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PART 70 OPERATING PERMIT TECHNICAL SUPPORT DOCUMENT (STATEMENT of BASIS)

**APPLICATION FOR:
Operating Permit Renewal**

SUBMITTED BY
Nevada Power Company
6226 West Sahara Avenue
Las Vegas, Nevada 89146

FOR
Las Vegas Generating Station
Source: 00329

LOCATION:
1701 East Alexander Road
North Las Vegas, Nevada 89030

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

Application Received: April 14, 2022

TSD Date: December 14, 2023

EXECUTIVE SUMMARY

Las Vegas Generating Station (LVGS) is a synthetic minor (SM80) source for NO_x, and a minor source for PM₁₀, CO, SO₂, VOC, and HAP. However, the source will continue to be classified as a Part 70 source and issued a Title V permit. The source is identified as a source for greenhouse gases (GHG). The source is under SIC 4911, “Electric Services” and NAICS 221112, “Fossil Fuel Electric Power Generation” and is located on 1701 East Alexander Road in North Las Vegas, Nevada, in the Las Vegas Valley airshed, Hydrographic Area 212 (the Las Vegas Valley). Hydrographic Area 212 is currently designated as an attainment area for all regulated air pollutants except ozone, for which it was classified as a moderate nonattainment area on January 5, 2023.

LVGS operates five turbine generator packages with stationary combustion turbines, one with a heat recovery steam generator (HRSG) and four with once-through steam generators (OTSG). There is no supplemental firing (no duct burners). LVGS is classified as a categorical stationary source, as defined by AQR 12.2.2(j)(1). In addition, LVGS operates three steam turbines, two cooling towers, and a diesel fire pump. There are no emissions associated with the HRSG, OTSG, or the steam turbines.

The source is subject to 40 CFR Part 60, Subparts A, “General Provisions,” and GG, “Standards of Performance for Stationary Gas Turbines.” It is also subject to 40 CFR Part 63, Subpart ZZZZ, “National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.”

Table 1 summarizes the source potential to emit for each regulated air pollutant.

Table 1: Source PTE¹

Pollutant	PM ₁₀	PM _{2.5}	NO _x	CO	SO ₂	VOCs	HAPs	Pb	H ₂ S	GHG ²
Tons/year	55.10	55.10	94.66	50.03	5.38	35.56	4.85	0.00	0.00	1,102,822.60
Major Source Thresholds (Title V)	100	100	100	100	100	100	10/25 ³	100	100	-
Major Stationary Source Thresholds (PSD/NANSR)	250	250	N/A	250	250	N/A	10/25 ³	250	250	-
Major Stationary Source Thresholds (Nonattainment)	N/A	N/A	100	N/A	N/A	100	10/25 ³	N/A	N/A	-

¹Not a source-wide emission limit; values are used for determining the major source status.

²Metric tons per year, CO_{2e}. PSD requirements for GHG have not been triggered.

³Ten tons for any individual HAP or 25 tons for a combination of all HAP. Neither value is exceeded.

The Clark County Department of Environment and Sustainability, Division of Air Quality (DAQ) has received delegated authority from the U.S. Environmental Protection Agency to implement the requirements of the Part 70 Operating Permit (OP). The most recent Part 70 OP renewal was issued on November 1, 2017. There have been several permit actions since the last Part 70 OP renewal was issued, including a significant revision, Prior Notifications, and a Reopen for Cause. Based on the information submitted by the applicant in the renewal application, subsequent revision applications, and a technical review performed by DAQ staff, the draft Part 70 OP renewal is proposed for LVGS.

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I. ACRONYMS

Table I-1: List of Acronyms

Acronym	Term
AOS	Alternative operating scenario
AQR	Clark County Air Quality Regulation
ATC	Authority to Construct
CAAA	Clean Air Act, as amended
CEMS	Continuous Emissions Monitoring System
CFC	Chlorofluorocarbon
CFR	Code of Federal Regulations
CO	carbon monoxide
CO ₂	carbon dioxide
CD	control device
CTG	Combustion Turbine-Generator
DAQ	Division of Air Quality
DES	Clark County Department of Environment and Sustainability
DLN	Dry Low-NO _x
DOM	date of manufacture
dscf	dry standard cubic feet
dscm	dry standard cubic meter
EPA	U.S. Environmental Protection Agency
EU	emission unit
g/gr	gram
HAP	hazardous air pollutant
HCFC	hydrochlorofluorocarbon
HHV	higher heating value
hp	horsepower
HRSG	heat recovery steam generator
kW	kilowatts
LHV	lower heating value
LON	letter of noncompliance
MMBtu/hr	Millions of British Thermal Units per Hour
M/N	model number
MW	megawatt
NAICS	North American Industry Classification System
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO _x	nitrogen oxides
NRS	Nevada Revised Statutes
NSPS	New Source Performance Standard

Acronym	Term
NSR	New Source Review
OP	Operating Permit
OTSG	Once Through Steam Generator
PM _{2.5}	particulate matter less than 2.5 microns in diameter
PM ₁₀	particulate matter less than 10 microns in diameter
ppm	Parts per Million
ppmvd	Parts per Million, Volumetric Dry
PSD	Prevention of Significant Deterioration
PTE	potential to emit
QA/QC	quality assurance/quality control
RATA	relative accuracy test audit
SIP	State Implementation Plan
SIC	Standard Industrial Classification
SO ₂	sulfur dioxide
TDS	Total Dissolved Solids
U.S.C.	United States Code
VEE	Visible Emissions Evaluation
VOC	volatile organic compound

II. SOURCE INFORMATION

A. PROCESS DESCRIPTION

LVGS operates five Turbine Generator Packages with GE LM-6000 stationary combustion turbines, one with a heat recovery steam generator (HRSG) and four with once-through steam generators (OTSG). There is no supplemental firing (no duct burners). LVGS is classified as a Categorical Stationary Source, as defined by AQR 12.2.2(j)(1). In addition, LVGS operates three steam turbines, two cooling towers, and a diesel fire pump. There are no emissions associated with the HRSG, OTSG, or the steam turbines.

The source is subject to 40 CFR Part 60, Subparts A, “General Provisions”; Dc, “Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units”; and GG, “Standards of Performance for Stationary Gas Turbines.” It is also subject to 40 CFR Part 63, Subpart ZZZZ, “National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.”

Table II-B-1 lists the emission units covered by this operating permit.

Table II-B-1: Summary of Emission Units

EU	Description	Rating	Manufacturer	Model Number	Serial Number	SCC
A01	Turbine Generator Package Unit 1, Natural Gas-fired; SCR and Oxidation Catalyst	480 MMBtu/hr; 44 MW	General Electric	LM-6000	260245	20100201
A02	Two-cell mechanical draft cooling tower, 6,000 ppm TDS, 0.005% drift loss	14,200 gpm	GEA	TD-3630-2-2422CF		38500101
A03	Turbine Generator Package Unit 2, Natural Gas-fired; SCR and Oxidation Catalyst	480 MMBtu/hr; 44 MW	General Electric	LM-6000	310891	20100201
A04	Turbine Generator Package Unit 3, Natural Gas-fired; SCR and Oxidation Catalyst	480 MMBtu/hr; 44 MW	General Electric	LM-6000	311668	20100201
A05	Turbine Generator Package Unit 4, Natural Gas-fired; SCR and Oxidation Catalyst	480 MMBtu/hr; 44 MW	General Electric	LM-6000	311724	20100201
A06	Turbine Generator Package Unit 5, Natural Gas-fired; SCR and Oxidation Catalyst	480 MMBtu/hr; 44 MW	General Electric	LM-6000	312189	20100201
A07	10-cell mechanical draft cooling tower, 6,000 ppm TDS, 0.001% drift loss	78,248 gpm	GEA	363028-10I-22-WCF		38500101
C01	Diesel-fired Fire Pump DOM: 1996	121 hp	Caterpillar	3208	90N74714	20100102

Insignificant Activities

The permit is required to identify insignificant activities or emission units pursuant to AQR 12.5.2.5. These activities are listed in Table II-B-2.

Table II-B-2: Summary of Insignificant Activities

Mobile combustion sources
Station maintenance activities
Maintenance shop activities (parts washers, sand blasters, welders, etc)
Steam cleaning operations
10,085 gallon aqueous ammonia pressure vessel
Fire pump diesel tank
Oil/water separator
137 gallon used oil tank
Portable gas-fired pump
Lube oil sumps and vents

B. PERMITTING HISTORY

The last renewal was issued November 1, 2017.

Table II-C-1: Permitting Actions Issued Since Last Renewal Was Issued

Date	Action Type	Description
10/5/2017	Title V OP – Prior Notification	Notification to use a temporary, mobile, trailer-mounted diesel water pump.
11/29/2018	Title V OP – Prior Notification	Notification to replace the gas metering valves associated with the four combustion turbines.
6/19/2020	Title V OP – Signification Revision	Revision in response to the Startup, Shutdown, and Malfunction (SSM) SIP Call Rule finalized in June 2015 by the United States Environmental Protection Agency (EPA) and the June 2016 proposed removal of the affirmative defense from the Part 70 regulation. NV Energy proposed alternate operating scenarios for unplanned operating events (UOE) as well as testing or tuning events in the LVGS Title V Operating Permit. The request for UOE was withdrawn by NV Energy prior to the permit being issued.
11/17/2021	Title V OP – Reopen for Cause	Add the requirement for the source to submit an Emission Statement as the NOx PTE is greater than 25 tons per year.

C. PERMITTING ACTION

DAQ received the Title V renewal application on April 14, 2022. The renewal application was received on time; therefore, the permittee is eligible for an application shield. The renewal application was deemed complete on June 1, 2022.

The only change NV Energy requested was to update the nonroad engine language to include the following language, identical to other NV Energy permits, and DAQ’s current standard language:

“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.”

DAQ accepted this request and updated the nonroad engine language accordingly.

Table II-D-1: Changes Included by DAQ as Part of the Renewal Process

Description
Reduced the diesel sulfur content limit from 0.05 percent to 15 ppm (0.0015 percent) to comply with 40 CFR 63, Subpart ZZZZ.
Updated the Visible Emissions Check monitoring conditions to DAQ’s most recent language.
A standard monitoring condition and a standard recordkeeping condition were added requiring the permittee to monitor and keep records of the sulfur content of the diesel fuel to show compliance with 40 CFR Part 63, Subpart ZZZZ.
Performance testing conditions were added to the permit that will applicable if the control officer requires additional testing. Initial performance tests have been conducted. Subsequent testing is currently not required by the permit.
Removed the Operational Limit that stated: <p style="margin-left: 40px;">The permittee shall include startup, shutdown, and testing/tuning emissions, as recorded by the continuous emission monitoring system (CEMS) for NO_x and CO in any consecutive 12-month period. <i>[Origin: NSR ATC Modification 3, Revision 5, (05/20/09) and Part 70 OP (06/19/2020); Authority: AQR 12.5.2.6(a)]</i></p> <p>This condition is an emissions limit and these emissions are to be included per Condition 3.2.1.</p>

D. ALTERNATIVE OPERATING SCENARIOS

LVGS did not propose any alternative operating scenarios in this permitting action.

III. EMISSIONS INFORMATION

A. EMISSIONS FOR PERMIT APPLICABILITY

Applicability emissions are calculated at 8,760 hours for each emission unit except for the fire pump, which is based on 500 hours, and include potential emissions from insignificant activities. Applicability emissions for the individual emissions units are listed in the appendix.

Table III-A-1: Applicability Emissions (tons per year)

Pollutant	PM ₁₀	PM _{2.5}	NO _x	CO	SO ₂	VOCs	HAPs
Source Applicability Emissions	66.24	66.24	117.45	73.26	6.58	44.10	5.42
Major Stationary Source Thresholds (Title V)	100	100	100 ¹	100	100	100 ¹	10/25 ²

¹Nonattainment area thresholds as well.

²10 tpy for single HAP and 25 tpy for combined HAP.

B. SOURCE-WIDE PTE

LVGS is an SM80 for NO_x and a minor source for PM₁₀, PM_{2.5}, CO, SO₂, VOC, and HAP. They are also a source of greenhouse gases. PTE for the individual emissions units are listed in the appendix.

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

PM ₁₀	PM _{2.5}	NO _x	CO	SO ₂	VOCs	HAPs ¹	Pb	H ₂ S	GHG ²
55.10	55.10	94.66	50.03	5.38	35.56	4.85	0.00	0.00	1,102,822.60

¹ Total HAP. No single HAP equals or exceeds 10 tpy.

² Metric tons per year, CO_{2e}

The source used AP-42 emission factors to calculate the HAP emissions from the turbines. For the short-term emissions (lb/hr) of PM₁₀, PM_{2.5}, NO_x, CO, SO₂, and VOC, the source used the manufacturer's data at 36 °F. For the annual emissions, the burner ratings were used for NO_x and CO and the manufacturer's data at 66 °F was used for PM₁₀, PM_{2.5}, SO₂, and VOC, which is lower than the short-term emission factors.

C. SOURCE CLASSIFICATION

Table III-C-1 shows the source classification based on the calculated applicability emissions, PTE, and applicable source thresholds.

Table III-C-1: Source Classification (tons per year)

	PM ₁₀	PM _{2.5}	NO _x	CO	SO ₂	VOCs	HAPs ¹
Applicability Emissions	66.24	66.24	117.45	73.26	6.58	44.10	5.42
Source PTE	55.10	55.10	94.66	50.03	5.38	35.56	4.85
Major Source Thresholds (Title V)	100	100	100	100	100	100	10/25 ²
Major Stationary Source Thresholds (PSD)	250	250	N/A	250	250	N/A	10/25 ²
Major Stationary Source Thresholds (NANSR)	N/A	N/A	100	N/A	N/A	100	10/25 ²
Status	Minor	Minor	Synthetic Minor	Minor	Minor	Minor	Area

¹ 10 tpy individual HAP, 25 tpy total HAP. Neither value is exceeded

None of the pollutants exceed PSD thresholds; therefore, LVGS is a minor NSR source. The source is classified as a synthetic minor for NO_x as the applicability emissions are greater than the Title V threshold for NO_x. The permittee will have to report, semiannually, a monthly, 12-month rolling total hours of operation and emissions. The permittee is already collecting data to support this recordkeeping and reporting, and already submits semiannual reports as a synthetic minor source of NO_x.

D. EMISSIONS INCREASE

As there are no changes in the emissions units or the operational limits, there is no change in PTE and no emissions increase.

E. OPERATIONAL LIMITS

There are no changes in operational limits of the emission units for this renewal.

Turbine Unit 1 (EU: A01) has no limit on the hours of normal operation, testing/tuning, or on startups/shutdowns. The CEMS will record NO_x and CO emissions during all operational modes, which are part of the annual emission limits.

Turbine Units 2 through 5 (EUs: A03 through A06) are limited to 792 startup/shutdown cycles each and have a combined limit of 30,480 hours in any consecutive 12-month period. All turbine units are limited to 480 MMBtu/hr at all times and 600 minutes per each per calendar year for testing and tuning. These limits were set by the source.

Operation limits for the turbines were set to avoid the source being a major source of NO_x emissions in a previous action and will be maintained in the renewed permit.

The diesel fire pump (EU: C01) has the standard limit of 100 hours per year for testing and maintenance, with 50 hours allowed to be used for nonemergency situations.

F. CONTROL TECHNOLOGY AND ANALYSIS

There are no new emission units or processes being added with this permitting action. No controls analysis is required with this permitting action. Previous BACT determinations remain valid for existing emission units.

Table II-D-1: BACT Determinations

EU	Description	Control Technology
A01	Turbine Unit 1, 480 MMBtu/hr	SCR, oxidation catalyst, water injection, natural gas combustion, inlet air filters
A02	14,200 gpm cooling tower	6,000 ppm TDS, 0.005% drift loss
A03 through A06	Turbine Units 2 through 5, 480 MMBtu/hr each	SCR, oxidation catalyst, water injection, natural gas combustion, inlet air filters
A07	78,248 gpm cooling tower	6,000 ppm TDS, 0.001% drift loss
C01	121 hp diesel fire pump	Turbocharging, aftercooling, and low sulfur diesel

As there are no changes in emissions, there are no emissions that exceed significance, therefore no new controls analysis is required.

G. MONITORING

There are no substantial changes to the monitoring requirements as part of this renewal except the permittee must now follow the Visible Emission Check Guide for visible emission checks on the emergency fire pump. Related conditions were added to the permit.

Compliance Assurance Monitoring (CAM)

CAM is not applicable as LVGS is not a major source under Part 70 for any pollutant and the source uses CEMS to demonstrate compliance with all emissions limitations for NO_x and CO from the turbines.

H. PERFORMANCE TESTING

There are no proposed changes to performance testing requirements incorporated as part of this renewal. The turbine units (EUs: A01 and A03 through A06) were subject to initial performance testing. There are no subsequent testing requirements for any turbine unit.

IV. REGULATORY REVIEW

A. LOCAL REGULATORY REQUIREMENTS

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

1. Chapter 445 of the NRS, Sections 401 through 601;
2. Portions of the AQR included in the SIP for Clark County, Nevada. SIP requirements are federally enforceable. All requirements from ATC permits issued by DAQ are federally enforceable because these permits were issued pursuant to SIP-included sections of the AQR; and
3. Portions of the AQR not included in the SIP. These locally applicable requirements are locally enforceable only.

B. FEDERALLY APPLICABLE REGULATIONS

DAQ has determined that the following federal regulations are applicable:

1. CAAA (42 U.S.C. § 7401, et seq.);
2. Title 40 of the CFR, including 40 CFR Part 70 and others;

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

Subpart A - General Provisions

40 CFR 60.7 - Notification and record keeping.

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

40 CFR 60.8 - Performance tests.

Discussion: These requirements are found in the Part 70 OP. Notice of intent to test, the applicable test methods, acceptable test method operating conditions, and the requirement for three runs are outlined in this regulation. DAQ requirements for initial performance testing are identical to 40 CFR 60.8.

40 CFR 60.11 - Compliance with standards and maintenance requirements.

Discussion: Subpart GG also requires fuel monitoring and sampling to meet a standard. Subpart GG requirements are addressed in the Part 70 OP. LVGS shall operate in a manner consistent with this section of the regulation.

40 CFR 60.12 – Circumvention.

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

40 CFR 60.13 - Monitoring requirements.

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

Subpart GG - Standards of Performance for Stationary Gas Turbines

40 CFR 60.330 - Applicability and designation of affected facility.

Discussion: Turbine Unit 1 (EU: A01) began construction in the late 1980s. The four newer combined-cycle turbines (EUs: A03 through A06) began construction in 2000. The maximum heat input rating of each of the five the turbine units, based on the lower heating value of the natural gas fuel, is above the 10-MMBtu per hour threshold. Subpart GG applies to the five (5) turbines at this source.

40 CFR 60.332 - Standard for nitrogen oxides.

Discussion: The NSPS sets a maximum NO_x emission standard by setting the value of Y in the following equation to 14.4 kJ/Wh. Because the facility uses natural gas, the F factor is zero.

Therefore:

$$\text{NO}_x \text{ emission standard} = 0.0075 (14.4 / Y) + F$$

(10,000 ppm/volume%)

Table IV-B-1: Subpart GG NO_x Standards

Emission Unit	Y Value (KJ/Wh)	NO _x STD in ppmvd @ 15% O ₂
A01	12.55	86
A03 – A06	10.29	105

Conversion Factor: (10,000 ppm/volume%)

LVGS shall comply with these standards for Turbine Unit 1 (EU: A01) and Turbine Units 2 through 5 (EUs: A03 through A06).

40 CFR 60.333 - Standard for sulfur dioxide.

Discussion: The sole use of pipeline-quality natural gas with total sulfur content less than 0.8 percent (8,000 ppmw) satisfies this requirement. The sulfur is limited to 0.75 grains per 100 dry standard cubic feet.

40 CFR 60.334 - Monitoring of operations.

Discussion: Sulfur content shall be verified annually and based on data from the gas supplier 40 CFR 60.334 (h)(3)(i) also allows the site to maintain a current tariff document from the gas supplier to satisfy the requirements of sulfur sampling.

40 CFR 60.335 - Test methods and procedures.

Discussion: These requirements are found in the conditions for performance testing found in the Part 70 OP.

Subpart III – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

40 CFR 60.4200 – Applicability Determination

Discussion: The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) with a displacement less than 30 liters per cylinder where the model year is 2007 or later, for engines that are not fire pumps, and July 1, 2006, for ICE certified by the National Fire Protection Association as fire pump engines. This subpart does not apply as the fire pump (EU: C01) was manufactured in 1996.

Subpart KKKK - Standards of Performance for Stationary Combustion Turbines

40 CFR 60.4305 – Applicability.

Discussion: The five (5) turbines (EUs: A01 and A03 through A06) are not subject to the provisions of this subpart because these turbines commenced construction, modification, or reconstruction before February 18, 2005.

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

Subpart A - General Provisions

40 CFR 63.4 – Prohibited activities and circumvention

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

Subpart ZZZZ - National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

40 CFR 63.6585 – Applicability.

Discussion: The diesel fire pump (EU: C01) is subject to the provisions of this subpart because this unit was constructed prior to 2007. The unit shall be limited to 100 hours per year for testing and maintenance to meet the definition of an emergency engine.

40 CFR PART 64 - COMPLIANCE ASSURANCE MONITORING

40 CFR 64.2 – Applicability.

Discussion: LVGS is not a major source under Part 70 for any pollutant and therefore is not subject to CAM.

In addition, the source operates a CEMS to demonstrate compliance with all emissions limitations for NO_x and CO from the facility's turbines and would satisfy the CAM requirements as listed in 40 CFR 64.3(d)(1).

The fire pump (EU: C01) and cooling towers (EUs: A02 and A07) do not have uncontrolled emission above major source thresholds, so none of these three emission units are subject to CAM.

40 CFR PART 72 - ACID RAIN PERMITS REGULATION

Subpart A – Acid Rain Program General Provisions

40 CFR 72.6 – Applicability.

Discussion: LVGS is defined as a utility unit pursuant to the definitions in Part 72; therefore, the provisions of this regulation apply to Turbine Unit 1 through Turbine Unit 5 (EUs: A01 and A03 through A06).

40 CFR Part 72.9: Standard Requirements.

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

Subpart B—Designated Representative

Discussion: LVGS has a Certificate of Representation for Designated Representative on file. They have fulfilled all requirements under this subpart.

Subpart C—Acid Rain Permit Applications

Discussion: LVGS has applied for an acid rain permit.

Subpart D—Acid Rain Compliance Plan and Compliance Options

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

Subpart E—Acid Rain Permit Contents

Discussion: LVGS has applied for an acid rain permit, and it will contain all information to demonstrate compliance with this subpart.

40 CFR PART 73 – ACID RAIN SULFUR DIOXIDE ALLOWANCE SYSTEM

40 CFR 73.2 – Applicability.

Discussion: LVGS is a subject of 40 CFR Part 72; therefore, the provisions of this regulation apply per 40 CFR 73.10.

40 CFR PART 75 - CONTINUOUS EMISSION MONITORING

Discussion: LVGS is subject to the Acid Rain emission limitations of 40 CFR Part 72; therefore, the facility is subject to the monitoring requirements of this regulation. Each combined cycle turbine unit has been equipped with both a NO_x CEMS and a diluent oxygen monitor. Each turbine unit is also equipped with a fuel flow monitor. The data from the CEMS are used to provide quarterly acid rain reports to both EPA and DAQ. All required monitoring plans, RATA testing protocols, and certification-testing reports have been provided to EPA and DAQ. Initial CEMS certification testing was completed on April 10, 2003. The CEMS Quality Assurance Plan was approved on January 2, 2002.

V. COMPLIANCE

A. COMPLIANCE HISTORY

Table V-A-1: Compliance History

Compliance Issue	How Resolved/Proposed	Date/Status
10/14/2010: Letter of Noncompliance (LON) for the operation of an unpermitted degreaser/parts washer.	On 09/08/2010 DAQ received a letter requesting the inclusion of this unit in the permit as an insignificant unit. DAQ agreed to this and the revised permit was issued on 05/14/2012.	Resolved.
12/18/2012: LON issued for operation of a cooling tower (EU: A07) at a water circulation rate greater than permitted.	The cooling tower was tested, which confirmed the source's statement that now emission exceedance occurred. A minor revision application to correct the circulation rate was received by DAQ on 02/13/2013, with a revised permit issued on 7/25/2013.	Resolved.

B. COMPLIANCE CERTIFICATION

- a. Regardless of the date of issuance of this Part 70 OP, the schedule for the submittal of reports to the Control Officer shall be as follows:

Table V-B-1: Reporting Schedule¹

Required Report	Applicable Period	Due Date
Semiannual report for 1 st six-month period	January, February, March, April, May, June	July 30 each year ¹
Semiannual report for 2 nd 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
Excess Emissions that Pose a Potential Imminent and Substantial Danger	As required	Within 12 hours of when permittee learns of 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
Performance Testing Protocol	As required	No less than 45 days, but no more than 90 days, before the anticipated test date ¹
Performance Testing Results	As required	Within 60 days of end of test ¹

Required Report	Applicable Period	Due Date
RATA Protocol	As required	No less than 21 days, but no more than 90 days, before the anticipated test date ¹
RATA Results	As required	Within 45 days of end of test for Part 75 sources or within 60 days for all others ¹

¹If the due date falls on a Friday, 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 nitrogen oxide (NO_x) and/or emit 25 tons or more of volatile organic compounds (VOC) during a calendar year.

- a. A statement of methods used for determining compliance, including a description of monitoring, recordkeeping, and reporting requirements and test methods.
- b. A schedule for submission of compliance certifications during the permit term.
- c. A statement indicating the permittee’s compliance status with any applicable enhanced monitoring and compliance certification requirements of the Act.

C. SUMMARY OF MONITORING FOR COMPLIANCE

Table V-C-1: Summary of Monitoring for Compliance

EU	Process Description	Monitored Pollutants	Applicable Subsection	Requirements	Compliance Monitoring
A01, A03, A04, A05, A06	Combustion turbines	CO, NO _x , SO ₂ , PM ₁₀ , VOC, HAPs	AQR Section 12.5 40 CFR Subpart GG	Annual and short-term emission limits.	CEMS for NO _x and CO. Compliance for PM ₁₀ , SO ₂ , VOC and HAPs shall be based on sole use of pipeline quality natural gas as fuel and emission factors. Recording is required for compliance demonstration.
A01, A03, A04, A05, A06	Combustion turbines	Opacity	AQR Section 26	Less than 20% opacity except for six (6) minutes in any 60-minute period.	Use of natural gas as fuel and good combustion practices as well as EPA Method 9 performance testing upon the request of the Control Officer.
A02, A07	Cooling towers	PM ₁₀	AQR Section 12.5 AQR Section 26	Short term emission limits.	Monitoring TDS in the circulating water.
C01	Diesel Emergency Generator	SO ₂ , Opacity	AQR Section 26	Opacity shall not exceed 20%, except for 3 min. out of every 60 min. period	Hours of operation, sulfur content of fuel. Additional monitoring per the request of the Control Officer

D. COMPLIANCE SUMMARY

LVGS has certified, through its renewal application, minor revision applications, and annual compliance certification, that the permittee is in compliance with all permit conditions and applicable requirements.

Table V-D-1: AQRs Applicable to LVGS

Citation	Title	Applicability	Applicable Test Method	Compliance Status
AQR Section 0	Definitions.	Applicable – LVGS will comply with all applicable definitions as they apply.	LVGS will meet all applicable test methods should new definitions apply.	LVGS complies with applicable requirements.
AQR Section 4	Control Officer	Applicable – The Control Officer or his representative may enter into LVGS property, with or without prior notice, at any reasonable time for purpose of establishing compliance.	LVGS will allow Control Officer to enter Station property as required.	LVGS complies with applicable requirements.
AQR Section 5	Interference with Control Officer	Applicable - LVGS Energy shall not hinder, obstruct, delay, resist, interfere with, or attempt to interfere with, the Control Officer.	LVGS will allow Control Officer to operate as needed.	LVGS complies with applicable requirements.
AQR Section 8	Persons Liable for Penalties – Punishment Defense	Applicable – LVGS and employees will be individually and collectively liable to any penalty or punishment from DAQ.	LVGS understands and will adhere to the rules stipulated in the AQR.	LVGS complies with applicable requirements.
AQR Section 9	Civil Penalties	Applicable – LVGS as a whole is subject to penalties for AQR violations.	LVGS understands and will adhere to the rules stipulated in the AQR.	LVGS complies with applicable requirements.
AQR Section 12.0	Applicability, General Requirements, and Transition Procedures	Applicable – LVGS as a whole is subject to these requirements. The rule outlines source applicability, the requirement for a source to obtain a permit, and transition for sources that received a permit prior to rulemaking.	LVGS applied for and received ATC permits from DAQ prior to commercial operations. LVSD will comply with the requirements for ATCs.	LVGS complies with applicable requirements.
AQR Section 12.2	Permit Requirements for Major Sources in Attainment Areas (PSD)	Not Applicable – LVGS is a synthetic minor source for NO _x and is a minor source for all other pollutants.	Not Applicable.	Not Applicable.
AQR Section 12.3	Permit Requirements for Major Sources in Nonattainment Areas	Not Applicable – LVGS is a synthetic minor source for NO _x and is a minor source for all other pollutants.	Not Applicable.	Not Applicable.
AQR Section 12.4	Authority to Construct Application and Permit Requirements for Part 70 Sources	Applicable – LVGS as a whole is subject to these requirements. The rule outlines the ATC application requirements.	An ATC permit was applied for and obtained for LVGS prior to commercial operation. Any new ATC applications will adhere to these requirements.	LVGS complies with applicable requirements.

Citation	Title	Applicability	Applicable Test Method	Compliance Status
AQR Section 12.5	40 CFR Part 70 Operating Permits	Applicable – LVGS is not a major stationary source but is subject to a Part 70 Operating Permit as required by the Acid Rain regulations of 40 CFR Parts 72-78 and under Part 70 the initial Title V permit application was submitted as required. Renewal applications are due between 6 and 18 months prior to expiration. Revision applications will be submitted within 12 months or commencing operation of any new emission unit. Section 19 is both federally and locally enforceable	LVGS's existing Part 70 permit is dated November 1, 2017. This renewal application was submitted before the October 31, 2022, expiration. Applications for new units will be submitted within 12 months of startup.	LVGS complies with applicable requirements.
AQR Section 12.7	Emission Reduction Credits (ERC)	Applicable – In the event LVGS generates or requires ERC, LVGS will follow the procedures in this section.	LVGS will follow the procedures of this section to bank or generate and ERC	LVGS complies with applicable requirements.
AQR Section 12.9	Annual Emissions Statement and Inventory Requirement	Applicable – LVGS has the potential to emit greater than 25 tons per year of NO _x and VOC	LVGS is required to submit and annual emissions statement.	LVGS complies with applicable requirements.
AQR Section 12.10	Continuous Monitoring Requirements for Stationary Sources	Applicable – LVGS operates a CEMS in accordance with 40 CFR Part 75.	LVGS is required to calibrate, operate, and maintain the CEMS.	LVGS complies with applicable requirements.
AQR Section 14.1(b)(1) Subpart A	NSPS – General Provisions	Applicable – LVGS is an affected facility under the regulations. Sec. 14 is locally enforceable; however, the NSPS standards they reference are federally enforceable.	Applicable monitoring, recordkeeping and reporting requirements.	LVGS complies with applicable requirements.
AQR Section 14.1(b)(40) Subpart GG	Standards of Performance for New Stationary Sources (NSPS) – Stationary Gas Turbines	Applicable – The five (5) LVGS turbines are natural gas-fired units with heat input greater than 10 MMBtu/hr.	The five (5) turbines meet the applicable NO _x emission standard. NO _x emissions determined by EPA Method 7E.	LVGS complies with applicable requirements.
AQR Section 18	Permit and Technical Service Fees	Applicable – LVGS will be required to pay all required/applicable permit and technical service fees.	LVGS is required to pay all required/applicable permit and technical service fees.	LVGS complies with applicable requirements.
AQR Section 21	Acid Rain Permits	Applicable - LVGS is defined as a utility unit pursuant to the definitions in Part 72; therefore, the provisions of this regulation apply to all turbines.	LVGS has applied for an acid rain permit, and it will contain all information to demonstrate facility compliance.	LVGS complies with applicable requirements.
AQR Section 22	Acid Rain Continuous Emission Monitoring	Applicable - LVGS is subject to the acid rain monitoring requirements. Each combined cycle turbine unit has been equipped with both a NO _x CEMS and a diluent oxygen monitor.	All required monitoring plans, RATA testing protocols, and certification-testing reports have been provided to EPA and DAQ.	LVGS complies with applicable requirements.

Citation	Title	Applicability	Applicable Test Method	Compliance Status
AQR Section 25	Upset/ Breakdown, Malfunctions	Applicable – Any upset, breakdown, emergency condition, or malfunction which causes emissions of regulated air pollutants in excess of any permit limits shall be reported to Control Officer. Section 25.1 is locally and federally enforceable.	Any upset, breakdown, emergency condition, or malfunction in which emissions exceed any permit limit shall be reported to the Control Officer within 24 hours of onset of such event.	LVGS complies with applicable requirements.
AQR Section 26	Emissions of Visible Air Contaminants	Applicable – Opacity for the LVGS combustion turbine must not exceed 20 percent for more than six (6) minutes in any 60-minute period.	Compliance determined by EPA Method 9.	LVGS complies with applicable requirements.
AQR Section 28	Fuel Burning Equipment	Applicable – Regulation establishes maximum PM emission rates for fuel burning equipment as defined in Section 0.	LVGS has determined the maximum allowable PM emission rate from the equation in ARQ 28. All emission units are documented as having emissions lower than the maximum allowable rate	LVGS complies with applicable requirements.
AQR Section 40	Prohibition of Nuisance Conditions	Applicable – No person shall cause, suffer or allow the discharge from any source whatsoever such quantities of air contaminants or other material which cause a nuisance. Section 40 is locally enforceable only.	LVGS air contaminant emissions controlled by pollution control devices or good combustion in order not to cause a nuisance.	LVGS complies with applicable requirements.
AQR Section 41	Fugitive Dust	Applicable – LVGS shall take necessary actions to abate fugitive dust from becoming airborne.	LVGS utilizes appropriate best practices to not allow airborne fugitive dust.	LVGS complies with applicable requirements.
AQR Section 42	Open Burning	Applicable – In the event LVGS burns combustible material in any open areas, such burning activity will have been approved by Control Officer in advance. Section 42 is a locally enforceable rule only.	LVGS will contact DAQ and obtain approval in advance for applicable burning activities as identified in the rule.	LVGS complies with applicable requirements.
AQR Section 43	Odors in the Ambient Air	Applicable – An odor occurrence is a violation if the Control Officer is able to detect the odor twice within a period of an hour, if the odor causes a nuisance, and if the detection of odors is separated by at least fifteen minutes. Section 43 is a locally enforceable rule only.	LVGS will not operate its facility in a manner which will cause odors. LVGS is a natural gas fired facility and is not expected to cause odors.	LVGS complies with applicable requirements.
AQR Section 70.4	Emergency Procedures	Applicable – LVGS submitted an emergency standby plan for reducing or eliminating air pollutant emissions in the Initial Operating Permit Application.	LVGS submitted an emergency standby plan.	LVGS complies with applicable requirements.
AQR Section 80	Circumvention	Applicable – LVGS as a whole is subject. The rule stipulates that LVGS will not conceal emission in any way at the source.	LVGS will disclose all emissions as required by state and federal regulations.	LVGS complies with applicable requirements.

Table V-D-2: Federal Air Quality Regulations Applicable to LVGS

Citation	Title	Applicability	Applicable Test Method	Compliance Status
40 CFR Part 52.21	Prevention of Significant Deterioration (PSD)	Not Applicable – LVGS PTE < 100 TPY	Not Applicable.	Not Applicable.
40 CFR Part 52.1470	SIP Rules	Applicable – LVGS is classified as a Title V source, and SIP rules apply.	Applicable monitoring and record keeping of emissions data.	LVGS is in compliance with applicable state SIP requirements including monitoring and record keeping of emissions data.
40 CFR Part 60, Subpart A	Standards of Performance for New Stationary Sources (NSPS) – General Provisions	Applicable – LVGS is an affected facility under the regulations.	Applicable monitoring, recordkeeping, and reporting requirements.	LVGS complies with applicable requirements.
40 CFR Part 60, Subpart GG	Standards of Performance for New Stationary Sources (NSPS) – Stationary Gas Turbines	Applicable – The LVGS five turbines are natural gas- fired units with heat input greater than 10 MMBtu/hr.	Applicable monitoring, recordkeeping, and reporting requirements.	LVGS complies with applicable requirements.
40 CFR Part 60	Appendix A, Method 9 or equivalent, (Opacity)	Not Applicable.	Not Applicable.	Not Applicable.
40 CFR Part 64	Compliance Assurance Monitoring	Not Applicable – LVGS is not a Title V Major Source.	Not Applicable.	Not Applicable.
40 CFR Part 70	Federally Mandated Operating Permits	Applicable – LVGS is not a major stationary source but is subject to a Part 70 Operating Permit as required by the Acid Rain regulations of 40 CFR Parts 72-78 and under Part 70 the initial Title V permit application was submitted as required. Renewal applications are due between 6 and 18 months prior to expiration. Revision applications will be submitted within 12 months or commencing operation of any new emission unit.	LVGS's existing Part 70 permit is dated November 1, 2017. This renewal application was submitted before the October 31, 2022, expiration. Applications for new units will be submitted within 12 months of startup.	LVGS complies with applicable requirements.
40 CFR Part 72	Acid Rain Permits Regulation	Applicable – LVGS is not exempt from acid rain regulations based on 40 CFR 72.6 (b)(4).	LVGS maintains Acid Rain Permit.	LVGS complies with applicable requirements.
40 CFR Part 73	Acid Rain Sulfur Dioxide Allowance System	Applicable – LVGS is not exempt from acid rain regulations based on 40 CFR 73.2 (a).	LVGS verifies SO ₂ allowance with US EPA.	LVGS complies with applicable requirements.
40 CFR Part 75	Acid Rain CEMS	Applicable – LVGS is subject to acid rain regulations.	LVGS continuously monitors NO _x emissions with CEMS.	LVGS complies with applicable requirements.
40 CFR Part 82	Protection of Stratospheric Ozone	Applicable – LVGS is subject to stratospheric ozone regulations based on 40 CFR 82.4.	LVGS does not use stratospheric ozone depleting compounds.	LVGS complies with applicable requirements.

E. PERMIT SHIELD

Permit Shield

The permittee requested a permit shield as described in AQR 12.5.9.2 from the standard identified in 40 CFR 60, Subpart GG, for SO₂, as shown Table V-E-1. The permit limit is in the Part 70 OP as Condition 2.2.2.

Table V-E-1: Streamlining Demonstration for 40 CFR Part 60, Subpart GG

EU	Regulation (40 CFR)	Pollutant	Regulatory Standard		Permit Limit		Value Comparison			Avg. Period Comparison		
			Value	Units	Value	Units	Std. Value (permit limit units)	Permit Limit	Permit Limit Equal or More Stringent?	Std. Avg. Period	Permit Limit	Permit Limit Equal or More Stringent?
A01/A03/A04/A05/A06	60.333	SO ₂	0.8	% by weight	0.75	gr/100 scf	280	0.75	Yes	4-hour	Rolling 12-month	Yes

Table V-E-2: Streamlining Demonstration for 40 CFR Part 63, Subpart ZZZZ

EU ID	Description	Const. Date	Regulatory Citations	Emission Limit (gr/dscf)	Opacity Limit	Permit Emission Limit	Permit Limits	Streamlining Statement for Shielding Purposes
C01	121 hp Fire Pump	1996	63.6603, 63.6625, 63.6640, 63.6650, 63.6655	Not applicable to emergency engines. Management practices only.	None	None—follow management practices.	20% opacity at all times, hour meter, recordkeeping.	The permit limit is equal to, or more restrictive than, the regulatory limit.

VI. EMISSION REDUCTION CREDITS (OFFSETS)

The source is subject to offset requirements in accordance with AQR 12.7. Offset requirements and associated mitigation are pollutant-specific. This permitting action does not trigger any offset requirements.

VII. MODELING

Las Vegas Generating Station is a minor Part 70 source in Hydrographic Area 212 (the Las Vegas Valley). Permitted emission units include five turbines, two cooling towers and one fire pump. Since minor source baseline dates for NO_x (October 21, 1988) and SO₂ (June 29, 1979) have been triggered, Prevention of Significant Deterioration (PSD) increment analysis is required.

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 VII-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 VII-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)
SO ₂	3-hour	0.95 ¹	668770	4011207
SO ₂	24-hour	0.59 ¹	668800	4011200
SO ₂	Annual	0.08	668770	4011336
NO _x	Annual	1.72	668770	4011336

¹ Highest Second High Concentration.

VIII. ENVIRONMENTAL JUSTICE

LVGS's location is in northcentral Las Vegas. The source is surrounded by large business/warehouse areas. The nearest residences are approximately one half mile away. EPA's Environmental Justice Screening and Mapping Tool (EJScreen) was used to show that this permitting action will not have an adverse or disparate effect on an underserved population when compared to the general population of Las Vegas.

A screenshot of the demographic index is shown in Attachment 3 along with a graph of the environmental justice indexes comparing a three mile radius from the source with the general United States. The area is in high percentiles for almost all of the indexes. This can be attributed to the area of Las Vegas having a higher concentration of commercial/industrial sites than other areas of the valley. Although there is a higher percentile of the indexes in this area, this permitting action will not have an adverse or disparate effect on an underserved population when compared to the general population of Las Vegas.

IX. PUBLIC PARTICIPATION

Under AQR 12.5.2.17, public participation is required for Part 70 OP renewals. As mentioned in the previous section, there is no disproportional impact on an underserved population, therefore additional outreach is not necessary for this action.

X. ADMINISTRATIVE REQUIREMENTS

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

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

Legal

On December 5, 2001, in Federal Register Volume 66, Number 234, the EPA fully approved the Title V Operating Permit Program submitted for the purpose of complying with the Title V requirements of the 1990 Clean Air Act Amendments and implementing Part 70 of Title 40 Code of Federal Regulations.

Factual

LVGS has supplied all the necessary information for DAQ to draft Part 70 OP conditions encompassing all applicable requirements and corresponding compliance.

Conclusion

DAQ has determined LVGS will continue to determine compliance through the use of CEMS, performance testing, reporting, and recordkeeping, coupled with annual certifications of compliance. DAQ proceeds with the preliminary decision that a Part 70 OP should be issued as drafted to LVGS for a period not to exceed 5 years.

XI. ATTACHMENTS

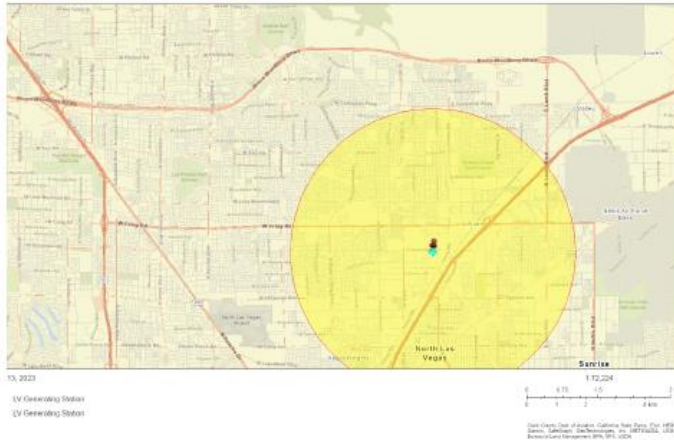
Attachment 1: Source-wide PTE (tons per year)

EU	Conditions	PM ₁₀	PM _{2.5}	NO _x	CO	SO ₂	VOC	HAP
A01	8,760 hr/yr	7.70	7.70	48.00	22.00	0.80	5.00	1.08
A02	8,760 hr/yr	4.39	4.39	0	0	0	0	0
A03	30,480 hr/yr	38.10	38.10	45.72	27.83	4.57	30.48	3.76
A04								
A05								
A06								
A07	8,760 hr/yr	4.84	4.84	0	0	0	0	0
C01	500 hr/yr	0.07	0.07	0.94	0.2	0.01	0.08	0.01
Totals		55.10	55.10	94.66	50.03	5.38	35.56	4.85

Attachment 2: Applicability Emissions (tons per year)

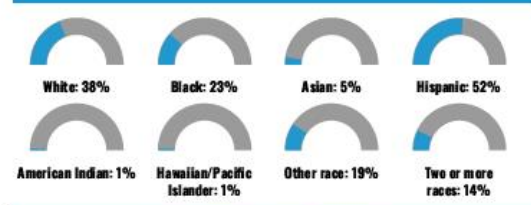
EU	PM ₁₀	PM _{2.5}	NO _x	CO	SO ₂	VOCs	HAPs
A01	13.14	13.14	61.32	39.42	1.31	8.76	1.08
A02	4.39	4.39	0	0	0	0	0
A03	10.95	10.95	13.80	8.41	1.31	8.76	1.08
A04	10.95	10.95	13.80	8.41	1.31	8.76	1.08
A05	10.95	10.95	13.80	8.41	1.31	8.76	1.08
A06	10.95	10.95	13.80	8.41	1.31	8.76	1.08
A07	4.84	4.84	0	0	0	0	0
C01	0.07	0.07	0.94	0.2	0.01	0.08	0.01
Insignificant Activities	0	0	0	0	0	0.22	0.01
Totals	66.24	66.24	117.45	73.26	6.58	44.10	5.42

Attachment 3: EJ Indexes



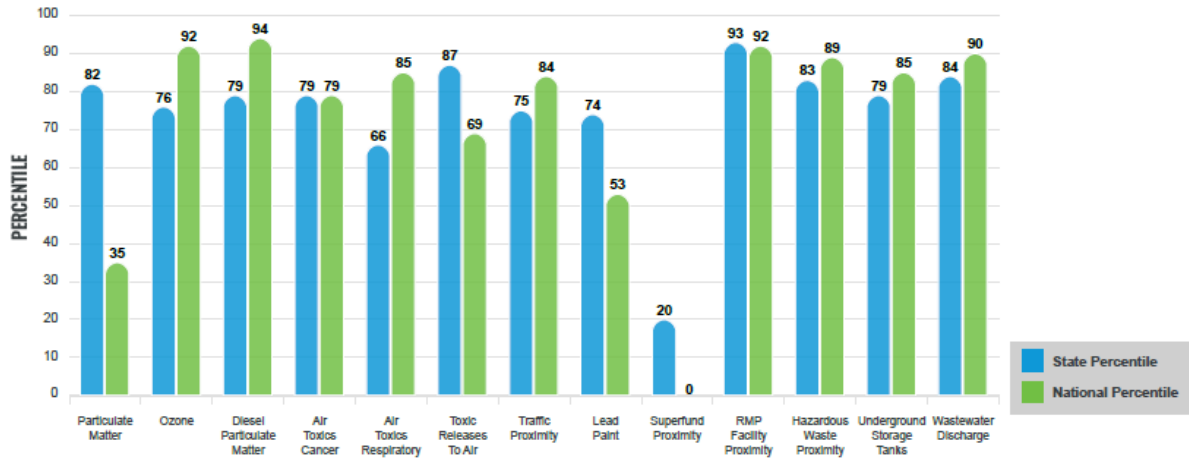
LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	51%
Spanish	43%
Tagalog (including Filipino)	2%
Other Asian and Pacific Island	1%
Total Non-English	49%



Notes: Numbers may not sum to totals due to rounding. Hispanic population can be of any race. Source: U.S. Census Bureau, American Community Survey (ACS) 2017-2021. Life expectancy data comes from the Centers for Disease Control.

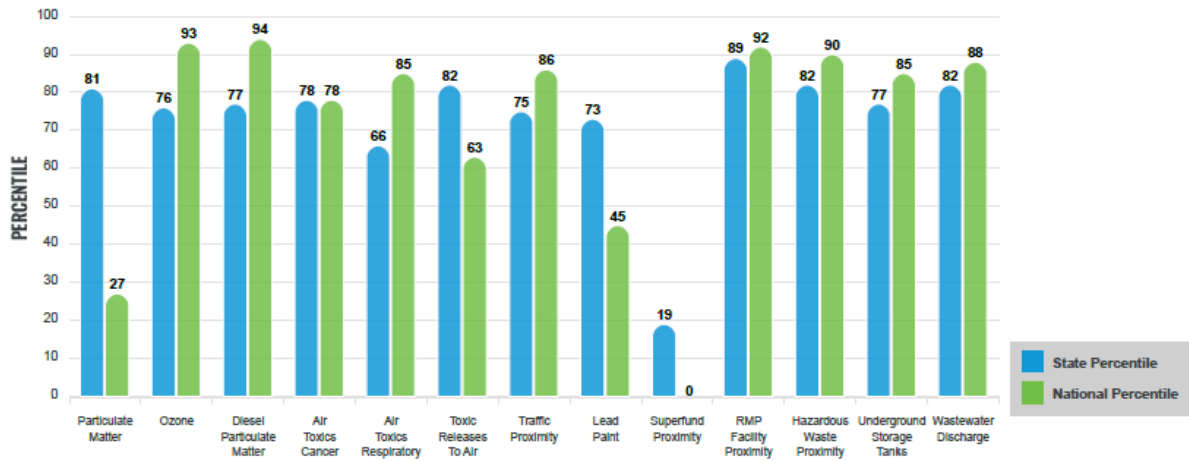
EJ INDEXES FOR THE SELECTED LOCATION



SUPPLEMENTAL INDEXES

The supplemental indexes offer a different perspective on community-level vulnerability. They combine data on percent low-income, percent linguistically isolated, percent less than high school education, percent unemployed, and low life expectancy with a single environmental indicator.

SUPPLEMENTAL INDEXES FOR THE SELECTED LOCATION



SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
POLLUTION AND SOURCES					
Particulate Matter ($\mu\text{g}/\text{m}^3$)	6.36	5.65	75	8.08	11
Ozone (ppb)	66	64.1	59	61.6	81
Diesel Particulate Matter ($\mu\text{g}/\text{m}^3$)	0.593	0.446	69	0.261	94
Air Toxics Cancer Risk* (lifetime risk per million)	29	25	5	28	3
Air Toxics Respiratory HI*	0.35	0.34	23	0.31	31
Toxic Releases to Air	330	1,400	72	4,600	39
Traffic Proximity (daily traffic count/distance to road)	190	200	68	210	74
Lead Paint (% Pre-1960 Housing)	0.062	0.063	77	0.3	28
Superfund Proximity (site count/km distance)	0.0045	0.014	11	0.13	0
RMP Facility Proximity (facility count/km distance)	0.95	0.29	92	0.43	87
Hazardous Waste Proximity (facility count/km distance)	2.5	1.8	71	1.9	77
Underground Storage Tanks (count/km ²)	4.9	3.3	78	3.9	77
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.66	7	90	22	90
SOCIOECONOMIC INDICATORS					
Demographic Index	64%	41%	84	35%	86
Supplemental Demographic Index	23%	16%	79	14%	85
People of Color	84%	50%	89	39%	85
Low Income	43%	33%	70	31%	73
Unemployment Rate	9%	7%	70	6%	78
Limited English Speaking Households	11%	6%	80	5%	86
Less Than High School Education	27%	14%	83	12%	89
Under Age 5	8%	5%	73	6%	73
Over Age 64	9%	17%	25	17%	21
Low Life Expectancy	20%	20%	40	20%	53

*Diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics emission sources and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: <https://www.epa.gov/haps/air-toxics-data-update>.

Sites reporting to EPA within defined area:

Superfund	0
Hazardous Waste, Treatment, Storage, and Disposal Facilities	6
Water Dischargers	267
Air Pollution	13
Brownfields	139
Toxic Release Inventory	28

Other community features within defined area:

Schools	35
Hospitals	6
Places of Worship	18

Other environmental data:

Air Non-attainment	Yes
Impaired Waters	Yes

Selected location contains American Indian Reservation Lands*	No
Selected location contains a 'Justice40 (CJST)' disadvantaged community	Yes
Selected location contains an EPA IRA disadvantaged community	Yes

Report for 3 miles Ring Centered at 36.231610,-115.122934