



MAY 12 2016

Lorina Pisi
California Department of Forestry & Fire Protection (Cal Fire)
P O Box 944246
Sacramento, CA 94244-2460

Re: Notice of Preliminary Decision - Authority to Construct
Facility Number: C-8951
Project Number: C-1152875

Dear Ms. Pisi:

Enclosed for your review and comment is the District's analysis of California Department of Forestry & Fire Protection's (Cal Fire's) application for an Authority to Construct for a 72 horsepower LPG/propane fired emergency standby IC engine powering an electrical generator, at Bear Mountain in Squaw Valley, Fresno County.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. After addressing all comments made during the 30-day public notice period, the District intends to issue the Authority to Construct. Please submit your written comments on this project within the 30-day public comment period, as specified in the enclosed public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Brian Clerico of Permit Services at (559) 230-5892.

Sincerely,



Arnaud Marjollet
Director of Permit Services

AM:bkc

Enclosures

cc: Tung Le, CARB (w/ enclosure) via email

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San Joaquin Valley Air Pollution Control District

Authority to Construct

Application Review

LPG/Propane Emergency Standby IC Engine

Facility Name: California Department of Forestry and Fire Protection (Cal Fire) Date: April 28, 2016

Mailing Address: P O Box 944246 Engineer: Brian Clerico
Sacramento, CA 94244-2460 Lead Engineer: George Heinen

Contact Person: Lorina Pisi T&V Manager

Telephone: (714) 282-8240

Application #: C-8951-1-0

Project #: C-1152875

Complete: December 9, 2015

I. Proposal

The California Department of Forestry and Fire Protection (Cal Fire) has submitted an Authority to Construct (ATC) application for an existing 72 bhp LPG/propane fired emergency standby IC engine powering an electrical generator. The application was submitted in response to a Notice of Violation for operation of equipment without a permit. The applicant estimated the generator set was installed between 1991 – 1997 without a permit. The engine's data plate is stamped "8/23/91."

Engines greater than 65 bhp located in Fresno County required a permit beginning in 1989. Since the engine in this project was installed after 1989, this application will be processed as an Authority to Construct rather than an In-House Permit to Operate.

II. Applicable Rules

- Rule 2201 New and Modified Stationary Source Review Rule (4/21/11)
- Rule 2520 Federally Mandated Operating Permits (6/21/01)
- Rule 4001 New Source Performance Standards (4/14/99)
- Rule 4002 National Emission Standards for Hazardous Air Pollutants (5/20/04)
- Rule 4101 Visible Emissions (2/17/05)
- Rule 4102 Nuisance (12/17/92)
- Rule 4201 Particulate Matter Concentration (12/17/92)
- Rule 4701 Internal Combustion Engines - Phase 1 (8/21/03)
- Rule 4702 Internal Combustion Engines (11/14/13)
- Rule 4801 Sulfur Compounds (12/17/92)

CH&SC 41700 Health Risk Assessment
CH&SC 42301.6 School Notice
California Environmental Quality Act (CEQA)
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387:
CEQA Guidelines

III. Project Location

The IC engine is located on top of Bear Mountain in Squaw Valley at the end of Bear Mountain Road. The District has verified with aerial maps that this engine is not located within 1,000 feet of a school. Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is not required.

IV. Process Description

This emergency standby engine powers an electrical generator that provides back-up power to a remote wildfire lookout site on top of Bear Mountain. Other than emergency standby operation, the engine may be operated up to 100 hours per year for maintenance and testing purposes.

V. Equipment Listing

ATC Equipment Description

C-8951-1-0: 72 BHP GENERAC/GM MODEL 50GN (5.0 L) LPG-PROPANE FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR (SG030)

VI. Emission Control Technology Evaluation

The engine is equipped with Positive Crankcase Ventilation (PCV). The PCV system reduces crankcase VOC and PM₁₀ emissions by at least 90% over an uncontrolled crankcase vent.

VII. General Calculations

A. Assumptions

Emergency operating schedule:	24 hours/day
Non-emergency operating schedule:	100 hours/year
EPA F-factor (adjusted to 60 °F):	8,578 dscf/MMBtu (40 CFR 60 Appendix B)
Fuel heating value:	94,000 Btu/gal (AP-42, Appendix A, pg. 5, dated 9/85)
BHP to Btu/hr conversion:	2,542.5 Btu/bhp-hr
Thermal efficiency of engine:	commonly ≈ 35%

B. Emission Factors

The emission factors for NO_x and CO presented below are from AT&T project S-6700, 1143857 involving the same make, model, and horsepower engine installed in 1999 at a remote cell tower site. The NO_x and CO emission factors are based on EPA's NONROAD Model and take account of fuel type, horsepower category, type of service (e.g. generator), and model year (which contributes to a "deterioration factor," assuming 500 hours per year operation). The emission factors are higher than the emission factors used in the District's GEAR for new LPG/propane fired emergency IC engines. (As part of a consent decree, EPA required AT&T either to revise the air permits for its LPG/propane fired IC engines to use the higher NO_x and CO emissions factors predicted by EPA's NONROAD Model or source test to demonstrate compliance with the lower emission factors on their current permits.)

Given the similarity in Cal Fire's and AT&T's engine, and EPA's previous actions regarding the AT&T engine(s), the EPA NONROAD emission factors for NO_x and CO will be used in the present project.

Emission Factors		
Pollutant	Emission Factor (g/bhp-hr)	Source
NO _x	13.0	EPA NONROAD Model (ATC project S-6700, 1143857)
SO _x	0.012	GEAR
PM ₁₀	0.175	GEAR
CO	39.0	EPA NONROAD Model (ATC project S-6700, 1143857)
VOC	2.91	Current PTO, GEAR

C. Calculations

1. Pre-Project Emissions (PE1)

The unit in this project is "new;" therefore, the PE1 = 0 for all pollutants.

2. Post-Project PE (PE2)

The daily and annual PE2 are calculated as follows:

$$\text{Daily PE2 (lb-pollutant/day)} = \text{EF (g-pollutant/bhp-hr)} \times \text{rating (bhp)} \times \text{operation (hr/day)} / 453.6 \text{ g/lb}$$

$$\text{Annual PE2 (lb-pollutant/yr)} = \text{EF (g-pollutant/bhp-hr)} \times \text{rating (bhp)}$$

× operation (hr/yr) / 453.6 g/lb

PE2						
Pollutant	Emissions Factor (g/bhp-hr)	Rating (bhp)	Daily Hours of Operation (hr/day)	Annual Hours of Operation (hr/yr)	Daily PE2 (lb/day)	Annual PE2 (lb/yr)
NO _x	13.0	72	24	100	49.5	206
SO _x	0.012	72	24	100	0.0	0
PM ₁₀	0.175	72	24	100	0.7	3
CO	39.0	72	24	100	148.6	619
VOC	2.91	72	24	100	11.1	46

3. Pre-Project Stationary Source Potential to Emit (SSPE1)

Pursuant to Section 4.9 of District Rule 2201, the Pre-Project Stationary Source Potential to Emit (SSPE1) is the Potential to Emit (PE) from all units with valid ATCs or PTOs at the Stationary Source and the quantity of Emission Reduction Credits (ERCs) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

This is a new facility; therefore, the SSPE1 = 0 for all pollutants.

4. Post-Project Stationary Source Potential to Emit (SSPE2)

Pursuant to Section 4.10 of District Rule 2201, the Post-Project Stationary Source Potential to Emit (SSPE2) is the Potential to Emit (PE) from all units with valid ATCs or PTOs, except for emissions units proposed to be shut down as part of the Stationary Project, at the Stationary Source and the quantity of Emission Reduction Credits (ERCs) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

SSPE2 is summarized in the following table. This facility has only one permit unit. The annual PE values for C-8951-1-0 were taken from Section VII.C.2 of this application review.

SSPE2					
Permit Unit	NO _x (lb/yr)	SO _x (lb/yr)	PM ₁₀ (lb/yr)	CO (lb/yr)	VOC (lb/yr)
C-8951-1-0	206	0	3	619	46
SSPE2	206	0	3	619	46

5. Major Source Determination

Rule 2201 Major Source Determination:

Pursuant to District Rule 2201, a Major Source is a stationary source with a SSPE2 equal to or exceeding one or more of the following threshold values. For the purposes of determining major source status the following shall not be included:

- any ERCs associated with the stationary source
- Emissions from non-road IC engines (i.e. IC engines at a particular site at the facility for less than 12 months)
- Fugitive emissions, except for the specific source categories specified in 40 CFR 51.165

Rule 2201 Major Source Determination (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
Facility emissions pre-project	0	0	0	0	0
Facility emissions post-project	206	0	3	619	46
Major Source Threshold	20,000	140,000	140,000	200,000	20,000
Major Source?	No	No	No	No	No

As seen in the table above, the facility is not an existing Major Source and is not becoming a Major Source as a result of this project.

Rule 2410 Major Source Determination:

The facility is not an existing major source for PSD for at least one pollutant. Therefore the facility is not an existing major source for PSD.

6. Baseline Emissions (BE)

BE = Pre-project Potential to Emit for:

- Any unit located at a non-Major Source,

- Any Highly-Utilized Emissions Unit, located at a Major Source,
- Any Fully-Offset Emissions Unit, located at a Major Source, or
- Any Clean Emissions Unit, located at a Major Source.

otherwise,

BE = Historic Actual Emissions (HAE), calculated pursuant to Section 3.23

Since the engine is a new unit, BE = 0 for all criteria pollutants.

7. SB 288 Major Modification

SB 288 Major Modification is defined in 40 CFR Part 51.165 as "any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act."

Since this facility is not a Major Source for any of the pollutants addressed in this project, this project does not constitute an SB 288 major modification.

8. Federal Major Modification

District Rule 2201, Section 3.18 states that Federal Major Modifications are the same as "Major Modification" as defined in 40 CFR 51.165 and part D of Title I of the CAA.

Since this facility is not a Major Source for any pollutants, this project does not constitute a Federal Major Modification. Additionally, since the facility is not a major source for PM₁₀ (140,000 lb/year), it is not a major source for PM_{2.5} (200,000 lb/year).

9. Rule 2410 - Prevention of Significant Deterioration (PSD) Applicability Determination

Rule 2410 applies to any pollutant regulated under the Clean Air Act, except those for which the District has been classified nonattainment. The pollutants which must be addressed in the PSD applicability determination for sources located in the SJV (See 52.21 (b) (23) definition of significant) and which are emitted in this project are:

- NO₂ (as a primary pollutant)
- SO₂ (as a primary pollutant)
- CO
- PM
- PM₁₀

I. Project Emissions Increase - New Major Source Determination

The post-project potentials to emit from all new and modified units are compared to the PSD major source thresholds to determine if the project constitutes a new major source subject to PSD requirements.

The facility or the equipment evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21 (b)(1)(i). The PSD Major Source threshold is 250 tpy for any regulated NSR pollutant.

PSD Major Source Determination: Potential to Emit (tons/year)						
	NO2	VOC	SO2	CO	PM	PM10
Total PE from New and Modified Units*	0	0	0	0	0	0
PSD Major Source threshold	250	250	250	250	250	250
New PSD Major Source?	N	N	N	N	N	N

* PE values that are less than 0.5 tons/year are rounded to 0.

As shown in the table above, the potential to emit for the project, by itself, does not exceed any PSD major source threshold. Therefore Rule 2410 is not applicable and no further analysis is required.

10. Quarterly Net Emissions Change (QNEC)

The QNEC is calculated solely to establish emissions that are used to complete the District's PAS emissions profile screen. See Appendix A for QNEC calculations.

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis for the following*:

- a. Any new emissions unit with a potential to emit exceeding two pounds per day,
- b. The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,

- c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
- d. Any new or modified emissions unit, in a stationary source project, which results in an SB288 Major Modification or a Federal Major Modification, as defined by the rule.

*Except for CO emissions from a new or modified emissions unit at a Stationary Source with an SSPE2 of less than 200,000 pounds per year of CO.

a. New emissions units – PE > 2 lb/day

The applicant is proposing to install a new LPG/propane-fired IC engine.

BACT Applicability				
Pollutant	PE2 (lb/day)	BACT Threshold (lb/day)	SSPE2 (lb/yr)	BACT Triggered?
NO _x	49.5	> 2.0	n/a	Yes
SO _x	0.0	> 2.0	n/a	No
PM ₁₀	0.7	> 2.0	n/a	No
CO	148.6	> 2.0 and SSPE2 ≥ 200,000 lb/yr	619	No
VOC	11.1	> 2.0	n/a	Yes

As the table above shows, BACT is triggered for NO_x and VOC.

b. Relocation of emissions units – PE > 2 lb/day

There are no emissions units being relocated from one stationary source to another; therefore, BACT is not triggered for the relocation of an emission unit.

c. Modification of emissions units – AIPE > 2 lb/day

There are no modified emissions units associated with this project; therefore, BACT is not triggered for the modification of an emission unit.

d. SB 288/Federal Major Modification

As discussed in Sections VII.C.7 and VII.C.8 above, this project does not constitute an SB 288 and/or Federal Major Modification for any pollutant. Therefore, BACT is not triggered for an SB288 or Federal Major Modification.

2. BACT Guideline

The applicable BACT guideline at the time of original permitting was BACT Guideline 3.1.5, Emergency Gas-Fired IC Engine < 132 hp, Rich Burn (see **Appendix B**).

3. Top Down BACT Analysis

Pursuant to the attached Top-Down BACT Analysis, which appears in Appendix C of this report, BACT is satisfied with:

- NO_x: BACT for NO_x is satisfied with no controls. (No technologically feasible option was determined to be cost effective)
- VOC: BACT for VOC is satisfied with positive crankcase ventilation (PCV).

B. Offsets

Since emergency IC engines are exempt from the offset requirements of Rule 2201, per Section 4.6.2, offsets are not required for this engine, and no offset calculations are required.

C. Public Notification

1. Applicability

Public noticing is required for:

- a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications,
- b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
- c. Any project which results in the offset thresholds being surpassed, and/or
- d. Any project with an SSPE of greater than 20,000 lb/year for any pollutant.
- e. Any project which results in a Title V significant permit modification

a. **New Major Sources, SB288 Major Modifications, and Federal Major Modifications**

New Major Sources are new facilities, which are also Major Sources. As shown in Section VII.C.5 above, the SSPE2 is not greater than the Major Source threshold for any pollutant. Therefore, public noticing is not required for this project for new Major Source purposes.

b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any pollutant

The PE2 for this new unit is compared to the daily PE Public Notice thresholds in the following table:

PE > 100 lb/day Public Notice Thresholds			
Pollutant	PE2 (lb/day)	Public Notice Threshold	Public Notice Triggered?
NO _x	49.5	100 lb/day	No
SO _x	0.0	100 lb/day	No
PM ₁₀	0.7	100 lb/day	No
CO	148.6	100 lb/day	Yes
VOC	11.1	100 lb/day	No

As the table above shows, the daily PE for CO is greater than 100 lb/day. Therefore, public noticing for a new unit having a PE > 100 lb/day is required.

c. Any project which results in the offset thresholds being surpassed

The SSPE1 and SSPE2 are compared to the offset thresholds in the following table.

Offset Thresholds				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO _x	0	206	20,000 lb/year	No
SO _x	0	0	54,750 lb/year	No
PM ₁₀	0	3	29,200 lb/year	No
CO	0	619	200,000 lb/year	No
VOC	0	46	20,000 lb/year	No

As shown above, there were no offset thresholds surpassed with this project; therefore, public noticing is not required for offset purposes.

d. Any project with a Stationary Source Project Increase in Permitted Emissions (SSIPE) greater than 20,000 lb/year for any pollutant

Since the PE2 is well below 20,000 lb/year for all pollutants (See Section VII.C.2), the SSIPE for this project will be below the public notice threshold.

e. Any project which results in a Title V significant permit modification

This facility is not a Title V source, so this project cannot result in a significant modification to a Title V permit.

2. Public Notice Action

As discussed above, this project will require public noticing for CO emissions greater than 100 lb/day for a “new” emissions unit. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB) and a public notice will be published in a local newspaper of general circulation prior to the issuance of the ATC(s) for this equipment.

D. Daily Emissions Limits

Daily Emissions Limitations (DELS) and other enforceable conditions are required by Rule 2201 to restrict a unit’s maximum daily emissions to a level at or below the emissions associated with the maximum design capacity. Per Sections 3.16.1 and 3.16.2, the DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. Therefore, the following conditions will be listed on the ATC to ensure compliance:

- Emissions from this IC engine shall not exceed any of the following limits: 13.0 g-NOx/bhp-hr, 0.175 g-PM10/bhp-hr, 39.0 g-CO/bhp-hr, or 2.91 g-VOC/bhp-hr. [District Rule 2201]
- {1897} This engine shall be equipped with either a positive crankcase ventilation (PCV) system that recirculates crankcase emissions into the air intake system for combustion, or a crankcase emissions control device of at least 90% control efficiency. [District Rule 2201]
- {modified 3505} This IC engine shall be fired on LPG/propane gas only. [District Rules 2201 and 4801]
- {modified 3806} This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rules 2201, 4102, and 4702]

E. Compliance Assurance

1. Source Testing

Pursuant to District Policy APR 1705, source testing is not required for emergency standby IC engines to demonstrate compliance with Rule 2201.

2. Monitoring

No monitoring is required to demonstrate compliance with Rule 2201.

3. Recordkeeping

Recordkeeping requirements, in accordance with District Rule 4702, will be discussed in Section VIII, *District Rule 4702*, of this evaluation.

4. Reporting

No reporting is required to ensure compliance with Rule 2201.

F. Ambient Air Quality Analysis (AAQA)

An AAQA shall be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. The District's Technical Services Division conducted the required analysis. Refer to **Appendix C** of this document for the AAQA summary sheet.

The proposed location is in an attainment area for NO_x, CO, and SO_x. As shown by the AAQA summary sheet the proposed equipment will not cause a violation of an air quality standard for NO_x, CO, or SO_x.

The proposed location is in a non-attainment area for the state's PM₁₀ as well as federal and state PM_{2.5} thresholds. As shown by the AAQA summary sheet, the proposed equipment will not cause a violation of an air quality standard for PM₁₀ and PM_{2.5}.

Since an unimpeded vertical exhaust was assumed in the AAQA, the following permit condition will be included on the ATC:

- {modified 1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rules 2201 and 4102]

Rule 2520 Federally Mandated Operating Permits

Since this facility's potential to emit does not exceed any Major Source thresholds of Rule 2201, this facility is not a Major Source, and Rule 2520 does not apply.

Rule 4001 New Source Performance Standards (NSPS)

40 CFR 60 Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

The District has not been delegated the authority to implement Subpart JJJJ requirements for non-Major Sources; therefore, no Subpart JJJJ requirements shall be included on the permit.

Rule 4002 National Emission Standards for Hazardous Air Pollutants

40 CFR 63 Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Emissions (RICE)

The District has not been delegated the authority to implement NESHAP regulations for non-Major (i.e. Area) Sources; therefore, no Subpart ZZZZ requirements shall be included on the permit.

Rule 4101 Visible Emissions

Rule 4101 states that no air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. Therefore, the following condition will be listed on the ATC to ensure compliance:

- {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]

Rule 4102 Nuisance

Rule 4102 states that no air contaminant shall be released into the atmosphere which causes a public nuisance. Public nuisance conditions are not expected as a result of operation of this engine, provided the engine is well maintained. Therefore, the following condition will be listed on the ATC to ensure compliance:

- {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

California Health & Safety Code 41700 (Health Risk Assessment)

District Policy APR 1905 - Risk Management Policy for Permitting New and Modified Sources (dated 3/2/01) specifies that for an increase in emissions associated with a proposed new source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite.

A summary of the risk management review is presented in the table below. See **Appendix C** for memo.

RMR Summary			
Categories	LPG ICE (Unit 1-0)	Project Totals	Facility Totals
Prioritization Score	1.17	>1.0	>1.0
Acute Hazard Index	0.092	0.092	0.092
Chronic Hazard Index	0.000	0.000	0.000
Maximum Individual Cancer Risk	1.24E-08	1.24E-08	1.24E-08
T-BACT Required?	No		
Special Permit Requirements?	Yes		

T-BACT or BACT for toxics was not triggered; however, the following conditions are required to ensure compliance with the assumptions used in the RMR:

- {modified 3806} This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rules 2201, 4102, and 4702]
- {modified 1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rules 2201 and 4102]

Compliance with the District's Risk Management Policy is expected.

Rule 4201 Particulate Matter Concentration

Rule 4201 limits particulate matter emissions from any single source operation to 0.1 g/dscf.

$$0.175 \frac{g - PM_{10}}{bhp - hr} \times \frac{1 bhp - hr}{2,542.5 Btu} \times \frac{10^6 Btu}{8,578 dscf} \times \frac{0.35 Btu_{out}}{1 Btu_{in}} \times \frac{15.43 grain}{g} = 0.04 \frac{grain - PM}{dscf}$$

Since 0.04 grain-PM/dscf is \leq to 0.1 grain per dscf, compliance with Rule 4201 is expected.

Therefore, the following condition will be listed on the ATC to ensure compliance:

- {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

Rule 4701 Internal Combustion Engines - Phase 1

The purpose of this rule is to limit the emissions of nitrogen oxides (NO_x), carbon monoxide (CO), and volatile organic compounds (VOC) from internal combustion engines. Except as provided in Section 4.0, the provisions of this rule apply to any internal combustion engine, rated greater than 50 bhp, that requires a PTO.

The proposed engine is also subject to District Rule 4702, Internal Combustion Engines. Since the emissions limits and all other requirements of District Rule 4702 are equivalent or more stringent than the requirements of District Rule 4701 for emergency engines, compliance with District Rule 4702 requirements will satisfy requirements of District Rule 4701.

Rule 4702 Internal Combustion Engines

Section 1.0 Purpose

The purpose of this rule is to limit the emissions of nitrogen oxides (NO_x), carbon monoxide (CO), volatile organic compounds (VOC), and sulfur oxides (SO_x) from internal combustion engines.

Section 2.0 Applicability

This rule applies to any internal combustion engine rated at 25 brake horsepower or greater.

The engine in this project is rated at greater than 25 bhp and is therefore subject to this rule.

Section 3.0 Definitions

The engine in this project is an emergency-standby engine. Rule 4702, Section 3.15 defines an emergency-standby engine as follows:

An engine shall be considered to be an emergency standby engine if it is used only for the following purposes:

- (1) periodic maintenance, periodic readiness testing, or readiness testing during and after repair work;*
- (2) unscheduled outages, or to supply power while maintenance is performed or repairs are made to the primary power supply; and*
- (3) if it is limited to operate 100 hours or less per calendar year for non-emergency purposes.*

An engine shall not be considered to be an emergency standby engine if it is used:

(1) to reduce the demand for electrical power when normal electrical power line service has not failed, or

(2) to produce power for the utility electrical distribution system, or

(3) in conjunction with a voluntary utility demand reduction program or interruptible power contract.

The following standard ATC conditions will ensure compliance with the emergency-standby criteria of the rule:

- {modified 3806} This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rules 2201 and 4702]
- {3807} An emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. [District Rule 4702]
- {3808} This engine shall not be used to produce power for the electrical distribution system, as part of a voluntary utility demand reduction program, or for an interruptible power contract. [District Rule 4702]

Section 4.0 Exemptions

Per Section 4.2, provided that the engine is operated with an operating nonresettable elapsed time meter, emergency-standby engines are exempt from the requirements of Rule 4702 except for the requirements of Sections 5.9 (Monitoring) and 6.2.3 (Recordkeeping).

Section 5.9 Monitoring

Section 5.9.2 requires the permittee to properly operate and maintain each engine as recommended by the engine manufacturer or emission control system supplier.

Section 5.9.3 requires the permittee to monitor the operational characteristics of each engine as recommended by the engine manufacturer or emission control system supplier.

Section 5.9.4 requires the permittee to install and operate a non-resettable elapsed time meter.

The following standard ATC conditions will ensure compliance with the requirements of this section:

- {3405} This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702]
- {3478} During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702]
- {3404} This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702]

Section 6.2.3 Recordkeeping

Section 6.2.3 requires the permittee to maintain annual operating records, to retain them for at least five years, and make them readily available to the APCO upon request. The records shall include, but are not limited to, the following:

6.2.3.1 Total hours of operation,

6.2.3.2 The type of fuel used,

6.2.3.3 The purpose for operating the engine,

6.2.3.4 For emergency standby engines, all hours of non-emergency and emergency operation shall be reported, and

6.2.3.5 Other support documentation necessary to demonstrate claim to the exemption.

The following standard conditions will ensure compliance with the recordkeeping requirements of Rule 4702:

- {modified 3500} The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.), and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rule 4702]

- {3498} All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. For units at unstaffed sites or operated remotely, records may be maintained and retained at a District-approved off-site location. [District Rule 4702]¹

Rule 4801 Sulfur Compounds

Rule 4801 requires that sulfur compound emissions (as SO₂) shall not exceed 0.2% by volume. Using the ideal gas equation, the sulfur compound emissions are calculated as follows:

$$\text{Volume SO}_2 = (n \times R \times T) \div P$$

n = moles SO₂

T (standard temperature) = 60 °F or 520 °R

$$R (\text{universal gas constant}) = \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot \text{°R}}$$

$$0.35^2 \frac{\text{lb} - \text{SO}_x}{1,000 \text{ gal}} \times \frac{1 \text{ gal}}{0.094 \text{ MMBtu}} \times \frac{1 \text{ MMBtu}}{8,578 \text{ scf}} \times \frac{\text{lb} - \text{mol}}{64 \text{ lb} - \text{SO}_2} \times \frac{10.73 \text{ psi} - \text{ft}^3}{\text{lb} - \text{mol} - \text{°R}} \times \frac{520 \text{ °R}}{14.7 \text{ psi}} \times 1,000,000 = 2.6 \text{ ppmv}$$

Since 2.6 ppmv is ≤ 2,000 ppmv, this engine is expected to comply with Rule 4801. Therefore, the following condition (previously proposed in this engineering evaluation) will be listed on the ATC to ensure compliance:

- {modified 3505} This IC engine shall be fired on LPG/propane gas only. [District Rules 2201 and 4801]

California Health & Safety Code 42301.6 (School Notice)

The District has verified that this engine is not located within 1,000 feet of a school. Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is not required.

¹ The lookout tower may only have staff on site during the fire season.

² Per the GEAR for emergency-standby LPG/propane IC engines, the 0.012 g/bhp-hr SO_x emission factor is equivalent to 0.35 lb-SO_x/1,000 gal:

$$\frac{0.35 \text{ lb} - \text{SO}_x}{1,000 \text{ gal}} \times \frac{\text{gal}}{94,000 \text{ Btu}} \times \frac{2,542.5 \text{ Btu}}{\text{bhp} - \text{hr input}} \times \frac{1 \text{ bhp input}}{0.35 \text{ bhp out}} \times \frac{453.6 \text{ g}}{\text{lb}} = \frac{0.012 - \text{SO}_x}{\text{bhp} - \text{hr}}$$

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA) requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The San Joaquin Valley Unified Air Pollution Control District (District) adopted its *Environmental Review Guidelines* (ERG) in 2001.

The basic purposes of CEQA are to:

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities.
- Identify the ways that environmental damage can be avoided or significantly reduced.
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

Consistent with California Environmental Quality Act (CEQA) and CEQA Guidelines requirements, the San Joaquin Valley Air Pollution Control District (District) has adopted procedures and guidelines for implementing CEQA. The District's Environmental Review Guidelines (ERG) establishes procedures for avoiding unnecessary delay during the District's permitting process while ensuring that significant environmental impacts are thoroughly and consistently addressed. The ERG includes policies and procedures to be followed when processing permits for projects that are exempt under CEQA.

The State Legislature granted a number of exemptions from CEQA, including projects that require only ministerial approval. Based upon analysis of its own laws and consideration of CEQA provisions, the District has identified a limited number of District permitting activities considered to be ministerial approvals. As set forth in §4.2.1 of the ERG, projects permitted consistent with the District's *Guidelines for Expedited Application Review* (GEAR) are standard application reviews in which little or no discretion is used in issuing Authority to Construct (ATC) documents.

For the proposed project, the District performed an Engineering Evaluation (this document) and determined that the project will occur at an existing facility; involves negligible expansion of the existing use; and would not have a significant effect on the environment. The District further determined that the project qualifies for processing under the procedures set forth in the District's Permit Services Procedures Manual in the *Guidelines for Expedited Application Review* (GEAR). Thus, as discussed above,

issuance of such ATC(s) is ministerial approval for the District and is not subject to CEQA provisions.

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Pending a successful 30-day Rule 2201 Public Notification period, issue ATC C-8951-1-0 subject to the permit conditions on the attached draft ATC in **Appendix D**.

X. Billing Information

Billing Schedule			
Permit Number	Fee Schedule	Fee Description	Fee Amount
C-8951-1-0	3020-10-A	72 bhp IC engine	\$84

XI. Appendices

- A. Quarterly Net Emissions Change
- B. BACT Guideline and Top-Down BACT Analysis
- C. Risk Management Review and Ambient Air Quality Analysis Memo
- D: Draft ATC

Appendix A
Quarterly Net Emissions Change

Quarterly Net Emissions Change (QNEC)

The Quarterly Net Emissions Change is used to complete the emission profile screen for the District's PAS database. The QNEC shall be calculated as follows:

QNEC = PE2 - PE1, where:

QNEC = Quarterly Net Emissions Change for each emissions unit, lb/qtr.

PE2 = Post Project Potential to Emit for each emissions unit, lb/qtr.

PE1 = Pre-Project Potential to Emit for each emissions unit, lb/qtr.

Using the values in Sections VII.C.2 and VII.C.1 in the evaluation above, quarterly PE2 and quarterly PE1 can be calculated as follows:

$$\begin{aligned} \text{PE2}_{\text{quarterly}} &= \text{PE2}_{\text{annual}} \div 4 \text{ quarters/year} \\ &= 206 \text{ lb/year} \div 4 \text{ qtr/year} \\ &= 51.5 \text{ lb-NOx/qtr} \end{aligned}$$

$$\begin{aligned} \text{PE1}_{\text{quarterly}} &= \text{PE1}_{\text{annual}} \div 4 \text{ quarters/year} \\ &= 0 \text{ lb/year} \div 4 \text{ qtr/year} \\ &= 0 \text{ lb-NOx/qtr} \end{aligned}$$

QNEC			
	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO _x	51.5	0	51.5
SO _x	0	0	0
PM ₁₀	0.75	0	0.75
CO	154.75	0	154.75
VOC	11.5	0	11.5

Appendix B

BACT Guideline and Top-Down BACT Analysis

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 3.1.5*

Last Update: 11/27/1996

Emergency Gas Fired I.C. Engine - < 132 hp, Rich Burn

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Positive crankcase ventilation (PCV)	VOC catalyst (3 way), positive crankcase ventilation (PCV)	
PM10	Positive crankcase ventilation (PCV)	Positive crankcase ventilation (PCV)	
NOx		NOx Catalyst (3 way)	
CO		CO Catalyst (3 way)	

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

***This is a Summary Page for this Class of Source**

Top Down BACT Analysis for NOx

BACT Guideline 3.1.5, Emergency Gas-Fired IC Engine < 132 hp, Rich Burn, 4th quarter 2005 applies to this engine.

Step 1 - Identify all control technologies

BACT Guideline 3.1.5 identifies the following control option for NOx:

- *NOx catalyst (Technologically Feasible)*

Step 2 - Eliminate technologically infeasible options

There are no technologically infeasible options in the guideline.

Step 3 - Rank remaining options by control effectiveness

1. *NOx catalyst (Technologically Feasible)*

Step 4 - Cost Effectiveness Analysis

Technologically Feasible options are not required for a facility classified as a small emitter. The table below shows this facility qualifies as a small emitter; therefore, a cost effectiveness analysis of the 3-way catalyst is not required.

Small Emitter Thresholds ³			
Pollutant	SSPE2 (lb/day)	Small Emitter Threshold (lb/yr)	Small Emitter?
NOx	206	4,000	Yes
SOx	0	4,000	
PM10	3	4,000	
CO	619	4,000	
VOC	46	4,000	

Step 5 - Select BACT

With the elimination of the NOx catalyst as an option, BACT for NOx is satisfied with no controls.

³ APR 1305, BACT Policy.

Top Down BACT Analysis for VOC

BACT Guideline 3.1.5, Emergency Gas-Fired IC Engine < 132 hp, Rich Burn, 4th quarter 1996 applies to this engine.

Step 1 - Identify all control technologies

BACT Guideline 3.1.5 identifies the following control options for VOC:

- *VOC catalyst (3 way) (Technologically Feasible)*
- *Positive crankcase ventilation (PCV) (Achieved in Practice)*

Step 2 - Eliminate technologically infeasible options

There are no technologically infeasible options in the guideline.

Step 3 - Rank remaining options by control effectiveness

1. *VOC catalyst (3 way) (Technologically Feasible)*
2. *Positive crankcase ventilation (PCV) (Achieved in Practice)*

Step 4 - Cost Effectiveness Analysis

Technologically Feasible options are not required for a facility classified as a small emitter. The table below shows this facility qualifies as a small emitter; therefore, a cost effectiveness analysis of the VOC catalyst is not required.

Small Emitter Thresholds ⁴			
Pollutant	SSPE2 (lb/day)	Small Emitter Threshold (lb/yr)	Small Emitter?
NOx	206	4,000	Yes
SOx	0	4,000	
PM10	3	4,000	
CO	619	4,000	
VOC	46	4,000	

Step 5 - Select BACT

With the elimination of the VOC catalyst as a control option, BACT is satisfied with PCV.

⁴ APR 1305, BACT Policy.

Appendix C

Risk Management Memo and Ambient Air Quality Analysis Memo

San Joaquin Valley Air Pollution Control District Risk Management Review

To: Brian Clerico – Permit Services
 From: Marissa Williams – Technical Services
 Date: April 27, 2016
 Facility Name: CalFire
 Location: Bear Mtn, Fresno County NW Sec 5, T14S
 Application #(s): C-8951-1-0
 Project #: C-1152875

A. RMR SUMMARY

RMR Summary			
Categories	LPG ICE (Unit 1-0)	Project Totals	Facility Totals
Prioritization Score	1.17	>1.0	>1.0
Acute Hazard Index	0.092	0.092	0.092
Chronic Hazard Index	0.000	0.000	0.000
Maximum Individual Cancer Risk	1.24E-08	1.24E-08	1.24E-08
T-BACT Required?	No		
Special Permit Requirements?	Yes		

Proposed Permit Requirements

To ensure that human health risks will not exceed District allowable levels, the following shall be included as requirements for:

Unit # 1-0

1. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction.
2. This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year.

B. RMR REPORT

I. Project Description

Technical Services received a request on April 25, 2016, to perform an Ambient Air Quality Analysis and a Risk Management Review for a 72 bhp LPG-propane fired emergency IC engine powering an electrical generator.

II. Analysis

Toxic emissions for this proposed unit were calculated using 2000 AP42 emission factors for Natural Gas Fired internal combustion (4 Stroke Rich Burn) Engine and the Districts approved conversion factors from Natural Gas to LPG, and were input into the San Joaquin Valley APCD's Hazard Assessment and Reporting Program (SHARP). In accordance with the District's Risk Management Policy for Permitting New and Modified Sources (APR 1905, May 28, 2015), risks from the proposed unit's toxic emissions were prioritized using the procedure in the 1990 CAPCOA Facility Prioritization Guidelines. The prioritization score for the facility is greater than 1.0 (see RMR Summary Table). Therefore, a refined health risk assessment was required. The AERMOD model was used, with the parameters outlined below and meteorological data for 2010-2014 from Fresno to determine the dispersion factors (i.e., the predicted concentration or X divided by the normalized source strength or Q) for a receptor grid. These dispersion factors were input into the SHARP Program, which then used the Air Dispersion Modeling and Risk Tool (ADMRT) of the Hot Spots Analysis and Reporting Program Version 2 (HARP 2) to calculate the chronic and acute hazard indices and the carcinogenic risk for the project.

The following parameters were used for the review:

Analysis Parameters Unit 1-0			
Source Type	Point	Location Type	Rural
Stack Height (m)	2.438	Closest Receptor (m)	50
Stack Diameter. (m)	0.064	Type of Receptor	Business
Stack Exit Velocity (m/s)	49.178	Max Hours per Year	100
Stack Exit Temp. (°K)	755.22	Fuel Type	LPG
LPG Usage (1,000gal/hr)	0.00556	LPG Usage (1,000gal/hr)	.55641

Technical Services performed modeling for criteria pollutants CO, NO_x, SO_x, and PM₁₀ with the emission rates below:

Unit #	NO _x (Lbs.)		SO _x (Lbs.)		CO (Lbs.)		PM ₁₀ (Lbs.)	
	Hr.	Yr.	Hr.	Yr.	Hr.	Yr.	Hr.	Yr.
1-0	0	183	0	0	0	550	0	2

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

Diesel ICE	1 Hour	3 Hours	8 Hours.	24 Hours	Annual
CO	NA ¹	X	NA ¹	X	X
NO _x	NA ¹	X	X	X	Pass
SO _x	NA ¹	NA ¹	X	NA ¹	Pass
PM ₁₀	X	X	X	NA ¹	Pass ²
PM _{2.5}	X	X	X	NA ¹	Pass ²

*Results were taken from the attached PSD spreadsheet.

¹The project is an intermittent source as defined in APR-1920. In accordance with APR-1920, compliance with short-term (i.e., 1-hour, 3-hour, 8-hour and 24-hour) standards is not required.

²The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).

III. Conclusion

The acute and chronic indices are below 1.0 and the cancer risk factor associated with the project is less than 1.0 in a million. **In accordance with the District's Risk Management Policy, the project is approved without Toxic Best Available Control Technology (T-BACT).**

To ensure that human health risks will not exceed District allowable levels; the permit requirements listed on page 1 of this report must be included for this proposed unit.

These conclusions are based on the data provided by the applicant and the project engineer. Therefore, this analysis is valid only as long as the proposed data and parameters do not change.

The emissions from the proposed equipment will not cause or contribute significantly to a violation of the State and National AAQS.

IV. Attachments

- A. RMR request from the project engineer
- B. Additional information from the applicant/project engineer
- C. Prioritization score w/ toxic emissions summary
- D. Facility Summary
- E. AAQA Summary

Appendix D
Draft ATC

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: C-8951-1-0

LEGAL OWNER OR OPERATOR: CAL FIRE
MAILING ADDRESS: BEAR MOUNTAIN FRESNO
PO BOX 944246
SACRAMENTO, CA 94244-2460

LOCATION: BEAR MOUNTAIN FRESNO
NW 1/4 SEC 5 TWN 14S R25E
SQUAW VALLEY, CA

EQUIPMENT DESCRIPTION:
72 BHP GENERAC/GM MODEL 50GN (5.0 L) LPG-PROPANE FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR (SG030)

CONDITIONS

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
3. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
4. {3404} This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702]
5. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rules 2201 and 4102]
6. {3807} An emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. [District Rule 4702]
7. {3808} This engine shall not be used to produce power for the electrical distribution system, as part of a voluntary utility demand reduction program, or for an interruptible power contract. [District Rule 4702]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DRAFT
Arnaud Marjollet, Director of Permit Services
C-8951-1-0 - Apr 28 2016 3:16PM -- CLERICOB - Joint Inspection NOT Required

8. {1897} This engine shall be equipped with either a positive crankcase ventilation (PCV) system that recirculates crankcase emissions into the air intake system for combustion, or a crankcase emissions control device of at least 90% control efficiency. [District Rule 2201]
9. Emissions from this IC engine shall not exceed any of the following limits: 13.0 g-NO_x/bhp-hr, 0.175 g-PM₁₀/bhp-hr, 39.0 g-CO/bhp-hr, or 2.91 g-VOC/bhp-hr. [District Rule 2201]
10. This IC engine shall be fired on LPG/propane gas only. [District Rules 2201 and 4801]
11. This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rules 2201, 4102, and 4702]
12. {3405} This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702]
13. {3478} During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702]
14. The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.), and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rule 4702]
15. {3498} All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. For units at unstaffed sites or operated remotely, records may be maintained and retained at a District-approved off-site location. [District Rule 4702]

DRAFT