed seal when not in use. *[40 CFR Part 63.11116]*

Other

x. At all times, including periods of startup, shutdown, and malfunction, the permittee 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. *[40 CFR Part 60.11(d)]*

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

D. MONITORING

1. The permittee shall comply with the applicable monitoring requirements of 40 CFR Part 60, Subparts A and GG by maintaining CEMS on Turbine Units 5 through 8 (EUs: A00701A–A00708) and 40 CFR Part 60, Subparts A and KKKK on Turbine Units 11 through 22 (EUs: A27–A38). *[AQR 12.5.2.6]*

   a. Required periodic audit procedures and QA/QC procedures for CEMS shall conform to the provisions of 40 CFR Part 60 and 40 CFR Part 75.

   b. Relative Accuracy Test Audits (RATA) of the CO, NO_x, and O_2 CEMS shall be conducted at least annually.

2. The permittee shall comply with applicable monitoring requirements of 40 CFR Part 63, Subpart CCCCCC by maintaining records of gasoline throughput. *[AQR 12.5.2.6]*

3. The permittee shall comply with applicable emissions limits in this operating permit. Emissions of NO_X and/or CO greater than the applicable limits, as determined by the NO_x and CO CEMS, shall be considered a violation of the emission limits of this permit and may result in enforcement action. However, compliant CEMS data does not preclude the use of other credible evidence in determining or showing compliance. *[AQR 12.5.2.6]*

Turbine Units 5 through 8

4. The permittee shall, to demonstrate continued direct compliance with operational limitations and the hourly and/or yearly emissions limitations for NOx and CO specified in Section II of this permit, calibrate, maintain, and operate CEMS on Turbine Units 5 through 8 to monitor and record the following parameters for each individual turbine unit:

   a. Hours of operation;

   b. Fuel consumption;

   c. Hours of downtime of the CEMS;

   d. Exhaust gas flow rate (by direct or indirect methods);

e. Exhaust gas concentration of NO_x, CO and O_2;

f. One hour average NO_x concentration; and

g. Hourly and 12-month rolling accumulated mass emissions of NO_x and CO. *[AQR 12.5.2.6]*

5. The permittee shall maintain a Quality Assurance Plan (QAP) for CEMS. The QAP is binding and consistent with the regulations. The QAP contains auditing schedules, reporting schedules, and design specifications for the CEMS system. The CEMS shall conform to all provisions of 40 CFR Part 60.13 and 40 CFR Part 60, Subpart GG. Audit procedures shall conform to the provisions of 40 CFR Part 60, Appendix F. The QAP for CEMS required for Turbines 5 through 8 (EUs: A00701A, A00702B, A00705, and A00708) has already been submitted to and accepted by the Control Officer. *[AQR 12.5.2.6]*

6. To determine the NO_x emission concentration on a one-hour average for Turbine Units 5 through 8 (EUs: A00701A–A00708), the permittee shall use CEMS in accordance with the applicable reference methods specified in 40 CFR Part 60 to calculate emission for each 15-minute interval within each clock hour, except as provided in this condition. Compliance with the 5 ppm NO_x emission rate shall be shown by the permittee by averaging all 15-minute CEMS interval readings within a clock hour, except that any 15-minute CEMS interval that contains any part of a startup or shutdown shall not be included in the calculation of that 1-hour average. A minimum of two 15-minute CEMS interval readings within a clock hour, not including startup or shutdown intervals, is required to determine compliance with the 5 ppm NO_x emission rate on a 1-hour average. *[ATC Modification 5, Condition IV-E-7 (10/1/08)]*

7. The permittee shall monitor monthly occurrences and duration of startup/shutdown cycles for Turbine Units 5 through 8 (EUs: A00701A–A00708). *[AQR 12.5.2.6(d)]*

Turbine Units 11 through 22 (EUs: A27 through A38, Peaker Units)

8. The permittee shall monitor and record at least the following data from each CEMS:

   a. Exhaust gas concentration of NO_X, CO, and diluent O_2;

   b. Exhaust gas flow rate (by direct or indirect methods);

   c. Fuel flow rate;

   d. Hours of operation;

   e. One-hour clock averages for NO_X, and CO concentrations;

   f. Hourly mass emissions of NO_X and CO; and

   g. Hours of downtime of the CEMS. *[AQR 12.5.2.6]*

9. The permittee shall report all emissions recorded by CEMS in clock-hour increments. Any clock hour that contains any part of a startup, shutdown, or testing/tuning event on either or both turbines of the unit shall not be subject to the limits in Tables III-C-2 or III-C-3.

10. Any clock hour that contains any part of a testing/tuning event shall be subject to the testing/tuning limits. *[Part 70 OP (10/05/20)]*

11. The permittee shall ensure the QAP for CEMS associated with Turbine Units 11 through 22 (EUs: A27–A38) is consistent with the regulations. The CEMS shall conform to all provisions of 40 CFR Part 60.13 and 40 CFR Part 60, Subpart KKKK. Audit procedures shall conform to the provisions of 40 CFR Part 60, Appendix F, except insofar as Subpart KKKK allows the use of 40 CFR Part 75 provisions. The QAP shall contain auditing schedules, reporting schedules, and design specifications for the CEMS systems. The QAP for CEMS required for Turbine Units 11 through 22 has already been submitted to and accepted by the Control Officer. *[NSR ATC/OP 00007, Modification 4 Revision 1, Condition III-E-9 (03/20/07)]*

12. The permittee shall monitor monthly occurrences and duration of startup/shutdown cycles for Turbine Units 11 through 22 (EUs: A27–A38). *[AQR 12.5.2.6(d)]*

13. The permittee shall monitor the duration of testing/tuning events for each turbine unit (EUs: A27–A38). *[AQR 12.5.2.6(d)]*

Cooling Towers (EUs: A00712 and A00713)

14. The permittee shall monitor the TDS in the cooling tower circulating water daily when operating. The permittee shall use the conductivity measurements for TDS monitoring or equivalent method approved in advance by the Control Officer. *[AQR 12.5.2.6]*

Diesel Engines

15. The permittee shall operate each emergency engine (EUs: A21 and A45) with a nonresettable hour meter and monitor the duration of operation for testing, maintenance, and non-emergency operation, and separately for emergencies. *[NSR ATC 00007, Modification 6, Conditions IV-E-1, (04/27/09)]*

16. The permittee shall monitor the sulfur content, and cetane index or aromatic content of the fuel burned in the fire pump (EU: A45) by retaining a copy of vendor fuel specifications. *[AQR 12.5.2.6(d)(1)(B)]*

17. Beginning January 1, 2015, the permittee shall monitor the sulfur content, and cetane index or aromatic content of the fuel burned in the emergency generator (EU: A21) by retaining a copy of vendor fuel specifications. *[40 CFR Part 63.6604(b) and AQR 12.5.2.6(d)(1)(B)]*

Gasoline Dispensing [AQR 12.5.2.6(d)(1)(B)]

18. The permittee shall monitor and record as necessary the throughput of gasoline (EU: A46) in gallons so as to determine monthly combined throughput, and shall calculate each month the total of the last 365 days of gasoline throughput divided by 12.

19. The permittee shall monitor the fuel storage and dispensing system to determine if its components are in compliance with the control requirements of this permit. Monitoring inspections shall be recorded and consist of:

    a. Inspecting each day the tank is operated for gasoline spills, and recording the times and dates the source became aware of a spill and cleaned the spill up; and

b. Inspecting covers on gasoline containers and fill pipes after each respective delivery, and recording the dates of fuel deliveries and corresponding inspections.

Other

20. The permittee shall perform at least one visual emissions observation on a plant-wide level each calendar quarter. Quarterly visual observations shall include the diesel-fired emergency generators and fire pump (EUs: A21 and A45) while operating, not necessarily simultaneously, to demonstrate compliance with the opacity limit. If any of the diesel-fired emergency generators or fire pump does not operate during the calendar quarter, then no observation of that unit shall be required. If visible emissions are observed, then corrective actions shall be taken to minimize the emissions and, if practicable, the opacity of emissions shall be visually determined in accordance with 40 CFR Part 60, Appendix A: Reference Method 9. *[AQR 12.5.2.6 and 40 CFR Part 70.6]*

E. TESTING

1. Performance testing is subject to the current Clark County Department of Air Quality Guidelines for Source Testing.

2. The permittee shall performance test baghouses after each 8,760 hours of use. Table III-E-1 summarizes PM_{10} performance test method for all baghouses. *[AQR 12.5.2.6]*

Table III-E-1: Performance Testing Requirements for Baghouses

Test Point	Pollutant	Method (40 CFR Part 60, Appendix A)	Frequency
Baghouse Exhaust Stack	PM_{10}	EPA Method 5 or 17	Every 8,760 hours of use

F. RECORDKEEPING

1. The permittee shall comply with all applicable record keeping requirements of 40 CFR Part 60.7; 40 CFR Part 60, Subpart GG; 40 CFR Part 60, Subpart IIII; 40 CFR Part 60, Subpart KKKK; 40 CFR Part 72; 40 CFR Part 75, Subpart F; and 40 CFR Part 63, Subparts ZZZZ and CCCCCC.

2. The permittee shall maintain records on-site that require semiannual reporting and include, at a minimum: *[AQR 12.5.2.6]*

   a. The magnitude and duration of excess emissions, permit deviations, notifications, monitoring system performance, malfunctions, and corrective actions taken, as required by 40 CFR Part 60.7;

   b. Total combined duration of startups and shutdowns (EUs: A27 through A38);

   c. The number of occurrences and the duration of each testing/tuning event as well as the reason of the testing/tuning (EUs: A27 through A38);

   d. CEMS audit results or accuracy checks, and corrective actions, as required by 40 CFR Part 60 and the CEMS Quality Assurance Plan;

e. Time, duration, nature and probable cause of any CEMS downtime and corrective actions taken;

f. Monthly CEMS NO_x and CO;

g. Monthly and annual total hours of operation for the peaker turbine generators (EUs: A27 through A38);

h. Annual hours of operation of the emergency generator and fire pump for testing, maintenance, and non-emergency use (EUs: A21 and A45);

i. Date and duration of operation of the emergency generator and fire pump for emergency use, including documentation justifying use during the emergency (EU: A21 and A45);

j. Monthly, consecutive 12-month total quantity of natural gas consumed in each gas turbine;

k. Monthly, consecutive 12-month total throughput of the lime silo and each soda ash silo (EUs: A00709, A00710, and A00711);

l. Monthly, consecutive 12-month total gasoline throughput (EU: A46) pursuant to 40 CFR Part 63.11116(b); and

m. Monthly, consecutive 12-month total emissions for each emission unit in tons per year.

3. The permittee shall maintain records on-site that include, at a minimum: *[AQR 12.5.2.6]*

a. All CEMS information required by 40 CFR Part 75, including a CEMS monitoring plan;

b. Startup and shutdown emissions per turbine in pounds per hour and yearly emissions, including startup, shutdown and normal operations, in tons per each consecutive 12-month period;

c. The date, time, and duration of each startup and shutdown (EUs: A00701A through A00708 and EUs: A27 through A38);

d. Sulfur content of natural gas;

e. Sulfur content and cetane index or aromatic content of diesel fuel used to power the fire pump (EU: A45) as certified by the supplier;

f. Beginning January 1, 2015, the sulfur content and cetane index or aromatic content of diesel fuel used to power the emergency generator (EU: A21) as certified by the supplier;

g. Daily TDS content of tower circulation of each cooling tower water, when operating (EUs: A00712 and A00713);

h. Log of visible emission checks;

i. Annual copies of all reports, compliance certifications, other submissions and all records made or required under the Acid Rain Program;

j. Copies of all documents used to complete an Acid Rain permit application and any other submission under the Acid Rain Program to demonstrate compliance with the requirements of the Acid Rain Program;

k. Date and time that gasoline storage and distribution equipment was taken out of service;

l. Date of repair or replacement of gasoline storage and distribution equipment/parts;

m. Results of performance testing; and

n. Records of location changes for nonroad engines, if applicable.

4. The permittee shall include at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective action taken (if required) for all inspections, visible emission checks, and testing required under monitoring, logs, reports, and records. *[AQR 12.5.2.6]*

5. Records and data required by this operating permit to be maintained by the permittee may, at the permittee's expense, be audited at any time by a third party selected by the Control Officer. *[AQR 4.1 and AQR 12.5.2.8(b)]*

6. The permittee shall keep all records and logs, or a copy thereof, on-site for a minimum of five (5) years from the date the measurement was taken or data was entered, and shall make these available to DAQ upon request. *[AQR 12.5.2.6]*

7. The permittee shall submit an RMP by the date specified in Section 68.10 and shall certify compliance with the requirements of Part 68 as part of the annual compliance certification as required by 40 CFR Parts 70 or 71 should this stationary source, as defined in 40 CFR Part 68.3, become subject to the accidental release prevention regulations in 40 CFR Part 68. *[AQR 12.5.2.6(d)(4)(B)]*

8. The Control Officer reserves the right to require additional requirements concerning records and record keeping for this source. *[AQR 12.5.2.6]*

G. REPORTING

1. The permittee shall address all report submissions to the attention of the Control Officer. *[AQR 12.5.2.6(d), AQR 14.3, AQR 21.4, and AQR 22.4]*

2. The permittee shall include in all reports a certification of truth, accuracy, and completeness by the responsible official. *[AQR 12.5.2.6 and AQR 12.5.2.6(l)]*

3. The permittee shall submit semiannual reports to the Control Officer. *[AQR 12.5.2.6]*

4. The permittee shall include the following requirements in semiannual reports: *[AQR 12.5.2.6]*

   a. The report shall include each item listed in Section III-F-2.

   b. The report shall include semiannual summaries of any permit deviations, their probable cause, and corrective or preventative actions taken.

   c. The report shall be submitted to DAQ within 30 calendar days after the due date.

5. The permittee shall comply with the schedule for report submissions outlined in Table III-G-1 regardless of the date of issuance of this OP. *[AQR 12.5.2.6(d) & AQR 12.5.2.8]*

Table III-G-1: Reporting Schedule

Required Report	Applicable Period	Due Date
Semiannual report for 1st six-month period	January, February, March, April, May, June	July 30 each year[1]
Semiannual report for 2nd six-month period; any additional annual records required	July, August, September, October, November, December	January 30 each year[1]
Annual Compliance Certification	Calendar year	January 30 each year[1]
Annual Emissions Inventory Report	Calendar year	March 31 each year[1]
Annual Emissions Statement[2]	Calendar year	March 31 each year[1]
Notification of Malfunctions, Startup, Shutdowns, or Deviations with Excess Emission	As required	Within 24 hours of the permittee learns of the event
Report of Malfunctions, Startup, Shutdowns, or Deviations with Excess Emission	As required	Within 72 hours of the notification
Deviation Report without Excess Emissions	As required	Along with semiannual reports[1]
Excess Emissions that Pose a Potential Imminent and Substantial Danger	As required	Within 12 hours of the permittee learns of the event
Performance Testing Protocol	As required	No less than 45 days, but no more than 90 days, before the anticipated test date[1]
Performance Testing	As required	Within 60 days of end of test[1]

[1]If the due date falls on a Saturday, Sunday, or federal or Nevada holiday, the submittal is due on the next regularly scheduled business day.
[2]Required only for stationary sources that emit 25 tons or more of NO_x) and/or emit 25 tons or more of VOCs during a calendar year.

6. The Control Officer reserves the right to require additional reports and reporting to verify compliance with permit conditions, permit requirements, and requirements of applicable federal regulations. *[AQR 4.1 and AQR 12.5.2.6]*

7. The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR Part 72 and 40 CFR Part 75. *[40 CFR Part 72.9(f)]*

H. MITIGATION

The source has no federal offset requirements. *[AQR 59.1.1]*

IV. ACID RAIN REQUIREMENTS

1. In accordance with the provisions of Title IV of the Clean Air Act and 40 CFR Parts 72–77, this Acid Rain Permit is issued to Nevada Power Company dba NV Energy Clark Station, Las Vegas, Nevada.

2. All terms and conditions of the permit are enforceable by DAQ and EPA under the Clean Air Act. *[40 CFR Part 72]*

3. The permittee shall comply with all the applicable requirements of the Acid Rain Permit Application located in Attachment 2. *[40 CFR Part 72.30]*

4. This Acid Rain permit incorporates the definitions of terms in 40 CFR Part 72.2.

5. This permit is valid for a term of five years from the date of issuance unless a timely and complete renewal application is submitted to DAQ. *[40 CFR Part 72.69]*

6. A timely renewal application is an application that is received at least six months prior to the permit expiration date. *[40 CFR Part 72.30]*

7. Emissions from this source shall not exceed any allowances that the source lawfully holds under Title IV of the Act or its regulations. *[AQR 12.5.2.6 and 40 CFR Part 70.6(a)(4)]*

V. OTHER REQUIREMENTS

1. The permittee shall not use, sell, or offer for sale any fluid as a substitute material for any motor vehicle, residential, commercial, or industrial air conditioning system, refrigerator freezer unit, or other cooling or heating device designated to use a chlorofluorocarbon or hydrochlorofluorocarbon compound as a working fluid, unless such fluid has been approved for sale in such use by the Administrator. The permittee shall keep record of all paperwork relevant to the applicable requirements of 40 CFR Part 82 on-site. *[40 CFR Part 82]*

2. The permittee shall notify DAQ of a testing/tuning event no less than 24 hours prior to the event unless DAQ agrees to a shorter notification time. *[AQR 12.5.2.6(d)]*

VI. PERMIT SHIELD

Compliance with the terms contained in this permit shall be deemed compliance with the following applicable requirements in effect on the date of permit issuance. *[AQR 12.5.2.9]*

Table VI-1: Applicable Requirements Related to Permit Shield

Citation	Title
AQR 14.1.56, Subpart GG	"Standards of Performance for New Stationary Sources (NSPS)—Stationary Gas Turbines"

Table VI-2: Streamlined Requirements Related to Permit Shield

Regulation (40 CFR)	Pollutant	Regulatory Standard	Permit Limit	Value Comparison			Averaging Comparison			Shield Statement
				Standard Value, in Units of Permit Limit[1]	Permit Limit Value	Is Permit Limit Equal or More Stringent	Standard Averaging Period	Permit Limit Averaging Period	Is Permit Limit Equal or More Stringent	
Turbines 5 through 8										
60.332 (GG)	NOx	75[1] ppmvd @ 15% O_2	5.0 ppmvd @ 15% O_2	75[1]	5.0	Yes	4 hour	1 hour	Yes	The permit limit is more stringent than the standard, based on both concentration and averaging time, therefore the facility should be shielded from the standard.
60.333 (GG)	SO_2	0.15% by volume @15% O_2	1.62 lbs/hr	830[2]	1.62	Yes	4 hour	1 hour	Yes	The permit limit is more stringent than the standard, based on both concentration and averaging time, therefore the facility should be shielded from the standard.
Turbines 11 through 22										
60.4330 (KKKK)	SO_2	0.06 lb/MMBtu	0.00066 lb/MMBtu	0.06	6.6 E-04	Yes	N/A	N/A	Yes	The permit limit is more stringent than the standard, based on both concentration and averaging time, therefore the facility should be shielded from the standard.

[1]The 60.332 NOx standard is a formula; the value used here (75 ppmvd) is the minimum possible value of the standard for any emission unit.
[2]Heat input used to calculate SO_2 standard value (in units of the permit limit) is the permit limit of 1081 MMBtu/hr.

ATTACHMENT 1 – APPLICABLE REGULATIONS

REQUIREMENTS SPECIFICALLY IDENTIFIED AS APPLICABLE:

1. NRS, Chapter 445B.
2. Applicable AQR Sections:

Citation	Title
AQR 0	Definitions
AQR 4	Control Officer
AQR 5	Interference with Control Officer
AQR 8	Persons Liable for Penalties – Punishment: Defense
AQR 9	Civil Penalties
AQR 10	Compliance Schedule
AQR 12.4	Authority to Construct Application and Permit Requirements for Part 70 Sources
AQR 12.5	Part 70 Operating Permit Requirements
AQR 14.1.13	Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978
AQR 14.1.15	Standards of Performance for Small Industrial – Commercial – Institutional Steam Generating Units
AQR 14.1.56	Standards of Performance for New Stationary Sources (NSPS) – Standards of Performance for Gas Turbines
AQR 18	Permit and Technical Service Fees
AQR 21	Acid Rain Continuous Emissions Monitoring
AQR 22	Acid Rain Permits
AQR 25	Upset/Breakdown, Malfunctions
AQR 26	Emissions of Visible Air Contaminants
AQR 28	Fuel Burning Equipment
AQR 40	Prohibition of Nuisance Conditions
AQR 41	Fugitive Dust
AQR 42	Open Burning
AQR 43	Odors in the Ambient Air
AQR 70	Emergency Procedures
AQR 80	Circumvention

3. CAAA, Authority: 42 U.S.C. § 7401, et seq.
4. Applicable 40 CFR Subsections:

Citation	Title
40 CFR Part 52.21	Prevention of Significant Deterioration (PSD)
40 CFR Part 52.1470	SIP Rules
40 CFR Part 60, Subpart A	Standards of Performance for New Stationary Sources (NSPS) – General Provisions
40 CFR Part 60, Subpart Da	Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978

Citation	Title
40 CFR Part 60, Subpart Dc	Standards of Performance for Small Industrial – Commercial – Institutional Steam Generating Units
40 CFR Part 60, Subpart GG	Standards of Performance for New Stationary Sources (NSPS) – Stationary Gas Turbines
40 CFR Part 60, Subpart IIII	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
40 CFR Part 60, Subpart KKKK	Standards of Performance for New Stationary Sources (NSPS) – Stationary Combustion Turbines
40 CFR Part 60	Appendix A, Method 9 or equivalent, (Opacity)
40 CFR Part 63, Subpart ZZZZ	National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines
40 CFR Part 64	Compliance Assurance Monitoring
40 CFR Part 70	Federally Mandated Operating Permits
40 CFR Part 72	Acid Rain Permits Regulation
40 CFR Part 73	Acid Rain Sulfur Dioxide Allowance System
40 CFR Part 75	Acid Rain Continuous Emission Monitoring
40 CFR Part 82	Protection of Stratospheric Ozone

ATTACHMENT 2 – ACID RAIN PERMIT APPLICATIONS

United States
Environmental Protection Agency
Acid Rain Program

OMB No. 2060-0258
Approval expires 11/30/2012

Acid Rain Permit Application

For more information, see instructions and 40 CFR 72.30 and 72.31.

This submission is: ☐ new ☐ revised ■ for Acid Rain permit renewal

STEP 1

Identify the facility name, State, and plant (ORIS) code.

Facility (Source) Name **Clark Station**	State **Nevada**	Plant Code **2322**

STEP 2

Enter the unit ID# for every affected unit at the affected source in column "a."

a	b
Unit ID#	Unit Will Hold Allowances in Accordance with 40 CFR 72.9(c)(1)
11A	Yes
11B	Yes
12A	Yes
12B	Yes
13A	Yes
13B	Yes
14A	Yes
14B	Yes
15A	Yes
15B	Yes
16A	Yes
16B	Yes
17A	Yes
17B	Yes
18A	Yes
18B	Yes
19A	Yes
19B	Yes

EPA Form 7610-16 (Revised 12-2009)

Facility (Source) Name (from STEP 1) **Clark Station**

Acid Rain - Page 2

20A	Yes
20B	Yes
21A	Yes
21B	Yes
22A	Yes
22B	Yes

Facility (Source) Name (from STEP 1) **Clark Station**

Permit Requirements

STEP 3

Read the standard requirements.

(1) The designated representative of each affected source and each affected unit at the source shall:

(i) Submit a complete Acid Rain permit application (including a compliance plan) under 40 CFR part 72 in accordance with the deadlines specified in 40 CFR 72.30; and

(ii) Submit in a timely manner any supplemental information that the permitting authority determines is necessary in order to review an Acid Rain permit application and issue or deny an Acid Rain permit;

(2) The owners and operators of each affected source and each affected unit at the source shall:

(i) Operate the unit in compliance with a complete Acid Rain permit application or a superseding Acid Rain permit issued by the permitting authority; and

(ii) Have an Acid Rain Permit.

Monitoring Requirements

(1) The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75.

(2) The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the source or unit, as appropriate, with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.

(3) The requirements of 40 CFR part 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Act and other provisions of the operating permit for the source.

Sulfur Dioxide Requirements

(1) The owners and operators of each source and each affected unit at the source shall:

(i) Hold allowances, as of the allowance transfer deadline, in the source's compliance account (after deductions under 40 CFR 73.34(c)), not less than the total annual emissions of sulfur dioxide for the previous calendar year from the affected units at the source; and

(ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.

(2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act.

(3) An affected unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide requirements as follows:

(i) Starting January 1, 2000, an affected unit under 40 CFR 72.6(a)(2); or

(ii) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3).

Facility (Source) Name (from STEP 1) **Clark Station**

Sulfur Dioxide Requirements, Cont'd.

STEP 3, Cont'd.

(4) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.
(5) An allowance shall not be deducted in order to comply with the requirements under paragraph (1) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.
(6) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
(7) An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right.

Nitrogen Oxides Requirements

The owners and operators of the source and each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides.

Excess Emissions Requirements

(1) The designated representative of an affected source that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77.
(2) The owners and operators of an affected source that has excess emissions in any calendar year shall:
(i) Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR part 77; and
(ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77.

Recordkeeping and Reporting Requirements

(1) Unless otherwise provided, the owners and operators of the source and each affected unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the Administrator or permitting authority:
(i) The certificate of representation for the designated representative for the source and each affected unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative;

Facility (Source) Name (from STEP 1) **Clark Station**

Recordkeeping and Reporting Requirements, Cont'd.

STEP 3, Cont'd.

(ii) All emissions monitoring information, in accordance with 40 CFR part 75, provided that to the extent that 40 CFR part 75 provides for a 3-year period for recordkeeping, the 3-year period shall apply.
(iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and,
(iv) Copies of all documents used to complete an Acid Rain permit application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.

(2) The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR part 72 subpart I and 40 CFR part 75.

Liability

(1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Act.
(2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Act and 18 U.S.C. 1001.
(3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.
(4) Each affected source and each affected unit shall meet the requirements of the Acid Rain Program.
(5) Any provision of the Acid Rain Program that applies to an affected source (including a provision applicable to the designated representative of an affected source) shall also apply to the owners and operators of such source and of the affected units at the source.
(6) Any provision of the Acid Rain Program that applies to an affected unit (including a provision applicable to the designated representative of an affected unit) shall also apply to the owners and operators of such unit.
(7) Each violation of a provision of 40 CFR parts 72, 73, 74, 75, 76, 77, and 78 by an affected source or affected unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Act.

Effect on Other Authorities

No provision of the Acid Rain Program, an Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8 shall be construed as:
(1) Except as expressly provided in title IV of the Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an affected source or affected unit from compliance with any other provision of the Act, including the provisions of title I of the Act relating

Facility (Source) Name (from STEP 1) **Clark Station**

Effect on Other Authorities, Cont'd.

STEP 3, Cont'd.

to applicable National Ambient Air Quality Standards or State Implementation Plans;
(2) Limiting the number of allowances a source can hold; *provided,* that the number of allowances held by the source shall not affect the source's obligation to comply with any other provisions of the Act;
(3) Requiring a change of any kind in any State law regulating electric utility rates and charges, affecting any State law regarding such State regulation, or limiting such State regulation, including any prudence review requirements under such State law;
(4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,
(5) Interfering with or impairing any program for competitive bidding for power supply in a State in which such program is established.

Certification

STEP 4
Read the certification statement, sign, and date.

I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name Dariusz Rekowski	
Signature	Date 12-19-2018

From: Rekowski, Dariusz (NV Energy)
To: Silvia Gonzalez
Subject: Read: [INTERNET] DAQ Permit_and_TSD for Source ID: 0007_Clark Generating Station
Date: Tuesday, November 30, 2021 8:06:12 PM
Importance: High

Your message

To: Rekowski, Dariusz (NV Energy)

Subject: [INTERNET] DAQ Permit_and_TSD for Source ID: 0007_Clark Generating Station

Sent: Tuesday, November 30, 2021 3:00:56 PM (UTC-08:00) Pacific Time (US & Canada) was read on Tuesday, November 30, 2021 8:06:03 PM (UTC-08:00) Pacific Time (US & Canada).

From: Butler, Johnny (NV Energy)
To: Silvia Gonzalez
Subject: Read: [INTERNET] DAQ Permit_and_TSD for Source ID: 0007_Clark Generating Station
Date: Wednesday, December 1, 2021 5:54:14 AM
Importance: High

Your message

To: Butler, Johnny (NV Energy)

Subject: [INTERNET] DAQ Permit_and_TSD for Source ID: 0007_Clark Generating Station

Sent: Tuesday, November 30, 2021 11:00:56 PM (UTC) Coordinated Universal Time

was read on Wednesday, December 1, 2021 1:54:07 PM (UTC) Coordinated Universal Time.

From:	Spitzer, Sean (NV Energy)
To:	Silvia Gonzalez; Rekowski, Dariusz (NV Energy); Butler, Johnny (NV Energy); Page, Steven (NV Energy); Lacy, Starla (NV Energy)
Cc:	Giannantonio, Anthony (NV Energy); Garcia, Tony (NV Energy)
Subject:	RE: [INTERNET] DAQ Permit_and_TSD for Source ID: 0007_Clark Generating Station
Date:	Tuesday, November 30, 2021 3:04:50 PM

Thank you Silvia; I'm confirming receipt. Take care,
Sean

From: Silvia Gonzalez <SXG@ClarkCountyNV.gov>
Sent: Tuesday, November 30, 2021 3:01 PM
To: Rekowski, Dariusz (NV Energy) <DREKOWSKI@NVENERGY.COM>; Butler, Johnny (NV Energy) <JBUTLER@NVENERGY.COM>; Page, Steven (NV Energy) <SPAGE@NVENERGY.COM>; Lacy, Starla (NV Energy) <SLACY@NVENERGY.COM>
Cc: Giannantonio, Anthony (NV Energy) <AGIANNANTONIO@NVENERGY.COM>; Garcia, Tony (NV Energy) <TONY.GARCIA@NVENERGY.COM>; Spitzer, Sean (NV Energy) <SSPITZER@NVENERGY.COM>
Subject: [INTERNET] DAQ Permit_and_TSD for Source ID: 0007_Clark Generating Station
Importance: High

Attached are the Permit and Technical Support documents for Source ID: 00007, clark Generating Station. The documents should be printed and maintained on site.

If you have any questions regarding the Permit, please contact Santosh Mathew at 702-455-5942.

Please confirm receipt of the documents.

Thank you,

Silvia Gonzalez
Administrative Secretary
Department of Air Quality
Permitting Division
702-455-8007
sxg@clarkcountynv.gov

NVEnergy

June 29, 2021

Santosh Mathew
Permitting Supervisor
Clark County Department of Environment and Sustainability, Division of Air Quality
4701 W. Russell Road, Suite 200
Las Vegas, NV 89118

Re: **AQR Section 12.3.1.6(b) and 12.5.2.12(a) Notification**
Spare Gas Generator Installation Project
Clark Generating Station (Source ID: 7)

Dear Mr. Mathew:

Pursuant to AQR 12.3.1.6(b) and 12.5.2.12(a), Nevada Power Company d/b/a NV Energy (NVE) is providing this combined notification to the Clark County Department of Environment and Sustainability, Division of Air Quality (DAQ) for the Spare Gas Generator Installation project associated with Turbine Unit 17 (EU:A33) at the Clark Generating Station (Clark). AQR 12.5.2.12(a) requires concurrent notification to EPA of such changes, and as such EPA has been copied on this notification.

Clark is an existing major stationary source, operating under a Part 70 Permit for Source 7 issued on October 5, 2020. The facility is in an area designated as marginal non-attainment for ozone National Ambient Air Quality Standard (2015) and is designated as attainment for all other criteria pollutants. The station houses 12 emission units commonly referred to as the "Clark Peakers" (EUs: A27-A38), each of which is a PW Power Systems FT8 3® SWIFTPAC® gas turbine package comprising two stationary combustion turbine engines driving a single generator with a nominal output capacity of 57.9 MW. The gas generator (commonly called a turbine engine), is merely a component of the emission unit.

Under the provisions of AQR 12.3.1.6(b), NV Energy hereby provides the information set out in AQR 12.3.1.6(a).

AQR 12.3.1.6 (a)(1) A description of the project.

Clark recently experienced a mechanical failure on one of the gas generators in Unit 17 (EU: A33), thus necessitating its removal and repair. A replacement gas generator will be leased from the turbine vendor and installed in the emission unit as to allow the unit to resume functional operation in a timely manner.

AQR 12.3.1.6 (a)(2) Identification of the emissions unit(s) whose emissions of a regulated NSR pollutant could be affected by the project.

Clark Turbine Unit 17 (EU: A33).

AQR 12.3.1.6 (a)(3) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions, the projected actual emissions, the amount of emissions excluded under paragraph (1)(D) of the definition of projected actual emissions and an explanation for why such amount was excluded, and any netting calculations, if applicable.

Actual emissions of NSR pollutants are not expected to increase due to the project. Because the existing gas generator and the leased gas generator are substantially identical and will use existing air pollution control equipment, their emissions characteristics are expected to be the same. Additionally, no changes to utilization are expected in the post-project operation of this unit.

NVE calculated the emissions increase using a forecast of the annual emissions with the project minus the sum of the baseline emissions and excludable emissions. To calculate the projected actual emissions, NVE used the annual average hourly heat input in the baseline period and multiplied by the projected annual hourly utilization. In accordance with the AQR definition of Projected Actual Emissions at 12.3.2(hh) in calculating project emissions increases, NV Energy then excluded the portion of emissions occurring from the project-affected existing unit that the unit could have accommodated during the baseline period that are also unrelated to the project, based on heat input and utilization given sufficient electricity demand. The emission factors used in the analysis are based on the highest recorded average annual emission factors in the baseline years for NO_x and CO (conservatively rounded up), 2014 performance test results for $PM_{10/2.5}$ and VOC, and the acid rain default emission factor for pipeline natural gas for SO_2. No changes to the emission factors are expected as a result of the project.

The calculated projected emissions increase was compared to the major and minor NSR significant emission thresholds listed in AQR Sections 12.3.2(mm) and 12.4.2.1(b), respectively. As shown in **Table 1** below, the maximum annual emission increase projected from this project is zero tons for all pollutants; inherently less than the NSR thresholds and less than the minor NSR/EPA reporting thresholds for all pollutants.

Table 1

Description	$PM_{10}/PM_{2.5}$	CO	VOC	NOx	SO_2	CO_2e
Baseline Actual Emissions, average 2018 and 2019 (tpy)	**0.98**	**0.36**	**0.31**	**2.70**	**0.07**	**14,339**
Unit 17: Projected Actual Emissions (tpy)	0.99	1.23	0.31	2.84	0.07	14,456
Unit 17: Excludable Emissions	0.01	0.88	0.00	0.14	0.00	117
Project Emission Increase = Projected Actual – Baseline Actual – Excludable Emissions (tpy)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0**
NSR Significance thresholds (tpy)	**10**	**100**	**40**	**40**	**40**	**75,000**
Minor NSR Significance thresholds (tpy)	**5**	**50**	**20**	**20**	**20**	**n/a**
Are emissions increases > Minor NSR (Y/N)	N	N	N	N	N	n/a
Are emissions increases > NSR Significance thresholds? (Y/N)	N	N	N	N	N	N

This project will not impact compliance with the permitted air pollutant emission limits or heat input limit, and no revisions to any existing permit requirements are necessary. This project is not a modification under NSPS. Moreover, no new applicable requirements will be triggered because of this project. Pursuant to AQR Section 12.3.1.6(b), NVE understands that a determination from DAQ is not required before beginning actual implementation of the project. NVE intends to commence operation of the project immediately after the 7-day advance notification period has ended.

Pursuant to AQR 12.3.1.6(d), NVE will submit a report to the Control Officer within sixty (60) days after the end of each calendar year during which records must be generated under Section 12.3.1.6(c) setting out the unit's annual emissions during the calendar year that preceded submission of the report. The semi-annual report will satisfy this requirement.

Please contact Chris Heintz at (702) 402-2048 or Anthony Giannantonio (702) 402-7711 if you have any questions or concerns regarding this notification.

Pursuant to AQR 12.5.2, I certify that based on information and belief formed after reasonable inquiry, the statements and information in this document are true, accurate and complete.

Sincerely,

Dariusz Rekowski
Vice President, Generation
(Responsible Official)
NV Energy

cc: EPA Region IX

NVEnergy

July 8, 2021

Santosh Mathew
Permitting Supervisor
Clark County Department of Environment and Sustainability, Division of Air Quality
4701 W. Russell Road, Suite 200
Las Vegas, NV 89118

Re: **AQR Section 12.3.1.6(b) and 12.5.2.12(a) Notification**
Spare Gas Generator Installation Project
Clark Generating Station (Source ID: 7)

Dear Mr. Mathew:

Pursuant to AQR 12.3.1.6(b) and 12.5.2.12(a), Nevada Power Company d/b/a NV Energy (NVE) is providing this combined notification to the Clark County Department of Environment and Sustainability, Division of Air Quality (DAQ) for the Spare Gas Generator Installation project associated with Turbine Unit 20 (EU: A36) at the Clark Generating Station (Clark). AQR 12.5.2.12(a) requires concurrent notification to EPA of such changes, and as such EPA has been copied on this notification.

Clark is an existing major stationary source, operating under a Part 70 Permit for Source 7 issued on October 5, 2020. The facility is in an area designated as marginal non-attainment for ozone National Ambient Air Quality Standard (2015) and is designated as attainment for all other criteria pollutants. The station houses 12 emission units commonly referred to as the "Clark Peakers" (EUs: A27-A38), each of which is a PW Power Systems FT8 3® SWIFTPAC® gas turbine package comprising two stationary combustion turbine engines driving a single generator with a nominal output capacity of 57.9 MW. The gas generator (commonly called a turbine engine), is merely a component of the emission unit.

Under the provisions of AQR 12.3.1.6(b), NV Energy hereby provides the information set out in AQR 12.3.1.6(a).

AQR 12.3.1.6 (a)(1) A description of the project.

Clark recently experienced a mechanical failure on one of the gas generators in Unit 20 (EU: A36), thus necessitating its removal and repair. As the facility owns a spare gas generator that is stored on site, the installation of the spare gas generator will allow the emission unit to resume functional operation in a timely manner.

AQR 12.3.1.6 (a)(2) Identification of the emissions unit(s) whose emissions of a regulated NSR pollutant could be affected by the project.

Clark Turbine Unit 20 (EU: A36).

AQR 12.3.1.6 (a)(3) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions, the projected actual emissions, the amount of emissions excluded under paragraph (1)(D) of the definition of projected actual emissions and an explanation for why such amount was excluded, and any netting calculations, if applicable.

Actual emissions of NSR pollutants are not expected to increase due to the project. Because the existing gas generator and the leased gas generator are substantially identical and will use existing air pollution control equipment, their emissions characteristics are expected to be the same. Additionally, no changes to utilization are expected in the post-project operation of this unit.

NVE calculated the emissions increase using a forecast of the annual emissions with the project minus the sum of the baseline emissions and excludable emissions. To calculate the projected actual emissions, NVE used the annual average hourly heat input in the baseline period and multiplied by the projected annual hourly utilization. In accordance with the AQR definition of Projected Actual Emissions at 12.3.2(hh) in calculating project emissions increases, NV Energy then excluded the portion of emissions occurring from the project-affected existing unit that the unit could have accommodated during the baseline period that are also unrelated to the project, based on heat input and utilization given sufficient electricity demand. The emission factors used in the analysis are based on the highest recorded average annual emission factors in the baseline years for NO_x and CO (conservatively rounded up), 2014 performance test results for $PM_{10/2.5}$ and VOC, and the acid rain default emission factor for pipeline natural gas for SO_2. No changes to the emission factors are expected as a result of the project.

The calculated projected emissions increase was compared to the major and minor NSR significant emission thresholds listed in AQR Sections 12.3.2(mm) and 12.4.2.1(b), respectively. As shown in **Table 1** below, the maximum annual emission increase projected from this project is zero tons for all pollutants; inherently less than the NSR thresholds and less than the minor NSR/EPA reporting thresholds for all pollutants.

Table 1

Description	$PM_{10}/PM_{2.5}$	CO	VOC	NOx	SO_2	CO_2e
Baseline Actual Emissions, average 2019 and 2020 (tpy)	**0.15**	**0.23**	**0.11**	**2.66**	**0.07**	**12,734**
Unit 20: Projected Actual Emissions (tpy)	0.15	1.09	0.11	2.83	0.07	12,742
Unit 20: Excludable Emissions	0.00	0.86	0.00	0.17	0.00	8
Project Emission Increase = Projected Actual – Baseline Actual – Excludable Emissions (tpy)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0**
NSR Significance thresholds (tpy)	**10**	**100**	**40**	**40**	**40**	**75,000**
Minor NSR Significance thresholds (tpy)	**5**	**50**	**20**	**20**	**20**	**n/a**
Are emissions increases > Minor NSR (Y/N)	N	N	N	N	N	n/a
Are emissions increases > NSR Significance thresholds? (Y/N)	N	N	N	N	N	N

This project will not impact compliance with the permitted air pollutant emission limits or heat input limit, and no revisions to any existing permit requirements are necessary. This project is not a modification under NSPS. Moreover, no new applicable requirements will be triggered because of this project. Pursuant to AQR Section 12.3.1.6(b), NVE understands that a determination from DAQ is not required before beginning actual implementation of the project. NVE intends to commence operation of the project immediately after the 7-day advance notification period has ended.

Pursuant to AQR 12.3.1.6(d), NVE will submit a report to the Control Officer within sixty (60) days after the end of each calendar year during which records must be generated under Section 12.3.1.6(c) setting out the unit's annual emissions during the calendar year that preceded submission of the report. The semi-annual report will satisfy this requirement.

Please contact Sean Spitzer at (702) 402-5132 or Anthony Giannantonio (702) 402-7711 if you have any questions or concerns regarding this notification.

Pursuant to AQR 12.5.2, I certify that based on information and belief formed after reasonable inquiry, the statements and information in this document are true, accurate and complete.

Sincerely,

Dariusz Rekowski
Vice President, Generation
(Responsible Official)
NV Energy

cc: EPA Region IX

From:	Spitzer, Sean (NV Energy)
To:	Santosh Mathew
Cc:	Page, Steven (NV Energy); Garcia, Tony (NV Energy); Emily Kolb; Vineet Masuraha; Sean Keane; Ted Lendis; AQ Permitting
Subject:	7 day notification letter - Wet compression on unit 11 at Clark (Source 7)
Date:	Thursday, September 23, 2021 4:02:49 PM
Attachments:	7-day notification - Wet compression Clark Unit 11 9-23-21.pdf

Good afternoon Santosh,

Per our discussion last week, NVE and Trinity have finalized the notification letter regarding the planned wet compression turbine installation project on Unit 11 (EU: A27) at Clark Station (Source 7). A hardcopy is being sent via FedEx as well, with cc to EPA Region IX.

Please feel free to reach out to us with any questions; we'd be happy to set up another call to go over anything in additional detail if needed. Thanks, and take care,

Sean Spitzer
Sr. Environmental Adviser
NV Energy
6226 W Sahara ave M/S 30
Las Vegas, NV 89146
(702) 402-5132 (office)
(702) 513-5010 (cell)

NVEnergy

September 23, 2021

Santosh Mathew
Permitting Supervisor
Clark County Division of Air Quality
4701 W. Russell Road, Suite 200
Las Vegas, NV 89118-2231

RE: 7-day Notification Letter per CCAQR 12.5.2.12(a)
Wet Compression System Installation on Unit 11 (EU: A27)
Clark Generating Station – Source ID 7

Dear Mr. Mathew:

Nevada Power Company d/b/a NV Energy (NVE) hereby provides required notification per Section 12.5.2.12(a) for the installation of a wet compression system at its Clark Generating Station (Source: 7). As AQR 12.5.2.12(a) requires concurrent notification to EPA of such changes, EPA Region IX has been copied on this notification. Please refer to the attachments for a detailed analysis of the project and all required documentation.

Please feel free to contact Sean Spitzer at (702) 513-5010 should you have any questions.

Sincerely,

Steve Page
Plant Director, Clark Generating Station
Alternate Responsible Official

Attachments

cc: EPA Region IX

TURBINE REPLACEMENT WITH WET COMPRESSION

Prior Notification of Off-Permit Change

NV Energy – Clark Generating Station

Prepared For:

Sean Spitzer, NV Energy

NV ENERGY INC.
6226 W. Sahara Ave. M/S 30
Las Vegas, NV 89146

Prepared By:

Emily Kolb, Trinity Consultants
Sean Keane, Trinity Consultants

TRINITY CONSULTANTS
7919 Folsom Blvd
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Sacramento, CA 95826

September 2021

Project 210506.0081

Trinity Consultants

TABLE OF CONTENTS

1. EXECUTIVE SUMMARY

NV Energy operates the Clark Generating Station (the Facility) located at 5640 Stephanie St., Las Vegas, Nevada 89122. The Facility currently operates under the Clark County Department of Environment and Sustainability, Division of Air Quality (DAQ) Part 70 Operating Permit for Source #7 (the Permit), issued on October 5, 2020 and revised on June 17, 2021. The Facility is located in Hydrographic Area 212 which is designated as marginal nonattainment for the 2015 8-hour ozone standard and attainment for all other criteria pollutants with respect to the National Ambient Air Quality Standards (NAAQS).[1] The Facility is a Title V major source and an area source of hazardous air pollutants (HAP), as total HAP potential emissions do not exceed 25 tpy and individual HAP potential emissions do not exceed 10 tpy. The Facility is an existing Prevention of Significant Deterioration (PSD) major source, per Clark County Air Quality Regulation (CCAQR) Section 12.2.2(s) and 12.2.2(ff)(1)(A).

NV Energy is proposing to replace one of the two natural gas-fired turbines associated with Emission Unit (EU) A27 with a similar turbine, equipped with a wet compression system on the air inlet, at the Facility (the Project), as further described in Section 2.2. NV Energy does not expect the Project to result in an increase of the current fuel input or emission limits contained in the Permit.

This report discusses the applicability of air regulatory requirements (permitting and compliance) for the Project, including:

- Prevention of Significant Deterioration (PSD)
- Nonattainment New Source Review (NA NSR)
- Minor New Source Review (NSR) permitting
- CCAQR Sections
- New Source Performance Standards (NSPS)
- National Emission Standards for Hazardous Air Pollutants (NESHAP)

With this report, NV Energy is providing DAQ and the U.S. Environmental Protection Agency (EPA) with a seven-day notification required by CCAQR Section 12.5.2.12 for the replacement of an existing turbine with a similar turbine equipped with wet compression, at the Facility. NV Energy can make the changes described herein after seven days following the submittal of this report. Additionally, as required by CCAQR Section 12.5.2.4 and Condition II.C.2 of the Permit, a responsible official certification has been provided in Appendix B. Further discussion of CCAQR Section 12.5 applicability to the Project can be found in Section 4.4 of this report.

[1] Clark County attainment status per EPA Greenbook: https://www3.epa.gov/airquality/greenbook/anayo_nv.html.

2. FACILITY AND PROJECT DESCRIPTION

2.1 Facility Overview

The Facility consists of seventeen natural gas-fired turbine units, cooling towers, diesel-fired emergency engines powering a generator and a fire pump, one 250 above-ground gasoline storage tank, storage silos, and various insignificant activities. The seventeen turbines consist of the following:

- One 60 MW simple cycle unit (EU A00704D, Unit 4);
- Four 85 MW combined cycle units which provide heat for four Heat Recovery Steam Generators (HRSG) turbines with no supplemental duct firing (EUs A00701A, A00702B, A00705, and A00708; Units 5-8); and
- 12 simple cycle paired units rated at 57.9 MW per pair (EUs A27 to EU A38; Units 11-22), referred to as the Peaker turbines, each of which is a PW Power Systems FT8 3® SWIFTPAC® gas turbine package comprising two stationary combustion turbine engines driving a single generator.

Natural gas is the only fuel fired by the turbines. Oxides of nitrogen (NO_X) emissions for EUs A27 through A38 are controlled by a selective catalytic reduction (SCR) system. Carbon monoxide (CO) and volatile organic compounds (VOC) for EUs A27 through A38 are controlled by an oxidation catalyst. Continuous emissions monitoring systems (CEMS) for NO_X and CO are installed on all turbines. Each of the Peaker turbines have a permitted heat input of 541 MMBtu/hr (LHV) based on 71º F.[2]

2.2 Project Description

High ambient temperatures (i.e., during the summer when power demand is high) generally result in reduced power output from the combustion turbines. As the ambient temperature increases, air density decreases which results in a lower flow rate of inlet air to the compressors. This corresponds to a lower flow rate of compressed air to the combustor, a lower mass flow rate of gases from the combustor to the turbine, and finally lower power output.

To balance the effects of the high ambient temperatures on power output during high demand season, NV Energy is proposing to replace an existing turbine at the Facility with one that is equipped with a wet compression system on the air inlet of the turbine. The new turbine will have a system to spray a fog of water into the turbine's inlet air stream; more water is sprayed than can evaporate in the inlet airflow. This excess fog (or overspray) is carried into the turbine compressor where it evaporates and provides an intercooling effect. The intercooling effect reduces the energy used by the compressor, which results in less power loss from the turbine, so more power is available at the output of the turbine. The intercooling effect and subsequent increase in efficiency provides for the majority of the increase in power output. Secondarily, the cooled, denser air allows for an increased fuel flow through the turbine, increasing the output to a level that the unit is already capable of producing under optimal conditions.

NV Energy is proposing to replace one of the Peaker turbines (EU A27) with a similar turbine equipped with wet compression. Note that EU A27 consists of two Peaker turbines in a pair, but only one of those turbines is being replaced as part of this Project. The turbine (also known as a gas generator) is a component of the emission unit (EU A27).

[2] Maximum hourly heat input rating per Table III-C-7 of the Permit. The temperature the heat input is based on historical permitting documentation associated with Authority to Construct Modification 4 Revision 1.

The replacement turbine's wet compression system will be integrated into the unit's control system and will include a series of limits to protect the engine from surpassing critical operating parameters. The wet compression system controls are designed to reduce or hold the fuel flow up to 541 MMBtu/hr, intrinsically ensuring the unit is not capable of exceeding the limit required by the Permit. NV Energy held discussions with the turbine supplier, and they have confirmed that the operation of wet compression with the replacement turbine will not increase the volumetric concentrations of NO_X, CO, and particulate matter (PM) above the current capability of EU A27 due to the following considerations:

- The replacement turbine will be operated with the same exhaust gas temperature schedule to prevent changes to the burner exit temperature and the adiabatic flame temperature.
- The engine will be operated using the same water injection schedule for the burner.
- Injecting water into the turbine's inlet increases the specific humidity of the air entering the combustor. Higher specific humidity helps lower NO_X concentrations due to higher average specific heat of the air that reduces adiabatic flame temperature. However, to be conservative with the estimates, the benefit of increased specific humidity due to wet compression was not evaluated in this analysis. It is expected that the actual NO_X volumetric concentrations will be lower while CO volumetric concentrations will remain the same.
- Additional PM emissions are not expected from evaporation of the additional water because the water is demineralized before injection into the inlet air stream.

Note that this system will not impact the turbine's combustion dynamics. Additionally, this proposed replacement turbine with wet compression will not impact current Permit conditions and as stated, the turbine's permitted capacities will remain the same. The Project will not increase the maximum heat input capacity of the turbine; rather, it will give NV Energy the opportunity to allow for additional power output primarily in the summer months, if needed, that is usually lost due to the impacts of high ambient temperatures. Additional **actual** heat input to the turbines (as compared to historical heat input) as a result of the Project is expected to be minimal (see Section 3).

3. EMISSIONS QUANTIFICATION

This section addresses the methodology used to quantify the emissions from the Project and assess federal NSR program applicability. There will be no changes in the facility-wide potential to emit (PTE) from the Project at the Facility. Complete documentation of these calculations is provided in Appendix A.

3.1 PSD Program Applicability Analysis

Per CCAQR Section 12.2.1, the requirements of the PSD permitting program apply to the construction of any new major stationary source or any major modification in attainment or unclassifiable areas. For modifications, CCAQR Section 12.2.1.4(c) defines the PSD program applicability test as follows:

> *Actual-to-Projected-Actual Applicability Test for Projects that only involve Existing Emissions Units. A significant emission increase of a regulated NSR pollutant is projected to occur if the sum of the difference between the projected actual emissions and the baseline actual emissions for each existing emissions unit equals or exceeds the significant amount for that pollutant."*

The significant amount for each pollutant is defined by the significant emission rate (SER) for that pollutant per CCAQR 12.2.2(uu) and shown in Table 3-1 below.[3]

Table 3-1. Significant Emission Rates

Pollutant	SER (Tpy)
NO_X	40
CO	100
VOC [1]	40
SO_2	40
PM	25
PM_{10}	15
$PM_{2.5}$	10
GHG	75,000

1. Since the Facility is located in a nonattainment area for ozone the SER for NO_X and VOC is defined per CCAQR 12.3.2(dd) and SER for all other pollutants (including NO_X, as HA 212 is in attainment for NO_2 NAAQS) is defined per CCAQR 12.2.2(uu).

[3] SERs exist for additional pollutants not listed in Table 3-1. However, pollutants not listed are not emitted in significant quantities from the Facility.

3.2 NA NSR Program Applicability Analysis

Per CCAQR Section 12.3.1, the requirements of the NA NSR program apply to the construction of any new major stationary source or any major modification in nonattainment areas. For modifications, CCAQR Section 12.3.1.4(d) defines the NA NSR program applicability test as follows:

> *Actual-to-Projected-Actual Applicability Test for Projects that only involve Existing Emissions Units. A significant emission increase of a regulated NSR pollutant is projected to occur if the sum of the difference between the projected actual emissions and the baseline actual emissions for each existing emissions unit equals or exceeds the significant amount for that pollutant."*

The significant amount for each pollutant is defined by the SER for that pollutant per CCAQR 12.3.2(dd) and shown in Table 3-1 above.[4]

3.3 Project Emissions Increase (PEI)

A PSD and NA NSR program evaluation is required to be completed as the Project is considered a physical change that could result in an emissions increase. The Facility has analyzed the emissions increase on an actual-to-projected actual emissions basis as described in CCAQR Sections 12.2.1.4(c) and 12.3.1.4(d) for existing units. Note that only the steady state operation of the turbines was evaluated, and emissions associated with start-up (SU) and shutdown (SD) were not included as the Project will only be executed when the units are in steady state operation. All historic SU/SD events will remain as is and no additional SU/SD events will occur as part of the Project.

3.3.1 Baseline Actual Emissions (BAE)

The baseline actual emissions (BAE) are defined in CCAQR Sections 12.2.2(c)(2) and 12.3.2(b)(2) for any existing non-electric utility steam generating emissions unit, as the average rate in tons per year at which the unit actually emitted the pollutant during any consecutive 24-month period selected within the 10-year baseline period immediately preceding the beginning of construction of the Project. The Facility proposes to use June 2017 through May 2019 for all pollutants, as the 24-month baseline period for all pollutants.

The assumptions and data used in the calculation of the BAE are listed below:

- Hourly plant data from January 1, 2017 to August 31, 2021 was used to determine the turbine's monthly heat input as well as the monthly NO_X, CO, GHG, SO_2, VOC, and PM emissions.
  - The NO_X and CO emissions are based on hourly Continuous Emissions Monitoring System (CEMS) data from January 2017 to August 2021.
    - The CEMS data was summed to determine the 24-month rolling emissions.
  - The hourly plant data for all other pollutants is based on the results of the March 17, 2014 Source Test Report for EU A27.
    - PM_{10} and $PM_{2.5}$ emissions are assumed to be equal to PM.
- The monthly emissions were summed for each consecutive 24-month period to determine the baseline period.
  - Since the monthly emissions are based on both turbines represented by EU A27 and the Project is only replacing one of those turbines, the emissions and fuel usage were divided by two.

[4] SERs exist for additional pollutants not listed in Table 3-1. However, pollutants not listed are not emitted in significant quantities from the Facility.

3.3.2 Projected Actual Emissions (PAE)

The next step in evaluating the proposed Project is to calculate the projected actual emissions (PAE). The PAE is defined in CCAQR Sections 12.2.2(nn) and 12.3.2(z) as the maximum annual rate at which an existing emission unit is projected to emit a PSD pollutant in any one of the 5 years following the date the unit resumes regular operation after the project or in the following 10 years following that date, if the project involves increasing the emission unit's design capacity or its potential to emit of that PSD pollutant, and full utilization of the unit would result in a significant emissions increase or a significant net emissions increase at the major stationary source.

The assumptions and data used in the calculation of the PAE are listed below:

- Since the replacement turbine will operate within the current Permit conditions of EU A27, the projected actual heat input is based on the annualized maximum monthly rolling heat input in the baseline period:
  - The installation of the wet compression system on the replacement turbine at the Facility will likely only increase the actual heat input during the summer months, as this is when the wet compression system will provide the most benefit. Furthermore, when used, the wet compression system is expected to result in only a 10% increase in actual hourly heat input (which is less than 10% on an annual basis). However, in order to present a conservative PEI calculation, NV Energy has evaluated the maximum projected operation of the Facility in future years, both from impacts of this Project as well as increases in demand not related to the Project. The maximum projected operation is estimated as the annualized max monthly operation for one turbine.
  - When wet compression is utilized, it mimics atmospheric conditions at a lower ambient temperature (i.e., more dense air) which results in increased output. The maximum design capacity for the EU A27 was originally based on 71°F. Since wet compression will only be utilized for the small portion of the year, it is not expected design temperature would be significantly lowered. The replacement turbine is to be installed in Unit 11 which is already equipped with SCR and catalytic oxidation to maintain compliance with the Permit limits.
  - Since the maximum monthly rolling heat input is based on both turbines represented by EU A27, the projected heat input was divided by two for the PAE calculations.
- For all pollutants, emission factors are determined by dividing the PTE contained in Table III-C-1 of the Permit by the hours of operation (3,500 hr/yr per Condition C.2.d of the Permit) and the max heat input (541 MMBtu/hr per Table III-C-7 of the Permit).
- The emission factors for each pollutant were multiplied by the projected actual heat input to determine the PAE.
  - The emission factors derived from the permit limits are a conservative estimate as it is not expected the turbine will operate continuously at the permit limits.
- NV Energy has included an evaluation of "could have accommodated" (CHA) emissions in this analysis as allowed by CCAQR Sections 12.2.2(nn)(1)(D) and 12.3.2(z)(1)(D). The CHA represents the emissions that could have been accommodated in the baseline and are unrelated to the project. The CHA is estimated as the difference between the projected and baseline heat input.
  - CCAQR Sections 12.2.2(nn)(1)(D) and 12.3.2(z)(1)(D) state that CHA emissions shall be "*unrelated to the particular project, including any increased utilization due to product demand growth*". Since the heat input used in the PAE is assumed to include the 10% increase in actual heat input due to wet compression, only 90% of the PAE heat input was used when determining the heat input used in the CHA emissions. This removes the portion of emissions that are related to the project and as mentioned above the 10% increase is a conservative estimate.
  - Emission factors used in CHA calculations are derived from the PTE in Table III-C-1 of the Permit.

Table 3-2 below shows the result of the PSD and NA NSR applicability analysis and demonstrates that the PSD and NA NSR are not applicable to Project. Detailed emissions calculations are presented in Appendix A of this report.

Table 3-2. PEI Summary[1]

Pollutant	Project Emissions Increase (tpy)	Significant Emission Rate[2] (tpy)	PSD Triggered?	NA NSR Triggered?
NO_X	-0.61	40	No	No
CO	0.32	100	No	N/A
SO_X	-0.02	40	No	N/A
PM	-0.19	25	No	N/A
PM_{10}	-0.19	15	No	N/A
$PM_{2.5}$	-0.19	10	No	N/A
VOC	-0.06	40	N/A	No
GHG[4]	169.91	75,000	No[3]	N/A

1. The emissions increases are calculated by subtracting BAE from PAE for each pollutant associated with the Project. It is conservatively assumed that PM = PM_{10} = $PM_{2.5}$

2. Since the Facility is located in a nonattainment area for ozone the SER for NO_X and VOC is defined per CCAQR 12.3.2(dd) and SER for all other pollutants (including NO_X, as HA 212 is in attainment for NO_2 NAAQS) is defined per CCAQR 12.2.2(uu).

3. GHG SER as provided under "subject to regulation" definitions in 40 CFR 51.166(b)(48) and 52.21(b)(49). Unlike other pollutants' SERs, a GHG SER is not listed in 40 CFR 51.166(b)(23) or 52.21(b)(23). Per 40 CFR 52.21 (b)(49)(iv):

> *… the pollutant GHGs is subject to regulation if:*
>
> > *(a) The stationary source is a new major stationary source for a regulated NSR pollutant that is not GHGs, and also will emit or will have the potential to emit 75,000 tpy CO2e or more; or*
> >
> > *(b) The stationary source is an existing major stationary source for a regulated NSR pollutant that is not GHGs, and also will have an emissions increase of a regulated NSR pollutant, and an emissions increase of 75,000 tpy CO2e or more"*

Based on the above, because there are no non-GHG pollutants that are triggering the PSD SER, GHG alone will not trigger a PSD review.

4. REGULATORY APPLICABILITY

The Project is subject to certain federal and state air regulations. This section of the application summarizes the air permitting requirements and the key air quality regulations that apply to Project. Specifically, applicability of PSD, NA NSR, NSPS, NESHAP, and the CCAQR are addressed.

4.1 Prevention of Significant Deterioration

The Facility is located in a portion of Clark County, which is designated by the U.S. EPA as "attainment" or "unclassifiable" with NAAQS for all criteria pollutants with the exception of being in marginal nonattainment for the 2015 8-hour ozone standard.[5] The Facility is potentially subject to PSD permitting requirements should the Facility undergo a physical change or change in the method of operation. Under PSD permitting rules, the major source threshold is 250 tpy unless the facility is listed specifically in CCAQR Section 12.2.2(j) as having a lower 100 tpy threshold. The Facility meets the definition of "Electric Utility Steam Generating Unit" in CCAQR Section 12.2.2(s); as such, Facility is on the list of 28 categories detailed in CCAQR Section 12.2.2(j) with a lower threshold of 100 tpy. The Facility is an existing PSD major source since potential emissions of NO_x, CO, PM_{10}, and $PM_{2.5}$ are greater than the 100 tpy PSD threshold. Since the Facility is a PSD major source, the Project was reviewed to determine if it meets the definition of major modification under CCAQR Section 12.2.2(dd). See Section 3 for discussion of PSD non-applicability to the Project.

CCAQR Section 12.2.1.6 includes requirements for projects that (1) are not part of a major modification, (2) may result in a significant emissions increase, and (3) the source used the actual-to-projected-actual test for determining major modification applicability. NV Energy will comply with the requirements of this section, including Section 12.2.1.6(c) and (e). NV Energy will monitor and record emissions and submit the required reports after resuming regular operations of the affected emission units, if applicable.

4.2 Nonattainment New Source Review

Permitting requirements under CCAQR Section 12.3 are triggered if a facility proposes a major modification to an existing major stationary source for a NSR pollutant designated as nonattainment. As previously discussed, the Facility is located in Hydrographic Area 212 which is designated as marginal nonattainment for the 2015 8-hour ozone standard.[6]

Since the Facility is considered an existing major source of NO_X and VOC, per the 100 tpy threshold in CCAQR Section 12.3.2(r)(1)(C), the Project was reviewed to determine if it meets the definition of major modification under CCAQR Section 12.3.2(q). See Section 3 for discussion of NA NSR non-applicability to the Project.

CCAQR Section 12.3.1.6 includes requirements for projects that (1) are not part of a major modification, (2) may result in a significant emissions increase, and (3) the source used the actual-to-projected-actual test for determining major modification applicability. NV Energy will comply with the requirements of this section, including Section 12.3.1.6(c) and (e). NV Energy will monitor and record emissions and submit the required reports after resuming regular operations of the affected emission units, if applicable.

[5] Clark County attainment status per EPA Greenbook: https://www3.epa.gov/airquality/greenbook/anayo_nv.html.

[6] 2015 Ozone NAAQS rulemaking at 83 FR 25776, June 4, 2018.

4.3 NSPS and NESHAP

The Project is potentially subject to federal air quality regulations. This section describes the applicability criteria and requirements of NSPS and NESHAP subparts.

4.3.1 New Source Performance Standards

NSPS require new, modified, or reconstructed sources to control emissions to the level achievable by the best demonstrated technology as specified in the applicable provisions. Moreover, any source subject to an NSPS is also subject to the general provisions of NSPS Subpart A, unless specifically excluded.

4.3.1.1 NSPS Subpart A – General Provisions

All affected sources subject to source-specific NSPS are subject to the general provisions of NSPS Subpart A unless specifically excluded by the source-specific NSPS. Subpart A requires initial notification, performance testing, recordkeeping and monitoring, provides reference methods, and mandates general control device requirements for all other subparts as applicable.

4.3.1.2 NSPS Subpart GG – Stationary Gas Turbines

NSPS Subpart GG applies to all stationary gas turbines with a heat input at peak load equal to or greater than 10 MMBtu/hr based on the lower heating value of the fuel fired. The subpart applies to units for which construction, reconstruction, or modification commenced after October 3, 1977. Although EU A27 was constructed after October 3, 1977, NSPS Subpart GG does not apply because EU A27 is subject to NSPS Subpart KKKK as detailed in Section 4.3.1.3 below. Per 40 CFR 60.4305(b), stationary combustion turbines regulated under NSPS Subpart KKKK are exempt from the requirements of NSPS Subpart GG.

4.3.1.3 NSPS Subpart KKKK – Stationary Combustion Turbines

NSPS Subpart KKKK is applicable to stationary combustion turbines with a heat input greater than or equal to 10 MMBtu/hr (based on higher heating value of the fuel) that commenced construction, modification, or reconstruction after February 18, 2005. The Peaker turbines, including EU A27, are affected facilities subject to the requirements of NSPS Subpart KKKK. The Project will not change the requirements of NSPS Subpart KKKK that currently apply. NV Energy expects continued compliance with NSPS Subpart KKKK post-Project. For the Peaker turbines, each affected facility includes a turbine engine, power turbine, and ancillary equipment such as fuel, air, lubrication, and exhaust gas systems. The swap-out of a turbine engine is merely the replacement of a component of the existing emissions unit and it is a physical change. Therefore, its installation does not constitute installation of a separate emissions unit, modification, or reconstruction (as further discussed below).[7]

Per 40 CFR 60.14, a modification is defined as: "…any physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies… Upon modification, an existing facility shall become an affected facility for each pollutant to which a standard applies and for which there is an increase in the emission rate to the atmosphere." As previously stated, the Peaker turbines, including EU A27, are currently affected facilities for the purposes of NSPS Subpart KKKK. As such, the Peaker turbines are not considered existing facilities and the Project cannot meet the definition of a modification. Additionally, as previously stated, a physical change, or change in the method of operation may meet the definition of modification only if that change also increases the maximum hourly emissions of any pollutant. As discussed in Section 3, the turbines' maximum hourly

[7] Consistent with the May 9, 2019 Letter from DAQ to NV Energy.

emission rate and heat input are not expected to increase as a result of the Project. As such, the Project does not meet the definition of modification in 40 CFR 60.14.

Per 40 CFR 60.15(a), "an existing facility, upon reconstruction, becomes an affected facility, irrespective of any change in emission rate." As previously stated, the Peaker turbines are currently affected facilities for the purposes of NSPS Subpart KKKK. As such, the Peaker turbines are not considered existing facilities and the Project cannot meet the definition of reconstruction.

4.3.1.4 NSPS Subpart TTTT – Greenhouse Gas Emissions for Electric Generating Units

NSPS 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 or commences modification or reconstruction after June 18, 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 Peaker turbines were constructed before January 8, 2014. Additionally, as discussed in Section 4.3.1.3, the Project does not constitute installation of a separate emissions unit, modification, or reconstruction. As such, EU A27 continues to be an existing facility not subject to the requirements of NSPS Subpart TTTT.

4.3.2 National Emission Standards for Hazardous Air Pollutants

NESHAP are emission standards for HAP and are applicable to major and area sources of HAP. A HAP major source is defined as having potential emissions in excess of 25 tpy for total HAP and/or potential emissions in excess of 10 tpy for any individual HAP. An area source is a stationary source that is not a major source. The Facility is an area source of HAP.

4.3.2.1 NESHAP Subpart A – General Provisions

Any source subject to a NESHAP is also subject to the general provisions of NESHAP Subpart A, unless specifically excluded. Subpart A requires initial notification and performance testing, recordkeeping, monitoring, provides reference methods, and mandates general control device requirements for all other subparts as applicable.

4.3.2.2 NESHAP Subpart YYYY – Stationary Combustion Turbines

NESHAP Subpart YYYY applies to stationary combustion turbines located at sources that are major sources of HAP emissions. Since the Facility is an area source of HAP, the combustion turbines at the Facility are not subject to NESHAP Subpart YYYY.

4.4 Clark County Air Quality Regulations (CCAQR)

In addition to the federal air requirements described previously, DAQ establishes requirements applicable at the emission unit level and at the facility level. The regulations also contain requirements related to the need for construction and/or operating permits. The requirements potentially applicable to the Project are detailed in the following sections.

4.4.1.1 CCAQR Section 12.2

See Section 4.1 for PSD applicability discussion.

4.4.1.2 CCAQR Section 12.3

See Section 4.2 for NA NSR applicability discussion.

4.4.1.3 CCAQR Section 12.4

CCAQR Section 12.4.1.1(a) requires existing Part 70 Operating Permit sources to obtain an Authority to Construct (ATC) permit before beginning actual construction or continuing to operate any of the following:

> *(1) A new Part 70 source;*

The Project is not a new Part 70 source.

> *(2) A "Major Modification" as defined in Sections 12.2 or 12.3;*

The Project is not a major modification as defined in Section 12.2 or 12.3 (see Sections 4.1 and 4.2).

> *(3) A modification that increases the Part 70 source's PTE by an amount equal to or greater than the minor NSR significant level in Section 12.4.2.1;*

There is no proposed increase in potential emissions as a result of the Project, therefore the minor NSR significant levels in Section 12.4.2.1 will not be exceeded.

> *(4) Construction, modification, or reconstruction of an affected facility that becomes newly subject to a standard, limitation, or other requirement under 40 CFR Part 60;*

As described in Section 4.3.1, the Project does not result in an affected facility newly subject to any additional standards or limitations in 40 CFR Part 60.

> *(5) Construction or reconstruction of a new source or of an affected source that becomes newly subject to a standard, limitation, or other requirement under 40 CFR Part 63, including, but not limited to, construction or modification that requires preconstruction review under 40 CFR Part 63.5; or*

As described in Section 4.3.2, the Project is not subject to any standard under 40 CFR Part 63.

> *(6) A modification to a solid waste incinerator unit as defined by an applicable standard under 40 CFR Part 60*

The Project does not involve a solid waste incinerator unit. The Project does not meet the preconstruction review applicability criteria of 12.4.1.1(a) and, as a result, does not require an ATC permit pursuant to CCAQR Section 12.4.

4.4.1.4 CCAQR Section 12.5

CCAQR Section 12.5 outlines the requirements for Part 70 Operating Permits in Clark County. The Facility is currently subject to this section and, as a result, is evaluating the Project against the permit revision requirements contained in Section 12.5.2.12 through Section 12.5.2.14.

CCAQR Section 12.5.2.12 allows for changes to be made at the Facility without a permit revision such that the following requirements are met:

(a) A Part 70 source may make changes that are not addressed or prohibited by the permit without a permit revision, unless such changes are subject to any requirements under Title IV of the Act or are modifications under any provisions of Title I of the Act.

The Project is not subject to any requirements under Title IV of the Act and is not a modification under any provisions of Title I of the Act.

(1) Each such change shall meet all applicable requirements and shall not violate any existing permit term or condition.

The Project will meet all applicable requirements and not violate any existing permit term or condition. No permit condition changes are being proposed as a result of the Project.

(2) Sources must provide at least seven (7) days' written notice to the Control Officer and EPA of each such change, except for changes that qualify as insignificant under Section 12.5.2.5. Such written notice shall describe each such change, including the date, any change in emissions, pollutants emitted, and any applicable requirements that would apply as a result of the change.

This notification is being submitted at least seven (7) days prior to the commencement of the Project.

(3) The change shall not qualify for a permit shield.

NV Energy understands the change will not qualify for a permit shield.

(4) The permittee shall keep a record describing changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.

NV Energy will keep a record of changes of the emissions resulting from the installation. Additionally, the Project will not result in an increase in PTE. The Project is shown to meet the requirements of CCAQR Section 12.5.2.12 and as a result, a prior notification of an off-permit change (pursuant to Section 12.5.2.12(a)(2)) is appropriate for the Project.

4.4.1.5 CCAQR Section 13

See Section 4.2.2 for NESHAP applicability discussion.

4.4.1.6 CCAQR Section 14

See Section 4.2.1 for NSPS applicability discussion.

APPENDIX A. EMISSION CALCULATIONS

Table A.1. Summary of the Project Emissions Increase

Pollutant	Projected Actual Emissions (tpy)		Baseline Actual Emissions (tpy)		CHA Actual Emissions (tpy)		Emission Increase [2] (tpy)		PTE [3] (tpy)	Total Emission Increase (tpy)	Significant Emission Rate [4] (tpy)	PSD Triggered?
	A27 - One Turbine	Wet Compression Turbine	A27 - One Turbine	Wet Compression Turbine	A27 - One Turbine	Wet Compression Turbine	A27 - One Turbine	Wet Compression Turbine	A27 - One Turbine			
NO_X	0.00	1.61	1.94	0.00	0.27	0.00	-2.21	1.61	15.48	-0.61	40	No
CO	0.00	0.62	0.19	0.00	0.10	0.00	-0.29	0.62	5.78	0.32	100	No
SO_X	0.00	0.05	0.07	0.00	0.01	0.00	-0.08	0.05	0.51	-0.02	40	No
PM_{10}	0.00	0.49	0.59	0.00	0.08	0.00	-0.67	0.49	4.55	-0.19	15	No
$PM_{2.5}$	0.00	0.49	0.59	0.00	0.08	0.00	-0.67	0.49	4.55	-0.19	10	No
VOC	0.00	0.15	0.18	0.00	0.03	0.00	-0.21	0.15	1.43	-0.06	40	No
GHG	0.00	11,856.05	9,681.10	0.00	2,005.04	0.00	-11,686.14	11,856.05	4,529,427	169.91	75,000	No [5]

1. Only regulated pollutants classified as "attainment" or "unclassifiable" that are emitted by the turbines are included in this analysis.
2. The emissions increases are calculated by subtracting BAE and CHA from PAE for each pollutant associated with the project.
3. EU A27 PTE is determined from Table III-C-1 of the Part 70 Operating Permit for Source #7. Since no GHG PTE exists for the turbines the GHG PTE is equal to the facility wide GHG PTE. EU A27 is a natural gas turbine powered by two engines. Only one engine is being replaced with this project so the PTE was divided by two.
4. SER as defined in CCAQR 12.2.2(UU).
5. GHG SER as provided under "subject to regulation" definitions in 40 CFR 51.166(b)(48) and 52.21(b)(49). Unlike other pollutant SERs, a GHG SER is not listed in 40 CFR 51.166(b)(23) or 52.21(b)(23). Per 40 CFR 52.21 (b)(49)(iv) "… the pollutant GHGs is subject to regulation if:

(a) The stationary source is a new major stationary source for a regulated NSR pollutant that is not GHGs, and also will emit or will have the potential to emit 75,000 tpy CO2e or more; or

(b) The stationary source is an existing major stationary source for a regulated NSR pollutant that is not GHGs, and also will have an emissions increase of a regulated NSR pollutant, and an emissions increase of 75,000 tpy CO2e or more"

Based on the above, because there are no non-GHG pollutants that are triggering the PSD SER, GHG alone will not trigger a PSD review.

Table A.2. A27 - Emissions per Month [1]

Date	Fuel Usage (MMBtu/month)	NO_X (lb/month)	CO (lb/month)	SO_2 (lb/month)	CO_2 (ton/month)	$PM_{10}/PM_{2.5}$ (lb/month)	VOC (lb/month)
1/1/2017	2,745.60	56.73	4.30	2.47	181.20	21.95	6.87
2/1/2017	7,228.20	259.03	20.35	6.51	476.60	57.80	18.07
3/1/2017	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4/1/2017	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5/1/2017	2,033.60	23.26	2.77	1.83	134.10	16.26	5.09
6/1/2017	56,545.10	1,452.68	86.63	50.89	3,731.10	452.34	141.36
7/1/2017	68,499.60	1,760.79	140.36	61.65	4,477.40	548.02	171.25
8/1/2017	37,136.40	1,071.12	83.89	33.42	2,423.20	297.10	92.83
9/1/2017	6,011.50	275.26	15.41	5.41	386.70	48.08	15.05
10/1/2017	4,101.50	138.45	13.68	3.69	267.50	32.81	10.25
11/1/2017	11,913.20	467.94	39.13	10.72	774.70	95.29	29.77
12/1/2017	13,077.90	400.80	36.64	11.77	853.60	104.63	32.68
1/1/2018	9,488.90	263.13	27.99	8.54	626.00	75.90	23.72
2/1/2018	10,598.40	238.65	25.70	9.54	698.90	84.79	26.45
3/1/2018	7,467.50	207.07	9.30	6.72	493.00	59.72	18.64
4/1/2018	26,891.70	707.64	60.86	24.20	1,758.60	215.05	67.25
5/1/2018	21,473.90	591.51	56.79	19.33	1,400.60	171.82	53.69
6/1/2018	64,973.10	1,617.18	143.25	58.48	4,242.80	519.77	162.41
7/1/2018	84,470.50	1,958.87	229.78	76.02	5,533.20	675.63	211.20
8/1/2018	50,795.50	1,198.60	163.63	45.72	3,323.10	406.42	126.97
9/1/2018	24,519.20	647.40	70.80	22.07	1,599.70	196.13	61.29
10/1/2018	2,891.50	88.67	10.93	2.60	188.40	23.15	7.22
11/1/2018	15,628.50	479.47	61.77	14.07	1,017.50	124.99	39.05
12/1/2018	12,590.60	386.86	57.01	11.33	820.00	100.69	31.49
1/1/2019	17,591.50	392.96	61.86	15.83	1,154.60	140.74	44.03
2/1/2019	11,457.20	331.30	28.46	10.31	746.80	91.68	28.64
3/1/2019	19,629.90	475.17	53.88	17.67	1,283.20	157.01	49.11
4/1/2019	8,745.10	241.27	23.72	7.87	564.10	69.97	21.81
5/1/2019	5,512.00	152.19	20.84	4.96	359.70	44.12	13.77
6/1/2019	18,410.50	518.64	55.80	16.57	1,202.90	147.30	46.04
7/1/2019	20,584.50	581.76	64.47	18.53	1,344.10	164.71	51.46
8/1/2019	27,484.70	609.07	68.08	24.74	1,804.00	219.89	68.67
9/1/2019	11,610.80	400.61	31.92	10.45	753.70	92.89	29.05
10/1/2019	9,059.30	354.79	30.92	8.15	590.80	72.48	22.65
11/1/2019	9,206.50	337.90	33.78	8.29	599.20	73.64	23.02
12/1/2019	5,836.20	217.73	24.23	5.25	378.70	46.68	14.61
1/1/2020	2,007.00	121.01	30.46	1.81	131.90	16.07	5.02
2/1/2020	2,316.50	106.96	11.97	2.08	149.80	18.53	5.76
3/1/2020	10,405.70	237.12	37.18	9.37	682.10	83.26	26.03

Table A.2. A27 - Emissions per Month [1]

Date	Fuel Usage (MMBtu/month)	NO_X (lb/month)	CO (lb/month)	SO_2 (lb/month)	CO_2 (ton/month)	$PM_{10}/PM_{2.5}$ (lb/month)	VOC (lb/month)
4/1/2020	2,340.80	245.13	9.22	2.11	149.20	18.74	5.86
5/1/2020	9,701.20	283.33	18.80	8.73	630.70	77.64	24.28
6/1/2020	35,683.70	654.80	81.51	32.12	2,336.90	285.46	89.22
7/1/2020	30,575.00	1,133.88	87.09	27.52	1,995.70	244.61	76.40
8/1/2020	44,080.70	1,074.42	131.34	39.67	2,883.70	352.68	110.19
9/1/2020	22,396.70	554.78	68.61	20.16	1,458.80	179.16	56.00
10/1/2020	15,739.60	465.16	44.73	14.17	1,038.10	125.90	39.34
11/1/2020	3,375.70	168.88	12.96	3.04	222.40	27.00	8.45
12/1/2020	1,459.50	42.98	12.38	1.31	96.30	11.67	3.64
1/1/2021	7,076.70	214.57	26.43	6.37	455.10	56.60	17.69
2/1/2021	1,121.90	89.83	6.69	1.01	70.30	8.98	2.79
3/1/2021	6,868.80	169.51	22.84	6.18	447.10	54.95	17.15
4/1/2021	7,391.80	238.72	24.71	6.65	475.20	59.12	18.48
5/1/2021	7,669.70	280.88	27.45	6.90	496.00	61.33	19.19
6/1/2021	31,922.30	833.85	90.76	28.73	2,070.50	255.38	79.74
7/1/2021	20,371.40	615.75	51.44	18.33	1,325.40	162.98	50.92
8/1/2021	23,636.90	583.60	56.22	21.27	1,540.10	189.05	59.08
9/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A

1. Fuel usage and emissions per the hourly plant data from 01/01/2017 through 8/31/2021.
2. PM emissions were assumed to be equal to PM_{10} and $PM_{2.5}$.

Table A.3. A27 - Emissions per 24-Month Period [1]

Rolling 24-Month Period		Fuel Usage (MMBtu/year)	NO_x (tpy)	CO (tpy)	SO_2 (tpy)	CO_2 (tpy)	$PM_{10}/PM_{2.5}$ (tpy)	VOC (tpy)
Period Start	Period End							
1/1/2017	12/1/2018	135,270	1.79	0.17	0.06	8,851.98	0.54	0.17
2/1/2017	1/1/2019	138,982	1.83	0.18	0.06	9,095.33	0.56	0.17
3/1/2017	2/1/2019	140,039	1.84	0.18	0.06	9,162.88	0.56	0.18
4/1/2017	3/1/2019	144,947	1.90	0.19	0.07	9,483.68	0.58	0.18
5/1/2017	4/1/2019	147,133	1.93	0.19	0.07	9,624.70	0.59	0.18
6/1/2017	5/1/2019	148,003	1.94	0.19	0.07	9,681.10	0.59	0.18
7/1/2017	6/1/2019	138,469	1.83	0.19	0.06	9,049.05	0.55	0.17
8/1/2017	7/1/2019	126,490	1.68	0.18	0.06	8,265.73	0.51	0.16
9/1/2017	8/1/2019	124,077	1.62	0.17	0.06	8,110.93	0.50	0.16
10/1/2017	9/1/2019	125,477	1.64	0.18	0.06	8,202.68	0.50	0.16
11/1/2017	10/1/2019	126,716	1.66	0.18	0.06	8,283.50	0.51	0.16
12/1/2017	11/1/2019	126,040	1.65	0.18	0.06	8,239.63	0.50	0.16
1/1/2018	12/1/2019	124,229	1.62	0.18	0.06	8,120.90	0.50	0.16
2/1/2018	1/1/2020	122,359	1.61	0.18	0.06	7,997.38	0.49	0.15
3/1/2018	2/1/2020	120,288	1.59	0.18	0.05	7,860.10	0.48	0.15
4/1/2018	3/1/2020	121,023	1.59	0.18	0.05	7,907.38	0.48	0.15
5/1/2018	4/1/2020	114,885	1.54	0.17	0.05	7,505.03	0.46	0.14
6/1/2018	5/1/2020	111,942	1.50	0.17	0.05	7,312.55	0.45	0.14
7/1/2018	6/1/2020	104,620	1.38	0.16	0.05	6,836.08	0.42	0.13
8/1/2018	7/1/2020	91,146	1.27	0.14	0.04	5,951.70	0.36	0.11
9/1/2018	8/1/2020	89,467	1.26	0.14	0.04	5,841.85	0.36	0.11
10/1/2018	9/1/2020	88,937	1.25	0.14	0.04	5,806.63	0.36	0.11

Table A.3. A27 - Emissions per 24-Month Period [1]

Rolling 24-Month Period		Fuel Usage (MMBtu/year)	NO_x (tpy)	CO (tpy)	SO_2 (tpy)	CO_2 (tpy)	$PM_{10}/PM_{2.5}$ (tpy)	VOC (tpy)
Period Start	**Period End**							
11/1/2018	10/1/2020	92,149	1.29	0.14	0.04	6,019.05	0.37	0.12
12/1/2018	11/1/2020	89,085	1.26	0.14	0.04	5,820.28	0.36	0.11
1/1/2019	12/1/2020	86,303	1.21	0.13	0.04	5,639.35	0.35	0.11
2/1/2019	1/1/2021	83,674	1.19	0.13	0.04	5,464.48	0.33	0.10
3/1/2019	2/1/2021	81,090	1.16	0.12	0.04	5,295.35	0.32	0.10
4/1/2019	3/1/2021	77,900	1.12	0.12	0.04	5,086.33	0.31	0.10
5/1/2019	4/1/2021	77,561	1.12	0.12	0.03	5,064.10	0.31	0.10
6/1/2019	5/1/2021	78,101	1.14	0.12	0.04	5,098.18	0.31	0.10
7/1/2019	6/1/2021	81,479	1.18	0.12	0.04	5,315.08	0.33	0.10
8/1/2019	7/1/2021	81,426	1.18	0.12	0.04	5,310.40	0.33	0.10
9/1/2019	8/1/2021	80,464	1.18	0.12	0.04	5,244.43	0.32	0.10
10/1/2019	9/1/2021	77,561	1.13	0.12	0.03	5,056.00	0.31	0.10
Max 24-Month Period Emissions (tpy)		**N/A**	1.94	0.19	0.07	9,681.10	0.59	0.18
Max 24-Month Period Fuel Usage (MMBtu/yr)		**148,003**	148,003	148,003	148,003	148,003	148,003	148,003
24-Month Period with Max Emissions	**Start**	6/1/2017	6/1/2017	6/1/2017	6/1/2017	6/1/2017	6/1/2017	6/1/2017
	End	5/1/2019	5/1/2019	5/1/2019	5/1/2019	5/1/2019	5/1/2019	5/1/2019

1. Emissions are calculated by summing the monthly emissions for each 24-month period.

2. Since EU A27 is the combination of two similar natural gas turbines and only one turbine is being replaced, the rolling 24-month average emissions were divided by two.

Table A.4. Emission Factors - Projected Actual Emissions [1]

Emission Factors	NO_X	CO	SO_2	CO_2	PM_{10} $PM_{2.5}$	VOC
	(lb/MMBtu)					
	0.0159	0.0061	0.0005	117.10	0.0048	0.0015

1. Emission factors are determined by dividing the PTE contained in Table III-C-1 of the permit by the hours of operation (3,500 hr/yr per Condition C.2.d) and the max heat input (541 MMBtu/hr per Table III-C-7). Since the emissions in Table III-C-1 are for two turbines, the emission factor was divided by two. CO_2 emissions are derived from 40 CFR Part 98 Table A-1, C-1, and C-2 and measured in units of CO2 equivalent (CO2e).

Table A.5. Projected Actual Emissions [1, 2, 3]

PAE	Wet Compression Turbine (tpy)						
	Projected 12-Month Rolling Fuel Usage (MMBtu/yr)	NO_X	CO	SO_X	GHG	PM_{10} $PM_{2.5}$	VOC
Projected Emissions	202,498	1.61	0.62	0.05	11856.05	0.49	0.15

1. In order to provide a conservative estimate for the fuel usage, the max monthly fuel usage in the baseline period was annualized and used in the PAE calculations. Since the turbine can only operate 3,500 hr/yr so the annualized max monthly fuel usage was multiplied by 3500/8760.

2. Since the rolling 12-month fuel usage is based on the combination of both turbines in EU A27, and only one is being replaced, the projected fuel usage was divided by two.

3. Data from other NVE facilities, that utilize wet compression, show that the actual hourly fuel usage is expected to increase by approximately 10% following the installation of the wet compression system. Since the wet compression system will only be utilized during summer months, the actual annual fuel usage is expected to increase by significantly less than 10%. As a result, the projected fuel usage is a conservative estimate designed to account for the unknown nature of the Facility's actual operation.

4. The emission factors derived from the permit limits were used in determining the PAE for each pollutant.

Table A.6. A27 - Could have Accommodated Emissions [1, 2]

Date	Fuel Usage (MMBtu/month)	NO_X	CO	SO_2	CO_2	$PM_{10}/PM_{2.5}$	VOC
Emission Factors (lb/MMBtu)		0.0159	0.0061	0.0005	117.0981	0.0048	0.0015
CHA (tpy)	34,245.45	0.27	0.10	0.01	2,005.04	0.08	0.03

1. Fuel usage per the hourly plant data from 01/01/2017 through 8/31/2021.

2. Could have Accommodated (CHA) fuel usage is determined from the difference between the projected fuel usage and the baseline fuel usage. Since the PAE fuel usage assumes a conservative 10% increase due to wet compression and CHA emissions are intended to be unrelated to the project, only 90% of the PAE fuel usage was used in determining the CHA fuel usage. The emission factors derived from the permit limits were used in determining the CHA emissions for each pollutant. CO_2 emission factors derived from 40 CFR Part 98 Table A-1, C-1, and C-2.

APPENDIX B. RESPONSIBLE OFFICIAL CERTIFICATION

"I certify that, based on information and belief formed after reasonable inquiry, the statements contained in this document are true, accurate, and complete."

Signature of Responsible Official

Steve Page, Plant Director (Alternate Responsible Official)
Print or Type Name and Title

NV Energy
Print or Type Name of Company

7
Source Identification Number

September 23, 2021
Date

Silvia Gonzalez

From: Santosh Mathew
Sent: Monday, November 1, 2021 4:29 PM
To: Silvia Gonzalez
Subject: FW: AQR https://protect-us.mimecast.com/s/NxU4C4xDQNuYg78VIOsQFj?domain=12.5.2.12 Notification of Spare Gas Generator Installation - Clark Generating Station (Source 7)
Attachments: 2021-11 Clark Spare Turbine Unit 15B Gas Generator Installation - Signed.pdf

Silvia,
Please open a new action, PNF, for this major source. We will also be receiving a hard copy of this letter.

Thanks
-Santosh

From: Heintz, Christopher (NV Energy) [mailto:Christopher.Heintz@nvenergy.com]
Sent: Monday, November 1, 2021 3:01 PM
To: Santosh Mathew <MATHEW@ClarkCountyNV.gov>
Cc: Region EPA IX <aeo_r9@epa.gov>; Page, Steven (NV Energy) <Steven.Page@nvenergy.com>
Subject: AQR https://protect-us.mimecast.com/s/NxU4C4xDQNuYg78VIOsQFj?domain=12.5.2.12 Notification of Spare Gas Generator Installation - Clark Generating Station (Source 7)

Good afternoon Santosh,
Please find the attached AQR 12.3.1.6 & 12.5.2.12 combined project notification letter related to installation of the spare gas generator in Unit 15 (EU: A31) at Clark Station. A hard copy of the letter is also being sent via FedEx to DAQ. Per the requirements of AQR 12.5.2.12(a)(2), EPA Region IX has been cc'd on this email as well.

If you have any questions, please feel free to contact me directly.

Thanks,

Chris Heintz
Corporate – Sr. Environmental Advisor
Phone: 702.402.2048 | **Mobile:** 702.279.1884
Address: 6226 W. Sahara Ave. M/S #30, Las Vegas, NV 89146
Email: Christopher.Heintz@nvenergy.com

NVEnergy

November 1, 2021

Santosh Mathew
Permitting Supervisor
Clark County Department of Environment and Sustainability
4701 W. Russell Road, Suite 200
Las Vegas, NV 89118

Re: **Air Quality Regulations Section 12.3.1.6(b) and 12.5.2.12(a) Notification**
Spare Gas Generator Installation Project
Clark Generating Station (Source ID: 7)

Dear Mr. Mathew:

Pursuant to Air Quality Regulations (AQR) 12.3.1.6(b) and 12.5.2.12(a), Nevada Power Company d/b/a NV Energy (NVE) is providing this combined notification to the Clark County Department of Environment and Sustainability, Division of Air Quality (DAQ) for the Spare Gas Generator Installation project associated with Turbine Unit 15 (EU:A31) at the Clark Generating Station (Clark). AQR 12.5.2.12(a) requires concurrent notification to EPA of such changes, and as such EPA has been copied on this notification.

Clark is an existing major stationary source, operating under a Part 70 Permit for Source 7 issued on October 5, 2020. The Clark facility is in an area designated as marginal non-attainment for ozone National Ambient Air Quality Standard (2015) and is designated as attainment for all other criteria pollutants. Clark houses 12 emission units commonly referred to as the "Clark Peakers" (EUs: A27-A38), each of which is a Pratt Whitney Power Systems FT8 3® SWIFTPAC® gas turbine package comprising two stationary combustion turbine engines driving a single generator with a nominal output capacity of 57.9 MW. The gas generator (commonly called a turbine engine) is merely a component of the emission unit.

Under the provisions of AQR 12.3.1.6(b), NV Energy hereby provides the information set out in AQR 12.3.1.6(a).

AQR 12.3.1.6 (a)(1) A description of the project.

Clark recently experienced a mechanical failure of the gas generators in Unit 15 (EU:A31), thus necessitating its removal and repair. As Clark owns a spare gas generator that is stored on site, the installation of the spare gas generator will allow the emission unit to resume functional operation in a timely manner.

AQR 12.3.1.6 (a)(2) Identification of the emissions unit(s) whose emissions of a regulated NSR pollutant could be affected by the project.

Clark Turbine Unit 15 (EU: A31).

AQR 12.3.1.6 (a)(3) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions, the projected actual emissions, the amount of emissions excluded under paragraph (1)(D) of the definition of projected actual emissions and an explanation for why such amount was excluded, and any netting calculations, if applicable.

Actual emissions of New Source Review (NSR) pollutants are not expected to increase due to the project. Because the existing gas generator and the spare gas generator are substantially identical and will use existing air pollution control equipment, their emissions characteristics are expected to be the same. Additionally, no changes to utilization are expected in the post-project operation of this unit.

NVE calculated the emissions increase using a forecast of the annual emissions with the project minus the sum of the baseline emissions and excludable emissions. To calculate the projected actual emissions, NVE used the annual average hourly heat input in the baseline period and multiplied by the projected annual hourly utilization. In accordance with the AQR definition of Projected Actual Emissions at 12.3.2(hh) in calculating project emissions increases, NVE then excluded the portion of emissions occurring from the project-affected existing unit that the unit could have accommodated during the baseline period that are also unrelated to the project, based on heat input and utilization given sufficient electricity demand. The emission factors used in the analysis are based on the highest recorded average annual emission factors in the baseline years for NO_x and CO (conservatively rounded up), 2013 performance test results for $PM_{10/2.5}$ and VOC, and the acid rain default emission factor for pipeline natural gas for SO_2. No changes to the emission factors are expected as a result of the project.

The calculated projected emissions increase was compared to the major and minor NSR significant emission thresholds listed in AQR Sections 12.3.2(mm) and 12.4.2.1(b), respectively. As shown in **Table 1** below, the maximum annual emission increase projected from this project is zero tons for all pollutants; inherently less than the NSR thresholds and less than the minor NSR thresholds for all pollutants.

Table 1

Description	$PM_{10}/PM_{2.5}$	CO	VOC	NOx	SO_2	CO_2e
Baseline Actual Emissions, Average 2018 and 2019 (tpy)	**0.22**	**0.30**	**0.07**	**2.48**	**0.07**	**14,320**
Unit 15: Projected Actual Emissions (tpy)	0.22	1.24	0.07	2.73	0.07	14,555
Unit 15: Excludable Emissions	0.00	0.95	0.00	0.25	0.00	235
Project Emission Increase = Projected Actual – Baseline Actual – Excludable Emissions (tpy)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0**
NSR SER thresholds (tpy)	**10**	**100**	**40**	**40**	**40**	**75,000**
Minor NSR thresholds (tpy)	**5**	**50**	**20**	**20**	**20**	**n/a**
Are emissions increases > Minor NSR thresholds? (Y/N)	N	N	N	N	N	n/a
Are emissions increases > NSR SER thresholds? (Y/N)	N	N	N	N	N	N

This project will not impact compliance with the permitted air pollutant emission limits or heat input limit, and no revisions to any existing permit requirements are necessary. This project is not a modification under New Source Performance Standards (NSPS). Moreover, no new applicable requirements will be triggered because of this project. Pursuant to AQR Section 12.3.1.6(b), NVE understands that a determination from DAQ is not required before beginning actual implementation of the project. NVE intends to commence operation of the project immediately after the 7-day advance notification period has ended.

Pursuant to AQR 12.3.1.6(d), NVE will submit a report to the Control Officer within sixty (60) days after the end of each calendar year during which records must be generated under Section 12.3.1.6(c) setting out the unit's annual emissions during the calendar year that preceded submission of the report. The semi-annual report will satisfy this requirement.

If you have any questions or require additional information, please contact Chris Heintz at (702) 402-2048 or Anthony Giannantonio (702) 402-7711 regarding this notification.

Pursuant to AQR 12.5.2, I certify that based on information and belief formed after reasonable inquiry, the statements and information in this document are true, accurate and complete.

Sincerely,

Dariusz Rekowski
Vice President, Generation
(Responsible Official)
NV Energy

cc: EPA Region IX
A. Giannantonio
C. Heintz

Silvia Gonzalez

From: Santosh Mathew
Sent: Wednesday, November 17, 2021 5:24 PM
To: Silvia Gonzalez
Subject: FW: AQR https://protect-us.mimecast.com/s/b6wGCzpNvLh8y5nNi4idLn?domain= 12.5.2.12 Notification of Replacement of SCR Tempering Air Damper Positioner - Clark Generating Station (Source 7)
Attachments: Signed - CS2264 - Peaker Fleet - SCR Damper Positioner Replacement- NSR eval and notification-FINAL TDGSS.pdf

Silvia,
Please create a new PNF action for this notification and assign it to me.
Thanks
Santosh

From: Heintz, Christopher (NV Energy) [mailto:Christopher.Heintz@nvenergy.com]
Sent: Wednesday, November 17, 2021 3:31 PM
To: Santosh Mathew <MATHEW@ClarkCountyNV.gov>
Cc: Region EPA IX <aeo_r9@epa.gov>; Garcia, Tony (NV Energy) <Tony.Garcia@nvenergy.com>; Page, Steven (NV Energy) <Steven.Page@nvenergy.com>; Giannantonio, Anthony (NV Energy) <Anthony.Giannantonio@nvenergy.com>; Rekowski, Dariusz (NV Energy) <Dariusz.Rekowski@nvenergy.com>
Subject: RE: AQR https://protect-us.mimecast.com/s/b6wGCzpNvLh8y5nNi4idLn?domain=12.5.2.12 Notification of Replacement of SCR Tempering Air Damper Positioner - Clark Generating Station (Source 7)

Good afternoon Santosh,
Please find the attached AQR 12.3.1.6 & 12.5.2.12 combined project notification letter related to replacement of the SCR tempering air damper positioner on Units 11-22 (EU: A27-A38) at Clark Station. A hard copy of the letter is also being sent via FedEx to DAQ. Per the requirements of AQR 12.5.2.12(a)(2), EPA Region IX has been cc'd on this email as well.

If you have any questions, please feel free to contact me directly.

Thanks,

Chris Heintz
Corporate – Sr. Environmental Advisor
Phone: 702.402.2048 | **Mobile:** 702.279.1884
Address: 6226 W. Sahara Ave. M/S #30, Las Vegas, NV 89146
Email: Christopher.Heintz@nvenergy.com

November 17, 2021

Santosh Mathew
Permitting Supervisor
Clark County Department of Environment and Sustainability
4701 W. Russell Road, Suite 200
Las Vegas, NV 89118

Re: **Air Quality Regulations Section 12.3.1.6(b) and 12.5.2.12(a) Notification**
SCR Tempering Air Damper Positioner Replacement Project
Clark Generating Station (Source ID: 7)

Dear Mr. Mathew:

Pursuant to Air Quality Regulations (AQR) 12.3.1.6(b) and 12.5.2.12(a), Nevada Power Company d/b/a NV Energy (NVE) is providing this combined notification to the Clark County Department of Environment and Sustainability, Division of Air Quality (DAQ) regarding the Selective Catalytic Reduction (SCR) Tempering Air Damper Positioner Replacement project associated with Turbine Units 11 through 22 (EU:A27 through EU:A38) at the Clark Generating Station (Clark). AQR 12.5.2.12(a) requires concurrent notification to EPA of such changes, and as such EPA has been copied on this notification.

Clark is an existing major stationary source, operating under a Part 70 Permit for Source 7 issued on October 5, 2020. The Clark facility is in an area designated as marginal non-attainment for ozone National Ambient Air Quality Standard (2015) and is designated as attainment for all other criteria pollutants. Clark operates 12 emission units commonly referred to as the "Clark Peakers" (EUs: A27-A38), each of which is a Pratt Whitney Power Systems FT8 3® SWIFTPAC® gas turbine package comprising two stationary combustion turbine engines driving a single generator with a nominal output capacity of 57.9 MW.

Under the provisions of AQR 12.3.1.6(b), NV Energy hereby provides the information set out in AQR 12.3.1.6(a).

AQR 12.3.1.6 (a)(1) A description of the project.

Over the last 10 years the Clark Peakers have experienced forced outage hours due to the air damper positioner on each of the units (A27-A38). These periods of forced outage occur when the SCR tempering air damper positioner provides feedback to the control system of the damper's position in relation to the operating tempering air fan and the control system senses a mismatch between the damper position and the operating tempering fan causing the unit to fail to start. The project is to replace the obsolete Clark Peaker SCR tempering air damper positioner with a more reliable positioner in each unit. The project will result in increased unit availability.

AQR 12.3.1.6 (a)(2) Identification of the emissions unit(s) whose emissions of a regulated NSR pollutant could be affected by the project.

Clark Turbine Units 11 through 22 (EU: A27 through EU: A38).

AQR 12.3.1.6 (a)(3) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions, the projected actual emissions, the amount of emissions excluded under paragraph (1)(D) of the definition of projected actual emissions and an explanation for why such amount was excluded, and any netting calculations, if applicable.

Actual emissions of New Source Review (NSR) pollutants are expected to increase slightly due to the project. The project will allow each unit to regain related historic forced outage hours and improve unit availability.

NVE calculated the projected emissions increase (PEI) using a forecast of the projected actual emissions (PAE) with the project minus the sum of the baseline actual emissions (BAE). Note that in this analysis, the "could have accommodated" excludable emissions were not evaluated because the PAE-BAE was below the significant emission rates for all pollutants. To calculate the PAE, NVE used the annual average hourly heat input in the baseline period and multiplied by the projected annual hourly utilization. The 24-month baseline period of 2018-2019 was selected to determine an annual average used in the BAE for all units. The emission factors used in the analysis are based on the highest recorded average annual emission factors in the baseline years for NO_x and CO (conservatively rounded up), 2013 and 2014 performance test results for $PM_{10/2.5}$ and VOC, and the acid rain default emission factor for pipeline natural gas for SO_2. No changes to the emission factors are expected as a result of the project.

The calculated PEI was compared to the major significant emission thresholds listed in AQR Sections 12.3.2(dd). Note, this project does not result in a change to the facility potential to emit (PTE) and thus the minor NSR thresholds in 12.4.2.1(d) are not applicable. As shown in **Table 1** below, the maximum annual emission increase projected from this project is 0.80 tons for all pollutants; inherently less than the NSR thresholds.

Table 1

Description	$PM_{10}/PM_{2.5}$	CO	VOC	NOx	SO_2	CO2e
Baseline Actual Emissions, Average 2018 and 2019 (tpy)	**11.14**	**3.32**	**3.49**	**31.96**	**1.24**	**162,773**
Clark Peakers, Units 11-22 - Projected Actual Emissions (tpy)	11.38	3.63	3.58	32.75	1.27	169,956
Clark Peakers, Units 11-22 - Excludable Emissions (typ)	0	0	0	0	0	0
Projected Emissions Increase = Projected Actual Emissions -Baseline Actual Emissions - Excludable Emission (tpy)	0.25	0.31	0.09	0.80	0.03	7,183
NSR SER thresholds (tpy)	**10**	**100**	**40**	**40**	**40**	**75,000**
Are emissions increases > NSR SER thresholds? (Y/N)	N	N	N	N	N	N

This project will not impact compliance with the permitted air pollutant emission limits or heat input limit, and no revisions to any existing permit requirements are necessary. This project is not a modification under New Source Performance Standards (NSPS). Moreover, no new applicable requirements will be triggered because of this project. Pursuant to AQR Section 12.3.1.6(b), NVE understands that a determination from DAQ is not required before beginning actual implementation of the project. NVE intends to commence operation of the project immediately after the 7-day advance notification period has ended.

Pursuant to AQR 12.3.1.6(d), NVE will submit a report to the Control Officer within sixty (60) days after the end of each calendar year during which records must be generated under Section 12.3.1.6(c) setting out the unit's annual emissions during the calendar year that preceded submission of the report. The semi-annual report will satisfy this requirement.

If you have any questions or require additional information, please contact Chris Heintz at (702) 402-2048 or Anthony Giannantonio (702) 402-7711 regarding this notification.

Pursuant to AQR 12.5.2, I certify that based on information and belief formed after reasonable inquiry, the statements and information in this document are true, accurate and complete.

Sincerely,

Dariusz Rekowski
Vice President, Generation
(Responsible Official)
NV Energy

cc: EPA Region IX
A. Giannantonio
C. Heintz