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

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

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

APPLICATION FOR:
Significant Revision

SUBMITTED BY:
Trinity Consultants, Inc.

FOR:
Switch, Ltd.

Source: 16304

LOCATION:
7135 South Decatur Boulevard
Las Vegas, Nevada 89118

SIC code 7375, "Information Retrieval Services"
NAICS code 517810, "All Other Telecommunications"

Application Received: September 5, 2024

TSD Date: May 15, 2025

EXECUTIVE SUMMARY

Switch, Ltd. (Switch) owns and operates six separate and adjacent data center campuses, referred to as NAP 7, NAP 8, NAP 9, NAP 10, NAP 11, and NAP 12 and is located at 7135 S. Decatur Blvd., Las Vegas, Nevada. The source is classified under SIC code 7375, "Information Retrieval Services," and NAICS code 517810, "All Other Telecommunications." Switch is not classified as a Categorical Stationary Source as defined in AQR 12.2.2(j). The source consists of emergency generators, fire pumps, and cooling towers and is located in Hydrographic Area (HA) 212, the Las Vegas Valley. HA 212 is currently designated as in attainment for all regulated air pollutants except ozone. HA 212 was designated a moderate nonattainment area for ozone on January 5, 2023. The designation did not impose any new requirements at that time. Effective January 21, 2025, the U.S. Environmental Protection Agency (EPA) designated HA 212 in serious nonattainment for the 2015 ozone National Ambient Air Quality Standard (NAAQS). Clark County has drafted or imposed new requirements to address this designation. HA 212 is also subject to a maintenance plan for the CO and PM_{10} NAAQS.

Switch is a major stationary source of NO_x, a synthetic minor source for CO, and a minor source for PM_{10}, $PM_{2.5}$, SO_2, VOCs, and HAPs. The source is also identified as a source of greenhouse gases.

The source is subject to 40 CFR Part 60, Subpart IIII and 40 CFR Part 63, Subpart ZZZZ. The engines subject to 40 CFR Part 60, Subpart IIII satisfy the requirements of 40 CFR Part 63, Subpart ZZZZ through compliance with 40 CFR Part 60, Subpart IIII.

The following table summarizes the source potential to emit for each regulated air pollutant from all emission units addressed by this Part 70 Operating Permit:

Table 1: Source PTE Summary (TPY)

Pollutant	PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	HAPs	GHG[2]
Source PTE	6.81	2.62	246.12	32.56	1.28	3.69	1.28	24,038.15
Major Source Thresholds (Title V)	100	100	100	100	100	100	10/25[1]	-
Major Stationary Source Thresholds (PSD)	250	250	250	250	250	250	10/25[1]	-
Major Stationary Source Threshold (Nonattainment)	-	-	50	-	-	50	-	-

[1]Ten tons for any individual hazardous air pollutant, or 25 tons for the combination of all hazardous air pollutants.
[2]Metric tons per year, CO_2e.

DAQ will continue to require the sources to estimate their GHG potential to emit in terms of each individual pollutant (CO_2, CH_4, N_2O, SF_6 etc). The TSD includes these PTEs for informational purposes.

DAQ has received delegated authority from the U.S. Environmental Protection Agency to implement the requirements of the Part 70 OP. Based on the information submitted by the applicant and a technical review performed by DAQ staff, the draft Part 70 OP to Switch is proposed.

TABLE OF CONTENTS

LIST OF TABLES

I. ACRONYMS

Table I-1: List of Acronyms

Acronym	Term
AQR	Clark County Air Quality Regulation
CF	control factor
CFR	Code of Federal Regulations
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
DAQ	Division of Air Quality
DES	Clark County Department of Environment and Sustainability
DOM	date of manufacture
EF	emissions factor
EPA	U.S. Environmental Protection Agency
EU	emission unit
GHG	greenhouse gas
HA	Hydrographic Area
HAP	hazardous air pollutant
hp	horsepower
kW	kilowatts
MMBtu/hr	Million British Thermal Units per Hour
NAAQS	National Ambient Air Quality Standard
NAICS	North American Industry Classification System
NO_X	nitrogen oxide(s)
$PM_{2.5}$	particulate matter less than 2.5 microns in aerodynamic diameter
PM_{10}	particulate matter less than 10 microns in aerodynamic diameter
PSD	prevention of significant deterioration
PTE	potential to emit
RACT	Reasonably Achievable Control Technology
SCC	Source Classification Code
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO_2	sulfur dioxide
SOP	standard operating procedure
TDS	Total Dissolved Solids
UTM	Universal Transverse Mercator
VOC	volatile organic compound

II. SOURCE DESCRIPTION

A. PROCESS DESCRIPTION

Switch owns and operates six separate and adjacent data center campuses, referred to as NAP 7, NAP 8, NAP 9, NAP 10, NAP 11, and NAP 12. It consists of diesel-powered emergency generators, fire pumps, and cooling towers used to support data center operations.

B. PERMITTING HISTORY

This is a Part 70 OP for an existing major source. The following represents permitting activities prior to this permitting action since the last renewal:

Table II-B-1: Permit History

Issue Date	Description
7/1/2021	Part 70 OP Renewal
9/12/2022	Part 70 OP Significant Revision
7/19/2022	Part 70 ATC Significant Revision
2/23/2023	Prior Notice Form
9/25/2024	Part 70 ATC – New

C. CURRENT PERMITTING ACTION

The permittee submitted an application for a minor revision to the Part 70 OP on September 5, 2024, to incorporate two emergency generator engines (EUs: L03 and L04). The engines are currently permitted under an ATC permit issued on June 27, 2014. The engines were originally permitted under the EU designations A35 and A36. The EUs were redesignated as L03 and L04 and incorporated into the Part 70 OP in a minor revision to the Part 70 OP dated March 6, 2017. However, the units were not constructed, and DES removed them from the Part 70 OP at the permittee's request in a minor revision to the Part 70 OP dated November 27, 2017.

The permittee has proposed incorporating the engines under the designations L03 and L04 at the NAP 12 campus and has provided updated model and serial numbers for the units. The permittee has also proposed including two, 7,200 gallon diesel aboveground storage tanks for EUs: L03 and L04 as insignificant activities.

Because the emergency generator engines are subject to NSPS and NESHAP regulations, incorporating these units into the Part 70 OP is considered a Title I modification of the Clean Air Act. Therefore, this permitting action does not meet the criteria for a minor revision under AQR 12.5.2.14(a)(1)(F) OP in accordance with AQR 12.5.2.14. DES has reclassified this permitting action as a significant revision to the Part 70 OP.

The permittee also submitted an application for a minor revision to the Part 70 OP on January 29, 2025, to incorporate two cooling towers (EUs: F04 and F08). The cooling towers are currently permitted under ATC permits issued on February 25, 2015, and July 19, 2022. The permittee has

proposed incorporating the cooling towers at the NAP 10 campus and has provided an updated model number for EU: F08 and serial numbers for both units. DAQ has included the changes proposed in the January 29, 2025, application into this significant revision to the Part 70 OP.

DAQ has made the following additional changes to the permit:

1. As part of a significant revision to the Part 70 OP issued on September 12, 2022, two 86 horsepower emergency generators were added to the source (EUs: C27 and C28). DAQ erroneously included emissions for four 86 horsepower emergency generators in the PTE calculations for that revision. DAQ has corrected the source-wide PTE to only include two 86 horsepower emergency generators.
2. Updated the operational limit prohibiting use of emergency generators for peak shavings, nonemergency demand response, or to generate income by supplying power to another entity to include an exception allowing for the permitted 50 hours per year for nonemergency use to be used to supply power as part of a financial arrangement with another entity if certain conditions are met.
3. The existing Part 70 OP includes a requirement to monitor the average NO_x emissions from the emergency generators (excluding EUs: C26 through C30) by testing at least 10 percent of the generator units each year, using a portable analyzer. During a full compliance evaluation of the source conducted by on March 27, 2025, DAQ compliance staff noted that the Part 70 OP did not include a corresponding NO_x concentration limit to compare to NO_x analyzer results for compliance demonstration. DAQ requested that the permittee propose a NO_x concentration limit to include in the Part 70 OP. The permittee submitted a proposed a NO_x concentration limit for emergency generators of 450.3 ppm and accompanying calculations on May 14, 2025. The concentration limit is equivalent to the manufacturer's guaranteed emission rate for NO_x. The permittee calculated the ppm limit using EPA Method 19 methodology and manufacturer specifications for the engines. DAQ approved the proposed limit and has included the limit in this significant revision. The permittee's calculations of the limit are included as an attachment.
4. Included applicable requirements of AQR 121 "Reasonably Available Control Technology Determinations for Specific Major Stationary Sources in the 2015 8-Hour Ozone NAAQS Moderate Nonattainment Area HA 212". AQR 121 was adopted on February 4, 2025, with an effective date of February 18, 2025. For existing permit conditions that satisfy the requirements of AQR 121, references to the applicable AQR 121 requirements have been included.

D. AFFECTED EMISSION UNITS LIST

Table II-D-1 lists the emission units added to the Part 70 OP by this permitting action.

Table II-D-1: Affected Emission Units

EU	Rating	Description	Manufacturer	Model No.	Serial No.	Bldg	SCC
F04	1,250 gpm	Cooling Tower	Evapco	ESWA 216-460	23P131595	NAP 10	38500101
F08	1,250 gpm	Cooling Tower	Evapco	ESWA 216-460-C	23P131597	NAP 10	38500101
L03	2,045 kW	Generator, Emergency	MTU	MTU16V4000DS2250	95030503525	NAP 12	20300101
	3,353 hp	Diesel Engine, DOM: 2023		16V4000G24S	5482001167		
L04	2,045 kW	Generator, Emergency	MTU	MTU16V4000DS2250	95030503526	NAP 12	20300101
	3,353 hp	Diesel Engine, DOM: 2023		16V4000G24S	5482001168		

The following new units or activities listed in in Table II-D-2 are being added to the source, but are deemed insignificant.

Table II-D-2: Affected Insignificant Activities

Rating	Description
7,200 gallons	Aboveground Storage Tank - Diesel
7,200 gallons	Aboveground Storage Tank - Diesel

III. EMISSIONS INFORMATION

A. APPLICABILITY EMISSIONS

Permitting applicability is determined by calculating the emissions for all proposed emission units using 8,760 hours of operation (except for emergency generators or fire pumps, which use 500 hours), any inherent controls, any inherent throughput limitations, and the emission factors provided by the manufacturer, by source test results, by EPA AP-42, or by other approved methods. Applicability emissions include all unconstructed emission units authorized by an ATC permits.

Applicability emissions include emissions from insignificant emission units and activities, but do not include fugitive emissions (except for categorical sources listed in AQR 12.2.2(j) or any other stationary source category that, as of August 7, 1980, is being regulated under Sections 111 or 112 of the Clean Air Act). This source is not a categorical source, so fugitive emissions are not included in applicability emission calculations.

Greenhouse gas applicability emissions have been corrected for engines by calculating applicability emissions at 500 hours per year instead of the 104 hours per year operational limit for applicable emission units.

The changes to applicability emissions as a result of this permitting action do not change the facility's current status.

Table III-A-1 summarizes the Applicability/Classification. Applicability emission calculations are included as an attachment.

Table III-A-1. Emissions for Permit Applicability – Summary (tons per year)

Pollutants	PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	HAPs	GHG[2]
Applicability Emissions	16.64	12.07	1,297.51	171.00	1.40	22.55	4.02	126,654.39
Major Source Thresholds (Title V)	100	100	100	100	100	100	10/25[1]	-
Major Stationary Source Thresholds (PSD)	250	250	-	250	250	-	10/25[1]	-
Major Stationary Source Threshold (Nonattainment)	-	-	50	-	-	50	-	-

[1]Ten tons for any individual hazardous air pollutant, or 25 tons for the combination of all hazardous air pollutants.
[2]Metric tons per year, CO_2e.

As shown by Table III-A-1, applicability emissions for the source exceed major source thresholds for NO_x and CO.

B. PTE

PTE is calculated to include any controls or limits, whether voluntarily proposed by the source or required. PTE does not include insignificant emission units and activities, but does include fugitive emissions. PTE for the emergency generator engines is based on the operational limit for emergency engines at the source of 104 hours per year (EUs: L03 and L04). PTE for the cooling towers is based on ratings of 1,250 gpm for each unit, 5,000 ppm total dissolved solids content of circulation water, 0.001% drift loss, and unlimited operation (8,760 hours per year).

Table III-B-1 shows the PTE associated with each affected emission unit in this action.

Table III-B-1. Emission Unit PTE of Affected Emissions Units (tons per year)

EU	Condition	PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	HAPs	H_2S	Pb	GHG[1]
F04	8,760 hr/yr	0.06	0.002	0	0	0	0	0	0	0	0
F08	8,760 hr/yr	0.06	0.002	0	0	0	0	0	0	0	0
L03	104 hours	0.02	0.02	2.06	0.27	0.01	0.03	0.01	0	0	200.51
L04	104 hours	0.02	0.02	2.06	0.27	0.01	0.03	0.01	0	0	200.51
Affected EU PTE		**0.16**	**0.04**	**4.12**	**0.54**	**0.02**	**0.06**	**0.02**	**0**	**0**	**401.02**

[1]Metric tons per year, CO_2e

Table III-B-2 shows the correction applied to the source-wide PTE for the removal of the emissions for two nonexistent 86 horsepower emergency generators with equivalent emissions to EUs: C27 and C28.

Table III-B-2. Correction to Source-wide PTE (tons per year)

EU[1]	Condition	PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	HAPs	H_2S	Pb	GHG[2,3]
86 hp Emergency Generator Engine	104 hours	-0.01	-0.01	-0.03	-0.01	-0.01	-0.01	-0.01	0	0	0
86 hp Emergency Generator Engine	104 hours	-0.01	-0.01	-0.03	-0.01	-0.01	-0.01	-0.01	0	0	0
Total PTE Correction		**-0.02**	**-0.02**	**-0.06**	**-0.02**	**-0.02**	**-0.02**	**-0.02**	**0**	**0**	**0**

[1]PTE has been reduced by equivalent of two emergency generators with equivalent emissions to EUs: C27 and C28 at the listed rating and hours of operation.
[2]Metric tons per year, CO_2e
[3]GHG Emissions were calculated correctly. No correction was necessary for GHG emissions.

Table III-B-3 summarizes the source-wide PTE.

Table III-B-3: Source-wide PTE (tons per year)

PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOCs	HAPs	GHGs[1]
6.81	2.62	246.12	32.56	1.28	3.69	1.28	24,038.15

[1]Metric tons per year, CO_2e

Switch is a Title V source for NO_x. Because applicability emissions for CO exceed major source thresholds and the PTE for CO is below major source thresholds, the source is a synthetic minor source of CO. Switch is a minor source for all other air pollutants, including greenhouse gases (GHGs).

Table III-B-4 shows the increase in emissions for the regulated pollutants associated with this permitting action. The emissions increases do not exceed minor NSR significance thresholds. Therefore, a RACT analysis is not required for this permitting action. The NO_x RACT determination for emergency engines from the ATC permit issued on June 27, 2014, remains in effect, which is the use of turbochargers and separate air coolers on these units.

Table III-B-4. Emissions Increase Calculation and Significance Evaluation (tons per year)

Affected EU	PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	H_2S	Pb
Proposed PTE	6.81	2.62	246.12	32.56	1.28	3.69	0	0
Existing PTE	6.67	2.60	242.06	32.04	1.28	3.65	0	0
Δ Emissions	0.14	0.02	4.06	0.52	0	0.04	0	0
Minor NSR Significance Threshold	**7.5**	**7.5**	**20**	**35**	**40**	**20**	**5**	**0.6**
RACT Analysis Required	No	No	No	No	No	No	NA	NA

IV. CONTROL TECHNOLOGY

Because emissions increases associated with this permitting action are below Minor NSR Significance Thresholds, no RACT analysis is required for this action.

All existing control requirements are being retained.

The emergency generator engines (EUs: L03 and L04) are subject are subject to the existing control requirements for emergency generator engines.

The permittee is required to operate each emergency generator with turbocharger and separate circuit air coolers, and to implement good combustion practices for the emergency generators (EUs: L03 and L04).

The permittee is required to only combust diesel fuel with a maximum sulfur content of 15 ppm and either a minimum cetane index of 40 or a maximum aromatic content of 35 percent by volume in the emergency generator engines. (EUs: L03 and L04).

The permittee is required to operate and maintain each diesel emergency generator and fire pump engine in compliance with the emissions limits and requirements of federal regulations incorporated by reference in AQR 14.2 (EUs: A02 through A29, A32 through A34, C01 through C30, E01 through E20, G01 through G24, J01 through J19, and L01 through L04). This requirement is included pursuant to AQR 121.12.1(a)(2).

The cooling towers (EUs: F04 and F08) are subject are subject to the existing control requirements for cooling towers.

The permittee is required to operate each cooling tower with drift eliminators that have a manufacturer’s maximum drift rate of 0.001 percent (EUs: F04 and F08).

The permittee is required to maintain the TDS content of the circulation water in each cooling tower at or below 5,000 ppm (EUs: F04 and F08).

The permittee is required to operate and maintain the cooling towers in accordance with manufacturer's O&M manual for emission related components and is prohibited from using chromium-containing compounds for water treatment (EUs: F04 and F08).

V. EMISSION LIMITS

Engines

The permittee is required to limit NO_x emissions from the emergency generators (excluding EUs: C26 through C30) to a concentration of 450.3 ppm. This concentration limit is equivalent to the manufacturer’s guaranteed emission rate for NO_x of 7.174 g/kWh. Calculations of the concentration limit submitted by the permittee are included as an attachment. The permittee will demonstrate compliance with the concentration limit by complying with the existing monitoring requirement to monitor the average NO_x emissions from the emergency generators (excluding

EUs: C26 through C30) by testing at least 10 percent of the generator units each year, using a portable analyzer.

The permittee shall comply with the emissions standards in 40 CFR Part 89.112–113 for the applicable compression ignition engine for the same model year and maximum engine power, provided in Table V-1.

Table V-1. Emission Standards for Engines (g/kW-hr)

EU	Power	NMHC + NOx	CO	PM
L03 and L04	kW > 900	6.4	3.5	0.20

VI. OPERATIONAL LIMITS

All existing operational limits are being retained. The emergency generators are limited to the existing operational limit in the Part 70 Operating Permit for emergency engines at the source of 104 hours of operation per any consecutive 12-month period, including emergencies (EUs: L03 and L04). These units were originally permitted with an operational limit of 155 hours per any consecutive 12-month period.

Emergency generator engines are limited to 100 hours per year for testing and maintenance purposes. The permittee may operate the engines for nonemergency situations for up to 50 hours per year, but those hours count towards the 100 hours provided for testing and maintenance. On May 1, 2015, the U.S. Court of Appeals for the District of Columbia Circuit issued a decision to vacate provisions in 40 CFR Part 60, Subpart IIII; 40 CFR Part 60, Subpart JJJJ; and 40 CFR Part 63, Subpart ZZZZ that allowed emergency engines to operate for demand response and when there is a deviation of voltage or frequency.

DAQ prohibited sources from operating emergency generators for those activities, consistent with the court decision and EPA's April 15, 2016, implementation memo. On August 10, 2022, EPA published a notice in the *Federal Register* (87 FR 48603) formally promulgating changes to the three CFR subparts listed above. Now, except as provided in 40 CFR Part 60.4211(f)(3)(i), and/or 40 CFR Part 60.4243(d)(3)(i), and/or 40 CFR Parts 63.6640(f)(4)(i) and (ii), the 50 hours per year for nonemergency use cannot be used for peak shavings or nonemergency demand response, or to generate income for a facility by supplying power to an electric grid or to otherwise supply power as part of a financial arrangement with another entity (EUs: L03 and L04).

The cooling towers are not subject to operational limits. All other existing operational limits remain enforceable.

VII. MONITORING

All existing monitoring requirements are being retained.
The emergency generator engines are subject to the existing monitoring requirements (EUs: L03 and L04).

The permittee is required to operate each diesel-fired emergency generator engine (EUs: L03 and L04) with a nonresettable hour meter and monitor the hours of operation of each engine during

testing, maintenance, and nonemergency operation. If the engine is used for an emergency, the permittee is required to monitor its hours of operation and document the nature of the emergency. The permittee is required to monitor monthly the hours of operation of each engine as consecutive 12-months totals.

The permittee is required to monitor the average NO_x emissions from the emergency generators (excluding EUs: C26 through C30) by testing at least 10 percent of the generator units each year, using a portable analyzer approved in advance by the Control Officer.

The permittee is required to demonstrate compliance with diesel fuel sulfur content requirements for the emergency generator engines by retaining a copy of vendor fuel specifications (EUs: L03 and L04).

The cooling towers are subject to the existing cooling tower monitoring requirements (EUs: F04 and F08). The permittee is required to monitor the TDS of the cooling tower recirculation water monthly, using a conductivity meter or other advice approved in advance by the control officer.

VIII. PERFORMANCE TESTING

Upon written request from the Control Officer, the permittee may be required to conduct performance testing on any emergency generator engine to demonstrate compliance with the emission limits in 40 CFR Part 60, Subpart IIII (EUs: L03 and L04).

The cooling towers are not subject to performance testing requirements.

All testing requirements and methodologies established with previous permitting actions remain enforceable.

IX. REGULATORY REVIEW

A. LOCAL REGULATORY REQUIREMENTS

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

1. CAAA (authority: 42 U.S.C. § 7401, et seq.);

2. Title 40 of the CFR, including 40 CFR Part 70 and others;

3. Chapter 445 of the NRS, Sections 401 through 601;

4. Portions of the AQR included in the state implementation plan (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

5. Portions of the AQR not included in the SIP. These locally applicable requirements are locally enforceable only.

The source is subject to the requirements of AQR 121 "Reasonably Available Control Technology Determinations for Specific Major Stationary Sources in the 2015 8-Hour Ozone NAAQS Moderate Nonattainment Area HA 212", adopted on February 4, 2025, and effective February 18, 2025. The existing permit satisfies the requirements of AQR 121. DAQ has includes references to AQR 121 for applicable existing permit conditions.

B. FEDERALLY APPLICABLE REGULATIONS

1. Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

2. Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

The emergency generator engines (EUs: L03 and L04) are new stationary internal combustion engines (ICE), located at a major source and operated according to the definition of an emergency stationary ICE under 40 CFR Part 60.4219. The emergency generators shall be limited to the operating provisions specified in 40 CFR Part 60.4211(f), Subpart IIII. The engines at this source are also subject to 40 CFR Part 63, Subpart ZZZZ. The source will meet the requirements of Subpart ZZZZ by meeting the requirements of Subpart IIII.

The engines associated with this permitting action are subject to 40 CFR Part 60, Subpart IIII, and 40 CFR Part 63, Subpart ZZZZ, so must meet the fuel requirements referenced therein from 40 CFR Part 80.510(b) (in Subpart I). The source must purchase diesel fuel that meets the per-gallon standard of 15 ppm maximum sulfur content, a minimum cetane index of 40, or a maximum aromatic content of 35 volume percent. This permit requires the permittee to monitor or keep records of the sulfur content, cetane index, or aromatic content of the diesel fuel used in the engine. (EUs: L03 and L04)

X. COMPLIANCE

Records shall be kept for all limitations specified in the permit.

XI. EMISSION REDUCTION CREDITS (OFFSETS)

The source has no federal offset requirements. *[AQR 12.7]*

XII. MODELING

Facility Location: 661190, 3992070 (Universal Transverse Mercator (UTM) NAD83)

Switch Ltd. is a major source in Hydrographic Area 212 (the Las Vegas Valley). Permitted emission units include 136 generators, 71 cooling towers and four fire pumps. Since minor source baseline dates for NO_x (October 21, 1988) and SO_2 (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. Average annual actual emissions (2022-2023) were used for the generators in the NO_X modeling. 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 XII-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 XII-1: PSD Increment Consumption

Pollutant	Averaging Period	Source's PSD Increment Consumption (µg/m³)	Location of Maximum Impact	
			UTM X (m)	UTM Y (m)
SO_2	3-hour	11.96[1]	660847	3991932
SO_2	24-hour	6.89[1]	660847	3991932
SO_2	Annual	3.42	660848	3991932
NO_X	Annual	13.78	660835	3991721

[1] Highest Second High Concentration

XIII. ENVIRONMENTAL JUSTICE

The primary principle of environmental justice is that all people have a right to live in a healthful environment that is protected from industrial pollution. Environmental justice focuses on the fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

The EPA environmental justice screening tool (EJScreen) allows users to screen for environmental justice concerns based on environmental indicators (e.g., pollutant concentrations, traffic proximity, and toxic releases to air) and socioeconomic indicators (e.g., low-income communities, communities of color, and limited-English speaking households) for a selected geographic area.

DES generated an EJ Screen Community Report (report) using EJ Screen for the area surrounding the source for an ATC permit issued on September 25, 2024. The data presented in the report is based on the area within a one-mile radius around the source, representing a population of 26,336 within the Las Vegas metropolitan area. The report indicates high percentiles for various environmental and socioeconomic indicators in the area. Based on the report, DES has determined that this permitting action will not result in adverse effects on a disadvantaged community. The report is included in the attachments.

XIV. PERMIT SHIELD

The source has not requested a permit shield.

XV. STREAMLINING

Table XV-1: Streamlining Analysis

EU	Regulation (40 CFR)	Regulatory Standard	Permit Limit	Is Permit Limit Equal or More Stringent?	Averaging Period Comparison			Streamlining Statement
					Standard	Permit Limit	Is Permit Limit Equal or More Stringent?	
L01-L04	60.4205(b) and 60.4211 (IIII)	Various limits for NOx, CO, PM, and VOC pollutants based on model year and engine power rating		Yes	Compliance demonstrated by keeping records of engine manufacturer's certified emissions data		Yes	The permit requirements and federal standards are identical

XVI. PUBLIC PARTICIPATION

This permitting action is a significant revision to the Part 70 OP and is subject to public participation requirements under AQR 12.5.17.

XVII. ATTACHMENTS

Attachment 1 – Emission Unit and PTE Tables

Table XVII-1: Affected Engine PTE Calculations

EU#	L03, L04	**Horsepower:**	3,353	
Make:	MTU	**Hours/Day:**	24.0	
Model:	MTU16V4000DS2250	**Hours/Year**	104	
S/N:	Various			
Manufacturer Guarantees				
PM10	0.065	g/kW-hr		
NOx	7.174	g/kW-hr		
CO	0.943	g/kW-hr		
SO_2		g/kW-hr		
VOC	0.12	g/kW-hr		
Engine Type:	Diesel			

	Emission Factor (lb/hp-hr)	Control Efficiency	Potential Emissions		
			lb/hr	lb/day	ton/yr
PM10	1.07E-04	0.00%	0.36	8.60	0.02
NOx	1.18E-02	0.00%	39.54	949.08	2.06
CO	1.55E-03	0.00%	5.20	124.75	0.27
SO_2	1.21E-05	0.00%	0.04	0.98	0.01
VOC	1.97E-04	0.00%	0.66	15.88	0.03
HAP	1.10E-05	0.00%	0.04	0.89	0.01
GHG	1.15E+00	0.00%	3855.95	92542.80	200.51

Diesel Fuel Sulfur Content is 15 ppm (0.0015%)

Table XVII-2: Affected Engine Applicability Calculations

EU#	L03, L04		**Horsepower:**	3,353		**Emission Factor (lb/hp-hr)**	**Control Efficiency**	**Potential Emissions**		
Make:	MTU		**Hours/Day:**	24.0				**lb/hr**	**lb/day**	**ton/yr**
Model:	MTU16V4000DS2250		**Hours/Year**	500	**PM10**	1.07E-04	0.00%	0.36	8.60	0.09
S/N:	Various				**NOx**	1.18E-02	0.00%	39.54	949.08	9.89
					CO	1.55E-03	0.00%	5.20	124.75	1.30
Manufacturer Guarantees					**SO_2**	1.21E-05	0.00%	0.04	0.98	0.01
PM10	0.065	g/kW-hr			**VOC**	1.97E-04	0.00%	0.66	15.88	0.17
NOx	7.174	g/kW-hr			**HAP**	1.10E-05	0.00%	0.04	0.89	0.01
CO	0.943	g/kW-hr			**GHG**	1.15E+00	0.00%	3855.95	92542.80	963.99
SO_2		g/kW-hr								
VOC	0.12	g/kW-hr								
Engine Type:	Diesel				Diesel Fuel Sulfur Content is 15 ppm (0.0015%)					

Table XVII-3: Cooling Tower PTE Calculations

EU	Description	Model No.	Drift Loss % (1)	Flow Rate (gal/min)	TDS (mg/l)	Hours of Operation		PM10 Emissions		PM2.5 Emissions	
						hr/day	hr/yr	lb/hr	ton/yr	lb/hr	ton/yr
B01-B05, B07-B21, B23, D01-D08, D10-D14, D16, F01-F12, H01-H04, H06-H16, K01-K03, K05-K07, K09-K11	Evapco Cooling Tower	ESWA 216-460	0.001%	1250	5000	24	8760	0.01	0.06	0.00046	0.002
71								0.71	4.26	0.03	0.14

Table XVII-4: Per Unit PTE Summary (tons per year)

EU Type	Number of Identical Units[1]	Hr/yr (each unit)	PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	HAP	GHG[2]
3,353 hp Diesel engine	119	104	0.02	0.02	2.06	0.27	0.01	0.03	0.01	200.51
1,250 gpm Cooling tower	71	8,760	0.06	0.002	0	0	0	0	0	0
800 gal/min Cooling tower	2	8,760	0.04	0.0002	0	0	0	0	0	0
125 hp Diesel engine	3	500	0.01	0.01	0.19	0.09	0.01	0.01	0.01	35.94
110 hp Diesel engine	1	500	0.01	0.01	0.17	0.07	0.01	0.01	0.01	31.63
331 hp Diesel engine	1	104	0.01	0.01	0.14	0.05	0.01	0.04	0.01	19.79
86 hp Diesel engine	2	104	0.01	0.01	0.03	0.01	0.01	0.01	0.01	5.14
67 hp Diesel engine	2	104	0.01	0.01	0.02	0.01	0.01	0.01	0.01	4.01

[1] Each EU group consists of identical EUs with identical PTE.
[2] Metric tons per year, CO_2e

Table XVII-5: Per Unit Applicability Emissions Summary (tons per year)

EU Type	Identical EUs Group[1] (Includes ATC Units)	Hr/yr (each unit)	PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	HAP	GHG[2]
3,353 hp Diesel engine	131	500	0.09	0.09	9.89	1.30	0.01	0.17	0.03	963.99
1,250 gpm Cooling tower	78	8,760	0.06	0.002	0	0	0	0	0	0
800 gal/min Cooling Tower	2	8,760	0.04	0.0002	0	0	0	0	0	0
125 hp Diesel engine	3	500	0.01	0.01	0.19	0.09	0.01	0.01	0.01	35.94
110 hp Diesel engine (1 unit)	1	500	0.01	0.01	0.17	0.07	0.01	0.01	0.01	31.63
331 hp Diesel engine	1	500	0.01	0.01	0.68	0.22	0.01	0.20	0.01	95.16
86 hp Diesel engine	2	500	0.01	0.01	0.14	0.04	0.01	0.01	0.01	24.73
67 hp Diesel engine	2	500	0.01	0.01	0.11	0.03	0.01	0.01	0.01	19.26

[1] Each EU group consists of identical EUs with identical PTE.
[2]Metric tons per year, CO_2e

Table XVII-6: Source PTE Summary (tons per year)

Location	EU	PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	HAP	GHG[1]
NAP 7	31 emergency generators (3,353 hp)	0.62	0.62	63.86	8.37	0.31	0.93	0.31	6,215.79
	21 cooling towers (1,250 gpm)	1.26	0.04	0	0	0	0	0	0
NAP 8	24 emergency generators (3,353 hp)	0.48	0.48	49.44	6.48	0.24	0.72	0.24	4,812.23
	14 cooling towers (1,250 gpm)	0.84	0.03	0	0	0	0	0	0
	1 emergency generator (331 hp)	0.01	0.01	0.14	0.05	0.01	0.04	0.01	19.79
	1 fire pump (110 hp)	0.01	0.01	0.17	0.07	0.01	0.01	0.01	31.63
	2 emergency generators (86 hp)	0.02	0.02	0.06	0.02	0.02	0.02	0.02	10.29
	2 emergency generators (67 hp)	0.02	0.02	0.04	0.02	0.02	0.02	0.02	8.01
NAP 9	24 emergency generators (3,353 hp)	0.48	0.48	49.44	6.48	0.24	0.72	0.24	4,812.23
	15 cooling towers (1,250 gpm)	0.90	0.03	0	0	0	0	0	0
	2 small cooling towers (800 gpm)	0.08	0.01	0	0	0	0	0	0
NAP 10	18 emergency generators (3,353 hp)	0.36	0.36	37.08	4.86	0.18	0.54	0.18	3,609.17
	12 cooling towers (1,250 gpm)	0.72	0.02	0.00	0.00	0.00	0.00	0.00	0
	2 fire pumps (125 hp)	0.02	0.02	0.38	0.18	0.02	0.02	0.02	71.88
NAP 11	18 emergency generators (3,353 hp)	0.36	0.36	37.08	4.86	0.18	0.54	0.18	3,609.17

Location	EU	PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	HAP	GHG[1]
	9 cooling towers (1,250 gpm)	0.54	0.02	0.00	0.00	0.00	0.00	0.00	0
	1 fire pump (125 hp)	0.01	0.01	0.19	0.09	0.01	0.01	0.01	35.94
NAP 12	4 emergency generators (3,353 hp)	0.04	0.04	4.12	0.54	0.02	0.06	0.02	802.04
PTE		**6.69**	**2.62**	**246.12**	**32.56**	**1.28**	**3.69**	**1.28**	**24,038.15**

[1] Metric tons per year, CO_2e

Table XVII-7: Source Applicability Emissions Summary (tons per year)

Location	EUs	PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	HAP	GHG[1]
NAP 7	31 emergency generators (3,353 hp)	2.79	2.79	306.59	40.30	0.31	5.27	0.93	29,883.61
	21 cooling towers (1,250 gpm)	1.26	0.04	0	0	0	0	0	0
	1 cooling tower (1,250 gpm)[2]	0.06	0.01	0	0	0	0	0	0
NAP 8	24 emergency generators (3,353 hp)	2.16	2.16	237.36	31.20	0.24	4.08	0.72	23,135.70
	14 cooling towers (1,250 gpm)	0.84	0.03	0	0	0	0	0	0
	1 emergency generator (331 hp)	0.01	0.01	0.68	0.22	0.01	0.20	0.01	95.16
	1 fire pump (110 hp)	0.01	0.01	0.17	0.07	0.01	0.01	0.01	31.63
	2 emergency generators (86 hp)	0.02	0.02	0.28	0.08	0.02	0.02	0.02	49.45
	2 emergency generators (67 hp)	0.02	0.02	0.22	0.06	0.02	0.02	0.02	38.53
	2 cooling towers (1,250 gpm)[2]	0.12	0.01	0	0	0	0	0	0
NAP 9	24 emergency generators (3,353 hp)	2.16	2.16	237.36	31.20	0.24	4.08	0.72	23,135.70
	15 cooling towers (1,250 gpm)	0.90	0.03	0	0	0	0	0	0
	2 small cooling towers (800 gpm)	0.08	0.01	0	0	0	0	0	0
	6 emergency generators (3,353 hp)[2]	0.54	0.54	59.34	7.80	0.06	1.02	0.18	5,783.93
	1 cooling tower (1,250 gpm)[2]	0.12	0.01	0	0	0	0	0	0
NAP 10	18 emergency generators (3,353 hp)	1.62	1.62	178.02	23.40	0.18	3.06	0.54	17,351.78
	12 cooling towers (1,250 gpm)	0.60	0.02	0	0	0	0	0	0
	2 fire pumps (125 hp)	0.02	0.02	0.38	0.18	0.02	0.02	0.02	71.88
NAP 11	18 emergency generators (3,353 hp)	1.62	1.62	178.02	23.4	0.18	3.06	0.54	17,351.78
	9 cooling towers (1,250 gpm)	0.54	0.02	0	0	0	0	0	0
	1 fire pump (125 hp)	0.01	0.01	0.19	0.09	0.01	0.01	0.01	35.94
	6 emergency generators (3,353 hp)[2]	0.54	0.54	59.34	7.80	0.06	1.02	0.18	5,783.93

Location	EUs	PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	HAP	GHG[1]
	3 cooling towers (1,250 gpm)[2]	0.18	0.01	0	0	0	0	0	0
NAP 12	4 emergency generators (3,353 hp)	0.36	0.36	39.56	5.20	0.04	0.68	0.12	3,855.95
Applicability Emissions		**16.64**	**12.07**	**1,297.51**	**171.00**	**1.40**	**22.55**	**4.02**	**126,654.39**

[1] Metric tons per year, CO_2e
[2] Unconstructed EUs authorized by an ATC permit.

Attachment 2 – Emergency Generator Engine Concentration Limit Calculations Submitted by Switch, Ltd.

VOLUMETRIC FLOWRATE BY FUEL CALCULATIONS
EPA Method 19 - Oil/Diesel #2

Category	Value	Unit
Oil Consumption Rate	163.0	gal/hr
Gross Calorific Value	138500.0	Btu/gal
Stack Oxygen	15.0	ppm @ 15% O2
Oil Fd-Factor @ 68°F	9190.0	DSCF/MMBtu
Standard Temperature, Tstd	528.0	°R
Million Btu per minute	0.4	MMBtu/min
Heat Input	22.6	MMBtu/hr
Stack Gas Flowrate	12248.9	DSCFM
NOx Emission Rate	39.5	lb/hr
NOx Concentration	450.3	ppm

Calculations,
MMBtu/min = (gal/hr * Btu/gal* 60 min/hr) / 1,000,000 Btu/MMBtu
DSCFM = Fd-Factor * (528/Tstd) * MMBtu/min * 20.9 / (20.9 - stack 02)
ppm = lb/hr / DSCFM / MW / 60 * 385,000,000

// Engine

Manufacturer	MTU
Model	16V 4000 G83 (T1638A36)
Type	4-Cycle
Arrangement	16-V
Displacement: L (in³)	76.3 (4,656)
Bore: cm (in)	17 (6.69)
Stroke: cm (in)	21 (8.27)
Compression Ratio	16.5:1
Rated RPM	1,800
Engine Governor	Electronic Isochronous (ADEC)
Maximum Power: Standby: kWm (bhp)	2,500 (3,351)
Maximum Power: Prime: kWm (bhp)	2,280 (3,056)
Speed Regulation	±0.25%
Air Cleaner	Dry

// Fuel Consumption

	STANDBY	PRIME
At 100% of Power Rating: L/hr (gal/hr)	617 (163)	558 (147)
At 75% of Power Rating: L/hr (gal/hr)	467 (123)	426 (113)
At 50% of Power Rating: L/hr (gal/hr)	325 (86)	299 (79)

// Cooling - Radiator System

	STANDBY	PRIME
Ambient Capacity of Radiator: °C (°F)	40 (104)	40 (104)
Maximum Restriction of Cooling Air, Intake, and Discharge Side of Rad.: kPa (in. H_2O)	0.12 (0.5)	0.12 (0.5)
Water Pump Capacity: L/min (gpm)	1,350 (357)	1,350 (357)
After Cooler Pump Capacity: L/min (gpm)	583 (154)	583 (154)

DETROIT DIESEL

TKF-Nr. 1127-07
Anlage

Emission (Nominal)[1]

Engine	Unit	16V4000G83 3D (Standby)			
		2500 kWm	1875 kWm	1250 kWm	625 kWm
NOx	g/kWh	7.174	5.631	5.175	4.747
HC	g/kWh	0.12	0.17	0.237	0.476
CO	g/kWh	0.943	0.74	0.742	1.547
PM	g/kWh	0.065	0.092	0.185	0.382

Emission (Nominal)[1]

Engine	Unit	16V4000G83 3B (Prime)			
		2280 kWm	1710 kWm	1140 kWm	570 kWm
NOx	g/kWh	6.933	5.456	4.64	4.549
HC	g/kWh	0.134	0.17	0.236	0.494
CO	g/kWh	0.799	0.831	0.905	1.883
PM	g/kWh	0.074	0.114	0.182	0.427

[1] Emission data measurement procedures are consistent with those described in EPA CFR 40 Part 89, and ISO 8178-1 for measuring NOx, HC, CO, and PM. Data shown is based on steady state operating conditions of 25°C and 960 mbar and diesel fuel due to EN 590. The nominal emission data shown is subject to instrumentation, measurement, facility, and engine-to-engine variations. Field emission test data are not guaranteed to these values. Emission data cannot be used to compare to EPA regulations which use values based on weighted cycle.

Attachment 3 – EJSCREEN Community Report

EPA

EJScreen Community Report

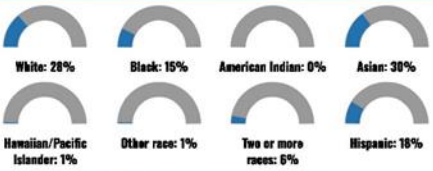
This report provides environmental and socioeconomic information for user-defined areas, and combines that data into environmental justice and supplemental indexes.

Enterprise, NV

1 mile Ring around the Area
Population: 26,336
Area in square miles: 5.61

COMMUNITY INFORMATION

BREAKDOWN BY RACE



BREAKDOWN BY AGE

LIMITED ENGLISH SPEAKING BREAKDOWN

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) 2018-2022. Life expectancy data comes from the Centers for Disease Control.

LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	50%
Spanish	14%
French, Haitian, or Cajun	1%
Russian, Polish, or Other Slavic	2%
Other Indo-European	1%
Korean	2%
Chinese (including Mandarin, Cantonese)	7%
Vietnamese	3%
Tagalog (including Filipino)	10%
Other Asian and Pacific Island	1%
Arabic	2%
Other and Unspecified	9%
Total Non-English	50%

Report for 1 mile Ring around the Area
Report produced August 6, 2024 using EJScreen Version 2.3

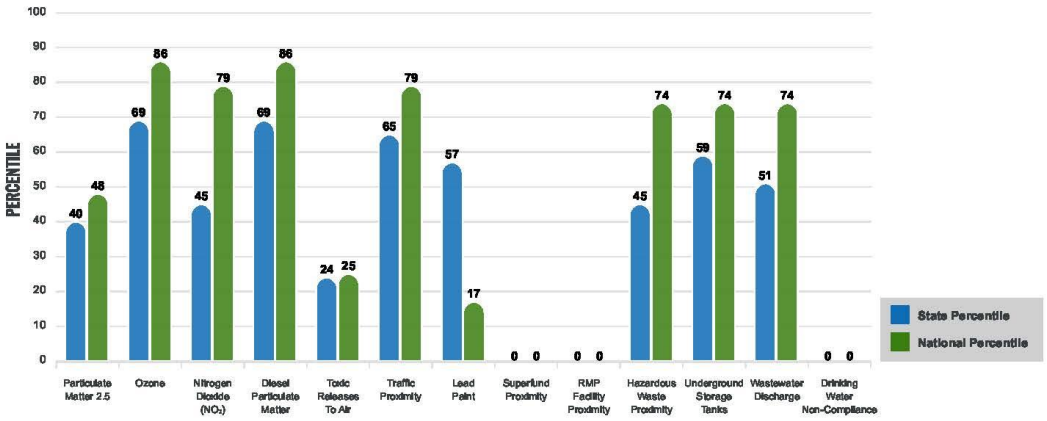
Environmental Justice & Supplemental Indexes

The environmental justice and supplemental indexes are a combination of environmental and socioeconomic information. There are thirteen EJ indexes and supplemental indexes in EJScreen reflecting the 13 environmental indicators. The indexes for a selected area are compared to those for all other locations in the state or nation. For more information and calculation details on the EJ and supplemental indexes, please visit the EJScreen website.

EJ INDEXES

The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.

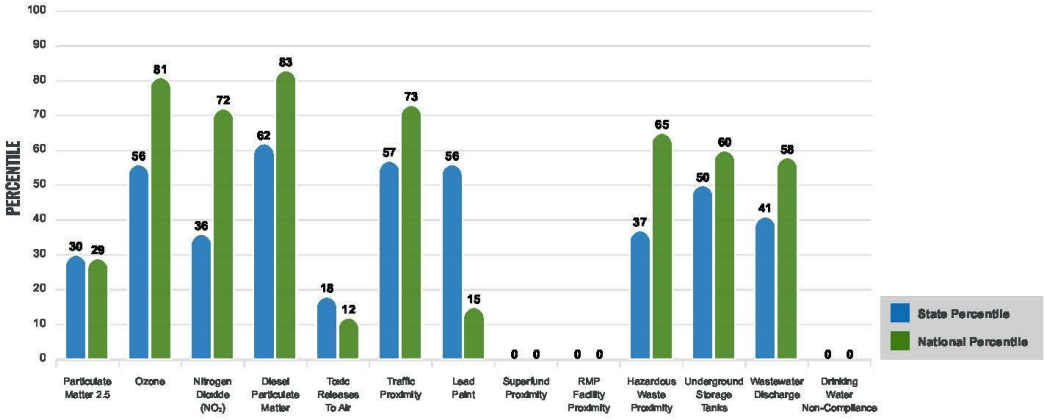
EJ INDEXES FOR THE SELECTED LOCATION



SUPPLEMENTAL INDEXES

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

SUPPLEMENTAL INDEXES FOR THE SELECTED LOCATION



Report for 1 mile Ring around the Area

Report produced August 6, 2024 using EJScreen Version 2.3

EJScreen Environmental and Socioeconomic Indicators Data

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
ENVIRONMENTAL BURDEN INDICATORS					
Particulate Matter 2.5 ($\mu g/m^3$)	7.38	8.15	28	8.45	26
Ozone (ppb)	70.2	69.2	64	61.8	86
Nitrogen Dioxide (NO_2) (ppbv)	10	10	33	7.8	75
Diesel Particulate Matter ($\mu g/m^3$)	0.541	0.388	72	0.191	96
Toxic Releases to Air (toxicity-weighted concentration)	20	1,400	15	4,600	12
Traffic Proximity (daily traffic count/distance to road)	2,300,000	1,800,000	65	1,700,000	75
Lead Paint (% Pre-1960 Housing)	0.007	0.063	57	0.3	15
Superfund Proximity (site count/km distance)	0	0.11	0	0.39	0
RMP Facility Proximity (facility count/km distance)	0	0.4	0	0.57	0
Hazardous Waste Proximity (facility count/km distance)	2.5	3.3	35	3.5	63
Underground Storage Tanks (count/km^2)	2.2	3.2	56	3.6	64
Wastewater Discharge (toxicity-weighted concentration/m distance)	110	30000	40	700000	57
Drinking Water Non-Compliance (points)	0	0.39	0	2.2	0
SOCIOECONOMIC INDICATORS					
Demographic Index USA	1.72	N/A	N/A	1.34	70
Supplemental Demographic Index USA	1.46	N/A	N/A	1.64	45
Demographic Index State	2.02	1.81	61	N/A	N/A
Supplemental Demographic Index State	1.13	1.44	39	N/A	N/A
People of Color	72%	51%	74	40%	78
Low Income	25%	32%	42	30%	46
Unemployment Rate	6%	7%	50	6%	65
Limited English Speaking Households	8%	6%	73	5%	81
Less Than High School Education	11%	14%	53	11%	62
Under Age 5	8%	5%	76	5%	75
Over Age 64	10%	18%	30	18%	25

*Diesel particulate matter index is 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. More information on the Air Toxics Data Update can be found at: https://www.epa.gov/haps/air-toxics-data-updates.

Sites reporting to EPA within defined area:

- Superfund 0
- Hazardous Waste, Treatment, Storage, and Disposal Facilities 0
- Water Dischargers 51
- Air Pollution 1
- Brownfields 0
- Toxic Release Inventory 0

Other community features within defined area:

- Schools 2
- Hospitals 0
- Places of Worship 2

Other environmental data:

- Air Non-attainment ..... Yes
- Impaired Waters ..... No

- Selected location contains American Indian Reservation Lands* ..... No
- Selected location contains a "Justice40 (CEJST)" disadvantaged community ..... Yes
- Selected location contains an EPA IRA disadvantaged community ..... Yes

Report for 1 mile Ring around the Area

Report produced August 6, 2024 using EJScreen Version 2.3

EJScreen Environmental and Socioeconomic Indicators Data

HEALTH INDICATORS

INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Low Life Expectancy	9%	20%	0	20%	0
Heart Disease	3	5.7	3	5.8	4
Asthma	9	10.1	10	10.3	17
Cancer	3.7	6	8	6.4	6
Persons with Disabilities	9.6%	13.7%	23	13.7%	27

CLIMATE INDICATORS

INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Flood Risk	5%	6%	67	12%	40
Wildfire Risk	67%	33%	68	14%	87

CRITICAL SERVICE GAPS

INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Broadband Internet	4%	12%	26	13%	25
Lack of Health Insurance	12%	12%	57	9%	76
Housing Burden	No	N/A	N/A	N/A	N/A
Transportation Access Burden	No	N/A	N/A	N/A	N/A
Food Desert	No	N/A	N/A	N/A	N/A

Report for 1 mile Ring around the Area
Report produced August 6, 2024 using EJScreen Version 2.3