Edit: Application Tracking

Air Case ID: 13217 Permit Id: 3603

FIN No.: A1896A

Company Name: SWITCH, LTD.

HA Basin No: 083 **Increment Tracked** ☑

Permit No: AP73753672 * Select a Permit No

Date App. Received: 09/22/2026 *

Permit Writer: Not Assigned (NA) *

Case Type: Class 1 OPTC Revision *

Default ODS Date: 11/06/2026 *

Actual ODS Date:

Date App. to be Closed: 05/05/2027 *

Stop Days: **Actual Date App. to be Closed:** 5/5/2027

App. Incomplete? ☐

Date App. Closed:

Fee Paid ($): 10000 *

Case Description:

Comments:

Flag (For Class 4) : None

Update Cancel

RECEIVED
SEP 2 2 2026
ENVIRONMENTAL PROTECTION

switch

September 18, 2026

RECEIVED
SEP 2 2 2026
BAPC/BAQP

Bureau of Air Pollution Control
Nevada Division of Environmental Protection
901 South Stewart Street, Suite 4001
Carson City, NV 89701

RE: Application for a Revision to a Class I Air Quality Operating Permit to Construct AP7375-3672, FIN A1896 – Switch Ltd.

Dear Sir or Madam,

Switch, Ltd. (Switch®) is in the process of constructing an advanced technology ecosystem communications facility located at 1 Superloop Circle in McCarran, Nevada (the Facility). The Facility is located within the jurisdiction of the Nevada Division of Environmental Protection (NDEP) and is permitted under the Class I Operating Permit to Construct (OPTC) AP7375-3672 (the Permit), issued by NDEP on January 30, 2015, and most recently revised on January 23, 2026. Enclosed is an application (the Application) for a revision to the Class I OPTC to authorize design changes at the Facility, including the removal of System 2, the addition of 2 emergency diesel-fired fire pumps, and a revised facility-wide potential to emit. Switch is submitting this application to request the revisions in the Permit detailed in Section 2 of the Application.

This Application includes all information required pursuant to NAC 445B.295 and satisfies the requirements stipulated in NAC 445B.3363 for revision to a Class I OPTC, including the necessary forms, emissions calculations, and equipment specifications. Emissions from the Project will not exceed the environmental evaluation thresholds in NAC 445B.310.1(b) and as such, an environmental evaluation is not included with the application package. Per NAC 445B.327, an application fee of $10,000 has been included with this Application and Switch will pay any additional processing fees.

As required by Permit Condition I.U, I, the responsible official, certify that based on information and belief formed after reasonable inquiry, the statements made in this letter are true, accurate, and complete. If you have any questions or comments about the information presented in this Application, please do not hesitate to call me at (702) 449-8827 or Sean Keane (Trinity Consultants) at (847) 445-0557.

Sincerely,

Devon White
Vice President of Data Center Operations

Enclosure
cc: Heather Borgen, Switch
Sean Keane, Trinity Consultants, Inc.

APPLICATION FOR A CLASS I OPERATING PERMIT TO CONSTRUCT REVISION

Nevada Division of Environmental Protection

Switch, Ltd. / Reno, Nevada

Prepared By:

TRINITY CONSULTANTS
5401 Longley Lane, Suite 5
Reno, NV 89511
(775) 242-3200

September 2026

TABLE OF CONTENTS

1. EXECUTIVE SUMMARY 1-1

2. FACILITY AND PROJECT INFORMATION 2-1
   - 2.1 Facility Description 2-1
   - 2.2 Project Description 2-1

3. EMISSIONS INFORMATION 3-1
   - 3.1 Project Emissions 3-1
     - *3.1.1 Emergency Fire Pumps 3-1*
     - *3.1.2 Diesel Tanks 3-2*
     - *3.1.3 Summary of Project PTE Emissions 3-2*

4. REGULATORY REVIEW 4-1
   - 4.1 Federally Applicable Regulations 4-1
     - *4.1.1 NSR Applicability (Non-Attainment New Source Review/PSD) 4-1*
     - *4.1.2 New Source Performance Standards 4-1*
     - *4.1.3 National Emission Standards for Hazardous Air Pollutants 4-2*
     - *4.1.4 Class I Operating Permit Program 4-3*

5. STATE SPECIFIC GENERAL REQUIREMENTS 5-1

APPENDIX A. NDEP FORMS A-1

APPENDIX B. MANUFACTURER SPECIFICATIONS B-1

APPENDIX C. EMISSION CALCULATIONS C-1

APPENDIX D. FACILITY PLOT PLANS D-1

1. EXECUTIVE SUMMARY

Switch, Ltd. (Switch®) is recognized as the independent world-leader in exascale data center ecosystems, edge data center designs, industry-leading telecommunications solutions, and next-generation technology innovation. Switch believes that the future of humanity depends on the intelligent and sustainable growth of the Internet.

Switch is in the process of constructing an advanced technology ecosystem communications facility located at 1 Superloop Circle in McCarran, Nevada (the Facility). The Facility is located in the jurisdiction of the Nevada Division of Environmental Protection (NDEP) Bureau of Air Pollution Control (BAPC) and currently operates under the Class I Operating Permit to Construct (OPTC) No. AP7375-3672 (the Permit) for Facility ID No. A1896 issued by NDEP on January 30, 2015 and most recently revised on January 23, 2026.

With this OPTC revision application (the Application), Switch is proposing the following changes to the Permit (these changes are collectively referred to as the "Project"). A detailed discussion of the Project is provided in Section 2 of this Application.

- Remove the 2 diesel-fired emergency fire pumps in System 2 of the Permit.
- Add two new diesel-fired emergency fire pumps (emergency fire pumps) to the Permit.

This report and associated appendices include all information required for a complete OPTC Revision application pursuant to Nevada Administrative Code (NAC) 445B.3363. Appendix A includes the Class I OPTC revision form, Appendix B includes the manufacturer specifications for the proposed emission units, Appendix C includes detailed emission calculations, and Appendix D includes the proposed equipment location map. Per NAC 445B.327, an application fee of $10,000 has been included with this Application and Switch will pay any additional processing fees.

2. FACILITY AND PROJECT INFORMATION

2.1 Facility Description

The Facility is located at 1 Superloop Circle, McCarran, NV. The Facility is approximately 15 miles east of Reno and approximately 30 miles northeast of Carson City in Hydrographic Area 83, also referred to as Basin 83 (HA83) or the Tracy Segment. This area is currently designated as unclassifiable and/or attainment for all criteria pollutants.[1] The Standard Industrial Classification (SIC) code for the Facility is 7375 (Information Retrieval Services) and the North American Industry Classification System (NAICS) code for the Facility is 518210 (Data Processing, Hosting, and Related Services).

2.2 Project Description

The Permit revisions proposed in this Application, including a description of the currently permitted Facility (Pre-Project Emission Units) and the Post-Project Facility, are outlined in Table 2-1. Note that Switch is only proposing to remove the equipment currently included in System 2 of the Permit and add 2 new emergency fire pumps to the Permit. A site map showing the location of the new emergency fire pumps is provided in Appendix D.

The addition of the emergency fire pumps is a life-safety measure necessary to support all occupied buildings planned at Switch's Facility, which the existing emergency fire pumps do not have sufficient capacity to serve. Switch plans to install the new emergency fire pumps by December 2026 pending approval from NDEP.

[1] EPA Green Book accessed June 2026. https://www3.epa.gov/airquality/greenbook/anayo_nv.html

Table 2-1. Summary of Proposed Permit Changes

System in Permit	Pre-Project Emission Units	Post-Project Emissions Units	Description of Change
System 2	2 Emergency Fire Pumps (Clarke JU6H-UFADPO Rated at 156 kW)	N/A – System will be removed from the Permit.	System 2 will be removed from the Permit.
	Each unit shall not operate more than 50 hours per 12-month rolling period.	N/A – System will be removed from the Permit.	
Proposed System 13	N/A	2 Emergency Fire Pumps (CAT C13 Rated at 388 kW)	2 Emergency Fire Pumps (CAT C13 Rated at 388 kW) will be added to the Permit.
	N/A	Each unit shall not operate more than 50 hours per 12-month rolling period.	

3. EMISSIONS INFORMATION

3.1 Project Emissions

The emergency fire pumps at the Facility result in nitrogen oxides (NO_x), carbon monoxide (CO), particulate matter (PM), particulate matter with an aerodynamic diameter of less than 10 microns (PM_{10}), particulate matter with an aerodynamic diameter of less than 2.5 microns ($PM_{2.5}$), sulfur dioxide (SO_2), volatile organic compounds (VOC), greenhouse gases (GHG), and hazardous air pollutants (HAP) emissions. The following sections describe emission calculation methodologies associated with the sources at the Facility. Appendix B includes the manufacturer's specification sheets for the Post-Project emission units. Detailed emission calculations are provided in Appendix C of this report. Table 3-1 contains a summary of the Pre- and Post-Project Potential to Emit (PTE).

3.1.1 Emergency Fire Pumps

Switch is proposing a Facility-wide planned and predictable, post-commissioning, annual limit (hours/year) for all the post-commissioning maintenance, testing, and non-emergency operation of the emergency fire pumps to determine annual PTE emissions. Calculations for the criteria pollutants are based on the annual hours of operation for all emergency fire pumps at the maximum power output for each post-commissioning maintenance, testing, and non-emergency operation. To provide the Facility with operational flexibility, Switch requests System-wide annual operating hour limits for the emergency fire pumps, as outlined in Table 2-1 and consistent with the structure of the current Permit.

For the emergency fire pumps, the following methodologies were used to calculate emissions. NO_x, CO, PM, and VOC emissions are calculated using the manufacturer provided emission factors contained in the emission data sheet (refer to Appendix B). PM_{10} and $PM_{2.5}$ emissions are conservatively assumed to be equal to PM emissions. SO_2 emissions were calculated using emission factors taken from AP-42 Section 3.3.

Emission factors for HAPs are obtained from AP-42 Section 3.3. To be conservative, HAP emissions are calculated for all speciated organic compounds and polycyclic aromatic hydrocarbons (PAH), provided in AP-42, Section 3.3 and Tables 3.3-2.

The GHG pollutants expected to be emitted include carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Standard emission factors for N_2O, CO_2, and CH_4 are provided in 40 CFR Part 98, Subpart C, Table C-1 and Table C-2. The global warming potential for each relevant pollutant is obtained from 40 CFR Part 98, Subpart A, Table A-1. Calculations for GHG pollutants are based on the emission factor for each GHG pollutant, the relevant global warming potential, annual hours of operation, and the maximum heat input of the emergency fire pumps. Note that the GHG emissions for all emergency fire pumps were revised from the previous permit to reflect the updated global warming potentials per 40 CFR 98 Subpart A, Table A-1. HAP emissions for engines being added or revised with this application are based on the maximum heat input and annual hours of operation.

Pursuant to the March 3, 2023, Notification of Authorized Change Approval (Air Case 11514), Switch is authorized to combust diesel fuel or renewable diesel fuel, both with a maximum sulfur content of 15 ppm, a minimum cetane index of 40, and a maximum aromatic content of 35 volume percent for the existing emergency engines and is proposing to use this fuel for the proposed emergency fire pumps.

3.1.2 Diesel Tanks

The emergency fire pumps have associated diesel tanks. Each of the tank emissions are expected to be minimal. As such, Switch claims these tanks to be insignificant activities under NAC 445B.288.2(d) and are exempt from permitting (consistent with the Permit's IA Units table).

3.1.3 Summary of Project PTE Emissions

Table 3-1 summarizes the annual Facility-Wide PTE emissions Pre-Project and Post-Project based on the changes outlined in Table 2-1.

Table 3-1. Facility and Project PTE Calculation (tons/year)

Category	PM	$PM_{10}/PM_{2.5}$	SO_2	VOC	CO	NO_x	HAP	GHG
	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)
Pre-Project Facility PTE [1]	5.33	5.33	0.20	14.56	34.89	191.97	0.24	24,916.34
Post-Project Facility PTE [2]	5.33	5.33	0.20	14.54	34.97	192.06	0.25	24,934.16
Net Project PTE [3]	1.36E-03	1.36E-03	-9.35E-06	-2.03E-02	7.91E-02	9.46E-02	4.22E-04	1.78E+01
NDEP Class II Thresholds[4] (tpy)	-	5	5	20	50	5	-	-
NDEP Environmental Evaluation Threshold[5] (tpy)	10	10	10	10	10	10	-	
NDEP Class I Thresholds[6] (tpy)	100	100	100	100	100	100	10/25	-
PSD Thresholds[7,8] (tpy)	250	250	250	250	250	250	-	75,000
Does Project PTE Exceed Class II Thresholds?	-	Yes	No	No	No	Yes	-	-
Does Project PTE Exceed the Environmental Evaluation Threshold?	No	No	No	No	No	No	No	-
Does Project PTE Exceed Class I Thresholds?	No	No	No	No	No	Yes	No	-
Does Project PTE Exceed PSD Thresholds?[9]	No	No	No	No	No	No	No	No

1. Pre-Project Facility PTE (tpy) = sum of emissions from all emission units (tpy) in Pre-Project Facility PTE. This is consistent with the permitted emissions except for GHG which was updated to reflect the revised global warming potentials in 40 CFR Part 98 Subpart A.

2. Post-Project Facility PTE (tpy) = sum of emissions from all emission units (tpy) in Post-Project Facility PTE.

3. Net Project PTE (tpy) = Post-Project Facility PTE (tpy) - Pre-Project Facility PTE (tpy).

4. The Class II thresholds are defined in NAC 445B.037.

5. Per NAC 445B.310(1)(b)(2), and environmental evaluation is required for modifications with an emission increase greater than 10 tpy at an existing facility with emissions greater than 25 tpy.

6. The Class I thresholds are defined in NAC 445B.036 [40CFR 52.21] as 100 tpy of any air contaminant and 10 tpy of any individual HAP or 25 tpy of combined HAP.

7. The Class II thresholds are defined in NAC 445B.037. Emissions less than these thresholds may not require a permit.

8. The PSD thresholds are defined in 40 CFR 52.21(b)(1)(ii) as 250 tpy of any regulated NSR pollutant for sources not listed in 40 CFR 52.21(b)(1)(i).

9. GHG SER as provided under "subject to regulation" definitions in 40 CFR 51.166(b)(48) and 52.21(b)(49). Unlike other pollutant SERs, a GHG SER is not listed in 40 CFR 51.166(b)(23) or 52.21(b)(23). Per 40 CFR 52.21 (b)(49)(iv) "... the pollutant GHGs is subject to regulation if:
(a) The stationary source is a new major stationary source for a regulated NSR pollutant that is not GHGs, and also will emit or will have the potential to emit 75,000 tpy CO_2e or more; or
(b) The stationary source is an existing major stationary source for a regulated NSR pollutant that is not GHGs, and also will have an emissions increase of a regulated NSR pollutant, and an emissions increase of 75,000 tpy CO2e or more."

4. REGULATORY REVIEW

The Facility is subject to federal and state air regulations. This section summarizes the air permitting requirements and the key air quality regulations that apply to the Facility. Specifically, the applicability of PSD, New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAP), and NDEP regulations are addressed. The applicability of certain general provisions is not detailed in this narrative summary.

4.1 Federally Applicable Regulations

4.1.1 NSR Applicability (Non-Attainment New Source Review/PSD)

The NSR permitting program generally requires a stationary source to obtain a permit and undertake other obligations prior to construction of any project at an industrial facility if the proposed project results in emission increases in excess of certain threshold levels. The NSR program is comprised of two elements: Non-Attainment NSR (NNSR) and PSD. The NNSR program potentially applies to new construction or modifications that result in emission increases of a particular pollutant for which the area in which the facility is located is classified as "nonattainment" for that pollutant. The PSD program potentially applies to project increases of those pollutants for which the area the facility is located in is classified as "attainment" or "unclassifiable".

The Facility is located in Hydrographic Area 83, also referred to as Basin HA83 or Tracy Segment. Tracy Segment is currently designated as unclassifiable and/or attainment for all criteria air pollutants.[2] As such, NNSR does not apply. A stationary source is considered "major" for PSD if it has the potential to emit either (1) 100 tons per year or more of a regulated pollutant if the source is classified as one of 28 designated industrial source categories, or (2) 250 tons per year or more of any regulated pollutant for unlisted sources. Given that data centers are not on the list of 28 industrial source categories and that the Post-Project site-wide PTE for all regulated pollutants (NO_x, SO_2, $PM_{10}/PM_{2.5}$ and CO) is under the 250 tons per year threshold for PSD (see Table 3-1), the Facility will continue to be considered a PSD minor source.

4.1.2 New Source Performance Standards

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

4.1.2.1 Subpart A- General Provisions

All affected sources are subject to the general provisions of NSPS Subpart A unless specifically excluded by the source specific NSPS. Subpart A requires initial notification and performance testing, recordkeeping, monitoring, provides reference methods, and mandates general control device requirements for all other subparts as applicable.

[2] EPA Green Book accessed June 2026. https://www3.epa.gov/airquality/greenbook/anayo_nv.html

4.1.2.2 Subpart Kc- Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After October 4, 2023

NSPS Kc, Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After October 4, 2023, applies to owners or operators of storage vessels that store Volatile Organic Liquids and that are above certain capacity thresholds. The diesel tanks for the emergency fire pumps included in this Project are not subject to NSPS Kc since their capacity will be less than 75.7 cubic meters per §60.110c(a).

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

NSPS Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, applies to any owner or operator of a stationary compression ignition (CI) internal combustion engine (ICE) for which construction has commenced after July 11, 2005. The emergency fire pumps included in this Project are considered CI ICE and construction will commence after July 11, 2005. Therefore, the emergency fire pumps are subject to the requirements under NSPS Subpart IIII.

Each of the emergency fire pumps meets the definition of an emergency stationary ICE per 40 CFR 60.4219 and will comply with 40 CFR 60.4211. Switch will follow all requirements for emergency ICE as stipulated under NSPS Subpart IIII.

4.1.3 National Emission Standards for Hazardous Air Pollutants

NESHAP, federal regulations found in Title 40 Parts 61 and 63 of the CFR, are emission standards for HAP and are primarily applicable to major sources of HAP (facilities that exceed the major source thresholds of 10 tpy of a single HAP and 25 tpy of any combination of HAP from stationary sources) or specifically designated area sources. NESHAP apply to sources in specifically regulated industrial source classifications (Clean Air Act Section 112(d)) or on a case-by-case basis (Clean Air Act Section 112(g)) for facilities not regulated as a specific industrial source type. Pollutant specific NESHAP may also be applicable.

The Facility will not have Post-Project potential to emit more than 10 tons per year of any specific HAP or 25 tons of combined HAP (see Table 3-1). Therefore, the Facility will continue to be classified as an area source with respect to 40 CFR Part 63 and will not be subject to any NESHAP subparts specifically applicable to major sources. Applicability determinations and a summary of the applicable emissions standards for the Project are provided in the following subsections.

4.1.3.1 Subpart A- General Provisions

All affected sources are subject to the general provisions of Part 63 NESHAP Subpart A unless specifically excluded by the source-specific NESHAP. Subpart A requires initial notification and performance testing, recordkeeping, monitoring, provides reference methods, and mandates general control device requirements for all other subparts as applicable.

4.1.3.2 Subpart ZZZZ- National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)

NESHAP Subpart ZZZZ, *NESHAP for Stationary Reciprocating Internal Combustion Engines (RICE)* establishes emission and operating limitations for HAPs emitted from stationary RICE located at major and area sources of HAP emissions. The emergency fire pumps will be subject to the RICE NESHAP in accordance with 40 CFR 63.6585. Pursuant to 40 CFR 63.6590(c)(1), new CI stationary RICE located at an

area source must meet the requirements of Subpart ZZZZ by meeting the requirements of 40 CFR Part 60 Subpart IIII, and no additional requirements under Subpart ZZZZ apply to such engines. Therefore, Switch will comply with the requirements of the RICE NESHAP for the emergency fire pumps by complying with NSPS Subpart IIII.

4.1.4 Class I Operating Permit Program

40 CFR Section 70 establishes the major source operating permit program. The major source thresholds with respect to the NDEP Class I operating permit program for sources in attainment areas are 10 tons per year of a single HAP, 25 tpy of any combination of HAP, or 100 tpy of a criteria pollutant. The Facility will continue to have potential emissions of NO_x exceeding the 100 tpy major source threshold (see Table 3-1). As a result, the Facility will continue to be considered a major source per NAC 445B.094.

5. STATE SPECIFIC GENERAL REQUIREMENTS

NAC 445B.295, NAC 445B.296, and NAC 445B.3363 outline requirements for content on applications for an operating permit/permit to construct, as an application for an OPTC revision must comply with the requirements for an application for a Class I operating permit. The regulatory text from NAC 445B.295, NAC 445B.296, and NAC 445B.3363 are included in ***italic, bold*** text. This section also includes Switch's action to meet each requirement in plain text. All applicable NAC requirements have been identified and addressed in the Class I OPTC revision form provided in Appendix A of the Application.

NAC 445B.295 Application: General requirements

1. Information to identify the applicant, including the name and address of the company or the name and address of the plant if different from that of the company, the name of the owner of the company and the owner's agent, and the name and telephone number of the manager of the plant or another appropriate person to contact;

Please refer to the Class I OPTC revision form in Appendix A for identifying information.

2. A description of the stationary source's processes and products by Standard Industrial Classification Code, including any processes and products associated with an alternative operating scenario identified by the owner or operator;

Please refer to Section 2 of the Application for relevant information.

3. A description of the fuels, fuel use and raw materials to be used and the rates of production and operating schedules for each emission unit which is a part of the stationary source;

Please refer to Sections 2 and 3 of the Application for this information.

4. An identification and a description of any equipment for the control of air pollution and any devices or activities for monitoring compliance with emission limitations;

None of the equipment proposed has specific control devices outside of the inherent process equipment. See Section 3 for more details on the PTE calculations.

5. Limitations on the operation of the stationary source or any standards for work practices which affect emissions for all regulated air pollutants at the stationary source;

Please refer to Sections 2 and 3 of this Application for this information.

6. An explanation of any proposed exemption from any applicable requirement;

Switch is proposing that the diesel tanks associated with the emergency fire pumps be designated as insignificant activities and exempt from permitting under NAC 445B.288.2(d). The emergency fire pumps are exempt from the initial notification requirements per 40 CFR Part 60.4214(b).

7. The location of any records that the applicant must keep pursuant to the requirements of the operating permit, if the records are kept at a location other than the emitting facility; and

All compliance related records will be retained either on-site or electronically.

8. Other specific information that the Director determines is necessary to carry out, enforce and determine the applicability of all legal requirements.

Switch will provide, as requested, any additional information requested by NDEP to meet this requirement. Switch requests that commercially or security sensitive information be protected as confidential, to the extent permissible by the Nevada Revised Statutes (NRS).

NAC 445B.296 Application: Requests for inclusion of additional provisions

If an applicant for an operating permit requests the inclusion of:

1. Provisions for alternative operating scenarios, the application must:

(a) Define each scenario;

(b) Demonstrate that each scenario will comply with each applicable requirement or relevant requirement of NAC 445B.001 to 445B.390, inclusive;

(c) Contain proposed conditions of the permit which will ensure compliance with any applicable requirements, including a requirement for contemporaneous log entries each time the stationary source changes from one scenario to another; and

(d) Contain any additional information that the Director determines is necessary to process the application.

Switch is not proposing any alternative operating scenarios with this Application.

2. A federally enforceable emissions cap, the application must:

(a) State each applicable requirement that the applicant seeks to avoid;

(b) Demonstrate that the applicant will comply with any applicable requirements that the applicant does not avoid with the federally enforceable emissions cap;

(c) Contain proposed conditions of the operating permit which will ensure compliance with any applicable requirement; and

(d) Contain any additional information that the Director determines is necessary to process the application.

Switch requests a federally enforceable emissions cap at the Facility based on 50 hours per year for each emergency fire pump. Switch will comply with all applicable requirements and Section 2 of this Application contains the proposed conditions to ensure compliance with any applicable requirement. Switch will submit any additional information that NDEP determines is necessary.

NAC 445B.3363 Operating permit to construct: Application

1. Except as otherwise provided in NAC 445B.33637, in addition to the information required pursuant to NAC 445B.295, an application for a Class I operating permit to construct or for a revision of a Class I operating permit to construct must include:

(a) Descriptions of all emissions of any regulated pollutants for which the source is defined as a major source.

(b) A description of all emissions of regulated air pollutants from all emission units.

(c) An identification and a description of all points of emissions and all activities which may generate emissions of the regulated air pollutants described pursuant to paragraph (a) in sufficient detail to establish the basis for the applicability of standards and fees.

(d) The emission rates of all regulated air pollutants that are subject to an emissions limitation pursuant to an applicable requirement. The emission rates must be described in

tons per year and in such terms as are necessary to establish compliance using the applicable standard reference test method.
(e) Any other information required by any applicable requirement.
(f) The calculations on which the information described in this subsection are based.
(g) Citations to and a description of all applicable requirements.
(h) A reference to any applicable test method used for determining compliance with each applicable requirement.

Please refer to Section 3, Appendix B, and Appendix C, in this Application for identifying information.

2. Except as otherwise provided in NAC 445B.33637, in addition to the information required pursuant to subsection 1, an application for a Class I operating permit to construct must contain:
(a) For a proposed new major stationary source, a proposed major modification to an existing stationary source or a major modification at an existing major stationary source:
(1) All information required pursuant to 40 C.F.R. § 52.21;
(2) A description of all emissions of each regulated pollutant:
(I) For which the source is a major stationary source; or
(II) That will, because of the major modification, result in a significant emissions increase or a significant net emissions increase in accordance with 40 C.F.R. § 52.21(a)(2);
(3) A description of all emissions of each regulated pollutant associated with the major modification;
(4) A description of each hydrographic area that may be triggered for increment consumption; and
(5) Any other information that the Director determines is necessary to process the application.

The modification is not a major modification with respect to 40 CFR 52.21 and therefore this section does not apply.

(b) For a proposed new major source or a proposed modification which is not a major modification:
(1) All information required by NAC 445B.308 to 445B.311, inclusive;

As the Project proposes a modification which is not considered a major modification, Switch reviewed NAC 445B.308 to 445B.311. NAC 445B.308 applies to the prerequisites and conditions for issuance or revision of an operating permit. NAC 445B.310 requires an environmental evaluation for modifications at existing sources that have a site wide PTE of greater than 25 tpy of a regulated air pollutant and who proposes a modification exceeding 10 tpy of a regulated air pollutant. As shown in Table 3-1, the Project's emissions do not exceed 10 tpy of any regulated air pollutant and therefore an environmental evaluation is not required.

(2) Any other information that the Director determines is necessary to process the application; and

In addition to the information provided as part of this Application, Switch will readily provide any additional information requested by NDEP.

(3) For stationary sources subject to the provisions regarding new source review set forth in 42 U.S.C. §§ 7501 to 7515, inclusive, all information required by 42 U.S.C. § 7503.

The Facility is located in an area currently designated as unclassifiable and/or attainment for all regulated air pollutants.[3] Therefore the nonattainment provisions set forth in 42 U.S.C. §§ 7501 to 7515 do not apply.

(c) For a source, or proposed source, subject to the requirements of 40 C.F.R. §§ 63.40 to 63.44, inclusive:
(1) All information required by 40 C.F.R. § 63.43(e); and
(2) Any other information that the Director determines is necessary to process the application.

The Facility is not subject to the requirements of 40 CFR §§ 63.40 to 63.44 since it will remain an area source of HAPs Post-Project and does not meet the definition of an affected source per §63.41.

(d) For a source, or proposed source, subject to the requirements of 40 C.F.R. §§ 63.50 to 63.56, inclusive:
(1) All information required by 40 C.F.R. § 63.53; and
(2) Any other information that the Director determines is necessary to process the application.

The Facility is not subject to the requirements of 40 CFR §§ 63.50 to 63.56 since the emission sources are subject to applicable emission standards as noted in Section 4 and therefore do not meet the definition of an affected source per §63.51.

3. Except as otherwise provided in NAC 445B.33637, in addition to the information required pursuant to subsections 1 and 2, an application for a Class I operating permit to construct for a modification at an existing major stationary source that is not a major modification must contain:
(a) All applicable information required to determine whether the project or modification will result in a significant emissions increase or a significant net emissions increase in accordance with 40 C.F.R. § 52.21(a)(2);
(b) A description of the project or modification, including all emission units;
(c) A description of the applicable procedures used to determine that the project or modification is not a major modification pursuant to the provisions of 40 C.F.R. § 52.21(a)(2);
(d) All calculations associated with the procedures required to make the determinations pursuant to 40 C.F.R. § 52.21(a)(2), including detailed information for expected and highest projections of any business activities in accordance with 40 C.F.R. § 52.21(b)(41)(ii)(a);
(e) Calculations of emissions in accordance with 40 C.F.R. § 52.21(b)(41)(ii)(b); and
(f) Detailed information used to demonstrate that emissions increases associated with any increased utilization that an emission unit could have accommodated during the baseline emission period is unrelated to the proposed project or modification, including any increased utilization due to product demand growth, in accordance with 40 C.F.R. § 52.21(b)(41)(ii)(c). In lieu of paragraphs (d), (e) and (f), the application must contain information on the potential of the unit to emit in accordance with 40 C.F.R. § 52.21(b)(41)(ii)(d).

[3] EPA Green Book accessed June 2026. https://www3.epa.gov/airquality/greenbook/anayo_nv.html

The Facility is not a major stationary source with respect to 40 CFR 52.21 and therefore this section does not apply.

4. Except for a source, or proposed source, subject to the requirements of 40 C.F.R. §§ 63.40 to 63.44, inclusive, or 40 C.F.R. §§ 63.50 to 63.56, inclusive, in addition to the information required pursuant to subsections 1, 2 and 3, an application for an operating permit to construct must include an environmental evaluation pursuant to NAC 445B.308, 445B.310 and 445B.311.

The environmental evaluation requirements under NAC 445B.310 are not triggered with this revision.

5. As used in this section, "project" has the meaning established in 40 C.F.R. § 52.21, as adopted by reference in NAC 445B.221.

The Project referenced in this Application has been defined consistent with the meaning established in 40 CFR § 52.21.

APPENDIX A. NDEP FORMS

Class I

Air Quality Operating Permit (AQOP), Operating Permit to Construct (OPTC), and Prevention of Significant Deterioration (PSD)
Application Form

Facility Name: Switch, Ltd.
Existing Facility ID: A1896
Existing Class I AQOP/OPTC: AP7375-3672
Type of Facility: Data Center
Number of Units (including IA's) in Facility: 396
Number of Units (including IA's) Affected in Action: 2

Application Type:

- ☐ New AQOP
- ☐ Minor Revision of Existing AQOP
- ☐ Significant Revision of Existing AQOP
- ☐ Renewal of Existing AQOP
- ☐ New OPTC
- ☒ Revision of OPTC
- ☐ Rollover OPTC to a New AQOP
- ☐ Rollover OPTC to Existing AQOP
- ☐ Administrative Revision of Existing AQOP
- ☐ New PSD AQOP
- ☐ Major PSD Revision of AQOP
- ☐ New PSD OPTC
- ☐ Major PSD Revision of OPTC

NDEP

Please Submit Application to:
Nevada Division of Environmental Protection
Bureau of Air Pollution Control, Class I Permitting Branch
901 South Stewart Street, Suite 4001
Carson City, Nevada 89701-5249
Phone (775) 687-9349

August 2026
(Ver. 6)

IMPORTANT INFORMATION

- The Application packet contains:
  - General Company Information Form
  - Industrial Process Application Form
  - Combustion Equipment Application Form
  - Storage Silo Application Form
  - Liquid Storage Tanks Application Form
  - Facility-Wide Potential to Emit Table
  - Surface Area Disturbance Form
  - Plant Boundary Coordinates Form
  - Plant Building Parameters Forms
  - Application Certification Document with Required Attachments

- Please see the Guidance Document located at https://ndep.nv.gov/air/permitting/air-permit-forms-and-resources for additional instructions on how to complete the application.
- The application is available from the Nevada Division of Environmental Protection – Bureau of Air Pollution Control (BAPC) in a Microsoft Word file, or on the internet at https://ndep.nv.gov/air/permitting/air-permit-forms-and-resources. A printed copy of the application must be submitted (mailed or hand delivered), along with an electronic version.
- The application filing fee required by Nevada Administrative Code (NAC) 445B.327 must be submitted with the completed application. Checks must be made payable to the "Nevada State Treasurer, Environmental Protection" with "BAPC" noted in the memo line. Fees may also be submitted electronically at https://epayments.ndep.nv.gov/.
- This application shall be used for a new, renewal, and revision of Class I sources, including AQOP, OPTC, rollover OPTC, and PSD actions.
- An application for a Class I AQOP, OPTC, and PSD must be signed by the Responsible Official, as defined in NAC 445B.156. The certification document (signature page) is the last page of the application and the original "wet" signature must be provided.
- All items in the application must be addressed. If an item does not apply "N/A" or similar notation must be entered in the appropriate blank. All other information must be provided. Incomplete applications will be returned to the Responsible Official within:
  - 45 days for a new or revision of Class I OPTC. (NAC 445B.3364(1))
  - 30 days for sources subject to permitting requirements set forth in 40 CFR 52.21 applying for a new or revision of Class I PSD OPTC. (NAC 445B.3364(2))
  - 60 days for a new, significant revision, or renewal of Class I AQOP. (NAC 445B.3395(1), NAC 445B.3443(3))
  - 10 working days for a minor revision of Class I AQOP. (NAC 445B.3395(5))
  - 30 days for sources subject to permitting requirements set forth in 40 CFR 52.21 applying for a new of Class I PSD. (NAC 445B.3395(2))
  - 45 days for an administrative revision of Class I OPTC. (NAC 445B.3441(2) and NAC 445B.3364(1))

IMPORTANT INFORMATION (continued)

- For the renewal of a Class I Operating Permit, a **complete** application and corresponding processing fee must be submitted in accordance with NAC 445B.3443(2) at least 240 days prior to the expiration date of the current permit but not earlier than 18 months. The BAPC suggests that the application be submitted well in advance of the timeline outlined in NAC 445B.3443 to ensure the application is deemed complete. The BAPC has 60 days to deem the application complete or incomplete. As stated above, incomplete applications will be returned within 60 days of the receipt of the application. Therefore, the BAPC recommends the application be submitted at least 300 days prior to expiration of the current permit.
- For stationary sources subject to the provisions regarding new source review set forth in United States Code (U.S.C.) Title 42 7501 through 7515, inclusive (nonattainment areas), include all information required by U.S.C. Title 42 7503 pursuant to NAC 445B.3363(2)(b)(3).
- For a proposed new major source or a proposed major modification to an existing stationary source that is subject to the provisions of 40 CFR 52.21, include all information required by 40 CFR 52.21 pursuant to NAC 445B.3368(3)(a).
- For a proposed new major source, or a proposed significant revision to an existing stationary source which is not subject to the provisions of 40 CFR 52.21, include all information as required by NAC 445B.308 through 445B.313, inclusive, pursuant to NAC 445B.3368(3)(b).
- For a proposed new major source or a proposed significant revision to an existing stationary source which is subject to the requirements of U.S.C. Title 42 7412 regarding hazardous air pollutants, include all information required by NAC 445B.308 through 445B.313, inclusive, pursuant to NAC 445B.3368(3)(c).

GENERAL COMPANY INFORMATION FORM

1. **Briefly describe the permitted facility's process and include the Standard Industrial Classification (SIC) number and North American Industry Classification System (NAICS). Add details in the attached Process Narrative.**

   SIC: 7375 (Information Retrieval Services), NAICS: 518210 (Data Processing, Hosting, and Related Services)

2. **Company Name and Address that are to appear on the operating permit [NAC 445B.295(1)]:**

   Name: Switch, Ltd.
   Address: 1 Superloop Circle
   City: McCarran
   State: NV Zip Code: 89434

3. **Owner's Name and Address [NAC 445B.295(1)]:**

   Name: Switch, Ltd.
   Address: 7135 South Decatur Blvd.
   City: Las Vegas
   State: NV Zip Code: 89118

4. **Facility Name and Physical Address, if different from #2 [NAC 445B.295(1)]:**

   Name: Same as #2
   Address:
   City:
   State: Zip Code:

5. **If records required under the operating permit will be kept at a location other than the facility, specify that location [NAC 445B.295(7)]:**

   Name:
   Address:
   City:
   State: Zip Code:

GENERAL COMPANY INFORMATION FORM (continued)

6. Responsible Official Name, Title and Mailing Address [NAC 445B.295(1)]:

Name: Devon White
Title: Vice President of Data Center Operations
Address: 1 Superloop Circle
City: McCarran
State: NV Zip Code: 89434
Phone Number: (702) 449-8827
Fax Number: N/A
E-mail Address: dwhite@switch.com

Is this a new Responsible Official? ☐ Yes ☒ No
If yes, and the Responsible Official (RO) does not meet the definition under NAC 445B.156 then please fill out the "Responsible Official Identification/Designation/Change Request Form" and mail it in. (https://ndep.nv.gov/air/permitting/download-permit-forms)

7. Plant Manager or other appropriate Contact Name, Title and Address [NAC 445B.295(1)]:

Name: Devon White
Title: Vice President of Data Center Operations
Address: 7135 South Decatur Blvd.
City: Las Vegas
State: NV Zip Code: 89118
Phone Number: (702) 449-8827
Fax Number: N/A
E-mail Address: dwhite@switch.com

8. Location and Driving Directions to the Facility (For Example: From Elko, Nevada, 4 miles south of I-80 at xx Interchange) [NAC 445B.295(8)]:

Hydrographic Basin (HA) Number: HA 83
HA Basin Name: Tracy Segment of Truckee River Basin / Storey County

Township(s): 19 N; Range(s): 22 E; Section(s): 10, 11, 13, 14, 15, 16, 21, 22, 23, 24, 26, 27

UTM Coordinates for the Front Gate of the Facility (NAD 83, Zone 11):
4,377,021 m North; 286,947 m East;
Nearest City: McCarran, NV
County: Storey

Driving Directions from nearest city to the Facility:
The Facility is located approximately 15 miles east of Reno, NV, on I-80, from there take USA Pkwy to the South and the Facility is approximately 4 miles on the west side of USA Pkwy

GENERAL COMPANY INFORMATION FORM (continued)

9. Emission Cap Requested [NAC 445B.070, NAC 445B.296(2), NAC 445B.296(3)]:

☒ Yes ☐ No (If yes, provide details in the attached Process Narrative)

10. **Important note** for completing the Industrial Process, Combustion Equipment, Storage Silo, and Liquid Storage Tank Application Forms: forms need to be included for all permitted emission units and insignificant activities. Provide additional forms as needed. All items in the application must be addressed. If an item does not apply, then "N/A" or similar notation (TDB, unknown, etc.) must be entered in the appropriate blank.

11. Check one that applies:

☐ Major Stationary Source [40 CFR 52.21]

☐ Minor Source [40 CFR 71.2]

☒ New Source Review (NSR) Synthetic Minor Source [40 CFR 49.167]

12. Is the Facility subject to 40 CFR 51.307 and 52.21(p) (i.e., located within 100 km of a Class I Federal Area within Nevada and any adjacent states, for example Jarbidge Wilderness Area) protected by the Regional Haze Program (40 CFR Part 81)?

☐ Yes ☒ No

13. Check any of the following that apply to this application: This is a revision to an OPTC and not an OP, therefore these do not apply

☐ Involve significant changes to the existing requirements for monitoring, reporting, or recordkeeping.

☐ Require or change a determination of an emission limitation or other standard on a case-by-case basis.

☐ Require or change a visibility or increment analysis.

☐ Require or change a determination of ambient impact for any temporary source.

☐ Establish or change a condition of the operating permit for which there is no a federally enforceable emissions cap and/or an alternative emission limitation pursuant to U.S.C. Title 42 7412(i)(5).

☐ Result in an increase in allowable emissions that exceeds any of the following specified thresholds: Carbon monoxide, 100 tons per year; Nitrogen oxides, 40 tons per year; Sulfur dioxide (SO_2), 40 tons per year; Particulate Matter less than or equal to 10 microns in diameter (PM_{10}), 15 tons per year; Ozone (O_3), 40 tons per year of volatile organic compounds (VOC); Sulfuric acid mist, 7 tons per year; and Hydrogen sulfide (H_2S), 10 tons per year.

☐ Modification pursuant to any provision of U.S.C. Title 42 7401 to 7515, inclusive, or a major modification at an existing major stationary source.

If any of the boxes were checked above, a minor revision may not be made to the Class I Operating Permit pursuant to NAC 445B.3425.

14. Will the Facility be constructed in more than one phase [NAC 445B.3395(17)]?

☒ Yes ☐ No (If yes, provide details in the attached Process Narrative)

GENERAL COMPANY INFORMATION FORM (continued)

15. Will the facility violate any "Applicable requirement" pursuant to NAC 445B.019?
☐ Yes ☒ No

16. Verify facility's compliance status for the following regulations and describe the reason for exemption if applicable:

FEDERALLY ENFORCEABLE REQUIREMENTS			
NAC 445B.225	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*
NAC 445B.315(3)(h)	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*
NAC 445B.315(3)(i)	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*
NAC 445B.315(3)(k)	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*
40 CFR 52.21(r)(4)	☐ Compliant	☐ Not Compliant	☒ Exempt, *40 CFR 52.21 is not applicable and the source is not a major stationary source and the project is not a major modification*
NAC 445B.252	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*
NAC 445B.22067	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*
NAC 445B.22093	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*
NAC 445B.22037	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*
NAC 445B.227	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*
40 CFR Parts 60.1-60.19, 61.01-61.19, 61.140-61.157, 63.1-63.15, and 70	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*
40 CFR Part 82	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*
NAC 445B.230	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*
NAC 445B.22017	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*

STATE REQUIREMENTS			
NRS 445B.470	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*
NAC 445B.22013	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*
NAC 445B.326(1)	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*
NAC 445B.22087	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*
NAC 459.952-459.95528	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*

17. Has the facility provided modeling for each non-combustion baghouse individually? (See Testing Determination System for Baghouses Guidance Document)
☐ Yes ☐ No

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS I OPERATING PERMIT

System Number and Name: **Proposed System 13 – Emergency Diesel-Fired Fire Pumps**

Emission Unit Description: **Emergency Diesel-Fired Fire Pump #1 (388 kW, manufactured by CAT; model C13; year 2026)**

Alternative Operating Scenario: ☐ **Yes** ☒ **No**

Insignificant Activity: ☐ **Yes** ☒ **No** If yes, identify exemption regulation: _____

Description			Data
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001	TBD
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	20200102
	Manufacturer		CAT
	Date Manufactured		2026
	Model and Serial Number		C13
	Emissions Released Inside building?	yes/no	No
For Reciprocating Internal Combustion Engines (RICE) Only	Type of Engine Code (See Notes*)		ECI
	Date Constructed	month/day/yr	2026
	Cylinder Displacement	liter/cylinder	2.08
	EPA Tier #		3
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	4376704.9
	UTM Easting (NAD 83, Zone 11)	m	286850.7
Operating Parameters /Fuel Usage	Fuel Type		Ultra Low Sulfur Diesel
	Fuel Flow Meter Installed?	yes/no/NA	No
	Sulfur Content	%	0.0015
	Heat Content	Btu/gal	137,000
	Start Time *if operating less than 24 hours day*	hour:minute	N/A
	End Time *if operating less than 24 hours day*	hour:minute	N/A
Control Equipment	Manufacturer		N/A
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	N/A
Stack Parameters	Stack Height	feet	8.96
	Stack Inside Diameter	feet	0.492
	Stack Temperature	°F	846
	Stack Exit Velocity	feet/second	132.46
	Actual Gas Volume Flow Rate	acfm	4,960
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	Not Specified
	Stack Release Type		☐ vertical ☐ capped ☒ horizontal

Notes*

Code	Description	Code	Description
LU	Limited Use	E-SI	Emergency Spark Ignition
LDG	Landfill/Digester Gas	SI4SRB	Spark Ignition 4-Stroke Rich Burn
NECI	Non-Emergency Compression Ignition	SI4SLB	Spark Ignition 4-Stroke Lean Burn
ECI	Emergency Compression Ignition	SI2SLB	Spark Ignition 2-Stroke Lean Burn

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS I OPERATING PERMIT (continued)

Emission Unit Description: **Emergency Diesel-Fired Fire Pump #1 (388 kW, manufactured by CAT; model C13; year 2026)**

1. Subject to a Federal Regulation specific to the emission unit (e.g. 40 CFR Part 60, 61, 63, 64, 76, or other): ☒ **Yes** ☐ **No** If yes, identify regulation and applicability and include required analysis or plans (e.g. siting analysis or Continuous Assurance Monitoring (CAM) plans).
   NSPS Subpart IIII- Stationary Compression Ignition Internal Combustion Engines
   NESHAP Subpart ZZZZ- Stationary Reciprocating Internal Combustion Engines

2. Subject to a State Regulation specific to the emission unit (e.g. NAC 445B.2203, NAC 445B.22047, NAC 445B.22017): ☒ **Yes** ☐ **No** If yes, identify regulation and applicability.
   Subject to NAC 445B.2203, 22047, and 22017 for opacity, particulate emissions, and sulfur emissions for fuel-burning equipment

3. Identify standards for work practices which affect emissions for all regulated air pollutants (e.g. At all times, including startup, shutdown and malfunction).
   At all times, including startup, shutdown and malfunction, the emission unit will be operated in a manner consistent with good air pollution control practices. Switch qualified technicians and/or the third party preferred vendors conduct periodic preventive/ predictive maintenance on a weekly, monthly, quarterly, and annual basis to meet or exceed manufactured recommendations

4. Identify and describe compliance and performance testing with reference to any applicable test methods, monitoring devices, compliance plan, or other activities required to determine compliance with an applicable requirement (e.g. Emissions from this unit will be monitored by CEMS and/or COMS for the specific pollutant(s) (NO_X, CO, etc.)).
   Emissions from this unit will be monitored by non-resettable hour meters.

5. How will fuel consumption be monitored for this emission unit? (e.g. maximum fuel consumption rate supplied by manufacturer, fuel flow meter).
   The fuel consumption will be monitored by tracking hours of operation and multiplying by the maximum fuel consumption rate provided by the manufacturer.

6. Does this unit have the capability to bypass air pollution controls in an emergency situation as defined under NAC 445B.056?:
   ☐ **Yes** ☒ **No**

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS I OPERATING PERMIT

System Number and Name: **Proposed System 13 – Emergency Diesel-Fired Fire Pumps**

Emission Unit Description: **Emergency Diesel-Fired Fire Pump #2 (388 kW, manufactured by CAT; model C13; year 2026)**

Alternative Operating Scenario: ☐ **Yes** ☒ **No**

Insignificant Activity: ☐ **Yes** ☒ **No** If yes, identify exemption regulation: _____

Description			Data
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001	TBD
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	20200102
	Manufacturer		CAT
	Date Manufactured		2026
	Model and Serial Number		C13
	Emissions Released Inside building?	yes/no	No
For Reciprocating Internal Combustion Engines (RICE) Only	Type of Engine Code (See Notes*)		ECI
	Date Constructed	month/day/yr	2026
	Cylinder Displacement	liter/cylinder	2.08
	EPA Tier #		3
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	4376704.9
	UTM Easting (NAD 83, Zone 11)	m	286850.7
Operating Parameters /Fuel Usage	Fuel Type		Ultra Low Sulfur Diesel
	Fuel Flow Meter Installed?	yes/no/NA	No
	Sulfur Content	%	0.0015
	Heat Content	Btu/gal	137,000
	Start Time *if operating less than 24 hours day*	hour:minute	N/A
	End Time *if operating less than 24 hours day*	hour:minute	N/A
Control Equipment	Manufacturer		N/A
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	N/A
Stack Parameters	Stack Height	feet	8.96
	Stack Inside Diameter	feet	0.492
	Stack Temperature	°F	846
	Stack Exit Velocity	feet/second	132.46
	Actual Gas Volume Flow Rate	acfm	4,960
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	Not Specified
	Stack Release Type		☐ vertical ☐ capped ☒ horizontal

Notes*

Code	Description	Code	Description
LU	Limited Use	E-SI	Emergency Spark Ignition
LDG	Landfill/Digester Gas	SI4SRB	Spark Ignition 4-Stroke Rich Burn
NECI	Non-Emergency Compression Ignition	SI4SLB	Spark Ignition 4-Stroke Lean Burn
ECI	Emergency Compression Ignition	SI2SLB	Spark Ignition 2-Stroke Lean Burn

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS I OPERATING PERMIT (continued)

Emission Unit Description: **Emergency Diesel-Fired Fire Pump #2 (388 kW, manufactured by CAT; model C13; year 2026)**

1. Subject to a Federal Regulation specific to the emission unit (e.g. 40 CFR Part 60, 61, 63, 64, 76, or other): ☒ **Yes** ☐ **No** If yes, identify regulation and applicability and include required analysis or plans (e.g. siting analysis or Continuous Assurance Monitoring (CAM) plans).
   NSPS Subpart IIII- Stationary Compression Ignition Internal Combustion Engines
   NESHAP Subpart ZZZZ- Stationary Reciprocating Internal Combustion Engines

2. Subject to a State Regulation specific to the emission unit (e.g. NAC 445B.2203, NAC 445B.22047, NAC 445B.22017): ☒ **Yes** ☐ **No** If yes, identify regulation and applicability.
   Subject to NAC 445B.2203, 22047, and 22017 for opacity, particulate emissions, and sulfur emissions for fuel-burning equipment

3. Identify standards for work practices which affect emissions for all regulated air pollutants (e.g. At all times, including startup, shutdown and malfunction).
   At all times, including startup, shutdown and malfunction, the emission unit will be operated in a manner consistent with good air pollution control practices. Switch qualified technicians and/or the third party preferred vendors conduct periodic preventive/ predictive maintenance on a weekly, monthly, quarterly, and annual basis to meet or exceed manufactured recommendations

4. Identify and describe compliance and performance testing with reference to any applicable test methods, monitoring devices, compliance plan, or other activities required to determine compliance with an applicable requirement (e.g. Emissions from this unit will be monitored by CEMS and/or COMS for the specific pollutant(s) (NO_X, CO, etc.)).
   Emissions from this unit will be monitored by non-resettable hour meters.

5. How will fuel consumption be monitored for this emission unit? (e.g. maximum fuel consumption rate supplied by manufacturer, fuel flow meter).
   The fuel consumption will be monitored by tracking hours of operation and multiplying by the maximum fuel consumption rate provided by the manufacturer.

6. Does this unit have the capability to bypass air pollution controls in an emergency situation as defined under NAC 445B.056?:
   ☐ **Yes** ☒ **No**

COMBUSTION EQUIPMENT DETAILED CALCULATIONS - *See Emission Calculations Included*

Unit No.	Unit Description	Operating Hours		Heat Input (MMBtu)		Fuel Usage			Power Output		Controls		Emissions					References
		Daily	Annual	Hourly	Annual	Hourly	Annual	Units	Amount	Units	Type	Efficiency or Dry Volume Flow Rate	Pollutant	Factor	Unit	Hourly Rate (lbs/hr)	Yearly Rate (tons/yr)	
System No. & Name:													**Uncontrolled**					
	See detailed emission calcs												PM					
													PM_{10}					
													$PM_{2.5}$					
													SO_2					
													NO_X					
													CO					
													VOC					
													Pb					
													Hg					
													H_2S					
													Controlled					
													PM					
													PM_{10}					
													$PM_{2.5}$					
													SO_2					
													NO_X					
													CO					
													VOC					
													Pb					
													Hg					
													H_2S					
System No. & Name:													**Uncontrolled**					
													PM					
													PM_{10}					
													$PM_{2.5}$					
													SO_2					
													NO_X					
													CO					
													VOC					
													Pb					
													Hg					
													H_2S					
													Controlled					
													PM					
													PM_{10}					
													$PM_{2.5}$					
													SO_2					
													NO_X					
													CO					
													VOC					
													Pb					
													Hg					
													H_2S					

*Exact format may be changed, but requested information is still required.

GREENHOUSE GASES (GHG) DETAILED CALCULATIONS - *See Emission Calculations Included*

Unit No.	Unit Description	Operating Hours		Heat Input (MMBtu)		Fuel Usage			Controls		Emissions					References
		Daily	Annual	Hourly	Annual	Hourly	Annual	Units	Type	Efficiency or Dry Volume Flow Rate	Pollutant	Factor	Unit	Hourly Rate (lbs/hr)	Yearly Rate (tons/yr)	
	System No. & Name:															
	See detailed emission calcs										CO_2					
											CH_4					
											N_2O					
	System No. & Name:															
											CO_2					
											CH_4					
											N_2O					
	System No. & Name:															
											CO_2					
											CH_4					
											N_2O					
	System No. & Name:															
											CO_2					
											CH_4					
											N_2O					
	System No. & Name:															
											CO_2					
											CH_4					
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	System No. & Name:															
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	System No. & Name:															
											CO_2					
											CH_4					
											N_2O					
	System No. & Name:															
											CO_2					
											CH_4					
											N_2O					
	System No. & Name:															
											CO_2					
											CH_4					
											N_2O					
	System No. & Name:															
											CO_2					
											CH_4					
											N_2O					
	System No. & Name:															
											CO_2					
											CH_4					
											N_2O					
	System No. & Name:															
											CO_2					
											CH_4					
											N_2O					

*Exact format may be changed, but requested information is still required.

HAZARDOUS AIR POLLUTANTS (HAPS) DETAILED CALCULATIONS - *See Emission Calculations Included*

Unit No.	Unit Description	Operating Hours		Heat Input (MMBtu)		Fuel Usage			Controls		Emissions					References
		Daily	Annual	Hourly	Annual	Hourly	Annual	Units	Type	Efficiency or Dry Volume Flow Rate	Pollutant	Factor	Unit	Hourly Rate (lbs/hr)	Yearly Rate (tons/yr)	
	System No. & Name:															
	See detailed emission calcs															

*Exact format may be changed, but requested information is still required.

FACILITY-WIDE POTENTIAL TO EMIT TABLE
(FOR ALL SOURCES INCLUDING INSIGNIFICANT ACTIVITIES)
(POUND/HOUR AND TON/YEAR)

Pollutant	Facility-Wide Potential to Emit (pound/hour)	Facility-Wide Potential to Emit (ton/year)
Total Particulate Matter (PM)	1.22	5.33
Total PM_{10}	1.22	5.33
Total $PM_{2.5}$	1.22	5.33
Total Sulfur Dioxide (SO_2)	0.05	0.20
Total Carbon Monoxide (CO)	7.98	34.97
Total Oxides of Nitrogen (NO_X)	43.84	192.06
Total Volatile Organic Compounds (VOC)	3.32	14.54
Total Lead (Pb)	-	-
Total Hydrogen Sulfide (H_2S)	-	-
Total Sulfuric Acid Mist (H_2SO_4)	-	-
Total Hazardous Air Pollutants (HAPs)	0.06	0.25
Total Greenhouse Gases (CO_{2e})	5,690.89	24,934.16
Other Regulated Pollutants (Specify)	-	-

REVISION TABLE

Please complete the table below if this application is for a Minor/Significant **Revision** of an existing Class I Air Quality Operating Permit. Add more columns if needed for any other applicable regulated pollutants. All Potential To Emit (PTE) values must be in tons per year (TPY) [NAC 445B.3425 and NAC 445B.344]

Description	Pollutants									
	PM	PM_{10}	$PM_{2.5}$	SO_2	NOx	CO	VOC	HAPs	CO_{2e}	Other
Permitted Facility-Wide PTE (TPY)	5.33	5.33	5.33	0.20	191.97	34.89	14.56	0.24	24,916.34	-
Proposed Facility-Wide PTE (TPY)	5.33	5.33	5.33	0.20	192.02	34.94	14.54	0.25	24,934.16	-
Change in Facility-Wide PTE (TPY)	1.36E-03	1.36E-03	1.36E-03	-9.35E-06	9.46E-02	7.91E-02	-2.03E-02	4.22E-04	1.78E+01	-

SURFACE AREA DISTURBANCE FORM

1. Total Acres of the Facility Site: 1,327 acres
2. Total Acres Disturbed: 875 acres
3. Add Surface Area Disturbance location as Township(s), Range(s) and Section
   10, 11, 13, 14, 15, 16, 21, 22, 23, 24, 26, 27, T 19 N, R 22 E
4. NAC 445B.22037 requires fugitive dust to be controlled (regardless of the size or amount of acreage disturbed), and requires an ongoing program, using best practical methods, to prevent particulate matter from becoming airborne. All activities which have the potential to adversely affect the local air quality must implement all appropriate measures to limit controllable emissions. Appropriate measures for dust control may consist of a phased approach to acreage disturbance rather than disturbing the entire area all at once; using wet suppression through such application methods as water trucks or water spray systems to control wind-blown dust; the application of soil binding agents or chemical surfactant to roadways and areas of disturbed soil; as well as the use of wind-break or wind limiting fencing designed to limit wind erosion soils.
5. If the Surface Area Disturbance is greater than 5 acres, please check each box that applies for Best Management Practices (BMPs) used for controlling dust on project's disturbed areas:
   - ☒ Water trucks
   - ☒ Graveling/paving of roadway storage areas and staging areas
   - ☒ Dust palliatives
   - ☒ Posting and limiting vehicle speeds to 10-15 miles per hour
   - ☒ Ceasing operations during high wind events
   - ☒ Fencing or berming to prevent unauthorized access to disturbed areas
   - ☒ Application of water sprays on material storage piles on a regular basis
   - ☐ Covering material storage piles with tarpaulin or geo-textiles; tenting
   - ☒ Use of overhead water spray racks or water hoses
   - ☒ Track-out controls (graveled entranced, exit area, and street sweeping)
   - ☐ Landscape preservation and impact avoidance
   - ☐ Wind fence
   - ☒ Pre-watering of areas to be disturbed (including all unpaved onsite roads and staging areas)
   - ☒ Inform all subcontractors (including truck drivers) of their responsibilities for the control of fugitive dust while they are on the project site
   - ☒ Training of equipment operators to recognize fugitive dust generation and having the authority to shut down operations until water truck arrives and sprays water on the disturbed areas
   - ☐ Other Applicable BMPs: Click or tap here to enter text.
   - ☐ Other Applicable BMPs: Click or tap here to enter text.
   - ☒ If using water trucks, list how many water trucks are used and their capacity in gallons: 1-8,000 gal, 4 – 4,000 gal

APPLICATION CERTIFICATION DOCUMENT

(With Required Attachments)

Please check all applicable boxes below to indicate the information provided in your application submittal:

- ☒ Cover Page
- ☒ General Company Information Form
- ☐ Compliance Plan – *Not Applicable*
- ☐ Industrial Process Application Form(s) – *Not Applicable*
- ☒ Combustion Equipment Application Form(s)
- ☐ Storage Silo Application Form(s) – *Not Applicable*
- ☐ Liquid Storage Tank Application Form(s) – *Not Applicable*
- ☒ Manufacturer's Guarantee
- ☒ Facility-Wide Potential to Emit Table
- ☒ Revision Table
- ☒ Surface Area Disturbance Form
- ☐ Plant Boundary Coordinates Form – *Not Applicable*
- ☐ Plant Building Parameters Form– *Not Applicable*
- ☒ Detailed Emission Calculations (for all emission units including IA units)
- ☐ Source Testing Data (if referenced in calculations) – *Not Applicable*
- ☒ Process Narrative (revision applications must include a description of the revision)
- ☐ Process Flow Diagram(s) – *Not Applicable*
- ☒ Site Plan(s) showing the locations (UTM coordinates), dimensions, and heights of buildings on the site
- ☒ Maps:
  - ☒ Vicinity Map of where the facility is located in the State
  - ☒ Area Map of the Facility (including location of all emission units, building locations (with UTMs), location of front gate, and fence line/site boundary (with UTMs))
- ☐ Environmental Evaluation (AERMOD Air Dispersion Modeling Report and Electronic Input Files) (NAC 445B.310, NAC 445B.311) – *Not Applicable*
- ☒ Manufacturer's Guarantee *if applicable*
- ☒ Equipment Specifications *if applicable*
- ☐ TANKs Modeling Output *if applicable* – *Not Applicable*
- ☒ Application Fee Attached or Electronically Submitted
- ☒ Digital Copy of Application on CD or Thumb Drive
- ☒ Application Certification Document with Original Responsible Official Signature

APPLICATION CERTIFICATION DOCUMENT (CONTINUED)

(With Required Attachments)

PLEASE NOTE THE FOLLOWING REQUIREMENTS WHICH APPLY TO PERMIT APPLICANTS DURING THE APPLICATION PROCESS:

A. A permit applicant must submit supplementary facts or corrected information upon discovery. (NAC 445B.297(1)(b))

B. A permit applicant is required to provide any additional information which the Director requests in writing within the time specified in the Director's request. (NAC 445B.297(1)(c))

C. Submission of fraudulent data or other information may result in prosecution for an alleged criminal offense. (NRS 445B.470)

CERTIFICATION:

I certify that, based on information and belief formed after reasonable inquiry, the statements and information contained in this application are true, accurate and complete.

Signature of Responsible Official

Devon White, Vice President of Data Center Operations

Print or Type Name and Title

9/21/2026

Date

APPENDIX B. MANUFACTURER SPECIFICATIONS

CLARKE PLD™

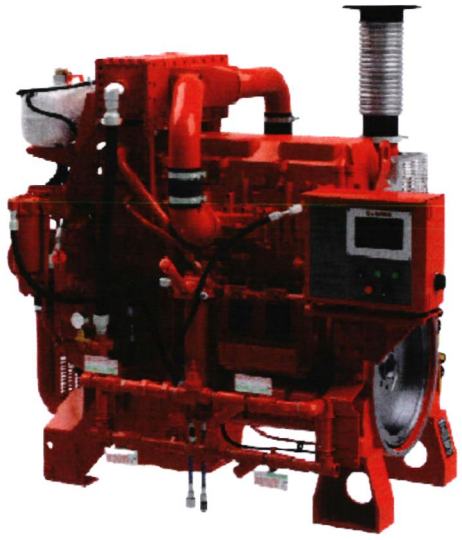
C13H0 MODELS

UFAD22-D
UFAD32-D
UFAD52-D
UFAD62-D
UFAD72-D

UL/FM - cUL APPROVED RATINGS **BHP**/*kW*

C13H0 MODEL ♦	RATED SPEED 1470		1760		2100		EMISSIONS
UFAD22-D	**275**	*205*	**327**	*244*	**311**	*232*	EPA Tier 3 Certified
UFAD32-D	**296**	*221*	**350**	*261*	**335**	*250*	EPA Tier 3 Certified
UFAD52-D	**351**	*262*	**380**	*283*	**399**	*297*	EPA Tier 3 Certified
UFAD62-D	**384**	*286*	**422**	*315*	**425**	*317*	EPA Tier 3 Certified
UFAD72-D	**398**	*297*	**455**	*339*	**460**	*343*	EPA Tier 3 Certified

Note 1: PLD-D Use the Clarke PLD-D Calculator on www.clarkefire.com to verify if the Clarke PLD-D will work in your specific application. To order a PLD-D engine, you must submit the PLD-D discharge pressure set point and a copy of the PLD-D calculator results. Discharge (-D) set point pressure can be factory set between 100-350 psi.



♦ All Models are available for export and suitable for installations in the US and US territories.

ENGINE SPECIFICATIONS	
Number of Cylinders	6
Aspiration	TRWA
Rotation*	CW
Overall Dimensions - in. (mm)	54.8 (1392) H X 68.9 (1750) L X 45.3 (1150) W
Crankshaft Centerline Height - in. (mm)	17.0 (432)
Weight - lb (kg)	3250 (1474)
Compression Ratio	17.3:1
Displacement - cu. in. (l)	763 (12.5)
Engine Type	4 Stroke Cycle - Inline Construction

Abbreviations: TRWA - Turbocharged and Raw Water Aftercooled CW - Clockwise
*Rotation viewed from Heat Exchanger / Front of engine

CERTIFIED POWER RATING

- Each engine is factory tested to verify power and performance
- FM-UL power ratings are shown at specific speeds. Clarke engines can be applied at a single rated RPM setting +/- 50 RPM.

ENGINE RATINGS BASELINES

- Engines are to be used for stationary emergency standby fire pump service only. Engines are to be tested in accordance with NFPA 25.
- Engines are rated at standard SAE conditions of 29.61 in. (752.1 mm) 77°F (25°C) inlet air temperature [approximates 300 ft. (91.4 m) above sea level] by the testing laboratory (see SAE Standard J 1349).
- A deduction of 3 percent from engine horsepower rating at standard SAE conditions shall be made for diesel engines for each 1000 ft. (305 m) altitude above 300 ft. (91.4 m)
- A deduction of 1 percent from engine horsepower rating as corrected to standard SAE conditions shall be made for diesel engines for every 10°F (5.6°C) above 77°F (25°C) ambient temperature.

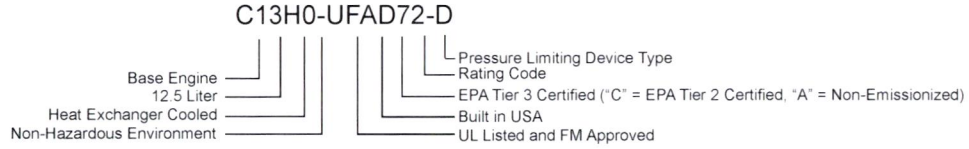
c UL us LISTED NFPA FM C US APPROVED

ENGINE EQUIPMENT

EQUIPMENT	STANDARD	OPTIONAL
Air Cleaner with Air Differential Gauge	Direct Mounted, Washable, Indoor Service with Drip Shield	Disposable, Drip Proof, Indoor Service Outdoor Type, Single or Two Stage
Alarm	Overspeed Alarm & Shutdown, Low Oil Pressure, Low & High Coolant Temperature, Low Raw Water Flow, High Raw Water Temperature, Alternate ECM Warning, Fuel Injection Malfunction, ECM Warning and Failure with Automatic Switching	Low Coolant Level, Low Oil Level, Oil Filter Differenetial Pressure, Fuel Filter Differential Pressure, Air Filter Restriction
Alternator	12V-DC, 50 Amps with V-Belt and Guard	24V-DC, 50 Amps with V-Belt and Guard
Coupling	Bare Flywheel	Driveshaft and Guard
Crankcase Ventilation		Crankcase Breather
Engine Heater	230V-AC, 2000 Watt	
Exhaust Flex Connection	SS Flex. 150# ANSI Flanged Connection. 6" 8" Standard for Residential Silencers	SS Flex. 150# ANSI Flanged Connection. 8"
Exhaust Protection	Metal Guard on Manifold and Turbochargers	
Flywheel Housing	SAE #1	
Flywheel Power Take Off	14" SAE Industrial Flywheel Connection	
Fuel Connections	Fire Resistent Supply and Return Lines	SS, Braided, cUL Listed, Supply and Return Lines
Fuel Filter	Primary Filter / Water Separator, Secondary Filter with Priming Pump	Duplex Secondary Filter
Fuel Injection System	Unit Injector	
Governor, Speed	Electronic, Dual Electronic Engine Control Modules	
Heat Exchanger	Serviceable Shell and Tube Type, 60 PSI (4 Bar), NPT (F) Connections	Serviceable 90/10 CuNi Sea Water Compatible
Instrument Panel	NEMA Type 4, Powder Coated Steel Construction Touch Screen Panel with Multimeter to Display and Metric, Tachometer, Hour meter, Water Temperature, Oil Pressure, and Dual Voltmeters, Front Opening, Soft Start for Commissioning *Note: Some models may include instrument panel with powerview display in place of TSP-E*	Stainless Steel NEMA Type 4X (IP66) Touch Screen Panel with Digital Tachometer, Hour Meter, Water Temperature, Oil Pressure and Voltmeter Gauges. Front Opening, Soft Start for Commissioning
Junction Box	Integral with Instrument Panel; For DC Wiring Interconnection to Engine Controller	
Lube Oil Cooler	Jacket Water Cooled, Shell and Tube Type	
Lube Oil Filter	Full Flow, Dual Element, Qty 2	Duplex Filter
Lube Oil Pump	Gear Driven, Gear Type	
Manual Start Control	Dual Manual Start Contactors & On Instrument Panel with Control Position Warning Light	
Overspeed Control	Electronic, Factory Set	
Raw Water Cooling Loop w/ Alarms	Galvanized	90/10 CuNi Seawater, All 316 SS, High Pressure
Raw Water Solenoid Operation	Automatic from Fire Pump Controller and from Engine Instrument Panel (for Horizontal Fire Pump Applications)	
Run - Stop Control	On Instrument Panel with Control Position Warning Light	
Starters	Two (2) 12V-DC	Two (2) 24V-DC
Throttle Control	Adjustable Speed Control by Increase/Decrease Button, Tamper Proof Adjustable Speed Control	
Water Pump	Centrifugal Type, Gear Driven	

Abbreviations: DC - Direct Current, AC - Alternating Current, SAE - Society of Automotive Engineers, BSP(F) - British Standard Pipe Thread (Female), SS - Stainless Steel

MODEL NOMENCLATURE (11 Digit Models)



Specifications and information contained in this brochure is subject to change without notice.

CLARKE

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United Kingdom
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Basic Engine Description

Engine Manufacturer	Caterpillar
Ignition Type	Compression (Diesel)
Number of Cylinders	6
Bore and Stroke - in (mm)	5.1 (130) X 6.2 (157)
Displacement - in^3 (L)	763 (12.5)
Compression Ratio	17.3:1
Valves per cylinder	
Intake	2
Exhaust	2
Combustion System	Direct Injection
Engine Type	In-Line, 4 Stroke Cycle
Fuel Management Control	Electronic, Unit Injector
Firing Order (CW Rotation)	1-5-3-6-2-4
Aspiration	Turbocharged
Charge Air Cooling Type	Raw Water Cooled
Rotation, viewed from front of engine, Clockwise (CW)	Standard
Engine Crankcase Vent System	Open
Installation Drawing	D891
Weight - lb (kg)	3250 (1470)

Power Rating	**1470**	**1760**	**2100**
Nameplate Power - HP (kW) [1]	351 (262)	380 (283)	399 (297.5)

Cooling System	**1470**	**1760**	**2100**
Engine Coolant Heat - Btu/sec (kW)	140 (148)	166 (175)	183 (193)
Engine Radiated Heat - Btu/sec (kW)	29 (30.6)	28 (29.5)	36 (38)
Heat Exchanger (NSR Standard Removable Bundle) Minimum Flow - [C053702]			
60°F (15°C) Raw H_2O - gal/min (L/min)	15 (56.8)	20 (75.7)	23 (87.1)
100°F (37°C) Raw H_2O - gal/min (L/min)	19 (71.9)	33 (125)	36 (136)
Heat Exchanger (NSR Standard Removable Bundle) Maximum Cooling Raw Water - [C053702]			
Inlet Pressure - psi (bar)	60 (4.1)		
Flow - gal/min (L/min)	100 (379)		
Heat Exchanger (NSR Seawater Removable Bundle) Minimum Flow - [C053898]			
60°F (15°C) Raw H_2O - gal/min (L/min)	19 (71.9)	23 (87.1)	24 (90.8)
100°F (37°C) Raw H_2O - gal/min (L/min)	25 (94.6)	36 (136)	36 (136)
Heat Exchanger (NSR Seawater Removable Bundle) Maximum Cooling Raw Water - [C053898]			
Inlet Pressure - psi (bar)	60 (4.1)		
Flow - gal/min (L/min)	100 (379)		
Typical Engine H_2O Operating Temp - °F (°C)	190 (87.8) - 200 (93.3)		
Thermostat			
Start to Open - °F (°C)	189 (87.2)		
Fully Opened - °F (°C)	208 (97.8)		
Engine Coolant Capacity - qt (L)	35 (33.1)		
Coolant Pressure Cap - lb/in^2 (kPa)	10 (68.9)		
Maximum Engine Coolant Temperature - °F (°C)	219 (104)		
Minimum Engine Coolant Temperature - °F (°C)	160 (71.1)		
High Coolant Temp Alarm Switch - °F (°C)	210 (98.9)		

Electric System - DC	**Standard**		**Optional**	
System Voltage (Nominal)	12		24	
Battery Capacity for Ambients Above 32°F (0°C)				
Voltage (Nominal)	12	{C07633}	12	{C07633}
Qty. Per Battery Bank	1		2	
SAE size per J537	8D		8D	
CCA @ 0°F (-18°C) per J537	1400		1400	
Reserve Capacity - Minutes per J537	430		430	
Battery Cable Circuit, Max Resistance - ohm	0.0013		0.0013	
Battery Cable Minimum Size				
0-120 in. Circuit Length [2]	3/0		2/0	
121-160 in. Circuit Length [2]	4/0		3/0	
161-200 in. Circuit Length [2]	500MCM		4/0	
Charging Alternator Maximum Output - Amp,	55	{C071363}	55	{C073361}
Starter Cranking Amps, Rolling - @60°F (15°C)	580	{C073837}	375	{C073380}

Exhaust System (Single Exhaust Outlet)	**1470**	**1760**	**2100**
Exhaust Flow - ft.³/min (m³/min)	2200 (62.3)	2480 (70.2)	2700 (76.5)
Exhaust Temperature - °F (°C) (corrected to 77°F)	894 (479)	846 (452)	821 (438)
Maximum Allowable Back Pressure - in H_2O (kPa)	30 (7.5)	30 (7.5)	35 (8.7)
Minimum Exhaust Pipe Dia. - in (mm) [3]	6 (152)	6 (152)	6 (152)

Fuel System	**1470**	**1760**	**2100**
Fuel Consumption - gal/hr (L/hr)	18 (68.1)	19.3 (73.1)	20.8 (78.7)
Fuel Return - gal/hr (L/hr)	59 (223)	58.7 (222)	67.2 (254)
Fuel Supply - gal/hr (L/hr)	77.0 (291)	78.0 (295)	88.0 (333)
Fuel Pressure - lb/in² (kPa)	85 (586) - 95 (655)		
Minimum Line Size - Supply - in.	.75 Schedule 40 Steel Pipe		
Pipe Outer Diameter - in (mm)	1.05 (26.7)		
Minimum Line Size - Return - in.	.50 Schedule 40 Steel Pipe		
Pipe Outer Diameter - in (mm)	0.848 (21.5)		
Max. Allowable Fuel Pump Suction Lift w/ clean Filter at Customer Connection Block - in H_2O (mH_2O)	71 (1.8)		
Maximum Allowable Fuel Head above Fuel pump, Supply or Return - ft (m)	15 (4.6)		
Fuel Filter Micron Size	2 (Secondary)		
Maximum fuel supply temperature - °F (°C)	174 (78.9)		

Heater System	**Standard**	**Optional**
Engine Coolant Heater		
Wattage (Nominal)	2000	
Voltage - AC, 1 Phase	230 (+5%, -10%)	
Part Number	{C122193}	

Air System	**1470**	**1760**	**2100**
Combustion Air Flow - ft.³/min (m³/min)	695 (19.7)	790 (22.4)	885 (25.1)
Air Cleaner	**Standard**		**Optional**
Part Number	{C03244}		{C03330}
Type	Indoor Service Only, with Shield		Canister, Single-Stage
Cleaning method	Washable		Disposable
Air Intake Restriction Maximum Limit			
Dirty Air Cleaner - in H_2O (kPa)	22 (5.5)		22 (5.5)
Clean Air Cleaner - in H_2O (kPa)	15 (3.7)		15 (3.7)
Maximum Allowable Temperature (Air To Engine Inlet) - °F (°C)	120 (48.9)		

Lubrication System	
Oil Pressure - normal - lb/in² (kPa)	30 (207) - 55 (379)
Low Oil Pressure Alarm Switch - lb/in² (kPa)	15 (103)
In Pan Oil Temperature - °F (°C)	200 (93.3) - 230 (110)
Total Oil Capacity with Filter - qt (L)	36 (34.1)

Lube Oil Heater	**Optional**	**Optional**
Wattage (Nominal)	300	300
Voltage	120V (+5%, -10%)	240V (+5%, -10%)
Part Number	{C04559}	{C04560}

Performance	**1470**	**1760**	**2100**
BMEP - lb/in² (kPa)	248 (1710)	224 (1540)	197 (1360)
Piston Speed - ft/min (m/min)	1519 (463)	1819 (554)	2170 (661)
Mechanical Noise - dB(A) @ 1m	C138672 - Reference Noise data on Engine Page at www.clarkefire.com		
Power Curve	C138500 - Reference Power Curve on Engine Page at www.clarkefire.com		

NOTE: This engine is intended for indoor installation or in a weatherproof enclosure. [1] Derate 3% per every 1000 ft. 304.8m above 300 ft. 91.4m and derate 1% for every 10°F 5.55 °C above 77°F 25°C. [2] Positive and Negative Cables Combined Length. [3] Minimum Exhaust Pipe Diameter is based on: 15 feet of pipe, one 90° elbow, and one Industrial silencer. A Back-pressure flow analysis must be performed on the actual field installed exhaust system to assure engine maximum allowable back pressure is not exceeded. See Exhaust Sizing Calculator on www.clarkefire.com. { } indicates component reference part number.

According to Caterpillar, the engine is fully EPA Tier3 certified. The values listed below are in fact for submission to the local air quality district. The data given is applicable for the 1760 RPM engine.

C13 Industrial E (388 kW @ 2100 rpm)

	Data	
NOx	3.580	g/kW-hr
NMHC	0.130	g/kW-hr
NOx+NMHC	3.710	g/kW-hr
CO	2.170	g/kW-hr
PM	0.0760	g/kW-hr

Above data is collected at the following conditions:

Inlet Restriction	3.7 kPa-g
Exhaust Restriction	10 kPa-g
ATAAC Restriction	15 kPa-d
Inlet Air Temperature	25C
Inlet Manifold Temperature	49C

Disclaimers:

- This information is Caterpillar Confidential. Unauthorized distribution of this information beyond its intended audience is prohibited.
- Above data is US EPA C1 8-mode test-cycle certification emissions. For additional emissions information, contact your CAT dealer.
- Data is subject to change.
- When comparing a source testing emissions results, please contact your CAT dealer for appropriate variability in numbers.

terpillar: Confidential Green

APPENDIX C. EMISSION CALCULATIONS

Table 1-1. Key Parameters/Constants for Proposed Emergency Fire Pump Engine Emission Calculations - Proposed System 13

Parameter	Value	Unit
100% Load Engine Power[1]	520.32	hp
100% Load Engine Power[1]	388.00	kW
Maximum Fuel Consumption Rate [1]	19.30	gal/hr
Annual Hours [2]	50.00	hrs/yr
Heating Value of Diesel [3]	137,000.00	btu/gal
Maximum Heat Input [4]	3.64	MMBtu/hr
Number of New Engines	2	Engine

1. Based on manufacturer specifications.
2. Calculated based on anticipated operational time.
3. Heating value of diesel provided in AP-42, Appendix A (09/85).
4. Brake-Specific Fuel Consumption = 7,000 Btu/bhp-hr obtained from AP-42 Section 3.3, Table 3.3-1, footnote a.

Maximum Heat Input (MMBtu/hr) = Engine Rating (hp) * Brake-Specific Fuel Consumption (Btu/hp-hr) / 10^6 (Btu/MMBtu).

Table 1-2. Emission Factors

Engine Load (%)	100%
Engine Power (kW)	388.00
Pollutant[1,2,3]	Emission Factor (g/hp-hr)
NO_x	2.67
CO	1.62
PM	5.67E-02
PM_{10}	5.67E-02
$PM_{2.5}$	5.67E-02
SO_X	2.05E-03
VOC	0.10

1. NO_x, CO, PM and VOC emission factors per manufacturer specifications.
2. It is conservatively assumed that emission factors for PM_{10} and $PM_{2.5}$ are equivalent to the emission factor for PM.
3. SO_X emission factor provided in AP-42 Table 3.3-1.

Table 1-3. HAP Emissions per Engine

Engine Load (%)		100%	Annual PTE (per engine)		Annual PTE (all engines)	
Engine Power (kW)		388.00				
Hours per Year at % Load		50.00				
Pollutant	Emission Factor (lb/MMBtu)[1]	Hourly PTE (lb/hr)[2,3]	(lb/yr)	(tpy)[4]	(lb/yr)	(tpy)
Benzene	9.33E-04	3.40E-03	1.70E-01	8.50E-05	0.34	1.70E-04
Toluene	4.09E-04	1.49E-03	7.45E-02	3.72E-05	1.49E-01	7.45E-05
Xylenes	2.85E-04	1.04E-03	5.19E-02	2.60E-05	1.04E-01	5.19E-05
1,3-Butadiene	3.91E-05	1.42E-04	7.12E-03	3.56E-06	1.42E-02	7.12E-06
Formaldehyde	1.18E-03	4.30E-03	2.15E-01	1.07E-04	0.43	2.15E-04
Acetaldehyde	7.67E-04	2.79E-03	1.40E-01	6.98E-05	0.28	1.40E-04
Acrolein	9.25E-05	3.37E-04	1.68E-02	8.42E-06	3.37E-02	1.68E-05
Naphthalene	8.48E-05	3.09E-04	1.54E-02	7.72E-06	3.09E-02	1.54E-05
Acenaphthylene	5.06E-06	1.84E-05	9.21E-04	4.61E-07	1.84E-03	9.21E-07
Acenaphthene	1.42E-06	5.17E-06	2.59E-04	1.29E-07	5.17E-04	2.59E-07
Fluorene	2.92E-05	1.06E-04	5.32E-03	2.66E-06	1.06E-02	5.32E-06
Phenanthrene	2.94E-05	1.07E-04	5.35E-03	2.68E-06	1.07E-02	5.35E-06
Anthracene	1.87E-06	6.81E-06	3.41E-04	1.70E-07	6.81E-04	3.41E-07
Fluoranthene	7.61E-06	2.77E-05	1.39E-03	6.93E-07	2.77E-03	1.39E-06
Pyrene	4.78E-06	1.74E-05	8.70E-04	4.35E-07	1.74E-03	8.70E-07
Benzo(a)anthracene	1.68E-06	6.12E-06	3.06E-04	1.53E-07	6.12E-04	3.06E-07
Chrysene	3.53E-07	1.29E-06	6.43E-05	3.21E-08	1.29E-04	6.43E-08
Benzo(b)fluoranthene	9.91E-08	3.61E-07	1.80E-05	9.02E-09	3.61E-05	1.80E-08
Benzo(k)fluoranthene	1.55E-07	5.65E-07	2.82E-05	1.41E-08	5.65E-05	2.82E-08
Benzo(a)pyrene	1.88E-07	6.85E-07	3.42E-05	1.71E-08	6.85E-05	3.42E-08
Indeno(1,2,3-cd)pyrene	3.75E-07	1.37E-06	6.83E-05	3.41E-08	1.37E-04	6.83E-08
Dibenz(a,h)anthracene	5.83E-07	2.12E-06	1.06E-04	5.31E-08	2.12E-04	1.06E-07
Benzo(g,h,i)perylene	4.89E-07	1.78E-06	8.91E-05	4.45E-08	1.78E-04	8.91E-08
Total HAPs:		1.41E-02	0.71	3.53E-04	1.41	7.05E-04

1. HAP Emission Factors per AP-42 Chapter 3.3, Table 3.3-2 (4/25).
2. HAP emissions (lb/hr) = Heat Input (MMBtu/hr) * EF (lb/MMBtu).
3. Brake-Specific Fuel Consumption = 7,000 Btu/bhp-hr obtained from AP-42 Section 3.3, Table 3.3-1, footnote a.
Maximum Heat Input (MMBtu/hr) = Engine Rating (hp) * Brake-Specific Fuel Consumption (Btu/hp-hr) / 106 (Btu/MMBtu).
4. HAP emissions (tpy) = HAP emissions (lb/hr) * Annual Hours of Operation (hr/yr) / 2000 (lb/ton).

Table 1-4. Greenhouse Gas Potential to Emit

Engine Load (%)			100%	CO_2e emissions (per engine)		CO_2e emissions (all engines)	
Engine Power (kW)			388.00				
Hours per Year at % Load			50.00				
Pollutant	Global Warming Potential[1]	Emission Factor (kg/MMBtu)[2]		(lb/yr)[3]	(tpy)	(lb/yr)	(tpy)
CO_2	1	73.96	593.88	29,693.87	14.85	59,387.75	29.69
CH_4	28	3.00E-03	0.67	33.72	1.69E-02	67.45	3.37E-02
N_2O	265	6.00E-04	1.28	63.84	3.19E-02	127.67	6.38E-02
Total CO_2e Emissions:			595.83	29,791.44	14.90	59,582.87	29.79

1. Global Warming Potentials are obtained from Subpart A of 40 CFR 98, Table A-1 "Global Warming Potentials."

2. Emission factor for carbon dioxide is obtained from 40 CFR 98, Table C-1 to Subpart C for Distillate Fuel Oil No. 2. Emission factors for methane and nitrous oxide are obtained from 40 CFR 98, Table C-2 to Subpart C.

3. CO_2e Potential Emissions (lb/year) = GWP * Emission Factor (kg/MMtu) * 1000 (g/kg) * 7,000 (Btu/hp-hr) / 1,000,000 (Btu/MMBtu) * Annual Hours (hr/year) * Engine Power (bhp) / 453.592 (grams/lb).

Table 1-5. Potential Emissions per Engine

Engine Load (%)	100%	Annual PTE (per engine)		Annual PTE (all engines)	
Engine Power (kW)	388.00				
Hours per Year at % Load	50.00				
Pollutant	Hourly PTE (lb/hr)[1]	(lb/yr)[2]	(tpy)	(lb/yr)	(tpy)
NO_x	3.06	153.12	7.66E-02	306.23	1.53E-01
CO	1.86	92.81	4.64E-02	185.62	9.28E-02
PM	6.50E-02	3.25	1.63E-03	6.50	3.25E-03
PM_{10}	6.50E-02	3.25	1.63E-03	6.50	3.25E-03
$PM_{2.5}$	6.50E-02	3.25	1.63E-03	6.50	3.25E-03
SO_X	2.35E-03	0.12	5.88E-05	0.24	1.18E-04
VOC	0.11	5.56	2.78E-03	11.12	5.56E-03
HAP	1.41E-02	0.71	3.53E-04	1.41	7.05E-04
GHG	595.83	29,791.44	14.90	59,582.87	29.79

1. Hourly PTE (lb/hr) = Emission Factor (g/hp-hr) * Engine Power (bhp) / 453.592 (grams/lb).

2. Annual PTE (lb/year) = Emission Factor (g/hp-hr) * Engine Power (bhp) * Annual Hours (hr/year) / 453.592 (grams/lb).

Table 2-1. Facility Wide Potential to Emit (PTE) Summary

System	PM (tpy)	$PM_{10}/PM_{2.5}$ (tpy)	SO_2 (tpy)	VOC (tpy)	CO (tpy)	NO_x (tpy)	HAP (tpy)	GHG (tpy)
Pre-Project Facility PTE								
System 2	1.89E-03	1.89E-03	1.27E-04	0.03	0.01	0.06	2.84E-04	11.98
Post-Project Facility PTE								
Proposed System 13	3.25E-03	3.25E-03	1.18E-04	5.56E-03	0.09	1.53E-01	7.05E-04	29.79
Project Emissions Summary								
Pre-Project Facility PTE [1]	5.33	5.33	0.20	14.56	34.89	191.97	0.24	24,916.34
Post-Project Facility PTE [2]	5.33	5.33	0.20	14.54	34.97	192.06	0.25	24,934.16
Net Project PTE [3]	1.36E-03	1.36E-03	-9.35E-06	-2.03E-02	7.91E-02	9.46E-02	4.22E-04	1.78E+01
NDEP Class II Thresholds[4] (tpy)	-	5	5	20	50	5	-	-
NDEP Environmental Evaluation Threshold[5] (tpy)	10	10	10	10	10	10	-	
NDEP Class I Thresholds[6] (tpy)	100	100	100	100	100	100	25/10	-
PSD Thresholds[7,8] (tpy)	250	250	250	250	250	250	-	75,000
Does Project PTE Exceed Class II Thresholds?	-	Yes	No	No	No	Yes	-	-
Does Project PTE Exceed the Environmental Evaluation Threshold?	No	No	No	No	No	No	No	-
Does Project PTE Exceed Class I Thresholds?	No	No	No	No	No	Yes	No	-
Does Project PTE Exceed PSD Thresholds?[9]	No	No	No	No	No	No	No	No

1. Pre-Project Facility PTE (tpy) = sum of emissions from all emission units (tpy) in Pre-Project Facility PTE. This is consistent with the Post-Project emissions from the pending application submitted to NDEP on September 11, 2026.

2. Post-Project Facility PTE (tpy) = sum of emissions from all emission units (tpy) in Post-Project Facility PTE.

3. Net Project PTE (tpy) = Post-Project Facility PTE (tpy) - Pre-Project Facility PTE (tpy).

4. The Class II thresholds are defined in NAC 445B.037.

5. Per NAC 445B.310(1)(b)(2), and environmental evaluation is required for modifications with an emission increase greater than 10 tpy at an existing facility with emissions greater than 25 tpy.

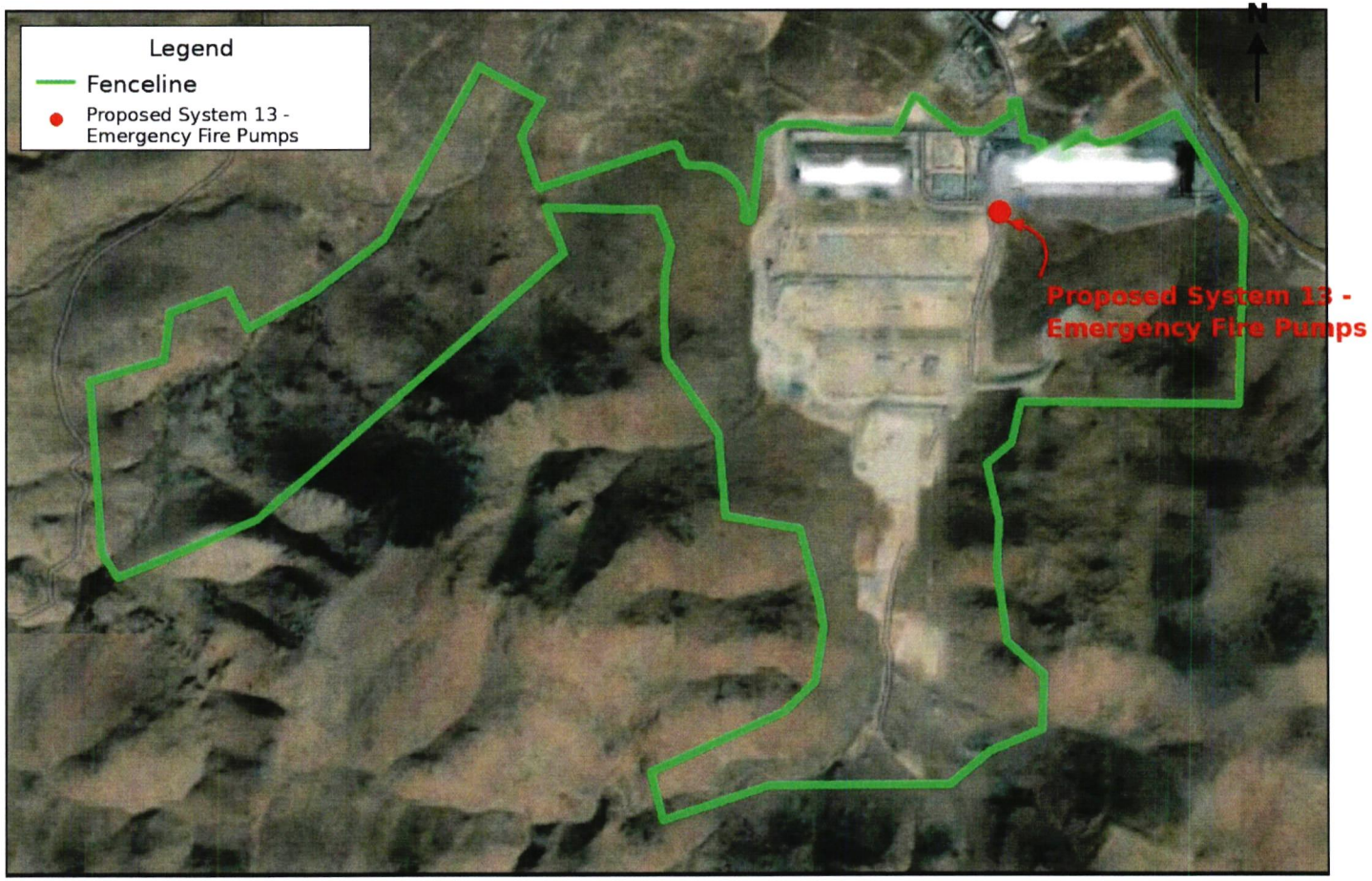
6. The Class I thresholds are defined in NAC 445B.036 [40CFR 52.21] as 100 tpy of any air contaminant and 10 tpy of any individual HAP or 25 tpy of combined HAP.

7. The Class II thresholds are defined in NAC 445B.037. Emissions less than these thresholds may not require a permit.

8. The PSD thresholds are defined in 40 CFR 52.21(b)(1)(ii) as 250 tpy of any regulated NSR pollutant for sources not listed in 40 CFR 52.21(b)(1)(i).

9. GHG SER as provided under "subject to regulation" definitions in 40 CFR 51.166(b)(48) and 52.21(b)(49). Unlike other pollutant SERs, a GHG SER is not listed in 40 CFR 51.166(b)(23) or 52.21(b)(23). Per 40 CFR 52.21 (b)(49)(iv) "... the pollutant GHGs is subject to regulation if:
(a) The stationary source is a new major stationary source for a regulated NSR pollutant that is not GHGs, and also will emit or will have the potential to emit 75,000 tpy CO_2e or more; or
(b) The stationary source is an existing major stationary source for a regulated NSR pollutant that is not GHGs, and also will have an emissions increase of a regulated NSR pollutant, and an emissions increase of 75,000 tpy CO2e or more."

APPENDIX D. FACILITY PLOT PLANS





Switch - Reno Facility

Coordinate System: NAD 1983 UTM Zone 11N