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.
7919 Folsom Blvd., Suite 320
Sacramento, CA 95826

FOR:
Switch, Ltd.
Source ID: 16304

LOCATION:
7135 S. Decatur Blvd.
Las Vegas, Nevada 89118

SIC code 7375, "Information Retrieval Services"
NAICS code 517919, "All Other Telecommunications"

September 12, 2022

EXECUTIVE SUMMARY

Switch, Ltd. (Switch) owns and operates six separate and adjacent advanced technology ecosystem communications facilities, 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 under SIC code 7375, "Information Retrieval Services," and NAICS code 517919, "All Other Telecommunications." The source is in Hydrographic Area (HA) 212 (Las Vegas Valley). HA 212 is currently designated as attainment for all pollutants except ozone. HA 212 was designated a marginal nonattainment area for ozone on August 3, 2018 for the 2015 NAAQS. The designation has not imposed any new requirements at this time. HA 212 is also subject to a maintenance plan for the CO and PM_{10} NAAQS.

Switch consists of emergency generators, fire pumps, and cooling towers and is permitted as a Part 70 major source of NO_X, a synthetic minor source of CO, and a minor source for all other regulated pollutants. The synthetic minor status for CO is a result of Switch taking a voluntary limit to operate the 3,353 hp emergency engines up to 104 hours per year each. Switch is a source of greenhouse gases (GHG).

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:

Source PTE (tons per year)

	PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	HAP	GHG[1]
Source PTE	**6.67**	**2.60**	**242.06**	**32.04**	**1.28**	**3.65**	**1.28**	**23,637.13**
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)	-	-	100	-	-	100	-	-

[1] Metric tons per year, CO2e.

Clark County Department of Environment and Sustainability (DES) has delegated authority from the U.S. Environmental Protection Agency to implement the requirement of the Part 70 operating permit program (Part 70 OP). Based on information submitted by the applicant and a technical review performed by DAQ staff, DAQ issued a Part 70 OP renewal on July 1, 2021.

Based on information submitted by the applicant on April 5, 2021, June 6, 2022, and a technical review performed by DAQ staff, DAQ proposes the issuance of a revised Part 70 OP to Switch.

TABLE OF CONTENTS

LIST OF TABLES

I. ACRONYMS AND ABBREVIATIONS

Acronym	Term
DAQ	Division of Air Quality
DES	Clark County Department of Environment and Sustainability
AQR	Clark County Air Quality Regulations
AST	aboveground storage tank
ATC	Authority to Construct
CFR	United States Code of Federal Regulations
CO	carbon monoxide
EF	emission factor
EPA	United States Environmental Protection Agency
EU	emission unit
HAP	hazardous air pollutant
HC	hydrocarbon
HP	horse power
IC	internal combustion
kW	kilowatt
MMBtu	millions of British thermal units
NAICS	North American Industry Classification System
NMHC	non-methane hydrocarbon
NO_X	nitrogen oxides
NSPS	New Source Performance Standards
NSR	New Source Review
O&M	operations & maintenance
ORVR	onboard refueling vapor recovery
$PM_{2.5}$	particulate matter less than 2.5 microns
PM_{10}	particulate matter less than 10 microns
ppm	parts per Million
PSD	Prevention of Significant Deterioration
PTE	potential to emit
RACT	reasonably available control technology
SCR	selective catalytic reduction
SIC	Standard Industrial Classification
SO_2	sulfur dioxide
TSD	Technical Support Document
UST	underground storage tank
VAEL	voluntarily accepted emission limitation
VOC	volatile organic compound

II. SOURCE INFORMATION

A. Description of Process

Switch, Ltd. owns and operates six separate and adjacent advanced technology ecosystem communications facilities, referred to as NAP 7, NAP 8, NAP 9, NAP 10, NAP 11, and NAP 12. The source consists of diesel-powered emergency generators, fire pumps, and cooling towers. It is categorized under SIC code 7375, "Information Retrieval Services," and NAICS code 517919, "All Other Telecommunications." The source meets or exceeds the major stationary source threshold for NO_x emissions (NA NSR), is a synthetic minor source of CO, and is a minor source for PM_{10}, $PM_{2.5}$, SO_2, and VOC.

Switch 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.

B. Permitting History

This is a significant revision to the Part 70 OP for a source. The following table shows the permitting activities beginning with the open ATC permit up to this permitting action.

Table II-B-1: Permit History

Issue Date	Description
6/27/2014	ATC issued
02/26/2016	Initial Part 70 OP issued
02/25/2015	ATC issued
03/06/2017	Revised Part 70 OP issued
11/17/2017	Revised Part 70 OP issued
06/18/2018	Revised Part 70 OP issued
12/20/18	Revised Part 70 OP issued
06/24/2019	Revised Part 70 OP issued
06/26/2019	Administrative Revision to 02/25/2015 ATC issued
07/01/2021	Renewal Part 70 OP issued
04/05/2021	Revision application submitted

C. Current Permitting Action

In the Part 70 OP minor revision application submitted on April 5, 2021, Switch requested to add four diesel-fired emergency generators (EUs: C27 through C30) at NAP 8. Two generators (EUs: C27 and C28) will be permanently installed on concrete pads and the other two (EUs: C29 and C30) will be on trailers, but are expected to remain at NAP 8. The source is not requesting that the trailer-mounted units be designated as nonroad units.

The supplemental information submitted on June 6, 2022, updated the specifications of two of the genenerators (EUs: C29 and C30).

The application was submitted prior to July 20, 2021, when AQR Section 12.4 was amended. At that time the proposed changes qualified as AQR 12.4.3.2(b) changes because the proposed modifications increased the source PTE by an amount less than the minor NSR significance levels of AQR 12.4.2.1. Currently, under DES's interpretation of the amended AQR 12.4, an Authority to Construct would be required for "construction, modification, or reconstruction of an affected facility that becomes newly subject to a standard, limitation, or other requirement under 40 CFR Part 60." In accordance with AQR 12.4.3.2(f) the Part 70 Operating Permit will serve as both the Part 70 Operating Permit and the Authority to Construct Permit for the affected and constructed emissions units.

Given that the minor revision application was submitted prior to the AQR Section 12.4 amendments, all changes proposed by the minor revision application were accepted as changes that could be issued through a revised operating permit and implemented after 30 days from the date of submittal, consistent with the DES interpretation of the rule at that time. However, as the permit will be issued after DES's latest interpretation of "newly subject to a standard, limitation, or other requirement under 40 CFR Part 60," and as the proposed IC engines are subject to a requirement under 40 CFR Part 60, the permitting action cannot qualify as a minor revision and will be processed under the significant permit revision procedures of AQR 12.5.2.14(c), including the public participation requirement.

The insignificant aboveground diesel tanks are now listed in the permit, without any requirements. The emissions from these units shall be reported on the Annual Emissions Statement per AQR 12.9.1.

III. EMISSIONS INFORMATION

A. Emission Units List

Table III-A-1 lists the new emission units added to the Part 70 OP.

Table III-A-1: Summary of New Emissions Units NAP 8

EU	Rating	Description	Make	Model	Serial	SCC
C27	52 kW	Generator, Emergency	Kohler	KDI3404TM	4926901800	20200102
	86 hp	Diesel Engine, DOM: 2019		50REOZK	33H3GMGR0013	
C28	52 kW	Generator, Emergency	Kohler	KDI3404TM	4928902370	20200102
	86 hp	Diesel Engine, DOM: 2019		50REOZK	33H3GMHG0001	
C29	42 kW	Generator, Emergency	Kohler	KDI3404TM/G18B	5033501540	20200102
	67 hp	Diesel Engine, DOM: 2020		40REOZK	33FYGMJD0009	
C30	42 kW	Generator, Emergency	Kohler	KDI3404TM/G18B	5030802160	20200102
	67 hp	Diesel Engine, DOM: 2020		40REOZK	33FYGMJD0011	

B. Source-wide PTE

Switch is a Part 70 major source for NO_x, a synthetic minor source of CO, and a minor source for all other air pollutants, including greenhouse gases (GHGs).

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

PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOCs	HAPs	GHGs[1]
6.67	2.60	242.06	32.04	1.28	3.65	1.28	23,637.13

[1]Metric tons per year.

C. Potential to Emit and Status Determination Emissions

Table III-C-1: Individual Emissions Unit PTE for New Emission Units (tons per year)

EU Type	Identical EUs Group[1]	Hours per Year	PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	HAP
86 hp Diesel engine (2 units)	C27, C28	104 each	0.01	0.01	0.03	0.01	0.01	0.01	0.01
67 hp Diesel engine (2 units)	C29, C30	104 each	0.01	0.01	0.02	0.01	0.01	0.01	0.01

[1] Each EU group consists of identical EUs with identical PTE.

Table III-C-2: Source PTE Summary (tons per any consecutive 12-month period)

Location	EU	PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	HAP
NAP 7	31 emergency generators (3,353 hp)	0.62	0.62	63.86	8.37	0.31	0.93	0.31
	21 cooling towers (1,250 gpm)	1.26	0.04	0.00	0.00	0.00	0.00	0.00
NAP 8	24 emergency generators (3,353 hp)	0.48	0.48	49.44	6.48	0.24	0.72	0.24
	14 cooling towers (1,250 gpm)	0.84	0.03	0.00	0.00	0.00	0.00	0.00
	1 emergency generator (331 hp)	0.01	0.01	0.14	0.05	0.01	0.04	0.01
	1 fire pump (110 hp)	0.01	0.01	0.17	0.07	0.01	0.01	0.01
	2 emergency generators (86 hp)	0.04	0.04	0.12	0.04	0.04	0.04	0.04
	2 emergency generators (67 hp)	0.02	0.02	0.04	0.02	0.02	0.02	0.02
NAP 9	24 emergency generators (3,353 hp)	0.48	0.48	49.44	6.48	0.24	0.72	0.24
	15 cooling towers (1,250 gpm)	0.90	0.03	0.00	0.00	0.00	0.00	0.00
	2 small cooling towers (800 gpm)	0.08	0.01	0.00	0.00	0.00	0.00	0.00
NAP 10	18 emergency generators (3,353 hp)	0.36	0.36	37.08	4.86	0.18	0.54	0.18
	10 cooling towers (1,250 gpm)	0.60	0.02	0.00	0.00	0.00	0.00	0.00
	2 fire pumps (125 hp)	0.02	0.02	0.38	0.18	0.02	0.02	0.02
NAP 11	18 emergency generators (3,353 hp)	0.36	0.36	37.08	4.86	0.18	0.54	0.18
	9 cooling towers (1,250 gpm)	0.54	0.02	0.00	0.00	0.00	0.00	0.00
	1 fire pump (125 hp)	0.01	0.01	0.19	0.09	0.01	0.01	0.01

Location	EU	PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	HAP
NAP 12	2 emergency generators (3,353 hp)	0.04	0.04	4.12	0.54	0.02	0.06	0.02
Totals		**6.67**	**2.60**	**242.06**	**32.04**	**1.28**	**3.65**	**1.28**

To calculate the applicability emissions, the emergency generators' operational limit of 104 hours per year each is increased to 500 hours per year each in accordance with DES policy. As the cooling towers are unlimited and the fire pumps' PTE is based on 500 hours per year each, there is no difference in PTE and applicability emissions for these units. The applicability emissions include only those units in the Part 70 OP.

Table III-C-3: Source Applicability Summary (tons per year)

Location	EUs	PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	HAP
NAP 7	31 emergency generators (3,353 hp)	2.79	2.79	306.59	40.30	0.31	5.27	0.93
	21 cooling towers (1,250 gpm)	1.26	0.04	0.00	0.00	0.00	0.00	0.00
NAP 8	24 emergency generators (3,353 hp)	2.16	2.16	237.36	31.20	0.24	4.08	0.72
	14 cooling towers (1,250 gpm)	0.84	0.03	0.00	0.00	0.00	0.00	0.00
	1 emergency generator (331 hp)	0.01	0.01	0.14	0.05	0.01	0.04	0.01
	1 fire pump (110 hp)	0.01	0.01	0.17	0.07	0.01	0.01	0.01
	2 emergency generators (86 hp)	0.02	0.02	0.28	0.08	0.02	0.02	0.02
	2 emergency generators (67 hp)	0.02	0.02	0.22	0.06	0.02	0.02	0.02
NAP 9	24 emergency generators (3,353 hp)	2.16	2.16	237.36	31.20	0.24	4.08	0.72
	15 cooling towers (1,250 gpm)	0.90	0.03	0.00	0.00	0.00	0.00	0.00
	2 small cooling towers (800 gpm)	0.08	0.01	0.00	0.00	0.00	0.00	0.00
NAP 10	18 emergency generators (3,353 hp)	1.62	1.62	178.02	23.40	0.18	3.06	0.54
	10 cooling towers (1,250 gpm)	0.60	0.02	0.00	0.00	0.00	0.00	0.00
	2 fire pumps (125 hp)	0.02	0.02	0.38	0.18	0.02	0.02	0.02
NAP 11	18 emergency generators (3,353 hp)	1.62	1.62	178.02	23.4	0.18	3.06	0.54
	9 cooling towers (1,250 gpm)	0.54	0.02	0.00	0.00	0.00	0.00	0.00
	1 fire pump (125 hp)	0.01	0.01	0.19	0.09	0.01	0.01	0.01
NAP 12	2 emergency generators (3,353 hp)	0.18	0.18	19.78	2.60	0.02	0.34	0.06
Totals		**14.84**	**10.77**	**1,158.51**	**152.63**	**1.26**	**20.01**	**3.60**
Major Source Thresholds		**100**	**100**	**100**	**100**	**100**	**100**	**10/25[1]**

[1] Ten tons for any one HAP or 25 tons for combination of all HAPs.

Switch is a major source of NO_x. With CO applicability emissions greater than the major source threshold and a CO PTE less than the major source threshold, as a result of the emergency generator operating hour limitation, Switch is considered a synthetic minor of CO emissions. The hour limit is a voluntary limitation.

D. Emissions Increase

Table III-D-1 shows the increase in emissions from the previous Title V OP. The increase is due to the four new emergency generators.

Table III-D-1: Emissions Increase (tons per year)

EUs	PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	HAP
Current PTE	6.67	2.60	242.06	32.04	1.28	3.65	1.28
Previous PTE (07/1/21)	6.61	2.54	241.90	31.98	1.22	3.59	1.22
Emissions Increase	**0.06**	**0.06**	**0.16**	**0.06**	**0.06**	**0.06**	**0.06**
AQR 12.5 Minor NSR Significant Levels	**7.5**	**5.0**	**20**	**50**	**20**	**20**	**--**

E. Control Technology

Since the emissions increases are below the Minor NSR Significant Levels no controls analysis is required in this permitting action. The diesel engines are turbocharged and certified to meet the applicable requirements in 40 CFR Part 60.

F. Operational Limitations

The four new emergency generators (EUs: C27 through C30) will be limited to 104 hours per calendar each, as requested by the source.

Typically, DES allows unlimited operation of emergency generators for emergency use and calculates the PTE based on 500 hours per year usage. The source took a voluntary emission limitation for each emergency generator to avoid becoming a major PSD source of NO_x. Switch uses 2.2 MW emergency generators and is confident they can reasonably limit the cap on hours of operation on the emergency generators and each emergency generator's operation shall be limited to 104 hours per calendar year, including emergencies. This hour limit is also used for the PTE calculation. This accommodates a worst-case emergency use of 55 hours per year and hours for testing and maintenance in accordance with the manufacturer's specifications. Switch has continuously complied with this limit.

The first 59 generators had an operational limit of 155 hours per year. This limit was established to not exceed the NAAQS for NO_2, and has since been reduced to the current 104 hours per year.

G. Monitoring

The new emission units in this revision do not trigger additional monitoring requirements, as similar units are present in the permit with sufficient monitoring requirements. The units added to the Title V OP were added to the existing conditions as applicable including quarterly visible emission checks and the use of hour meters.

Switch is required to monitor opacity, hours of operation of each generator and fire pump, and the TDS of the cooling towers.

H. Performance Testing

The new emission units do not trigger addition performance testing.

As deemed necessary and upon written request from the Control Officer, Switch may be required to conduct performance testing on any emergency generator or fire pump engine to demonstrate compliance with the emission limits in 40 CFR Part 60, Subpart IIII.

IV. 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.

B. Federally Applicable Regulations

The new emergency engines are subject to 40 CFR Part 60, Subpart IIII, and 40 CFR Part 63, Subpart ZZZZ. The engines will meet the requirements of Subpart ZZZZ by meeting the requirements of Subpart IIII

40 CFR Part 60, Subpart IIII—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

40 CFR Part 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 National Fire Protection Association as fire pump engines. Switch operates emission units that are subject to this subpart.

40 CFR Part 60.4202: Emission standards for owners and operators.

Discussion: The operator of the stationary CI ICE must provide the manufacturer certification of the emission standards specified in this subpart. These requirements are addressed in the Part 70 OP. By meeting the manufacturer's certified emissions, the emission units are in compliance with the emission standards of this subpart.

40 CFR Parts 60.4206 and 60.4211: Compliance requirements.

Discussion: The operator of the stationary CI ICE must operate and maintain CI ICE that achieve the emission standards according to the manufacturer's written instructions and procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine. These requirements are addressed in the Part 70 OP.

40 CFR Part 60.4214: Reporting and recordkeeping requirements.

Discussion: The operator of the CI ICE shall keep records that include: engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement; emission control equipment; and fuel used. If the stationary CI internal combustion is a certified engine, the owner or operator shall keep documentation from the manufacturer that the engine is certified to meet the emission standards. These requirements are addressed in the Part 70 OP.

40 CFR Part 63, Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

40 CFR Part 63.6585: Applicability determination.

Discussion: The provisions of this subpart are applicable to owners and operators of stationary RICE at major or area sources of HAP. Numeric emission standards are not applied to these emergency engines, however, operational limitations, management practices and record keeping are required. The engines meet the requirements of 40 CFR Part 63, Subpart ZZZZ, by complying with 40 CFR Part 60, Subpart IIII.

40 CFR Part 63, Subpart Q—National Emissions Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers

40 CFR Part 63.400: Applicability.

Discussion: This subpart does not apply to the cooling towers at Switch, as chromium-based water treatment chemical are not used in these units and Switch is not a major source of HAP.

V. COMPLIANCE

A. Compliance Certification

Switch has complied with the requirement in the Part 70 OP to submit annual compliance certifications per AQR 12.5.2.8.

Recordkeeping requirements are to be kept for all limitations specified in the permit.

1. Requirements for reporting

a. 12.5.2.8: Requirements for compliance certification:

i. Regardless of the date of issuance of this Part 70 OP, the schedule for the submittal of reports to DAQ shall be that in Table VI-A-1.

Table VI-A-1. Reporting Schedule

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

[1]If the due date falls on a Saturday, Sunday, or federal or Nevada holiday, the submittal is due on the next regularly scheduled business day.

ii. A statement of methods used for determining compliance, including a description of monitoring, recordkeeping, and reporting requirements and test methods.
iii. A schedule for submission of compliance certifications during the permit term.
iv. A statement indicating the source's compliance status with any applicable enhanced monitoring and compliance certification requirements of the Act.

B. Summary of Monitoring for Compliance

Table VI-B-1: Compliance Monitoring

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?	
A02-A29, A32-A34, C01-C24, C26-30, E01-E18, G01-G24, J01-J18, L01, L02	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
C25, E19, E20, J19	60.4205(c) 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

VI. EMISSION REDUCTION CREDITS (OFFSETS)

The permittee is not required to obtain offsets in this permitting action.

VII. ADMINISTRATIVE REQUIREMENTS

AQR Section 12.5 requires that Air Quality 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.

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

Legal:

On December 5, 2001, in 66 FR 30097, EPA fully approved the Title V Operating Permit Program submitted by DES for the purpose of complying with the Title V requirements of the 1990 CAAA and implementing 40 CFR Part 70.

Factual:

Switch has supplied all the necessary information for Air Quality to draft Part 70 OP conditions, encompassing all applicable requirements and corresponding compliance.

Conclusion:

DES has determined that Switch will continue to determine compliance through the use of performance testing, semiannual reporting, and daily and monthly recordkeeping coupled with annual certifications of compliance. Air Quality proceeds with the decision that a Part 70 OP should be issued as drafted to Switch for a period not to exceed five years.

VIII. INCREMENT

Switch Ltd is a major source in Hydrographic Area 212 (the Las Vegas Valley). Permitted emission units include 122 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 (2020-2021) 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 IX-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 IX-1: PSD Increment Consumption

Pollutant	Averaging Period	PSD Increment Consumption by the Source (µg/m³)	Location of Maximum Impact	
			UTM X (m)	UTM Y (m)
SO_2	3-hour	10.97[1]	660847	3991932
SO_2	24-hour	6.43[1]	660847	3991932
SO_2	Annual	3.19	660848	3991932
NO_X	Annual	4.84	660848	3991932

[1] Highest Second High Concentration

IX. PUBLIC NOTICE

This permitting action is processed under the significant revision procedures of AQR 12.5.2.14(c) and therefore is subject to public notice per AQR 12.5.2.17.

X. PERMIT SHIELD

No permit shield has been identified in this permitting action.

XI. ACID RAIN REQUIREMENTS

This source is not subject to the acid rain requirements.

XII. ATTACHMENTS

Attachment 1 – 40 CFR Part 60, Subpart IIII, Emission Standards

40 CFR Part 60, Subpart IIII, Emission Standards (g/kW-hr)

EU	HC	NO_X	NMHC + NO_X	CO	PM
A02 through A12, C26	1.3	9.2		11.4	0.54
A13 through A29, A32 through A34, C01 through C24, E01 through E18, G01 through G24, J01 through J18, L01, L02			6.4	3.5	0.2
C25, E19, E20, J19			10.5	5.0	0.80
C27 through C30			4.7	5.0	0.40

Attachment 2 – Emission Unit EF and PTE Tables

						Emission Factor	Potential Emissions		
EU#	C27-C28	**Horsepower:**	86			(lb/hp-hr)	lb/hr	lb/day	ton/yr
Make:	Kohler	**Hours/Day:**	24.0		**PM10**	6.25E-04	0.05	1.29	0.24
Model:	KDI3404TM	**Hours/Year**	8760		**NOx**	6.56E-03	0.56	13.54	2.47
S/N:					**CO**	1.81E-03	0.16	3.73	0.68
Manufacturer Guarantees					**SO_2**	1.21E-05	0.01	0.03	0.01
PM10	0.38	g/kW-hr			**VOC**	1.15E-04	0.01	0.24	0.04
NOx	3.99	g/kW-hr			**HAP**	2.71E-05	0.01	0.06	0.01
CO	1.1	g/kW-hr							
SO_2		g/kW-hr							
VOC	0.07	g/kW-hr							
Engine Type:	Diesel				Diesel Fuel Sulfur Content is 15 ppm (0.0015%)				

						Emission Factor	Potential Emissions		
EU#	C27-C28	**Horsepower:**	86			(lb/hp-hr)	lb/hr	lb/day	ton/yr
Make:	Kohler	**Hours/Day:**	24.0		**PM10**	6.25E-04	0.05	1.29	0.01
Model:	KDI3404TM	**Hours/Year**	104		**NOx**	6.56E-03	0.56	13.54	0.03
S/N:					**CO**	1.81E-03	0.16	3.73	0.01
Manufacturer Guarantees					**SO_2**	1.21E-05	0.01	0.03	0.01
PM10	0.38	g/kW-hr			**VOC**	1.15E-04	0.01	0.24	0.01
NOx	3.99	g/kW-hr			**HAP**	2.71E-05	0.01	0.06	0.01
CO	1.1	g/kW-hr							
SO_2		g/kW-hr							
VOC	0.07	g/kW-hr							
Engine Type:	Diesel				Diesel Fuel Sulfur Content is 15 ppm (0.0015%)				

EU#	C29-C30		Horsepower:	67
Make:			Hours/Day:	24.0
Model:			Hours/Year	104
S/N:				
Manufacturer Guarantees				
PM10	0.38	g/kW-h		
NOx	3.99	g/kW-h		
CO	1.1	g/kW-h		
SO_2		g/kW-h		
VOC	0.07	g/kW-h		
Engine Type:	Diesel			

	Emission Factor (lb/hp-hr)	Potential Emissions lb/hr	lb/day	ton/yr
PM10	6.25E-04	0.04	1.00	0.01
NOx	6.56E-03	0.44	10.55	0.02
CO	1.81E-03	0.12	2.91	0.01
SO_2	1.21E-05	0.01	0.02	0.01
VOC	1.15E-04	0.01	0.19	0.01
HAP	2.71E-05	0.01	0.04	0.01

Diesel Fuel Sulfur Content is 15 ppm (0.0015%)

EU#			Horsepower:	67
Make:			Hours/Day:	24.0
Model:			Hours/Year	500
S/N:				
Manufacturer Guarantees				
PM10	0.38	g/kW-h		
NOx	3.99	g/kW-h		
CO	1.1	g/kW-h		
SO_2		g/kW-h		
VOC	0.07	g/kW-h		
Engine Type:	Diesel			

	Emission Factor (lb/hp-hr)	Potential Emissions lb/hr	lb/day	ton/yr
PM10	6.25E-04	0.04	1.00	0.01
NOx	6.56E-03	0.44	10.55	0.11
CO	1.81E-03	0.12	2.91	0.03
SO_2	1.21E-05	0.01	0.02	0.01
VOC	1.15E-04	0.01	0.19	0.01
HAP	2.71E-05	0.01	0.04	0.01

Diesel Fuel Sulfur Content is 15 ppm (0.0015%)