



DES
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AND SUSTAINABILITY



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SYNTHETIC MINOR (SM80) SOURCE PERMIT

SOURCE ID: 18024

Switch Limited
5660 West Badura Avenue
Las Vegas, Nevada 89118

ISSUED ON: May 19, 2020

EXPIRES ON: May 18, 2025

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Current action: Significant Revision

Issued to:

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Issued by the Clark County Department of Environment and Sustainability, Division of Air Quality, in accordance with Section 12.1 of the Clark County Air Quality Regulations.

Santosh Mathew, Permitting Manager

EXECUTIVE SUMMARY

Switch Limited is a data center, located in the Hydrographic Area of 212 – Las Vegas Valley. As a data center, the source is classified under SIC 7375: Information Retrieval Services and NAICS 517810: All Other Telecommunications.

Switch Limited consists of emergency diesel generators, cooling towers, and an emergency fire pump. Combined, these emission units establish Switch Limited as a synthetic minor source of NO_x.

In addition, Switch Limited is subject to the federal requirements of 40 CFR Part 60 Subpart IIII and 40 CFR Part 63 Subpart ZZZZ. However, the source will meet all of the federal requirements of 40 CFR Part 63 Subpart ZZZZ, by adhering to the federal requirements of 40 CFR Part 60 Subpart IIII.

SOURCE-WIDE PTE SUMMARY

The facility is a synthetic minor (SM80) source of NO_x and a minor source of PM₁₀, PM_{2.5}, CO, SO₂, and VOC.

Table 1. Potential to Emit (tons per year)

Pollutant	PM ₁₀	PM _{2.5}	NO _x	CO	SO ₂	VOC	H ₂ S	Pb
Total	2.57	2.57	91.27	7.24	0.46	4.78	0	0

TABLE OF CONTENTS

1.0	EQUIPMENT	5
1.1	Emission Units	5
1.2	Insignificant Activities.....	10
1.3	Nonroad Engines.....	10
2.0	CONTROLS	11
2.1	Control Devices	11
2.2	Control Requirements	11
3.0	LIMITATIONS	12
3.1	Operational Limits	12
3.2	Emission Limits	13
4.0	COMPLIANCE DEMONSTRATION REQUIREMENTS	17
4.1	Monitoring	17
4.2	Testing.....	18
4.3	Recordkeeping Requirements	18
4.4	Reporting and Notification	20
5.0	ADMINISTRATIVE REQUIREMENTS	23
5.1	General.....	23
5.2	Renewals and Revisions	24

LIST OF TABLES

Table 1-1.	Summary of Emission Units.....	5
Table 3-1.	Potential to Emit (tons per year).....	13
Table 3-2.	Source-Wide Emission Unit PTE Summary (tons per year).....	13
Table 4-1.	Required Submittal Dates for Various Reports	22

COMMON ACRONYMS AND ABBREVIATIONS
(These terms may be seen in the permit)

AQR	Clark County Air Quality Regulation
CFR	Code of Federal Regulations
CO	carbon monoxide
DAQ	Division of Air Quality
DOM	date of manufacture
EF	emission factor
EPA	U.S. Environmental Protection Agency
EU	emission unit
HAP	hazardous air pollutant
H ₂ S	hydrogen sulfide
kW	kilowatt
MMBtu	British thermal units (in millions)
NAICS	North American Industry Classification System
NO _x	nitrogen oxide
Pb	lead
PM _{2.5}	particulate matter less than 2.5 microns in aerodynamic diameter
PM ₁₀	particulate matter less than 10 microns in aerodynamic diameter
ppm	parts per million
PSD	Prevention of Significant Deterioration
PTE	potential to emit
RACT	reasonably available control technology
RICE	reciprocating internal combustion engine
SCC	Source Classification Codes
SIC	Standard Industrial Classification
SO ₂	sulfur dioxide
TDS	total dissolved solids
TSD	Technical Support Document
VAEL	Voluntarily Accepted Emission Limit
VOC	volatile organic compound

1.0 EQUIPMENT

1.1 EMISSION UNITS

The stationary source consists of the emission units (EUs) listed in Table 1-1. [AQR 12.1.4.1(b)]

Table 1-1. Summary of Emission Units

EU	Rating	Type	Make	MN	SN
A01	2,045 kW	Emergency Generator	MTU	MTU16V4000DS2250	5482000515
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	95030502448
A02	2,045 kW	Emergency Generator	MTU	MTU16V4000DS2250	5482000516
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	95030502449
A03	2,045 kW	Emergency Generator	MTU	MTU16V4000DS2250	5482000512
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	95030502446
A04	2,045 kW	Emergency Generator	MTU	MTU16V4000DS2250	5482000510
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	95030502440
A05	2,045 kW	Emergency Generator	MTU	MTU16V4000DS2250	5482000507
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	95030502430
A06	2,045 kW	Emergency Generator	MTU	MTU16V4000DS2250	5482000514
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	95030502447
A07	2,045 kW	Emergency Generator	MTU	MTU16V4000DS2250	5482000618
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	95030502532
A08	2,045 kW	Emergency Generator	MTU	MTU16V4000DS2250	5482000590
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	95030502528
A09	2,045 kW	Emergency Generator	MTU	MTU16V4000DS2250	5482000617
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	95030502531

Minor Source Permit
Source Name: Switch, Ltd.
Source ID: 18024

EU	Rating	Type	Make	MN	SN
A10	2,045 kW	Emergency Generator	MTU	MTU16V4000DS2250	5482000591
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	95030502529
A11	2,045 kW	Emergency Generator	MTU	MTU16V4000DS2250	5482000615
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	95030502530
A12	2,045 kW	Emergency Generator	MTU	MTU16V4000DS2250	5482000589
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	95030502527
A13	2,045 kW	Emergency Generator	MTU	MTU16V4000DS2250	5482000821
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	95030503153
A14	2,045 kW	Emergency Generator	MTU	MTU16V4000DS2250	5482000813
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	95030503093
A15	2,045 kW	Emergency Generator	MTU	MTU16V4000DS2250	5482000803
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	95030503136
A16	2,045 kW	Emergency Generator	MTU	MTU16V4000DS2250	5482000814
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	95030503164
A17	2,045 kW	Emergency Generator	MTU	MTU16V4000DS2250	5482000820
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	95030503138
A18	2,045 kW	Emergency Generator	MTU	MTU16V4000DS2250	5482000804
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	95030503137
A19	2,045 kW	Emergency Generator	MTU	MTU16V4000DS2250	TBD
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	TBD
A20	2,045 kW	Emergency Generator	MTU	MTU16V4000DS2250	TBD
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	TBD

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EU	Rating	Type	Make	MN	SN
A21	2,045 kW	Emergency Generator	MTU	MTU16V4000DS2250	TBD
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	TBD
A22	2,045 kW	Emergency Generator	MTU	MTU16V4000DS2250	TBD
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	TBD
A23	2,045 kW	Emergency Generator	MTU	MTU16V4000DS2250	TBD
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	TBD
A24	2,045 kW	Emergency Generator	MTU	MTU16V4000DS2250	TBD
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	TBD
A25	2,045 kW	Emergency Generator ¹	MTU	MTU16V4000DS2250	TBD
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	TBD
A26	2,045 kW	Emergency Generator ¹	MTU	MTU16V4000DS2250	TBD
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	TBD
A27	2,045 kW	Emergency Generator ^{1,2}	MTU	MTU16V4000DS2250	TBD
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	TBD
A28	2,045 kW	Emergency Generator ¹	MTU	MTU16V4000DS2250	TBD
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	TBD
A29	2,045 kW	Emergency Generator ¹	MTU	MTU16V4000DS2250	TBD
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	TBD
A30	2,045 kW	Emergency Generator ¹	MTU	MTU16V4000DS2250	TBD
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	TBD
A31	2,045 kW	Emergency Generator ¹	MTU	MTU16V4000DS2250	TBD
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	TBD

Minor Source Permit
Source Name: Switch, Ltd.
Source ID: 18024

EU	Rating	Type	Make	MN	SN
A32	2,045 kW	Emergency Generator ¹	MTU	MTU16V4000DS2250	TBD
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	TBD
A33	2,045 kW	Emergency Generator ¹	MTU	MTU16V4000DS2250	TBD
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	TBD
A34	2,045 kW	Emergency Generator ¹	MTU	MTU16V4000DS2250	TBD
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	TBD
A35	2,045 kW	Emergency Generator ¹	MTU	MTU16V4000DS2250	TBD
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	TBD
A36	2,045 kW	Emergency Generator ¹	MTU	MTU16V4000DS2250	TBD
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	TBD
A37	2,045 kW	Emergency Generator ¹	MTU	MTU16V4000DS2250	TBD
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	TBD
A38	2,045 kW	Emergency Generator ¹	MTU	MTU16V4000DS2250	TBD
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	TBD
A39	2,045 kW	Emergency Generator ¹	MTU	MTU16V4000DS2250	TBD
	3,058 hp	Diesel Engine DOM 2017+	MTU	16V4000G24S	TBD
A40	TBD	Emergency Generator ¹	MTU	TBD	TBD
	3,674 hp	Diesel Engine DOM 2017+	MTU	20V4000G24S	TBD
A41	TBD	Emergency Generator ¹	MTU	TBD	TBD
	3,674 hp	Diesel Engine DOM 2017+	MTU	20V4000G24S	TBD
A42	TBD	Emergency Generator ¹	MTU	TBD	TBD
	3,674 hp	Diesel Engine DOM 2017+	MTU	20V4000G24S	TBD

Minor Source Permit
Source Name: Switch, Ltd.
Source ID: 18024

EU	Rating	Type	Make	MN	SN
A43	TBD	Emergency Generator ¹	MTU	TBD	TBD
	3,674 hp	Diesel Engine DOM 2017+	MTU	20V4000G24S	TBD
A44	TBD	Emergency Generator ¹	MTU	TBD	TBD
	3,674 hp	Diesel Engine DOM 2017+	MTU	20V4000G24S	TBD
A45	TBD	Emergency Generator ¹	MTU	TBD	TBD
	3,674 hp	Diesel Engine DOM 2017+	MTU	20V4000G24S	TBD
B01	138 hp	Emergency Fire Pump	Clarke	JU6H-UFADK0	FPC0002013860101
		Diesel Engine DOM 2017+	John Deere	6068HFC28	PE6068N017744
C01	1,250 gpm	Cooling Tower	Evapco	ESWA21646OC	21P107386
C02	1,250 gpm	Cooling Tower	Evapco	ESWA21646OC	21P107387
C03	1,250 gpm	Cooling Tower	Evapco	ESWA21646OC	21P110032
C04	1,250 gpm	Cooling Tower	Evapco	ESWA21646OC	TBD
C05	1,250 gpm	Cooling Tower	Evapco	ESWA21646OC	TBD
C06	1,250 gpm	Cooling Tower	Evapco	ESWA21646OC	21P110031
C07	1,250 gpm	Cooling Tower	Evapco	ESWA21646OC	21P110033
C08	1,250 gpm	Cooling Tower	Evapco	ESWA21646OC	21P110034
C09	1,250 gpm	Cooling Tower	Evapco	ESWA21646OC	TBD
C10	1,250 gpm	Cooling Tower	Evapco	ESWA21646OC	TBD
C11	1,250 gpm	Cooling Tower	Evapco	ESWA21646OC	22P118192
C12	1,250 gpm	Cooling Tower	Evapco	ESWA21646OC	22P118194
C13	1,250 gpm	Cooling Tower	Evapco	ESWA21646OC	22P118309
C14	1,250 gpm	Cooling Tower	Evapco	ESWA21646OC	23P131603
C15	1,250 gpm	Cooling Tower	Evapco	ESWA21646OC	TBD
C16	1,250 gpm	Cooling Tower ¹	Evapco	ESWA21646O	TBD
C17	1,250 gpm	Cooling Tower ¹	Evapco	ESWA21646O	TBD
C18	1,250 gpm	Cooling Tower ¹	Evapco	ESWA21646O	TBD
C19	1,250 gpm	Cooling Tower ¹	Evapco	ESWA21646O	TBD
C20	1,250 gpm	Cooling Tower ¹	Evapco	ESWA21646O	TBD

EU	Rating	Type	Make	MN	SN
C21	1,250 gpm	Cooling Tower ¹	Evapco	ESWA21646O	TBD
C22	1,250 gpm	Cooling Tower ¹	Evapco	ESWA21646O	TBD
C23	1,250 gpm	Cooling Tower ¹	Evapco	ESWA21646O	TBD
C24	1,250 gpm	Cooling Tower ¹	Evapco	ESWA21646O	TBD
C25	1,250 gpm	Cooling Tower ¹	Evapco	ESWA21646O	TBD
C26	1,250 gpm	Cooling Tower ¹	Evapco	ESWA21646O	TBD
C27	1,250 gpm	Cooling Tower ¹	Evapco	ESWA21646O	TBD
C28	1,250 gpm	Cooling Tower ¹	Evapco	ESWA21646O	TBD
C29	1,250 gpm	Cooling Tower ¹	Evapco	ESWA21646O	TBD
C30	1,250 gpm	Cooling Tower ¹	Evapco	ESWA21646O	TBD

¹ located at new data center

1.2 INSIGNIFICANT ACTIVITIES

No insignificant activities have been identified.

1.3 NONROAD ENGINES

Pursuant to Title 40, Part 1068.30 of the Code of Federal Regulations (40 CFR Part 1068.30), nonroad engines shall not remain at a location for more than 12 consecutive months; otherwise, the engine(s) will constitute a stationary reciprocating internal combustion engine (RICE) and be subject to the applicable requirements of 40 CFR Part 63, Subpart ZZZZ; 40 CFR Part 60, Subpart IIII; and/or 40 CFR Part 60, Subpart JJJJ. Stationary RICE shall be permitted as emission units upon commencing operation at this stationary source.

Records of location changes for portable or transportable nonroad engines shall be maintained, and shall be made available to the Control Officer upon request. These records are not required for engines owned and operated by a contractor for maintenance and construction activities as long as records are maintained demonstrating that such work took place at the stationary source for periods of less than 12 consecutive months.

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

2.0 CONTROLS

2.1 CONTROL DEVICES

No add-on control devices have been identified.

2.2 CONTROL REQUIREMENTS

Generators / Engines [AQR 12.1.4.1(c)&(f)]

1. The permittee shall only combust diesel fuel (including biodiesel and/or renewable diesel) with a maximum sulfur content of 15 ppm and either a minimum cetane index of 40 or a maximum aromatic content of 35% by volume in the emergency generators (EUs: A01-A45) and the emergency fire pump (EU: B01). [40 CFR 60.4207(b) and 40 CFR 63.6604(b)]
2. The permittee shall operate and maintain the emergency generator (EUs: A01-A45) and the emergency fire pump (EU: B01) in accordance with the manufacturer's O&M manual for emissions-related components.

Cooling Towers [AQR 12.1.4.1(c)&(f)]

3. The permittee shall operate the cooling towers (EUs: C01-C30) with drift eliminators that have a manufacturer's maximum drift rate of 0.001 percent.
4. The permittee shall limit the total dissolved solids (TDS) content of each cooling tower's circulation water (EUs: C01-C30) to 5,000 ppm.
5. The permittee shall operate and maintain each of the cooling towers (EUs: C01-C30) in accordance with the manufacturer's O&M manual for emissions-related components.

Other [AQR 12.1.4.1(c)&(f)]

6. The permittee shall not cause, suffer, or allow any source to discharge air contaminants (or other materials) in quantities that will cause a nuisance, including excessive odors. [AQR 40 & AQR 43]
7. The permittee shall not cause or permit the handling, transporting, or storage of any material in a manner which allows or may allow controllable particulate matter to become airborne. [AQR 41.1.2]

3.0 LIMITATIONS

3.1 OPERATIONAL LIMITS

Emergency Generators

1. The permittee shall limit the operation of each emergency generator (EUs: A01-A45) to 104 hours per any consecutive 12-month period for testing, maintenance, nonemergency use, and emergency use. [AQR 12.1.4.1(c)&(f) and AQR 12.1.7(a)(VAEL)]
2. The permittee shall limit the operation of each emergency generator (EUs: A01-A45) for testing and maintenance purposes to 100 hours per year. The permittee may operate the emergency generators up to 50 hours per year for nonemergency situations, but those hours count towards the 100 hours provided for testing and maintenance. Except as provided below (2.a), 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: [40 CFR Part 60.4211
 - a. The 50 hours per year for nonemergency use can be used to supply power as part of a financial arrangement with another entity if all the following conditions are met:
 - i. The engine is dispatched by the local balancing authority and/or local transmission and distribution operator.
 - ii. The dispatch is intended to mitigate local transmission and/or distribution limitations to avert potential voltage collapse or line overloads that could lead to interruption of power supply in a local area or region.
 - iii. The dispatch follows reliability, emergency operation, or similar protocols that follow specific NERC, regional, state, public utility commission, or local standards or guidelines.
 - iv. The power is provided only to the facility itself or to support the local transmission and distribution system.
 - v. The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission, or local standards or guidelines that are being followed for the dispatching engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

Emergency Fire Pump

3. The permittee shall limit the operation of the diesel-fired fire pump (EU: B01) for testing and maintenance purposes to 100 hours per year. The permittee may operate the fire pump up to 50 hours per year for nonemergency situations, but those hours count towards the 100 hours provided for testing and maintenance. [40 CFR Part 60 Subpart IIII]

3.2 EMISSION LIMITS

- The permittee shall not allow the actual emissions from the stationary source to exceed the PTE listed in Table 3-1 in any consecutive 12-month period, except for emission units intended only for use in emergencies and as provided in AQR 12.1.6(b). [AQR 12.1.4.1(c)]

Table 3-1. Potential to Emit (tons per year)

Pollutant	PM ₁₀	PM _{2.5}	NO _x	CO	SO ₂	VOC	H ₂ S	Pb
Total	2.57	2.57	91.27	7.24	0.46	4.78	0	0

- The permittee shall not allow the actual emissions from the following individual emission units to exceed the PTE listed in Table 3-2 in any consecutive 12-month period, except for emission units intended only for use in emergencies and as provided in AQR 12.1.6(b). [AQR 12.1.4.1(c)]

Table 3-2. Source-Wide Emission Unit PTE Summary (tons per year)

EU	Condition ¹	PM ₁₀	PM _{2.5}	NO _x	CO	SO ₂	VOC	H ₂ S	Pb
A01	104 hours	0.02	0.02	2.08	0.15	0.01	0.11	0	0
A02	104 hours	0.02	0.02	2.08	0.15	0.01	0.11	0	0
A03	104 hours	0.02	0.02	2.08	0.15	0.01	0.11	0	0
A04	104 hours	0.02	0.02	2.08	0.15	0.01	0.11	0	0
A05	104 hours	0.02	0.02	2.08	0.15	0.01	0.11	0	0
A06	104 hours	0.02	0.02	2.08	0.15	0.01	0.11	0	0
A07	104 hours	0.02	0.02	2.08	0.15	0.01	0.11	0	0
A08	104 hours	0.02	0.02	2.08	0.15	0.01	0.11	0	0
A09	104 hours	0.02	0.02	2.08	0.15	0.01	0.11	0	0
A10	104 hours	0.02	0.02	2.08	0.15	0.01	0.11	0	0
A11	104 hours	0.02	0.02	2.08	0.15	0.01	0.11	0	0
A12	104 hours	0.02	0.02	2.08	0.15	0.01	0.11	0	0
A13	104 hours	0.02	0.02	2.08	0.15	0.01	0.11	0	0
A14	104 hours	0.02	0.02	2.08	0.15	0.01	0.11	0	0
A15	104 hours	0.02	0.02	2.08	0.15	0.01	0.11	0	0
A16	104 hours	0.02	0.02	2.08	0.15	0.01	0.11	0	0
A17	104 hours	0.02	0.02	2.08	0.15	0.01	0.11	0	0

Minor Source Permit
Source Name: Switch, Ltd.
Source ID: 18024

EU	Condition ¹	PM ₁₀	PM _{2.5}	NO _x	CO	SO ₂	VOC	H ₂ S	Pb
A18	104 hours	0.02	0.02	2.08	0.15	0.01	0.11	0	0
A19	104 hours	0.02	0.02	2.08	0.15	0.01	0.11	0	0
A20	104 hours	0.02	0.02	2.08	0.15	0.01	0.11	0	0
A21	104 hours	0.02	0.02	2.08	0.15	0.01	0.11	0	0
A22	104 hours	0.02	0.02	2.08	0.15	0.01	0.11	0	0
A23	104 hours	0.02	0.02	2.08	0.15	0.01	0.11	0	0
A24	104 hours	0.02	0.02	2.08	0.15	0.01	0.11	0	0
A25	104 hours	0.01	0.01	1.79	0.16	0.01	0.09	0	0
A26	104 hours	0.01	0.01	1.79	0.16	0.01	0.09	0	0
A27	104 hours	0.01	0.01	1.79	0.16	0.01	0.09	0	0
A28	104 hours	0.01	0.01	1.79	0.16	0.01	0.09	0	0
A29	104 hours	0.01	0.01	1.79	0.16	0.01	0.09	0	0
A30	104 hours	0.01	0.01	1.79	0.16	0.01	0.09	0	0
A31	104 hours	0.01	0.01	1.79	0.16	0.01	0.09	0	0
A32	104 hours	0.01	0.01	1.79	0.16	0.01	0.09	0	0
A33	104 hours	0.01	0.01	1.79	0.16	0.01	0.09	0	0
A34	104 hours	0.01	0.01	1.79	0.16	0.01	0.09	0	0
A35	104 hours	0.01	0.01	1.79	0.16	0.01	0.09	0	0
A36	104 hours	0.01	0.01	1.79	0.16	0.01	0.09	0	0
A37	104 hours	0.01	0.01	1.79	0.16	0.01	0.09	0	0
A38	104 hours	0.01	0.01	1.79	0.16	0.01	0.09	0	0
A39	104 hours	0.01	0.01	1.79	0.16	0.01	0.09	0	0
A40	104 hours	0.02	0.02	2.38	0.16	0.01	0.13	0	0
A41	104 hours	0.02	0.02	2.38	0.16	0.01	0.13	0	0
A42	104 hours	0.02	0.02	2.38	0.16	0.01	0.13	0	0
A43	104 hours	0.02	0.02	2.38	0.16	0.01	0.13	0	0
A44	104 hours	0.02	0.02	2.38	0.16	0.01	0.13	0	0
A45	104 hours	0.02	0.02	2.38	0.16	0.01	0.13	0	0

Minor Source Permit
Source Name: Switch, Ltd.
Source ID: 18024

EU	Condition ¹	PM ₁₀	PM _{2.5}	NO _x	CO	SO ₂	VOC	H ₂ S	Pb
B01	500 hours	0.02	0.02	0.22	0.28	0.01	0.01	0	0
C01	8,760 hours	0.06	0.06	0	0	0	0	0	0
C02	8,760 hours	0.06	0.06	0	0	0	0	0	0
C03	8,760 hours	0.06	0.06	0	0	0	0	0	0
C04	8,760 hours	0.06	0.06	0	0	0	0	0	0
C05	8,760 hours	0.06	0.06	0	0	0	0	0	0
C06	8,760 hours	0.06	0.06	0	0	0	0	0	0
C07	8,760 hours	0.06	0.06	0	0	0	0	0	0
C08	8,760 hours	0.06	0.06	0	0	0	0	0	0
C09	8,760 hours	0.06	0.06	0	0	0	0	0	0
C10	8,760 hours	0.06	0.06	0	0	0	0	0	0
C11	8,760 hours	0.06	0.06	0	0	0	0	0	0
C12	8,760 hours	0.06	0.06	0	0	0	0	0	0
C13	8,760 hours	0.06	0.06	0	0	0	0	0	0
C14	8,760 hours	0.06	0.06	0	0	0	0	0	0
C15	8,760 hours	0.06	0.06	0	0	0	0	0	0
C16	8,760 hours	0.06	0.06	0	0	0	0	0	0
C17	8,760 hours	0.06	0.06	0	0	0	0	0	0
C18	8,760 hours	0.06	0.06	0	0	0	0	0	0
C19	8,760 hours	0.06	0.06	0	0	0	0	0	0
C20	8,760 hours	0.06	0.06	0	0	0	0	0	0
C21	8,760 hours	0.06	0.06	0	0	0	0	0	0
C22	8,760 hours	0.06	0.06	0	0	0	0	0	0
C23	8,760 hours	0.06	0.06	0	0	0	0	0	0
C24	8,760 hours	0.06	0.06	0	0	0	0	0	0
C25	8,760 hours	0.06	0.06	0	0	0	0	0	0
C26	8,760 hours	0.06	0.06	0	0	0	0	0	0
C27	8,760 hours	0.06	0.06	0	0	0	0	0	0

Minor Source Permit
Source Name: Switch, Ltd.
Source ID: 18024

EU	Condition ¹	PM ₁₀	PM _{2.5}	NO _x	CO	SO ₂	VOC	H ₂ S	Pb
C28	8,760 hours	0.06	0.06	0	0	0	0	0	0
C29	8,760 hours	0.06	0.06	0	0	0	0	0	0
C30	8,760 hours	0.06	0.06	0	0	0	0	0	0
Total		2.57	2.57	91.27	7.24	0.46	4.78	0	0

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

PROPOSED

4.0 COMPLIANCE DEMONSTRATION REQUIREMENTS

4.1 MONITORING

Visible Emissions [AQR 12.1.4.1(d)]

1. The responsible official shall sign and adhere to the *Visible Emissions Check Guidebook* and keep a copy of the signed guide on-site at all times.
2. The permittee shall conduct a visual emissions check, each quarter of operation, on the emergency generators (EUs: A01-A45) and the emergency fire pump (EU: B01), while each emission unit is in operation.
3. If no plume appears to exceed the opacity standard during the visible emissions check, the date, location, and results shall be recorded, along with the viewer's name.
4. If a plume appears to exceed the opacity standard, the permittee shall do one of the following:
 - a. Immediately correct the perceived exceedance, then record the first and last name of the person who performed the emissions check, the date the check was performed, the unit(s) observed, and the results of the observation; or
 - b. Call a certified Visible Emissions Evaluation (VEE) reader to perform a U.S. Environmental Protection Agency (EPA) Method 9 evaluation.
 - i. For sources required to have a certified reader on-site, the reader shall start Method 9 observations within 15 minutes of the initial observation. For all other sources, the reader shall start Method 9 observations within 30 minutes of the initial observation.
 - ii. If no opacity exceedance is observed, the certified VEE reader shall record the first and last name of the person who performed the VEE, the date the VEE was performed, the unit(s) evaluated, and the results. A Method 9 VEE form shall be completed for each emission unit that was initially perceived to have exceeded the opacity limit, and the record shall also indicate:
 - (1) The cause of the perceived exceedance;
 - (2) The color of the emissions; and
 - (3) Whether the emissions were light or heavy.
 - iii. If an opacity exceedance is observed, the certified VEE reader shall take immediate action to correct the exceedance. The reader shall then record the first and last name of the person performing the VEE, the date the VEE was performed, the unit(s) evaluated, and the results. A Method 9 VEE form shall be completed for each reading identified, and the record shall also indicate:

- (1) The cause of the exceedance;
- (2) The color of the emissions;
- (3) Whether the emissions were light or heavy;
- (4) The duration of the emissions; and
- (5) The corrective actions taken to resolve the exceedance.

5. Any scenario of visible emissions noncompliance can and may lead to enforcement action.

Generators / Engines [AQR 12.1.4.1(d)]

6. The permittee shall monitor the sulfur content and cetane index or aromatic content of the fuel burned in the emergency generators (EUs: A01-A45) and the emergency fire pump (EU: B01) by retaining a copy of vendor fuel specifications. [40 CFR 60.4207(b) and 40 CFR 63.6604(b)]
7. The permittee shall operate each emergency generator (EUs: A01-A45) and the emergency fire pump (EU: B01) with a nonresettable hour meter and monitor each one during testing, maintenance, and nonemergency operation. If the engine is used for an emergency, the permittee shall monitor its operation and document the nature of the emergency.

Cooling Towers [AQR 12.1.4.1(d)]

8. The permittee shall monitor the TDS of the cooling tower recirculation water (EUs: C01-C30), each month of operation, using a conductivity meter or another device the Control Officer has approved in advance.

4.2 TESTING

No performance testing requirements have been identified.

4.3 RECORDKEEPING REQUIREMENTS

1. The permittee shall create and maintain the following records, all of which must be producible on-site to the Control Officer's authorized representative upon request and without prior notice during the permittee's hours of operation: [AQR 12.1.4.1(d)(2) & AQR 12.1.4.1(s)]

Opacity

- a. Dates and times when visible emissions checks and observations are made, and the corrective steps taken to bring opacity into compliance.

Inspections/Maintenance/General

- b. Manufacturer's O&M manual for emission units (EUs: A01-A45, B01, and C01-C30), if available;
- c. Records of inspections and maintenance as required by this permit.

Emergency Generators

- d. Monthly, consecutive 12-month total hours of operation of each emergency generator (EUs: A01-A45) for testing maintenance, nonemergency use, and emergency use (reported semiannually);
- e. Sulfur content and cetane index or aromatic content of diesel fuel (including biodiesel), used to power the emergency generators (EUs: A01-A45), as certified by the supplier;

Emergency Fire Pump

- f. Date and duration of operation of the emergency fire pump (EU: B01) for testing, maintenance, and nonemergency use (reported semiannually);
- g. Date and duration of operation of the emergency fire pump (EU: B01) for emergency use, including documentation justifying use during the emergency (reported semiannually);
- h. Sulfur content and cetane index or aromatic content of diesel fuel used to power the emergency fire pump (EU: B01), as certified by the supplier;

Nonroad Engines

- i. Records of location changes for nonroad engines, if applicable;

Cooling Towers

- j. Monthly TDS content measurements of cooling tower circulation water (EUs: C01-C30);

Emissions

- k. Deviations from permit requirements that result in excess emissions (reported as required in Section 4.4 of this permit);
- l. Deviations from permit requirements that do not result in excess emissions (reported semiannually); and
- m. Calculation of annual emissions for each emission unit and for the entire source (reported annually).

2. The permittee shall include in each record above, where applicable, the date and time the monitoring or measurement was taken, the person performing the monitoring or measurement, and the emission unit or location where the monitoring or measurement was performed. Each record must also contain the action taken to correct any deficiencies, when applicable. *[AQR 12.1.4.1(d)(2)(A)]*
3. The permittee shall maintain all records for a period of at least five years from their creation. *[AQR 12.1.4.1(d)(2)(B)]*

4.4 REPORTING AND NOTIFICATION

1. The permittee is responsible for all applicable notification and reporting requirements contained in 40 CFR Parts 60 and 63.
2. If the construction or modification of a source differs from what was authorized in a new permit or significant permit revision, the source shall provide a written notice to the Control Officer that includes a list of the differences, and complete descriptions of each one, at least 30 days before commencing operations. *[AQR 12.1.4.1(n)]*
3. Within 15 days of commencing operations, the permittee shall submit to the Control Officer any outstanding identification and/or description for new emission unit(s) that was not previously available, and thus was noted in this permit with "TBD." *[AQR 12.1.3.6(b)(2)(B)]*
4. The permittee shall submit an annual report to the Control Officer in accordance with the following requirements. *[AQR 12.1.4.1(d)(3)]*
 - a. Each annual report shall be: *[AQR 12.9.2]*
 - i. Based on the preceding calendar year;
 - ii. Submitted on or before March 31 of each year, even if there was no activity (if March 31 falls on a state or federal holiday, or on any day the office is not normally open for business, the submittal shall be due on the next regularly scheduled business day); and
 - iii. Addressed to the attention of the Control Officer.
 - b. Each annual report shall contain, at a minimum:
 - i. As the first page of text, a signed certification containing the sentence: "I certify that, based on information and belief formed after reasonable inquiry, the statements contained in this document are true, accurate, and complete." This statement shall be signed and dated by a responsible official of the company (a sample form is available from DAQ); *[AQR 12.9.3]*
 - ii. The calculated actual annual emissions from each emission unit, even if there was no activity, and the total calculated actual annual emissions for the source based on the emissions calculation methodology used to establish the PTE in the permit or an equivalent method approved by the Control Officer prior to submittal. *[AQR 12.9(c)(2)]*; and

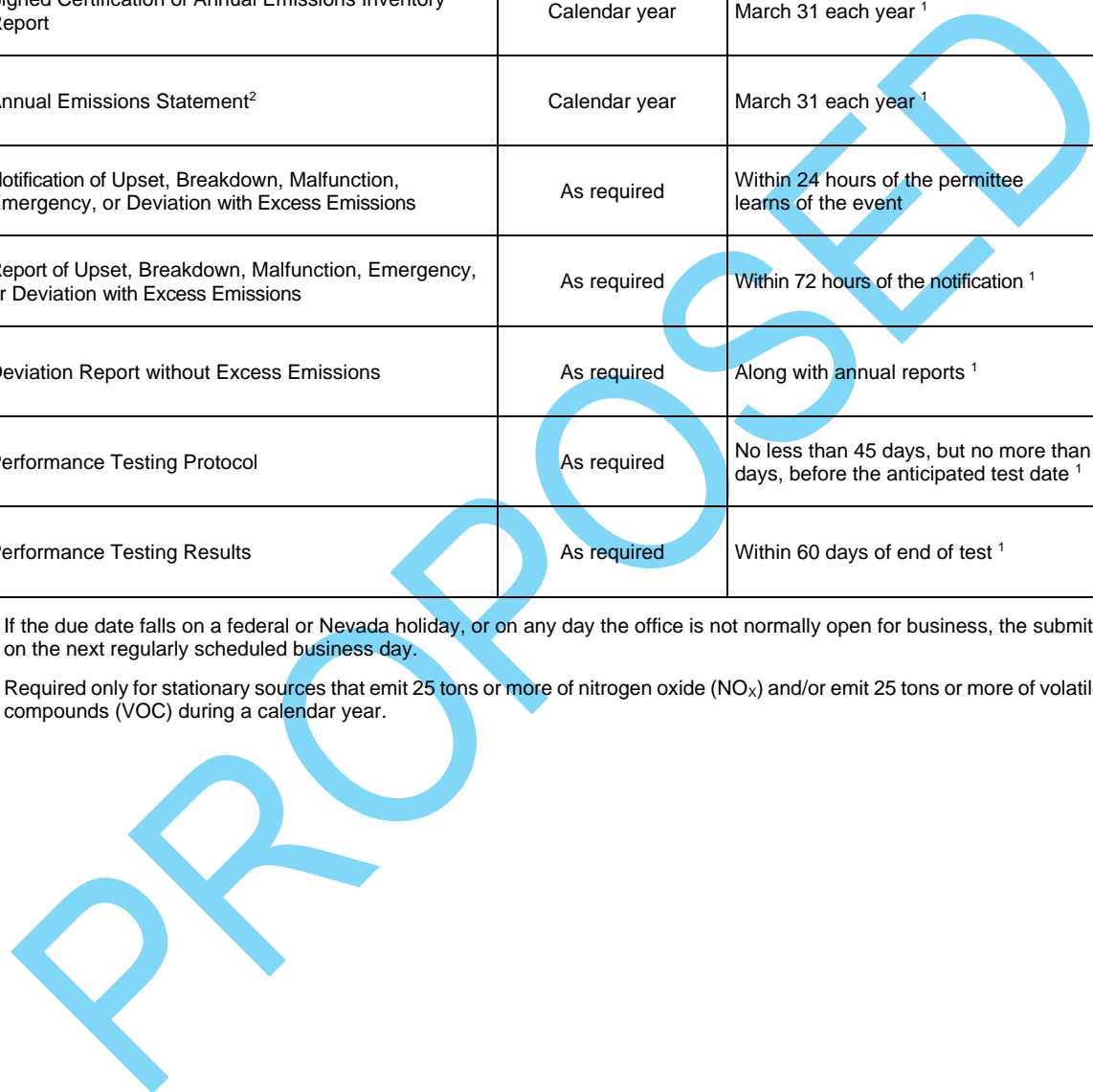
- iii. Include each recorded item listed in Section 4.3 of this permit that is noted for annual reporting purposes.
5. The permittee shall submit semiannual reports to the Control Officer in accordance with regulatory requirements. Each semiannual report shall: *[AQR 12.1.4.1(d)(3)]*
 - a. Be based on the preceding semiannual calendar period, which includes partial periods;
 - b. Be submitted within 30 calendar days after the semiannual calendar period (i.e., July 30 or January 30), even if there was no activity;
 - c. Include a summary of each recorded item listed in Section 4.3 of this permit that is noted for semiannual reporting purposes; and
 - d. Be addressed to the attention of the Control Officer.
6. Stationary sources that emit 25 tons or more of NO_x and/or emit 25 tons or more of VOCs from their emission units, insignificant activities, and exempt activities during a calendar year shall submit an annual emissions statement for both pollutants. Emissions statements must include actual annual NO_x and VOC emissions from all activities, including emission units, insignificant activities, and exempt activities. Emissions statements are separate from, and additional to, the calculated annual emissions reported each year for all regulated air pollutants (i.e., the annual emissions inventory report). *[AQR 12.9.1]*
7. The permittee shall report to the Control Officer any upset, breakdown, malfunction, emergency, or deviation that causes emissions of regulated air pollutants in excess of any limits set by regulation or by this permit. The report shall be in two parts, as specified below: *[AQR 25.6.1 & AQR 12.1.4.1(d)(3)(B)]*
 - a. Within 24 hours of the time the permittee learns of the excess emissions, the permittee shall notify DAQ by phone at (702) 455-5942, by fax at (702) 383-9994, or by email at AQCompliance@ClarkCountyNV.gov.
 - b. Within 72 hours of the notification required by Section 4.4.6.a above, the permittee shall submit a detailed written report to DAQ containing the information required by AQR 25.6.3.
8. The permittee shall report deviations from permit requirements that do not result in excess emissions, including those attributable to upset conditions as defined in the permit, with the annual report. Such reports shall include the probable cause of such deviations, as well as any corrective actions or preventive measures taken. *[AQR 12.1.4.1(d)(3)(B)]*
9. Any report and/or compliance certification submitted pursuant to this section or the AQR shall contain certification by a responsible official of truth, accuracy, and completeness. This certification, and any other certification required under this section, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. *[AQR 12.1.4.1(d)(3)(C)]*

Table 4-1. Required Submittal Dates for Various Reports

Required Report	Applicable Period	Due Date
Written notice describing differences in constructions/modifications than what was authorized	As required	No more than 30 days before commencing operations.
Annual Emissions Inventory Report	Calendar year	March 31 each year ¹
Signed Certification of Annual Emissions Inventory Report	Calendar year	March 31 each year ¹
Annual Emissions Statement ²	Calendar year	March 31 each year ¹
Notification of Upset, Breakdown, Malfunction, Emergency, or Deviation with Excess Emissions	As required	Within 24 hours of the permittee learns of the event
Report of Upset, Breakdown, Malfunction, Emergency, or Deviation with Excess Emissions	As required	Within 72 hours of the notification ¹
Deviation Report without Excess Emissions	As required	Along with annual 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

¹ If the due date falls on a federal or Nevada holiday, or on any day the office is not normally open for business, 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.



5.0 ADMINISTRATIVE REQUIREMENTS

5.1 GENERAL

1. The permittee must comply with all permit conditions. Noncompliance with any condition is a violation of the AQRs and grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a renewal application. [AQR 12.1.4.1(r)]
2. If any term or condition of this permit becomes invalid as a result of a challenge to a portion of this permit, the other terms and conditions of this permit shall be unaffected and remain valid. [AQR 12.1.4.1(i)]
3. The terms and conditions of this permit apply to any part or activity of the stationary source that emits, or has the potential to emit, any regulated air pollutant for which operating authority has been granted, and includes all third parties (such as lessees or contractors) conducting such activities. [AQR 12.1.4.1(c) & AQR 12.1.4.1(aa)]
4. Any application, report, or compliance certification submitted to the Control Officer pursuant to this permit or the AQRs shall contain a certification of truth, accuracy, and completeness with a responsible official's original signature. [AQR 12.1.3.6(a), AQR 12.1.4.1(d)(3), & 40 CFR Part 3]
5. As a condition of the issuance of the permit, the owner or operator agrees to allow inspection of the premises to which the permit relates, including the location where records must be kept under the conditions of the permit, by any authorized representative of the Control Officer at any time during the permittee's hours of operation without prior notice to perform the following: [AQR 12.1.4.1(s)]
 - a. Access and copy any records that must be kept under the conditions of the permit;
 - b. Inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;
 - c. Sample or monitor substances or parameters for the purpose of assuring compliance with the permit or applicable requirements; and
 - d. Document alleged violations using such devices as cameras or video equipment.
6. The permittee shall pay fees to the Control Officer consistent with the approved fee schedule in AQR 18. [AQR 12.1.4.1(k)]
7. This permit does not convey property rights of any sort, or any exclusive privilege. [AQR 12.1.4.1(t)]
8. Anyone issued a permit under AQR 12 shall post the permit in compliance with AQR 12.13. [AQR 12.1.4.1(v)]

9. This permit shall not waive, or make less stringent, any limitations or requirements contained in or issued under the Nevada State Implementation Plan, or that are otherwise federally enforceable. *[AQR 12.1.4.1(w)]*
10. Except as provided in AQR 12.1.6, no person shall commence construction of, operate, or make a modification to a minor source except in compliance with a minor source permit that authorizes such construction, operation, or modification. *[AQR 12.1.3.1(a)]*
11. The permittee's commencement of operations constitutes an acknowledgment that the permittee assumes the responsibility of ensuring the source's emission units and emission control equipment have been constructed and will be operated in compliance with all applicable requirements. *[AQR 12.1.4.2]*
12. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of the permit. *[AQR 12.1.4.1(o)]*

5.2 RENEWALS AND REVISIONS

1. This permit may be modified, revoked, reopened and reissued, or terminated for cause by the Control Officer. The filing of a request by the permittee for a permit modification, for termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. *[AQR 12.1.4.1(p)]*
2. The permittee shall furnish to the Control Officer, in writing and within a reasonable time, any information that the Control Officer may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Control Officer copies of records that the permit requires keeping. The permittee may furnish records deemed confidential to the Control Officer with a claim of confidentiality, pursuant to AQR 12.6. *[AQR 12.1.4.1(u)]*
3. Any revision of an emission limitation, monitoring, testing, reporting, or recordkeeping requirement shall be made consistent with the permit revision requirements in AQR 12.1.6. *[AQR 12.1.4.1(e)]*
4. A permit may be reopened and revised under any of the following circumstances: *[AQR 12.1.4.1(q)]*
 - a. Additional requirements (including excess emissions requirements) become applicable to an affected source under the acid rain program. Upon approval by the Control Officer, excess emissions offset plans shall be deemed to be incorporated into the permit.
 - b. The Control Officer determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
 - c. The Control Officer determines that the permit must be revised or revoked to assure compliance with applicable requirements.

- d. Proceedings to reopen and issue a permit shall follow the same procedures that apply to initial permit issuance, and shall affect only those parts of the permit for which cause to reopen exists. Such reopening shall be made as expeditiously as practicable.
5. For the renewal of an existing minor source permit, a timely application shall be submitted to the Control Officer. An application for renewal shall be deemed to be timely if it is submitted at least 120 days, but no more than 270 days, before the date of permit expiration. *[AQR 12.1.3.1(b)]*
6. To be deemed complete, an application must contain all information required under AQR 12.1.3.6, and must be accompanied by payment of the applicable fee(s) established in AQR 18. If, while processing an application deemed complete, the Control Officer determines that additional information is needed to evaluate or take final action on the application, he or she may request such information in writing and set a reasonable deadline for its submission. Failure to provide the additional information required by the Control Officer by the deadline could result in denial of the application. *[AQR 12.1.3.3]*
7. If an existing minor source submits a timely and complete application for renewal of a minor source permit, the source's continued operation after permit expiration and before issuance of the renewed permit is not a violation of the AQRs. This application shield shall cease to apply if, after a completeness determination, the applicant fails to submit any additional information identified as necessary to process the application by a deadline the Control Officer has specified in writing, or if the renewed permit is denied for any other reason. *[AQR 12.1.3.4]*
8. If the submittal of an application for renewal of an existing minor source permit is not timely, there is no permit application shield as provided in AQR 12.1.3.4, and the source loses its authority to operate upon permit expiration until the renewal permit is issued. *[AQR 12.1.3.1(c)]*
9. If an application for renewal of an existing minor source permit is submitted within six months after permit expiration, the source loses its authority to operate upon permit expiration until the renewal permit is issued. *[AQR 12.1.3.1(d)]*
10. If an application for the renewal of an existing minor source permit is submitted six months or more after permit expiration, the source loses its authority to operate upon permit expiration; the source will be treated as a new minor source, and the application will be subject to all the requirements of AQR 12.1.3.6. *[AQR 12.1.3.1(e)]*