



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

PART 70 OPERATING PERMIT TECHNICAL SUPPORT DOCUMENT

**Source Name:
NEVADA COGENERATION ASSOCIATES #2**

Source ID: 391

SOURCE LOCATION:
8000 East Lake Mead Boulevard,
Las Vegas, Nevada 89124

Company Name:
PanWest NCA2 Holdings LLC

APPLICATION PREPARED BY:
PanWest NCA2 Holdings LLC

CURRENT ACTION: **Renewal**

Application Received: July 15, 2020

TSD Date: March 21, 2022

EXECUTIVE SUMMARY

Nevada Cogeneration Associates #2 (NCA2) is a topping cycle cogeneration plant under SIC code 4931: Electric Cogeneration and NAICS Code 221112: Fossil Fuel Electric Power Generation. The source is located in hydrographic area 215 — Black Mountains Area. For new source review (NSR) purposes the source is a major stationary source for NO_x and CO and is minor source of PM₁₀, PM_{2.5}, SO₂ and VOC pollutants. The source meets and exceeds the Title V thresholds and is subject to its requirements, as outlined in section III-A below. The source is also an emitter of greenhouse gasses. The Black Mountains Area is classified as in attainment with the National Ambient Air Quality Standards (NAAQS) for all criteria air pollutants. The potential electrical generating capacity exceeds 250 MMBtu/hr. Thus, the source is a categorical source, as defined by AQR 12.2.2(j)(1).

NCA2 has a generation capacity of 85 megawatts of electricity. The source operates three natural gas-fired turbine generator packages that exhaust into heat recovery steam generating units. Each turbine combination is equipped with a 77 MMBtu/hr supplemental duct burner. A nominal 29.74 MW steam turbine generator is operated to produce electrical power. Other emission units at the facility include a diesel-powered emergency generator, a diesel-powered emergency fire pump, a diesel-powered water pump, and a two-cell cooling tower. This Part 70 Operating Permit (OP) is issued based on the renewal application submitted on July 15, 2020.

The following table summarizes the source PTE for each regulated air pollutant for all emission units addressed by this OP:

Source-wide PTE (tons per year)¹

Pollutants	PM₁₀	PM_{2.5}	NO_x	CO	SO₂	VOC	HAPs	GHG
PTE Totals	67.41	61.03	170.99	142.39	9.10	26.79	6.04	505,548

¹ The values in this table are not source-wide emission limits.

TABLE OF CONTENTS

Page

I. ACRONYMS 4

II. SOURCE INFORMATION..... 6

 A. General 6

 B. Description of Process 6

 C. Permitting History 7

 D. Current Permitting Action 7

 E. Emission Units..... 8

III. LIMITATIONS..... 9

 A. Potential to Emit..... 9

 B. Emission Limits 9

 C. Operational Limits..... 10

IV. PERFORMANCE TESTING 11

V. CONTROL EQUIPMENT 11

VI. MONITORING..... 11

 A. Visible Emissions Check..... 11

 B. Continuous Emissions Monitoring..... 11

VII. REGULATORY REVIEW 11

 A. Federally Applicable Regulations 11

 B. Local Regulatory Requirements 15

VIII. COMPLIANCE..... 16

 A. Compliance Certification..... 16

 B. CAM 16

 C. Permit Shield..... 16

IX. RECORDKEEPING AND REPORTING 16

X. INCREMENT ANALYSIS 17

XI. ATTACHMENTS 17

I. ACRONYMS

AQR	Clark County Air Quality Regulations
ASTM	American Society for Testing Materials
ATC	authority to construct
CAAA	Clean Air Act, as amended, or Clean Air Act Amendments
CAM	compliance assurance monitoring
CEMS	continuous emissions monitoring system
CFC	Chlorofluorocarbon
CFR	United States Code of Federal Regulations
CO	carbon monoxide
CO ₂	carbon dioxide
COMS	compliance opacity monitoring system
CTG	combustion turbine generator
DAQ	Division of Air Quality
Dscf	dry standard cubic feet
EPA	United States Environmental Protection Agency
EU	emission unit
GHG	greenhouse gases
HAP	hazardous air pollutant
HCFC	Hydrochlorofluorocarbon
HHV	higher heating value
HRSG	heat recovery steam generator
Hp	horse power
LHV	lower heating value
LPG	Propane
MACT	Maximum Achievable Control Technology
MMBtu	Millions of British Thermal Units
MW	Megawatt
NAC	Nevada Administrative Code
NAICS	North American Industry Classification System
NED	National Elevation Dataset
NO _x	oxides of nitrogen
NRS	Nevada Revised Statutes
NSPS	New Source Performance Standards
NSR	New Source Review
OP	Part 70 Operating Permit
PM _{2.5}	particulate matter less than 2.5 microns
PM ₁₀	particulate matter less than 10 microns
Ppm	parts per million
ppmvd	parts per million, volumetric dry
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
QA	quality assurance
QA/QC	quality assurance/quality control
RATA	relative accuracy test audit

SCR	selective catalytic reduction
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO ₂	sulfur dioxide
TDS	total dissolved solids
U.S.C.	United States Code
USGS	United States Geological Survey
UTM	Universal Transverse Mercator
VOC	volatile organic compound

II. SOURCE INFORMATION

A. General

Permittee	Panwest NCA2 Holdings LLC
Mailing Address	6895 East Lake Mead Boulevard, Suite 6, MSC 107 Las Vegas, Nevada 89156
Responsible Official	Chris Benkman, Plant Manager

B. Description of Process

NCA2 is a combined cycle natural gas power plant that is capable of producing 85 MW of electricity. It is classified as a cogeneration plant because it produces electric power, thermal energy, and chilled water. The electrical power is sold to the grid, while the thermal energy and chilled water are sold to PABCO Gypsum (PABCO), located adjacent to NCA2, for use in its gypsum wallboard production facility. Approximately 520,000 pounds per hour of turbine exhaust gas (process gas) is piped to PABCO through an insulated, stainless steel duct. This process gas is not ducted through the selective catalytic reduction (SCR) system because the resulting ammonia in the exhaust stream would be harmful to both employees and wallboard production. An absorption liquid chiller cools 145 gallons of water per minute, which is piped to PABCO for wallboard process use. Low-pressure steam extracted from the steam turbine is used to drive the chiller.

NCA2 operates three turbine packages each equipped with a heat recovery steam generator (HRSG), an SCR system, and an oxidation catalysts. The exhaust gases processed through the HRSGs are directed through an oxidation catalyst to control CO and VOC. In addition, the gases are then passed through an SCR module, where ammonia is injected onto a catalyst bed to control NO_x emissions.

In accordance with a 1999 EPA consent decree (CD) and an authority to construct permit (ATC), Modification 5, issued by DAQ in 1999, the source must operate the SCR controls at a minimum of 85 percent of the time the turbine unit is operating. Conditions in the permit from the CD include: startup and shutdown limitations, the allowable operation of the turbine units without SCR but with steam injection during SCR downtimes, and operationally specific NO_x concentration levels. The best available control technology (BACT) technologies for the turbine units are steam injection, SCR, oxidation catalysts, and natural gas combustion.

The HRSG units are operated with heat from the exhaust of the gas turbines. The duct burners supply supplemental heat. Each HRSG consists of a high-pressure evaporator and super-heater, an intermediate pressure evaporator and super-heater, an economizer section, and a low-pressure evaporator integrated with a deaerator.

An Ecodyne cooling tower with double drift eliminators provides cooling for the turbine units. The manufacturer guaranteed maximum drift is 0.0007 percent (through the use of a double drift eliminator) of the circulating water rate of 26,600 gallons per minute. This unit is permitted to operate 8,760 hours per year. As air passes through the water in the tower, some of the water containing total dissolved solids (TDS) is entrained in the air and carried out of the tower as drift.

This drift is a source of PM₁₀ emissions. PM₁₀ emissions are calculated as a function of TDS, water circulation rates, and operating hours. By a permit condition, TDS levels must not exceed 38,500 ppm on an annual average nor 57,750 ppm at any time.

Other equipment on site includes a 265 hp Detroit emergency fire pump, a 487 hp Caterpillar emergency diesel generator, an 80 hp diesel-fired water pump, and one 1,000 gallon aboveground storage tank for gasoline.

The NCA2 NO_x and CO emissions are monitored with CEMS.

C. Permitting History

This action is for the renewal of the OP for this source. Table II-C-1 illustrates the permitting activities since the last renewal:

Table II-C-1: Permit History

Issue Date	Description
6/5/2020	Administrative revision to transfer ownership.
10/19/2018	Administrative revision to update rating, model and/or serial numbers of the emergency fire pump (EU: A004) and the emergency engine (EU: A005).
1/30/2018	Administrative revision for a change of company and source names.
1/03/2017	Administrative revision to change the source name.

D. Current Permitting Action

The source submitted an application on July 15, 2020 under AQR 12.5 to renew their OP. Under AQR 12.5, the source submitted a timely renewal application at least six months and not greater than eighteen months prior to the date of permit expiration. Thus, the source can continue to operate with the application shield under their current OP until issuance of a new permit.

Updates to the permit include missing standards and associated conditions (NO_x and SO₂ standards under Subpart GG) and updates to the permit format. Also, to comply with the SO₂ standard, a sulfur limit is used as a surrogate to maintain that standard. The visible emissions check requirements have been updated. A regulation streamlining section was incorporated into the OP.

The PTE of the diesel fired water pump (EU: A007) has been updated with this permitting action. The water pump is powered by a continuous duty engine and the PTE is to be based on 720 hours per year, as limited by the current permit. As a result, there is a small increase in the source PTE. The increase in PTE has not triggered any NSR applicability.

The Department of Environment and Sustainability, Division of Air Quality (DAQ) has identified this source as possibly emitting 25 tons or more of actual emissions for NO_x and/or VOCs in any calendar year. Clark County was required to implement Section 182(a)(3)(B) of the Clean Air Act (CAA) which requires all ozone nonattainment areas to have in place a program that requires emissions statements from stationary sources of NO_x and/or VOCs.

Section 12.9.1 of the Clark County Air Quality Regulations (AQRs) codifies this requirement for Clark County and states the following:

- a. The Responsible Official of each Stationary Source that emits 25 tons or more of NO_x and/or VOC shall submit an Annual Emissions Statement (Statement) to the department for the previous calendar year.
- b. Pursuant to CAA Section 182, the Statement must include all actual emissions for all NO_x and VOC emitting activities.
- c. The Statement shall be submitted to and received by the department on or before March 31 of each year or other date, upon prior notice by the Control Officer, and shall include a certification that the information contained in the Statement is accurate to the best knowledge of the individual certifying the Statement.

A condition requiring submittal of annual emission statement has been included in the permit.

E. Emission Units

Table II-E-1 lists the EUs at the facility. The SCC codes have been updated for accuracy.

Table II-E-1: List of Emission Units

EU	Description	Rating	Manufacturer	Model Number	Serial Number	SCC
A001	Turbine Generator Package #1	22.2 MW 285 MMBtu/hr	General Electric	LM-2500 PE MG5602	260156-1	20200203
A001a	Supplemental Duct Burner	77 MMBtu/hr	Coen		BM ALPHA	10100602
A002	Turbine Generator Package #2	22.2 MW 285 MMBtu/hr	General Electric	LM-2500 PE MG5602	260156-2	20200203
A002a	Supplemental Duct Burner	77 MMBtu/hr	Coen		BM BRAVO	10100602
A003	Turbine Generator Package #3	22.2 MW 285 MMBtu/hr	General Electric	LM-2500 PE MG5602	260156-3	20200203
A003a	Supplemental Duct Burner	77 MMBtu/hr	Coen		BM CHARLIE	10100602
A004	Diesel Emergency Fire Pump, DOM: pre-2006	315 hp	Detroit Diesel	DDFP-L6AT-7017	6A-466677	20200102
A005	Diesel Emergency Engine, DOM: pre-2006	440 hp	Caterpillar	3406B D1	2WB08259	20200102
A006	Cooling Tower, 2-celled	26,600 gpm total	Ecodyne	2CFF60595L261 0-20	DO0-15664-A	38500101
A007	Diesel-Fired Water Pump, DOM: pre-2006	80 hp	John Deere	4045DF150B	T04045D819 214	20200102
A009	AST; Gasoline	1,000 Gallons	Air Boy			40600399

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

Table II-E-2: Summary of Insignificant Activities

Aboveground diesel storage tank, 250,000 gallons (not in use)
Anhydrous Ammonia Storage Tanks (previously EU: A008)
Generator Lube Oil Tank, 215 gallons
Steam Turbine Lube Oil Tank
Steam Turbine Lube Oil Conditioner Tank, 270 gallons
Oil/Water Sump
Generator Lube Oil Tank
Steam Turbine Lube Oil Tank, 1,150gallons
Steam Turbine Lube Oil Tank, 2,150 gallons
Steam Turbine Lube Oil Tank, 3,150 gallons
Diesel aboveground storage tank, 350 gallons (Fire Water Pump)
Steam and Water Treatment
Evaporation Pond
Maintenance Operations

III. LIMITATIONS

A. Potential to Emit

The following table summarizes the source PTE for each regulated air pollutant from the emission units addressed in the OP:

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

PM ₁₀	PM _{2.5}	NO _x	CO	SO ₂	VOC	HAPs	GHG ¹
67.41	61.03	170.99	142.39	9.10	26.79	6.04	505,548

¹Metric tons per year, CO_{2e}

The source emissions exceed the Title V threshold of 100 tpy for NO_x and CO. Therefore, it is subject to the Title V requirements.

The source did not ask to modify any existing emission limits at this time. However, permit language has been updated to the department’s current format. It’s customary for DAQ to move the emissions rates, that are otherwise not emission limitations, from the permit to the TSD. The permittee is expected to demonstrate compliance with the annual emission limits by including startup and shutdown emissions using the continuous emission monitoring system (CEMS) data or the emissions rates in Tables III-C-1 and III-C-2, as applicable. However, these are emission rates and are not for inclusion in the permit as emission limits.

B. Emission Limits

The permittee shall demonstrate compliance with the annual emission limits by including startup and shutdown emissions using the emission rates in Tables III-B-1 and III-B-2 when CEMS data is not available.

Table III-B-1: Startup Emissions per EU (pounds per hour)^{1,2}

EU	PM ₁₀	NO _x (SCR)	NO _x (no SCR)	CO	SO ₂	VOC
A001, A001a	3.88	13.31	21.50	32.69	0.69	2.75
A002, A002a	3.88	13.31	21.50	32.69	0.69	2.75
A003, A003a	3.88	13.31	21.50	32.69	0.69	2.75

¹ Pounds per hour emissions for the three turbine units are based on 40 minutes startup and 20 minutes of normal operation (with duct burner firing).

² NO_x, CO, and VOC emission factors were provided by the manufacturer.

Table III-B-2: Shutdown Emissions per EU (pounds per hour)^{1,2}

EU	PM ₁₀	NO _x (SCR)	NO _x (no SCR)	CO	SO ₂	VOC
A001, A001a	3.88	11.01	21.50	17.33	0.69	2.32
A002, A002a	3.88	11.01	21.50	17.33	0.69	2.32
A003, A003a	3.88	11.01	21.50	17.33	0.69	2.32

¹ Pounds per hour emissions for turbine units #1-3 are based on 8 minutes shutdown and 52 minutes of normal operation (with duct burner firing).

² NO_x, CO, and VOC emission factors were provided by the manufacturer.

40 CFR 60, Subpart GG has standards for SO₂ as well as NO_x. The SO₂ standards were added to the permit, although they have been excluded in the past. Per the regulation, the source is prohibited from emitting into the atmosphere from any stationary gas turbine SO₂ over 0.015% by volume at 15% O₂ on a dry basis, or from burning in any stationary gas turbine any fuel that contains total sulfur over 0.8% by weight (8,000 ppmw).

C. Operational Limits

The source did not request changes to the operational limits for any of the emission units during this permit renewal period.

The limit exempting the source from acid rain permitting was corrected to include the entirety of the regulatory exclusion condition. Corresponding monitoring, recordkeeping, and reporting conditions have been included accordingly. The condition now states:

The permittee shall, for each unit, supply equal to or less than one-third of its potential electrical output capacity, or equal to or less than 219,000 MWe-hr of its actual electric output, annually to any utility power distribution system for sale (on a gross basis). However if, in any three-calendar-year period, such unit sells to a utility power distribution system an annual average of more than one-third of its potential electrical output capacity and more than 219,000 MWe-hr of its actual electric output (on a gross basis), that unit shall be an affected unit subject to the requirements of the Acid Rain Program.

At EPA's behest, any references to its CD of February 9, 1999, have been changed to cite the ATC permit where the condition originated.

It was mentioned in the 2015 renewal TSD that the source had a diesel fuel limit of 216 hours for use during natural gas emergencies. This limitation was specific to the turbines, however, since 2002, that constraint was never included as an operational limit in the permit. That is, use of diesel as an alternative fuel was not accepted in the permit. For this renewal action, the reference that diesel fuel used as an alternative fuel during natural gas emergencies is being removed from the TSD.

IV. PERFORMANCE TESTING

Periodic performance testing for the turbines is not required. However, the Control Officer may require performance tests if compliance with permit limitations appears inadequate.

V. CONTROL EQUIPMENT

NCA2 operates three turbines (EUs: A001-A003) each combined with an HRSG (EUs: A001a-A003a). The turbine units are each equipped with an SCR system to control NO_x emissions. Additionally, the HRSGs contain an oxidation catalyst capable of controlling CO emissions.

VI. MONITORING

A. Visible Emissions Check

The visible emissions conditions have been updated to include the latest department changes. Visible emission checks are applicable to the diesel-fired equipment. Emission units that do not display opacity, such as GDOs and cooling towers, have been removed from this requirement.

B. Continuous Emissions Monitoring

The source is required to demonstrate continuous compliance with emission limitations of each turbine unit for NO_x and CO specified in the permit by installing and operating CEMS for NO_x and CO in accordance with 40 CFR 75, Appendix B and 40 CFR 60.13, as applicable. This existing requirement will stay in the permit without any change.

VII. REGULATORY REVIEW

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

1. CAAA, Authority: 42 U.S.C. § 7401, et seq.;
2. Title 40 of the CFR; including subsection listed in Attachment 1;
3. NRS, Chapter 445; Sections 401 through 601;
4. Clark County Air Quality Regulations (AQR), applicable sections listed in Attachment 2.

A. Federally Applicable Regulations

40 CFR Part 52.21 Prevention of Significant Deterioration Program

The source operates in the Black Mountain area which is designated as in attainment/maintenance for ozone and attainment for the remaining criteria pollutants. Thus, NCA2 is permitted as a major source for NO_x and CO under the PSD program as NO_x and CO emissions potential is over 100 tpy.

40 CFR Part 52.1470 SIP Rules

NCA2 is regulated under the Nevada SIP, which was promulgated under 40 CFR Part 52.1470. Section 110 of the CAA and 40 CFR Part 51 also establish measures to ensure Nevada achieves the National Ambient Air Quality Standards

40 CFR Part 60 New Source Performance Standards

The standards in 40 CFR Part 60 require new, modified, or reconstructed sources to control emissions to the level achievable by the best-demonstrated technology, as specified in applicable provisions. Any source subject to an NSPS is also subject to the general provisions of NSPS Subpart A unless specifically excluded.

NSPS 40 CFR Part 60, Subpart A – General Provisions

All affected sources are subject to the general provisions of NSPS Subpart A unless excluded by a 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.

40 CFR Part 60, Subpart Dc – Small Steam Generating Units

40 CFR Part 60, Subpart Dc regulates small industrial-commercial-institutional steam generating units greater than 10 MMBtu/hr but less than 100 MMBtu/hr for which construction, reconstruction, or modification is commenced after June 9, 1989. NCA2 operates three natural gas-fired duct burners that are subject to NSPS Subpart Dc (EUs: A001a, A002a, and A003a). This rule requires recordkeeping and maintenance of the amount of fuel consumed.

40 CFR Part 60, NSPS Subpart GG – Stationary Gas Turbines

40 CFR Part 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, regulates gas turbines with a heat input greater than 10 MMBtu/hr for which construction, reconstruction, or modification is commenced after October 3, 1977. NCA2 operates three emission units subject to NSPS Subpart GG (EUs: A001, A002, and & A003); as each of these combustion turbines have a heat input greater than 10 MMBtu/hr and were manufactured after October 3, 1977. This rule provides emission standards for NO_x and SO₂ emissions standards, continuous monitoring requirements, and testing requirements.

Nonapplicability of Other NSPS

Only the standards identified in the sections above are applicable to operations at NCA2. Other NSPS subparts are categorically not applicable to the operations at NCA2. 40 CFR Part 60, Subpart III for Compression Ignition Internal Combustion Engines is not applicable because the engines were manufactured prior to June 2006. And 40 CFR Part 60, TTTT for Electric Generating Units, applies to turbines constructed after June 18, 2014.

National Emissions Standards for Hazardous Air Pollutants

40 CFR Part 63 (NESHAP) contains the emission standards that apply to major sources of HAPs (i.e., facilities that exceed the major source thresholds: 10 tpy of a single HAP or 25 tpy of any combination of HAPs) or area sources. Under the CAA, the NESHAPs in Part 63 apply to sources in regulated industrial source classifications (Section 112(d)) or, where EPA has not promulgated a Section 112(d) standard by the applicable deadline, on a case-by-case basis (Sections 112(g) and (j)). NESHAP area source requirements for stationary reciprocating internal combustion engines (RICE) are analyzed below for applicability regarding the stationary engines at NCA2.

40 CFR Part 63, Subpart A – General Provisions

All affected sources subject to 40 CFR Part 63 must comply with the general provisions of Subpart A, unless excluded by a source-specific NESHAP. 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. Because 40 CFR Part 63 Subpart ZZZZ is applicable to NCA2, the provisions of Subpart A also apply.

40 CFR Part 63, Subpart ZZZZ – Stationary Reciprocating Internal Combustion Engines

40 CFR Part 63, Subpart ZZZZ regulates HAP emissions from stationary RICE located at major and area sources of HAP. For an area source of HAP, a stationary RICE is considered an existing source if construction or reconstruction of the engine commenced before June 12, 2006. NCA2 operates one stationary diesel fire pump (EU: A004), one diesel emergency generator (A005), and one stationary water pump (EU A007) that were manufactured prior to June 12, 2006, and are considered existing engines.

The stationary fire pump and diesel emergency generator (EUs: A004 and A005, respectively) are subject to Subpart ZZZZ as existing emergency stationary RICE. The compliance date for existing compression ignition (CI) engines located at area sources of HAP emissions is May 3, 2013. The following provisions of Subpart ZZZZ apply to emergency stationary CI engines at an area source of HAPs:

- § 63.6603(a), Table 2d
- § 63.6625(e), (f), and (i)
- § 63.6640(f); (f)(1); (f)(2)(i), (ii), (iii); and (f)(4)
- § 63.6650(f)
- § 63.6655.

The stationary water pump (EU: A007) is subject to the provisions of Subpart ZZZZ because it is not an emergency engine constructed before June 12, 2006. The compliance date for existing CI engines located at area sources of HAP emissions is May 3, 2013. The following provisions of Subpart ZZZZ apply to nonemergency, non-black start stationary CI engines of less than 300 hp:

- § 63.6603(a)
- § 63.6625(e) and (i)
- § 63.6650(f)
- § 63.6655.

40 CFR Part 63, Subpart CCCCCC – Gasoline Dispensing Facilities

40 CFR Part 63, Subpart CCCCCC regulates HAP emissions from the loading of gasoline storage tanks at GDFs located at an area source of HAP emissions. NCA2 operates a GDF (EU: A009) with a monthly throughput of less than 10,000 gallons of gasoline. The following provisions of Subpart CCCCCC therefore apply:

§ 63.11116(a)(1) – Minimize gasoline spills;

§ 63.11116(a)(2) – Clean up spills as expeditiously as practicable;

§ 63.11116(a)(3) – Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use; and

§ 63.11116(a)(4) – Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

Nonapplicability of Other NESHAPs

As with NSPS, the applicability of a NESHAP to a facility can be ascertained based on the industrial source category covered. All NESHAP regulations in 40 CFR Part 63 other than those specifically discussed above are not applicable to NCA2.

40 CFR Part 64 – Compliance Assurance Monitoring

40 CFR Part 64 requires facilities to prepare and submit monitoring plans for emission units with the initial or renewal OP application. Under the general applicability criteria, this regulation applies to emission units that use a control device to achieve compliance with an emission limit and whose precontrolled emission levels exceed the major source thresholds of the Title V Operating Program. The CAM plans are intended to provide ongoing assurance of compliance with emission limits.

The combustion turbines (EUs: A001, A002, & A003) and HRSGs (EUs: A001a, A002a, & A003a) qualify for two exemptions. Pursuant to 40 CFR Part 64.2(b)(1)(vi), NO_x and CO emissions are exempt because CEMS requirements are included in the Title V permit. PM₁₀, SO₂, HAP, and VOC emissions are exempt because they are less than the major source threshold (as outlined in 40 CFR Part 64.2(a)(3)).

The diesel fire pump (EU: A004), cooling tower (EU: A006), diesel-fired water pump (EU: A007), rental diesel electric generator (EU: A005), and gasoline dispensing facility (EU: A009) meet the exemption outlined in 40 CFR Part 64.2(a)(3), i.e., the potential precontrol emissions are less than the major threshold. Therefore, The CAM Rule is not applicable to NCA2 at this time.

C40 CFR Part 68 – Chemical Accident Prevention Provisions

40 CFR Part 68 regulates toxic and flammable substances under CAA Section 112(r). NCA2 utilizes anhydrous ammonia for the SCR system to reduce NO_x emissions from the HRSGs. Anhydrous ammonia is a regulated toxic substance at quantities that exceed 10,000 pounds. NCA2 is not subject to 40 CFR Part 68 because it stores no more than 5,690 pounds (in a 1,000-gallon pressure vessel) at the facility.

40 CFR Part 70 – Major Source Operating Permitting Program

DAQ developed local regulations that closely follow the 40 CFR Part 70 operating permit regulations, promulgated as AQR 12.5. This application is being submitted in accordance with Title V Operating Permit Program requirements.

40 CFR Parts 72, 73, and 75 – Acid Rain Program

Per 40 CFR Part 72.6(b)(4)(ii), NCA2 is not subject to the Acid Rain Program. NCA2 is a cogeneration facility that commenced construction after November 15, 1990, and supplies equal to or less than one-third of its potential electrical output capacity, or equal to or less than 219,000 MWe-hr of its actual output, annually to any utility power distribution system for sale (on a gross basis). However if, in any three-calendar-year period, an NCA2 unit sells to a utility power distribution system an annual average of more than one-third of its potential electrical output capacity and more than 219,000 MWe-hr of its actual electric output (on a gross basis), that unit shall be an affected unit, subject to the requirements of the Acid Rain Program.

NCA2 is not subject to 40 CFR Part 73, “Sulfur Dioxide Allowance System,” and 40 CFR Part 75, “Continuous Emission Monitoring,” because it is not subject to 40 CFR Part 72. The source is required to maintain CEMS using Part 75 methodologies under 40 CFR Part 60, Subpart GG and its CD.

Permit Shield

The Control Officer may include in each Part 70 OP a permit shield provision stating that the permittee shall be deemed in compliance with any applicable requirements as of the date of permit issuance provided that: 1) such applicable requirements are included and specifically identified in the permit, or 2) the Control Officer, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source and the permit includes the determination or a concise summary. NCA2 requested a permit shield, which was included in the permit.

B. Local Regulatory Requirements

The AQRs contain requirements related to construction and operating permits. The requirements for the following local regulations identified as applicable to this source are tabulated in Attachment 2.

VIII. COMPLIANCE

A. Compliance Certification

The source didn't provide the compliance certificate with the application. However pursuant to AQR 12.5.2.8, NCA2 submitted their annual compliance certification to the control officer on January 29, 2021 to assure compliance with the terms and condition of their permit during 2020.

The source is currently in compliance with all the conditions of its Title V permit and applicable requirements.

B. CAM

40 CFR Part 64 requires facilities to prepare and submit monitoring plans for emission units with the initial or renewal OP application. Under the general applicability criteria, this regulation applies to emission units that use a control device to achieve compliance with an emission limit and whose precontrolled emission levels exceed the major source thresholds of the OP. The CAM plans are intended to provide ongoing assurance of compliance with emission limits. The thresholds requiring CAM have not been exceeded; thus, the rule is not applicable to NCA2.

C. Permit Shield

NCA2 didn't request a permit shield for this action.

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

IX. RECORDKEEPING AND REPORTING

The visible emissions conditions have been updated to include the latest department changes. Visible emission checks are applicable to the diesel-fired equipment. Emission units that do not display an opacity, such as GDOs and cooling towers, have been removed from this requirement.

DAQ has identified this source as possibly emitting 25 tons or more of actual emissions for NO_x and/or VOCs in any calendar year. CAA Section 182(a)(3)(B) requires all ozone nonattainment areas to have in place a program that requires annual emissions statements from stationary sources of NO_x and/or VOCs. AQR 12.9.1 states the following requirements:

- a. The Responsible Official of each stationary source that emits 25 tons or more of NO_x and/or VOCs shall submit an Annual Emissions Statement to the department for the previous calendar year.
- b. Pursuant to CAA Section 182, this statement must include all actual emissions for all NO_x- and VOC-emitting activities.
- c. The statement shall be submitted to and received by the department on or before March 31 of each year—or other date upon prior notice by the Control Officer—and shall include a certification that the information contained in the statement is accurate to the best knowledge of the individual certifying it.

A condition requiring submittal of an annual emissions statement has been included in the permit. Also, 40 CFR Part 72 was removed from the recordkeeping requirements because it pertains to sources with “affected units.” So long as this source operates according to its permit conditions, it remains exempt from acid rain requirements. The source is no longer required to provide certificates of representation for designated and alternate representatives that meet all requirements of 40 CFR Part 72.24, since it no longer has “affected units.”

X. INCREMENT ANALYSIS

DAQ modeled the source using AERMOD to track the increment consumption. Stack data submitted by the applicant were supplemented with information available for similar emission units. Five years (2011 to 2015) of meteorological data from the McCarran Station were used in the model. U.S. Geological Survey National Elevation Dataset terrain data were used to calculate elevations. Table X-1 shows the location of the maximum impact and the potential PSD increment consumed by the source at that location. The impacts are below the PSD increment limits.

Table X-1: PSD Increment Consumption

Pollutant	Averaging Period	Source’s PSD Increment Consumption ($\mu\text{g}/\text{m}^3$)	Location of Maximum Impact	
			UTM X (m)	UTM Y (m)
PM ₁₀	24-hour	21.79 ¹	690634	4011030
PM ₁₀	Annual	4.47	690634	4011030
NO _x	Annual	6.33	690700	4011200

¹ Highest Second High Concentration.

XI. ATTACHMENTS

Attachment 1

Applicable Federal Requirements

Citation	Title	Applicable
40 CFR Part 52.21	Prevention of Significant Deterioration (PSD)	Yes
40 CFR Part 52.1470	Identification of Plan (SIP Rules)	Yes
40 CFR Part 60, Subpart A	NNSPS - General Provisions	Yes
40 CFR Part 60, Subpart Dc	NSPS – Standards of Performance for Small Steam Generating Units	Yes
40 CFR Part 60, Subpart GG	NSPS – Standards of Performance for Stationary Gas Turbines	Yes
40 CFR Part 60, Appendix A	Method 9 or equivalent (opacity)	Yes
40 CFR Part 60, Appendix B	Performance Specifications for NO _x , CO, and O ₂ CEMS	Yes
40 CFR Part 60, Appendix F	Quality Assurance Procedures	Yes
40 CFR Part 63, Subpart ZZZZ	NESHAP - Stationary Reciprocating Internal Combustion Engines	Yes

Citation	Title	Applicable
40 CFR Part 63, Subpart CCCCC	NESHAP - Gasoline Dispensing Facilities	Yes
40 CFR Part 70	Federally Mandated Operating Permits	Yes
40 CFR Part 82	Protection of Stratospheric Ozone	Yes
40 CFR Part 98	Greenhouse Gas Reporting	Yes

Attachment 2

Applicable AQRs

Citation	Title	SIP Approved	Applicable
Section 0	Definitions	Yes	Yes
Section 4	Control Officer	Yes, partial	Yes
Section 5	Interference with Control Officer	Yes	Yes
Section 6	Injunctive Relief	Yes	Yes
Section 8	Persons Liable for Penalties – Punishment: Defense	Yes	Yes
Section 9	Civil Penalties	Yes	Yes
Section 10	Compliance Schedule	No, repealed 12/18/18	No
Section 12.0	Applicability and General Requirements	Yes	No
Section 12.1	Applicability Requirements For Minor Sources	Yes	No
Section 12.2	Permit Requirements for Major Sources in Attainment Areas	Yes	Yes
Section 12.3	Permit Requirements for Major Sources in Nonattainment Areas	Yes	No
Section 12.4	Authority to Construct Application and Permit Requirements for Part 70 Sources	Yes	Yes
Section 12.5	Part 70 Operating Permit Requirements	Yes	Yes
Section 12.9	Annual Emissions Inventory Requirement	No	Yes
Section 12.10	Continuous Monitoring Requirements for Stationary Sources	No	Yes
Section 12.13	Posting of Permit	No	Yes
Section 13.2(b)(1), Subpart A	National Emission Standards for Hazardous Air Pollutants (NESHAP) General Provisions	No	Yes
Section 13.2(b)(82), Subpart ZZZZ	NESHAP for Stationary Reciprocating Internal Combustion Engines	No	Yes
Section 14.1(b)(1), Subpart A	New Source Performance Standards (NSPS) General Provisions	No	Yes
Section 14.1(b)(40), Subpart GG	NSPS – Stationary Gas Turbines	No	Yes
Section 14.1(b)(81), Subpart IIII	NSPS – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	No	Yes
Section 18	Permit and Technical Service Fees	Yes, partial	Yes

Citation	Title	SIP Approved	Applicable
Section 21	Acid Rain Continuous Emissions Monitoring	No	No
Section 22	Acid Rain Permits	No	No
Section 25	Upset/Breakdown, Malfunctions	Yes, partial	Yes
Section 26	Emissions of Visible Air Contaminants	Yes	Yes
Section 28	Fuel Burning Equipment	Yes	Yes
Section 40	Prohibition of Nuisance conditions	No	Yes
Section 41	Fugitive Dust	Yes	Yes
Section 42	Open Burning	Yes	Yes
Section 43	Odors in the Ambient Air	No	Yes
Section 52	Gasoline Dispensing Facilities	No, repealed 4/19/11	No
Section 70	Emergency Procedures	Yes	Yes
Section 80	Circumvention	Yes	Yes
Section 81	Provisions of Regulations Severable	Yes	Yes
Section 90	Fugitive Dust from Open Areas and Vacant Lots	Yes	Yes
Section 91	Fugitive Dust from Unpaved Road, Unpaved Alleys, and Unpaved Easement Roads	Yes	Yes
Section 92	Fugitive Dust from Unpaved Parking Lots and Storage Areas	Yes	Yes
Section 93	Fugitive Dust from Paved Roads and Street Sweeping Equipment	Yes	Yes
Section 94	Permitting and Dust Control for Construction Activities	Yes	Yes

Attachment 3

Table A-3 illustrates the source status determination emissions (SDE). The values are a rough estimate because the numbers are a recreation of the SDE using hourly PTE rates, which exclude startup and shutdown for PM₁₀, PM_{2.5}, NO_x, CO, and VOC. The NO_x values exclude SCR. Table A-3 shows that the source exceeds major source thresholds of 100 tpy for pollutants NO_x, and CO. The SDE for the remaining pollutants are less than major source threshold, which qualifies the source as a true minor for PM₁₀, PM_{2.5}, SO₂, VOC, and HAPs

Table A-3. Source Status Determination (tpy)

EU	Condition	PM ₁₀	PM _{2.5}	NO _x	CO	SO ₂	VOC	HAPs
A001, A001a ¹	8,760 hr/yr	17.00	17.00	94.17	46.87	3.02	8.76	2.00
A002, A002a ¹	8,760 hr/yr	17.00	17.00	94.17	46.87	3.02	8.76	2.00
A003, A003a ¹	8,760 hr/yr	17.00	17.00	94.17	46.87	3.02	8.76	2.00
A004 ²	500 hr/yr	0.33	0.33	3.33	1.16	0.01	0.07	0.01
A005 ²	500 hr/yr	0.06	0.06	2.28	0.44	0.01	0.31	0.01
A006	8,760 hr/yr	15.96	9.58	0	0	0	0.01	
A007 ³	8,760 hr/yr	0.13	0.13	4.69	1.40	0.70	0.35	
A009	9,000 gal/yr	0	0	0	0	0	0.06	0.01
Total		67.48	61.10	292.81	143.61	9.78	27.08	6.03
Major Source Thresholds		100	100	100	100	100	100	10/25 ⁵
PSD Thresholds ⁴		100	100	100	100	100	100	10/25 ⁵

For information purposes only.

¹Hourly rates excluding startup and shut down emissions and SCR were used to derive tpy values.

²Information used from the calculation sheet dated March 3, 2016.

³Emission factors from the application submitted July 15, 2020 were used.

⁴PSD threshold for categorical sources under 40 CFR Part 52.21(b)(1)(i)(a).

⁵10 tons for any individual HAP or 25 tons for any combination of HAPs.