



SEP 30 2013

Mr. Todd Seely
E & J Gallo Winery
600 Yosemite Boulevard
Modesto, CA 95353

Re: Proposed Authority to Construct/Certificate of Conformity (Minor Mod)
District Facility # N-3386
Project # N-1132554

Dear Mr. Seely:

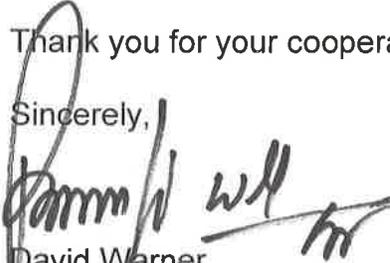
Enclosed for your review is the District's analysis of an application for Authority to Construct for the facility identified above. You requested that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The modification is to install an emergency fire pump powered by a diesel fired IC engine.

After addressing all comments made during the 45-day EPA comment period, the District intends to issue the Authority to Construct with a Certificate of Conformity. Prior to operating with modifications authorized by the Authority to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

If you have any questions, please contact Mr. Rupi Gill, Permit Services Manager, at (209) 557-6400.

Thank you for your cooperation in this matter.

Sincerely,



David Warner
Director of Permit Services

Enclosures

cc: Gerardo C. Rios, EPA (w/enclosure) via email

Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region
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Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
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Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 861-392-5500 FAX: 861-392-5585

Authority to Construct Application Review

Facility Name: E & J Gallo Winery
Mailing Address: 600 Yosemite Blvd.
Modesto, CA 95353

Date: September 23, 2013

Contact Person: Todd Seely
Telephone: (209) 341-8779

Engineer: Mark Schonhoff
Application #: N-3386-484-0

Project #: N-1132554
Deemed Complete: August 15, 2013

I. Proposal

E&J Gallo Winery is proposing to install a 175 bhp diesel fired standby internal combustion (IC) engine that will power an emergency fire pump.

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 Stationary Internal Combustion Engines – Phase 1 (8/21/03)
Rule 4702 Stationary Internal Combustion Engines (8/18/11)
Rule 4801 Sulfur Compounds (12/17/92)
CH&SC 41700 Health Risk Assessment
CH&SC 42301.6 School Notice
Title 17 CCR, Section 93115 - Airborne Toxic Control Measure (ATCM) for Stationary Compression-Ignition (CI) Engines
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

600 Yosemite Blvd.
Modesto, CA

The equipment will not be located within 1,000 feet of a K-12 school.

IV. Process Description

The emergency standby engine will power an emergency fire pump. Other than emergency standby operation, each engine may be operated up to 100 hours per year for maintenance and testing purposes.

V. Equipment Listing

175 BHP JOHN DEERE MODEL JU6H-UFADKO-D TIER 3 CERTIFIED DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN EMERGENCY FIRE PUMP.

VI. Emission Control Technology Evaluation

The applicant has proposed to install a Tier 3 diesel fired IC engine that will be fired on very low-sulfur diesel fuel (0.0015% by weight sulfur maximum).

The engine is equipped with:

- Turbocharger
- Intercooler/aftercooler
- Injection timing retard (or equivalent per District Policy SSP-1805, dated 8/14/1996)
- Positive Crankcase Ventilation (PCV) or 90% efficient control device
- This engine is required to be, and is UL certified
- Catalytic particulate filter
- Very Low (0.0015%) sulfur diesel

The emission control devices/technologies and their effect on diesel engine emissions detailed below are from *Non-catalytic NO_x Control of Stationary Diesel Engines*, by Don Koeberlein, CARB.

The turbocharger reduces the NO_x emission rate from the engine by approximately 10% by increasing the efficiency and promoting more complete burning of the fuel.

The use of very low-sulfur diesel fuel (0.0015% by weight sulfur maximum) reduces SO_x emissions by over 99% from standard diesel fuel.

VII. General Calculations

A. Assumptions

| | |
|--|------------------------|
| Emergency operating schedule: | 24 hours/day |
| Non-emergency operating schedule: | 100 hours/year |
| Density of diesel fuel: | 7.1 lb/gal |
| EPA F-factor (adjusted to 60 °F): | 9,051 dscf/MMBtu |
| Fuel heating value: | 137,000 Btu/gal |
| BHP to Btu/hr conversion: | 2,542.5 Btu/bhp-hr |
| Thermal efficiency of engine: | commonly \approx 35% |
| PM ₁₀ fraction of diesel exhaust: | 0.96 (CARB, 1988) |

B. Emission Factors

| | |
|----------------------|------------------------------------|
| EF _{NOx} : | 2.8 g/bhp-hr (engine data sheet) |
| EF _{CO} : | 0.9 g/bhp-hr (engine data sheet) |
| EF _{VOC} : | 0.075 g/bhp-hr (engine data sheet) |
| EF _{PM10} : | 0.09 g/bhp-hr (engine data sheet) |
| EF _{SOx} = | 0.006 g/bhp-hr – see below |

| | |
|---------------------------|------------|
| Sulfur Content of Diesel: | 15 ppmw |
| Density of Diesel: | 7.1 lb/gal |
| Fuel Use: | 11 gal/hr |
| Engine Rating: | 526 bhp |

$$EF_{SOx} = [(15 \text{ lb S}/10^6 \text{ lb fuel})(7.1 \text{ lb fuel/gal})(11 \text{ gal/hr})(2 \text{ lb SO}_2/\text{lb S}) \\ \times (453.6 \text{ g/lb})] / (175 \text{ bhp}) = 0.006 \text{ g/bhp-hr}$$

C. Potential to Emit (PE)

1. Potential to Emit

Premodification:

The equipment is new, therefore, the premodification potential to emit (PE) is zero for each unit.

Postmodification:

N-8881-1-0:

$$PE_{NOx} = (2.8 \text{ g/bhp-hr})(175 \text{ bhp})(\text{lb}/453.6 \text{ g})(24 \text{ hr/day}) = 25.9 \text{ lb/day}$$

$$PE_{NOx} = (2.8 \text{ g/bhp-hr})(175 \text{ bhp})(\text{lb}/453.6 \text{ g})(100 \text{ hr/yr}) = 108 \text{ lb/yr}$$

$$PE_{CO} = (0.9 \text{ g/bhp-hr})(175 \text{ bhp})(\text{lb}/453.6 \text{ g})(24 \text{ hr/day}) = 8.3 \text{ lb/day}$$

$$PE_{CO} = (0.9 \text{ g/bhp-hr})(175 \text{ bhp})(\text{lb}/453.6 \text{ g})(100 \text{ hr/yr}) = 35 \text{ lb/yr}$$

$$PE_{VOC} = (0.075 \text{ g/bhp-hr})(175 \text{ bhp})(\text{lb}/453.6 \text{ g})(24 \text{ hr/day}) = 0.7 \text{ lb/day}$$

$$PE_{VOC} = (0.075 \text{ g/bhp-hr})(175 \text{ bhp})(\text{lb}/453.6 \text{ g})(100 \text{ hr/yr}) = 3 \text{ lb/yr}$$

$$PE_{SOx} = (0.006 \text{ g/bhp-hr})(175 \text{ bhp})(\text{lb}/453.6 \text{ g})(24 \text{ hr/day}) = 0.1 \text{ lb/day}$$

$$PE_{SOx} = (0.006 \text{ g/bhp-hr})(175 \text{ bhp})(\text{lb}/453.6 \text{ g})(100 \text{ hr/yr}) = 0 \text{ lb/yr}$$

The annual SOx emissions were calculated to be 0.2 lb/yr and were set to zero per District policy APR-1105.

$$PE_{PM10} = (0.09 \text{ g/bhp-hr})(175 \text{ bhp})(\text{lb}/453.6 \text{ g})(24 \text{ hr/day}) = 0.8 \text{ lb/day}$$

$$PE_{PM10} = (0.09 \text{ g/bhp-hr})(175 \text{ bhp})(\text{lb}/453.6 \text{ g})(100 \text{ hr/yr}) = 3 \text{ lb/yr}$$

D. Increase in Permitted Emissions (IPE)

1. Quarterly IPE

$$IPE_{NOx} = 108 \text{ lb/yr} - 0 \text{ lb/yr} = 108 \text{ lb/yr} (27 \text{ lb/qtr})$$

$$IPE_{SOx} = 0 \text{ lb/yr} - 0 \text{ lb/yr} = 0 \text{ lb/yr} (0 \text{ lb/qtr})$$

$$IPE_{PM10} = 3 \text{ lb/yr} - 0 \text{ lb/yr} = 3 \text{ lb/yr} (0.75 \text{ lb/qtr})$$

$$IPE_{CO} = 35 \text{ lb/yr} - 0 \text{ lb/yr} = 35 \text{ lb/yr} (8.75 \text{ lb/qtr})$$

$$IPE_{VOC} = 3 \text{ lb/yr} - 0 \text{ lb/yr} = 3 \text{ lb/yr} (0.75 \text{ lb/qtr})$$

The emission profile for this ATC will include the following:

| | NOx (lb) | SOx (lb) | PM10 (lb) | CO (lb) | VOC (lb) |
|--------------|----------|----------|-----------|---------|----------|
| Annual PE | 108 | 0 | 3 | 35 | 3 |
| Daily PE | 25.9 | 0.1 | 0.8 | 8.3 | 0.7 |
| Δ PE (Qtr 1) | 27 | 0 | 0 | 8 | 0 |
| Δ PE (Qtr 2) | 27 | 0 | 1 | 9 | 1 |
| Δ PE (Qtr 3) | 27 | 0 | 1 | 9 | 1 |
| Δ PE (Qtr 4) | 27 | 0 | 1 | 9 | 1 |

2. Adjusted Increase in Permitted Emissions (AIPE)

AIPE is used to determine whether or not Best Available Control Technology (BACT) is required for modified units. The unit currently under consideration is new, therefore AIPE calculations are not necessary.

E. Facility Emissions

1. Pre Project Stationary Source Potential to Emit (SSPE1)

Detailed SSPE1 calculations are in Appendix E of this document. Facilities N-3386 and N-7478 were previously determined to be the same Stationary Source.

| Description | Pollutant (lb/year) | | | | |
|----------------|---------------------|--------|---------|-----------------|------------------|
| | NO _x | CO | VOC | SO _x | PM ₁₀ |
| SSPE1 (N-3386) | 9,028 | 50,812 | 36,710 | 778 | 72,504 |
| SSPE1 (N-7478) | 6,603 | 5,221 | 273,974 | 176 | 473 |
| PE w/o ERC's | 15,631 | 56,033 | 310,684 | 954 | 72,977 |
| ERC N-260-2 | 125 | 0 | 0 | 0 | 0 |
| ERC N-260-3 | 0 | 783 | 0 | 0 | 0 |
| ERC N-964-1 | 0 | 0 | 90,000 | 0 | 0 |
| Total | 15,756 | 56,816 | 400,684 | 954 | 72,977 |

2. Post Project Stationary Source Potential to Emit (SSPE2)

| Description | Pollutant (lb/year) | | | | |
|------------------|---------------------|--------|---------|-----------------|------------------|
| | NO _x | CO | VOC | SO _x | PM ₁₀ |
| SSPE1 (N-3386) | 9,028 | 50,812 | 36,710 | 778 | 72,504 |
| SSPE1 (N-7478) | 6,603 | 5,221 | 273,974 | 176 | 473 |
| ATC N-3386-484-0 | 108 | 35 | 3 | 0 | 3 |
| PE w/o ERC's | 15,739 | 56,068 | 310,687 | 954 | 72,980 |
| ERC N-260-2 | 125 | 0 | 0 | 0 | 0 |
| ERC N-260-3 | 0 | 783 | 0 | 0 | 0 |
| ERC N-964-1 | 0 | 0 | 90,000 | 0 | 0 |
| Total | 15,864 | 56,851 | 400,687 | 954 | 72,980 |

3. Stationary Source Increase in Permitted Emissions (SSIPE)

$$\text{SSIPE} = \text{SSPE2} - \text{SSPE1}$$

The SSPE1 and SSPE2 balances are from sections VII.E.1 and VII.E.2 of this document.

| Pollutant | SSPE2 (lb/yr) | SSPE1 (lb/yr) | SSIPE (lb/yr) |
|------------------|---------------|---------------|---------------|
| NO _x | 15,864 | 15,756 | 108 |
| CO | 56,851 | 56,816 | 35 |
| VOC | 400,687 | 400,684 | 3 |
| SO _x | 954 | 954 | 0 |
| PM ₁₀ | 72,980 | 72,977 | 3 |

4. Baseline Emissions

The equipment is new, therefore, the Baseline Emissions are zero for each pollutant.

F. Major Source Determination

Rule 2201 Major Source Determination:

The Major Source thresholds, the facility potentials to emit and whether or not the facility is a Major Source are presented on the following table. The Major Source thresholds are from Section 3.23.1.

| Pollutant | Threshold (lb/yr) | Facility PE (lb/yr) | Major Source |
|-----------|-------------------|---------------------|--------------|
| NOx | 20,000 | 15,739 | No |
| CO | 200,000 | 56,068 | No |
| VOC | 20,000 | 310,687 | Yes |
| SOx | 140,000 | 954 | No |
| PM10 | 140,000 | 72,980 | No |

Rule 2410 Major Source Determination:

The equipment currently under consideration is not a source category listed in 40 CFR Part 52.21(b)(1)(i), therefore, the applicable thresholds are those shown on the table below.

| Pollutant | Threshold (tons/yr) | Current Facility PE (tons/yr) | Major Source |
|-------------------|---------------------|-------------------------------|--------------|
| NOx | 250 | 7.8 | No |
| CO | 250 | 28.0 | No |
| VOC | 250 | 155.3 | No |
| SOx | 250 | 0.48 | No |
| PM | 250 | 36.5 | No |
| PM10 | 250 | 36.5 | No |
| CO ₂ e | 100,000 | 15,926.7 See below | No |

GHG Calculations:

| Permit # | Description | Fuel Type | Annual Fuel or Hour Limit |
|--------------|------------------|-------------|-----------------------------|
| N-3386-1-10 | 10.463 MMBtu/hr | Natural Gas | 8,760 hr/yr |
| N-3386-2-8 | 10.463 MMBtu/hr | Natural Gas | 30 x 10 ⁹ Btu/yr |
| N-3386-3-7 | 10.2058 MMBtu/hr | Natural Gas | 8,760 hr/yr |
| N-3386-23-6 | 240 bhp | Diesel | 30 hr |
| N-3386-26-3 | 192 bhp | Diesel | 50 hr |
| N-3386-27-2 | 1,120 bhp | Diesel | 50 hr |
| N-3386-28-4 | 270 bhp | Diesel | 100 hr |
| N-3386-29-3 | 460 bhp | Diesel | 200 hr |
| N-3386-484-0 | 175 bhp | Diesel | 100 hr |
| N-7478-1-4 | 3.0 MMBtu/hr | Natural Gas | 8,760 hr/yr |
| N-7478-2-4 | 4.0 MMBtu/hr | Natural Gas | 8,760 hr/yr |
| N-7478-4-2 | 954 bhp | Diesel | 50 hr |

Natural Gas Usage:

$$(10.463 \text{ MMBtu/hr} + 10.2058 \text{ MMBtu/hr} + 3.0 \text{ MMBtu/hr} + 4.0 \text{ MMBtu/hr}) \times (8,760 \text{ hr/yr}) + 30,000 \text{ MMBtu/yr} = 272,379 \text{ MMBtu/yr}$$

Diesel Fired IC Engine Use:

$$(240 \text{ bhp})(30 \text{ hr/yr}) + (192 \text{ bhp} + 1,120 \text{ bhp} + 954 \text{ bhp})(50 \text{ hr/yr}) + (270 \text{ bhp} + 175 \text{ bhp})(100 \text{ hr/yr}) + (460 \text{ bhp})(200 \text{ hr/yr}) = 257,000 \text{ bhp-hr/yr}$$

EF (Natural Gas): 52.87 kg/MMBtu (CARB GHG EF's)

EF (Diesel Engines): 0.000187 MT/bhp-hr (CARB GHG EF's)

$$PE_{CO_2e} = (272,379 \text{ MMBtu/yr})(52.87 \text{ kg/MMBtu})(\text{lb}/0.4536 \text{ kg})(\text{ton}/2000 \text{ lb}) + [(257,000 \text{ bhp-hr/yr})(0.000187 \text{ MT/bhp-hr})(2,205 \text{ lb/MT}) \times (\text{ton}/2,000 \text{ lb})] = 15,926.7 \text{ ton/yr}$$

G. Major Modification Determination

SB-288 Major Modification:

The purpose of SB-288 Major Modification calculations is to determine the following:

If Best Available Control Technology (BACT) is required for a Major Source pollutant from a new or modified emission unit involved in a permitting action that is a Major Modification (District Rule 2201, §4.1.3); and

If a public notification is triggered (District Rule 2201, §5.4.1).

Per section 3.36 of Rule 2201 and the District's draft policy titled Implementation of Rule 2201 (as amended on 12/18/08 and effective on 6/10/10) for SB-288 Major Modifications and Federal Major Modifications, a permitting action is an SB-288 Major Modification if the Net Emission Increase (NEI) for the new and modified units involved in the project exceed the thresholds shown on the following table. The facility is a Major Source only for VOC, therefore, only VOC will be addressed.

| Pollutant | Threshold (lb/yr) |
|-----------|-------------------|
| VOC | 50,000 |

Per the District's draft policy titled "Implementation of Rule 2201 (as amended on 12/18/08 and effective on 6/10/10) for SB288 Major Modifications and Federal Major Modifications", if the average increase in emissions is 0.5 lb/day or less then the project is not an SB-288 Major Modification.

$$\text{Average IPE} = (3 \text{ lb/yr} - 0 \text{ lb/yr}) / (365 \text{ days/yr}) = 0.008 \text{ lb/day}$$

The average IPE will not exceed 0.5 lb/day, therefore, this permitting action is not an SB-288 Major Modification.

Federal Major Modification:

The facility is a Major Source only for VOC, therefore, only VOC will be addressed.

Per the District's draft policy titled "Implementation of Rule 2201 (as amended on 12/18/08 and effective on 6/10/10) for SB288 Major Modifications and Federal Major Modifications", if the average increase in emissions is 0.5 lb/day or less then the project is not a Federal Major Modification.

$$\text{Average IPE} = (3 \text{ lb/yr} - 0 \text{ lb/yr}) / (365 \text{ days/yr}) = 0.008 \text{ lb/day}$$

The average IPE will not exceed 0.5 lb/day, therefore, this permitting action is not a Federal Major Modification.

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

A. 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.

As discussed in Section I, the facility is proposing to install two new emergency standby IC engines. Additionally, as shown in Section VII.G, this project does not result in an SB288 Major Modification or a Federal Major Modification. Therefore, BACT can only be triggered if the daily emissions exceed 2.0 lb/day for any pollutant.

The daily emissions from the new engines are compared to the BACT threshold levels in the following tables:

| New Emissions Unit BACT Applicability | | | | |
|---------------------------------------|--|---------------------------------|---------------|-----------------|
| Pollutant | Daily Emissions for unit -1-0 (lb/day) | BACT Threshold (lb/day) | SSPE2 (lb/yr) | BACT Triggered? |
| NO _x | 25.9 | > 2.0 | n/a | Yes |
| CO | 8.3 | > 2.0 and SSPE2 ≥ 200,000 lb/yr | 56,851 | No |
| VOC | 0.7 | > 2.0 | n/a | No |
| SO _x | 0.1 | > 2.0 | n/a | No |
| PM ₁₀ | 0.8 | > 2.0 | n/a | No |

As shown above, BACT will be triggered for the NO_x emissions from this engine.

2. BACT Guideline

BACT Guideline 3.1.1, which appears in Appendix B of this report, covers diesel-fired emergency IC engines.

3. Top Down BACT Analysis

Per District Policy APR 1305, Section IX, "A top-down BACT analysis shall be performed as a part of the Application Review for each application subject to the BACT requirements pursuant to the District's NSR Rule for source categories or classes covered in the BACT Clearinghouse, relevant information under each of the following steps may be simply cited from the Clearinghouse without further analysis."

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

NO_x: NO_x emissions of 6.9 g/bhp-hr or less

The following condition will be included on the ATC to ensure compliance with the NO_x BACT emissions limit:

- Emissions from this IC engine shall not exceed any of the following limits: 2.8 g-NO_x/bhp-hr, 0.9 g-CO/bhp-hr, or 0.075 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115]

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

District Rule 2201 section 5.4 requires a public notification for the affected pollutants from the following types of projects:

- a. New Major Sources
- b. Major Modifications
- c. New emission units with a PE > 100 lb/day of any one pollutant (IPE Notifications)
- d. Modifications with SSPE1 below an offset threshold and SSPE 2 above an offset threshold on a pollutant by pollutant basis (Existing Facility Offset Threshold Exceedence Notification)
- e. New stationary sources with SSPE2 exceeding offset thresholds (New Facility Offset Threshold Exceedence Notification)

f. Any permitting action with a SSIPE exceeding 20,000 lb/yr for any one pollutant. (SSIPE Notice)

a. New Major Source Notice Determination:

The facility is not new, therefore, a New Major Source Determination notice is not required.

b. Major Modification Notice:

AS shown in section VIII.G of this document, this permitting action is not a Major Modification. Therefore, this permitting action does not trigger a Major Modification notice.

c. PE Notification:

A notification is required for each new emission unit with the potential to emit more than 100 pounds per day of any one affected pollutant.

As shown in section VII.C.1 of this document, the PE of no pollutant will exceed 100 lb/day. Therefore, a notification is not required.

d. Existing Facility Offset Threshold Exceedence Notification

This permitting action will not result in the SSPE of any pollutant going from below to above an offset threshold. Therefore, a public notification is not required.

e. New Facility Offset Threshold Exceedence Notification

The facility is not new, therefore, a public notification is not required.

f. SSIPE Notification:

A notification is required for any permitting action that results in a SSIPE of more than 20,000 lb/yr of any affected pollutant. As shown in section VII.E.3 of this document, the SSIPE of each pollutant will be less than 20,000 pounds per year. An SSIPE notification is not required.

2. Public Notice

As shown above, a public notification is not required.

D. DAILY EMISSION LIMITS

Daily Emissions Limitations (DELs) and other enforceable conditions are required by Section 3.16 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: 2.8 g-NOx/bhp-hr, 0.9 g-CO/bhp-hr, or 0.075 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115]
- Emissions from this IC engine shall not exceed 0.09 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102 and 17 CCR 93115]
- Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801 and 17 CCR 93115]

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

As they apply to the equipment currently under consideration, no District rule or policy requires monitoring.

3. Record Keeping

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

4. Reporting

As they apply to the equipment currently under consideration, no District rule or policy requires reporting.

Rule 2410 Prevention of Significant Deterioration

Rule 2410 applies to pollutants for which the District is in attainment or for unclassified pollutants. The pollutants addressed in the PSD applicability determination are listed as follows:

- NO₂ (as a primary pollutant)
- SO₂ (as a primary pollutant)
- CO
- PM
- PM₁₀
- Greenhouse gases (GHG): CO₂, N₂O, CH₄, HFCs, PFCs, and SF₆

The first step of this PSD applicability evaluation consists of determining whether the facility is an existing PSD Major Source. This facility is not an existing PSD Major source (See Section VII.F of this document).

In this case if a facility that is NOT an existing PSD Major Source, the second step of the PSD evaluation is to determine if the project, by itself, would be a PSD major source.

Potential to Emit for All Emission Units at the Facility vs PSD Major Source Thresholds:

As a screening tool, the potential to emit from all new and modified units at the facility is compared to the PSD major source threshold and if the total potential to emit from all new and modified units at the facility is below this threshold, no further analysis will be needed.

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). Therefore the following PSD Major Source thresholds are applicable.

| PSD Major Source Determination: Potential to Emit (tons/year) | | | | | | | |
|--|-----------------|--------|-----------------|-------|--------|------------------|-------------------|
| | NO ₂ | VOC | SO ₂ | CO | PM | PM ₁₀ | CO ₂ e |
| Total PE from New and Modified Units | 0.054 | 0.0015 | 0 | 0.018 | 0.0015 | 0.0015 | 3.6 |
| PSD Major Source threshold | 250 | 250 | 250 | 250 | 250 | 250 | 100,000 |
| New PSD Major Source? | No | No | No | No | No | No | No |

EF_{GHG}: 0.000187 metric tons/bhp-hr (CARB greenhouse gas emission factor)
 Rating: 175 bhp
 Schedule: 100 hr/yr

$$PE_{GHG} = (0.000187 \text{ MT/bhp-hr})(175 \text{ bhp})(100 \text{ hr/yr})(2,205 \text{ lb/MT}) \times (\text{ton}/2000 \text{ lb}) = 3.6 \text{ tons/yr}$$

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

Rule 2520 Federally Mandated Operating Permits

The proposed permitting action is a Minor Title V permit modification. The applicant has proposed to receive the ATCs with Certificates of Conformity in accordance with the requirements of 40 CFR 70.6(c), 70.7 and 70.8. Therefore, the 45-day EPA comment period will be satisfied prior to the issuance of the ATCs. The following federally enforceable conditions will be placed on the Authorities to Construct:

This Authority to Construct serves as a written Certificate of Conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c).

Prior to operating with the modifications authorized by this Authority to Construct, the facility shall submit an application for an Administrative Amendment to its Title V permit.

Rule 4001 New Source Performance Standards (NSPS)

40 CFR 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

§60.4200 - Applicability

This subpart is applicable to owners and operators of stationary compression ignited internal combustion engines that commence construction after July 11, 2005, where the engines are:

- 1) Manufactured after April 1, 2006, if not a fire pump engine.
- 2) Manufactured as a National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.

Since the proposed engine will be installed after July 1, 2006 and will be manufactured after April 1, 2006, this subpart applies.

| 40 CFR 60 Subpart IIII Requirements for New Emergency IC Engines Powering Fire Pumps (2009 and Later Model Year) | Proposed Method of Compliance with 40 CFR 60 Subpart IIII Requirements |
|--|--|
| <p>Per section 60.4205(c), the unit is subject to the emission standard of table 4 of this subpart.</p> <p>Emission Standards:</p> <p>NMHC + NOx: 3.0 g/bhp-hr CO: No standard PM: 0.20 g/bhp-hr</p> | <p>The applicant has proposed the use of engine(s) that are certified to the latest EPA Tier Certification level for the applicable horsepower range, guaranteeing compliance with the emission standards of Subpart IIII.</p> <p>Certified Emission Levels:</p> <p>NMHC + NOx: 2.9 g/bhp-hr CO: N/A PM: 0.09 g/bhp-hr</p> |

| | |
|--|---|
| | |
| Engine(s) must be fired on fuel that complies with 40 CFR Part 80.510(b). This standard limits the sulfur content of fuel to 15 ppm. | The applicant has proposed the use of CARB certified diesel fuel, which meets all of the fuel requirements listed in Subpart IIII. A permit condition enforcing this requirement will be included on the ATC and the PTO. |
| Per section 60.4214 (b), the operator/owner must install a non-resettable hour meter prior to startup of the engine(s). | The applicant has proposed to install a non-resettable hour meter. The following condition will be included on the permit: <ul style="list-style-type: none"> This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 17 CCR 93115, and 40 CFR 60 Subpart IIII] |
| Per section 60.4211(f)(2), emergency engine(s) may be operated for the purpose of maintenance and testing up to 100 hours per year. There is no limit on emergency use. | The ATC and the PTO will limit non-emergency operation to 100 hours per year. |
| Per section 60.4211(a)(1), the owner/operator must operate and maintain the engine(s) and any installed control devices according to the manufacturers written instructions. | The following condition will be included on the permit: <ul style="list-style-type: none"> 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 and 40 CFR 60 Subpart IIII] |

Rule 4002 National Emission Standards for Hazardous Air Pollutants (NESHAP)

40 CFR 63 Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

The unit will be new and will be located at an Area Source of HAP emissions. Per 63.6590(c) and 63.6590c(1) such units must comply with this subpart by complying with 40 CFR Part 60 Subpart IIII. As shown above, compliance with Subpart IIII will be met.

Rule 4101 Visible Emissions

As long as the equipment is properly maintained and operated, the visible emissions are not expected to exceed 20% opacity for a period or periods aggregating more than 3 minutes in any one hour. Compliance with the provisions of this rule is expected.

Rule 4102 Nuisance

A. California Health & Safety Code 41700 (Health Risk Analysis)

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. Therefore, a risk management review (RMR) was performed for this project. The RMR results are summarized in the following table, and can be seen in detail in Appendix C.

| RMR Results | | | | |
|--------------|--------------------|----------------------|-------------------|------------------|
| Unit | Acute Hazard Index | Chronic Hazard Index | Cancer Risk | T-BACT Required? |
| N-3386-484-0 | N/A | N/A | 0.37 in a million | No |

The following conditions will be listed on the ATC to ensure compliance with the RMR:

- {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 Rule 4102]
- Emissions from this IC engine shall not exceed 0.09 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102 and 17 CCR 93115]
- The engine shall be operated only for maintenance, testing and required regulatory purposes and during emergency situations. Operation of the engine for maintenance, testing and required regulatory purposes shall not exceed 100 hours per year. [District Rules 2201 and 4702 and 17 CCR 93115]

Rule 4201 Particulate Matter Concentration

Rule 4201 limits particulate matter emissions from any single source operation to 0.1 g/dscf, which, as calculated below, is equivalent to a PM10 emission factor of 0.4 g-PM10/bhp-hr.

$$0.1 \frac{\text{grain-PM}}{\text{dscf}} \times \frac{\text{g}}{15.43 \text{ grain}} \times \frac{1 \text{ Btu}_{in}}{0.35 \text{ Btu}_{out}} \times \frac{9,051 \text{ dscf}}{10^6 \text{ Btu}} \times \frac{2,542.5 \text{ Btu}}{1 \text{ bhp-hr}} \times \frac{0.96 \text{ g-PM}_{10}}{1 \text{ g-PM}} = 0.4 \frac{\text{g-PM}_{10}}{\text{bhp-hr}}$$

Each new engine has a PM10 emission factor less than 0.4 g/bhp-hr. Therefore, compliance is expected and the following condition will be listed on the ATCs:

- {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 (NOx), 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 engines are also subject to District Rule 4702, Internal Combustion Engines. Since emissions limits of District Rule 4702 and all other requirements are equivalent or more stringent than District Rule 4701 requirements, compliance with District Rule 4702 requirements will satisfy requirements of District Rule 4701.

Rule 4702 Internal Combustion Engines

The following table demonstrates how the proposed engine(s) will comply with the requirements of District Rule 4702.

| District Rule 4702 Requirements Emergency Standby IC Engines | Proposed Method of Compliance with District Rule 4702 Requirements |
|--|--|
| <p>Operation of emergency standby engines is limited to 100 hours or less per calendar year for non-emergency purposes, verified through the use of a non-resettable elapsed operating time meter.</p> | <p>The Air Toxic Control Measure for Stationary Compression Ignition Engines (Stationary ATCM) for new emergency fire pump assemblies that are driven directly by stationary diesel-fueled CI engines are limited to the number of hours required for the NFPA 25 Standards for maintenance and testing purposes to 100 hours/year. Thus, compliance is expected.</p> |
| <p>The owner/operator must operate and maintain the engines and any installed control devices according to the manufacturers written instructions.</p> | <p>The following permit condition will appear on the ATC permit:</p> <ul style="list-style-type: none"> • 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] |
| <p>The owner/operator must monitor the operational characteristics of each engine as recommended by the engine manufacturer or emission control system supplier.</p> | <p>The following condition will be included on the permit:</p> <ul style="list-style-type: none"> • {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] |
| <p>Records of the total hours of operation of the emergency engine, purpose for operating the engine, all hours of non-emergency and emergency operation and support documentation must be maintained. All records shall be retained for a period of at least five years, shall be readily available, and be made available to the APCO upon request.</p> | <p>The following conditions will be included on the permit:</p> <ul style="list-style-type: none"> • {3489} 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, and the purpose of the operation (for example: load testing, weekly testing). 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 and 17 CCR 93115] • {3475} All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rules 4701 and 4702 and 17 CCR 93115] |

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

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

$$\frac{0.000015 \text{ lb} - \text{S}}{\text{lb} - \text{fuel}} \times \frac{7.1 \text{ lb}}{\text{gal}} \times \frac{64 \text{ lb} - \text{SO}_2}{32 \text{ lb} - \text{S}} \times \frac{1 \text{ MMBtu}}{9,051 \text{ scf}} \times \frac{1 \text{ gal}}{0.137 \text{ MMBtu}} \times \frac{\text{lb} - \text{mol}}{64 \text{ lb} - \text{SO}_2} \times \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} - \text{mol} \cdot \text{°R}} \times \frac{520 \text{°R}}{14.7 \text{ psi}} \times 1,000,000 = 1.0 \text{ ppmv}$$

Title 17 California Code of Regulations (CCR), Section 93115 - Airborne Toxic Control Measure (ATCM) for Stationary Compression-Ignition (CI) Engines

The following table demonstrates how the proposed engine(s) will comply with the requirements of Title 17 CCR Section 93115.

The following table demonstrates how the proposed engine will comply with the requirements of Title 17 CCR Section 93115.

| Title 17 CCR Section 93115 Requirements for New Emergency IC Engines Powering Fire Pump Assemblies | Proposed Method of Compliance with Title 17 CCR Section 93115 Requirements |
|--|--|
| <p>Emergency engines must be fired on CARB diesel fuel, or an approved alternative diesel fuel.</p> | <p>The applicant has proposed the use of CARB certified diesel fuel. The proposed permit condition, requiring the use of CARB certified diesel fuel, was included earlier in this evaluation.</p> |
| <p>Per Section 93115.6(a)(4) - Table 2, a new direct-drive fire pump, rated at 175 bhp and model year 2009 or later, must meet the following emissions standards:</p> <p>NOx + VOC: 3.0 g/bhp-hr</p> <p>CO: 2.6 g/bhp-hr</p> <p>PM10: 0.15 g/bhp-hr</p> | <p>As previously shown, the emissions from this engine are expected to be:</p> <p>NOx + VOC: 2.9 g/bhp-hr</p> <p>CO: 0.9 g/bhp-hr</p> <p>PM10: 0.09 g/bhp-hr</p> |
| <p>The engine may not be operated more than the number of hours necessary to comply with the testing requirements of National Fire Protection Association (NFPA) 25 – “Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems” 2002 edition.</p> | <p>The following condition will be included on the permit:</p> <ul style="list-style-type: none"> • The engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. For testing purposes, the engine shall only be operated the number of hours necessary to comply with the testing requirements of the National Fire Protection Association (NFPA) 25 – “Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems” 2002 edition. Total hours of operation for all maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rules 2201, 4102, and 4702, and 17 CCR 93115] |
| <p>Engines, with a PM10 emissions rate greater than</p> | <p>The District has verified that this engine will</p> |

| | |
|--|--|
| <p>0.01 g/bhp-hr and located at schools, may not be operated for maintenance and testing whenever there is a school sponsored activity on the grounds. Additionally, engines located within 500 feet of school grounds may not be operated for maintenance and testing between 7:30 AM and 3:30 PM</p> | <p>not be located within 500 feet of a school.</p> |
| <p>An owner or operator shall maintain monthly records of the following: emergency use hours of operation, maintenance and testing hours of operation, hours of operation for emission testing, initial start-up testing hours, hours of operation for all other uses and the type of fuel used. All records shall be retained for a minimum of 36 months.</p> | <p>Permit conditions enforcing these requirements were shown earlier in the evaluation. Records shall be maintained for a minimum of five years.</p> <p>{3475} All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rule 4702 and 17 CCR 93115] N</p> |

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.

The District performed an Engineering Evaluation (this document) for the proposed project and determined that the project qualifies for ministerial approval under the District’s Guideline for Expedited Application Review (GEAR). Section 21080 of the Public Resources Code exempts from the application of CEQA those projects over which a public agency exercises only ministerial approval. Therefore, the District finds that this project is exempt from the provisions of CEQA.

California Health & Safety Code 42301.6 (School Notice)

The equipment will not be located within 1,000 feet of a K-12 school, therefore, a school notice is not required.

IX. Recommendation

Issue an Authority-to-Construct permit subject to the conditions on the attached draft Authority to Construct permit.

X. Billing Information

| Permit # | Description | Fee Schedule |
|--------------|-------------|--------------|
| N-3386-484-0 | 175 bhp | 3020-10-B |

Appendices

- Appendix A: Draft ATC
- Appendix B: BACT Guideline and BACT Analysis
- Appendix C: RMR Summary
- Appendix D: Emission Data Sheet
- Appendix E: SSPE1 Calculations
- Appendix F: TV-009 Form

Appendix A

Draft ATC

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: N-3386-484-0

LEGAL OWNER OR OPERATOR: E & J GALLO WINERY
MAILING ADDRESS: 600 YOSEMITE BLVD
MODESTO, CA 95354

LOCATION: 600 YOSEMITE BLVD
MODESTO, CA 95353

EQUIPMENT DESCRIPTION:
175 BHP JOHN DEERE MODEL JU6H-UFADKO-D TIER 3 CERTIFIED DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN EMERGENCY FIRE PUMP.

CONDITIONS

1. This Authority to Construct serves as a written Certificate of Conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable Through Title V Permit
2. Prior to operating with the modifications authorized by this Authority to Construct, the facility shall submit an application for an Administrative Amendment to its Title V permit. [District Rule 2520] Federally Enforceable Through Title V Permit
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101 (02/17/05). If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101, and Stanislaus County Rule 401] Federally Enforceable Through Title V Permit
5. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
6. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801, 17 CCR 93115 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST** NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 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

DAVID WARNER, Director of Permit Services
N-3386-484-0 Sep 23 2013 8:18AM - SCHONHOM : Joint Inspection NOT Required

7. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit
8. {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 Rule 4102]
9. 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 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit
10. This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. For testing purposes, the engine shall only be operated the number of hours necessary to comply with the testing requirements of the National Fire Protection Association (NFPA) 25 - "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems", 2002 edition. Total hours of operation for all maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rules 4701 and 4702, 17 CCR 93115 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit
11. Emissions from this IC engine shall not exceed any of the following limits: 2.8 g-NO_x/bhp-hr, 0.9 g-CO/bhp-hr, or 0.075 g-VOC/bhp-hr. [District Rule 2201, 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]
12. Emissions from this IC engine shall not exceed 0.09 g-PM₁₀/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]
13. 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] Federally Enforceable Through Title V Permit
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, and the purpose of the operation (for example: load testing, weekly testing, emergency usage, etc.). 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 and 17 CCR 93115] Federally Enforceable Through Title V Permit
15. The permittee shall maintain monthly records of the type of fuel purchased. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit
16. 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. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit

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Appendix B

BACT Guideline and BACT Analysis

**Best Available Control Technology (BACT) Guideline 3.1.4
Last Update: 6/30/2001**

Emergency Diesel I.C. Engine Driving a Fire Pump

| Pollutant | Achieved in Practice or in the SIP | Technologically Feasible | Alternate Basic Equipment |
|------------------|--|---------------------------------|----------------------------------|
| CO | | Oxidation Catalyst | |
| NOx | Certified NOx emissions of 6.9 g/bhp-hr or less | | |
| PM10 | 0.1 grams/bhp-hr (if TBACT is triggered) (corrected 7/16/01) 0.4 grams/bhp-hr (if TBACT is not triggered) | | |
| SOx | Low-sulfur diesel fuel (500 ppmw sulfur or less) or Very Low-sulfur diesel fuel (15 ppmw sulfur or less), where available. | | |
| VOC | Positive crankcase ventilation [unless it voids the Underwriters Laboratories (UL) certification] | Catalytic Oxidation | |

1. Any engine model included in the ARB or EPA diesel engine certification lists and identified as having a PM10 emission rate of 0.149 grams/bhp-hr or less, based on ISO 8178 test procedure, shall be deemed to meet the 0.1 grams/bhp-hr requirement. 2. A site-specific Health Risk Analysis is used to determine if TBACT is triggered. (Clarification added 05/07/01)

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. For background information, see Permit Specific BACT Determinations on Details Page.

Top Down BACT Analysis for the Emergency IC Engine

BACT Guideline 3.1.1 (July 10, 2009) applies to emergency diesel IC engines. In accordance with the District BACT policy, information from that guideline will be utilized without further analysis.

1. BACT Analysis for NO_x Emissions:

a. Step 1 - Identify all control technologies

BACT Guideline 3.1.1 identifies only the following option:

- Certified NO_x emissions of 6.9 g/bhp-hr or less

b. Step 2 - Eliminate technologically infeasible options

The control option listed in Step 1 is not technologically infeasible.

c. Step 3 - Rank remaining options by control effectiveness

1. Certified NO_x emissions of 6.9 g/bhp-hr or less

d. Step 4 - Cost Effectiveness Analysis

The applicant has proposed the only control option remaining under consideration. Therefore, a cost effectiveness analysis is not required.

e. Step 5 - Select BACT

BACT for NO_x will be the use of an engine that will achieve a NO_x emission level of 6.9 g/bhp-hr or less. The applicant is proposing such a unit, therefore, BACT will be satisfied.

Appendix C RMR Summary

San Joaquin Valley Air Pollution Control District Risk Management Review

To: Mark Schonhoff – Permit Services
 From: Kyle Melching - Technical Services
 Date: September 9, 2013
 Facility Name: E&J Gallo Winery
 Location: 600 Yosemite Ave., Modesto
 Application #(s): N-3386-484-0
 Project #: N-1132554

A. RMR SUMMARY

| RMR Summary | | | |
|---------------------------------------|--|------------------|-----------------|
| Categories | Fire Water Pump w/ Diesel ICE (Unit 484-0) | Project Totals | Facility Totals |
| Prioritization Score | N/A ¹ | N/A ¹ | >1 |
| Acute Hazard Index | N/A ² | N/A ² | 0.06 |
| Chronic Hazard Index | N/A ² | N/A ² | 0.1 |
| Maximum Individual Cancer Risk | 3.7E-07 | 3.7E-07 | 4.28E-06 |
| T-BACT Required? | NO | | |
| Special Permit Conditions? | Yes | | |

- 1 Prioritization for this unit was not conducted since it has been determined that all diesel-fired IC engines will result in a prioritization score greater than 1.0.
- 2 Acute and Chronic Hazard Indices were not calculated since there is no risk factor, or the risk factor is so low that the risk has been determined to be insignificant for this type of unit.

Proposed Permit Conditions

To ensure that human health risks will not exceed District allowable levels; the following permit conditions must be included for:

Unit # 484-0

1. Modified {1901} The PM10 emissions rate shall not exceed **0.09** g/hp-hr based on US EPA certification using ISO 8178 test procedure. [District Rule 2201]
2. {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 Rule 4102] N
3. Modified {1344} The engine shall be operated only for maintenance, testing, and required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed **100** hours per year. [District NSR Rule and District Rule 4701]N

B. RMR REPORT

I. Project Description

Technical Services received a request on August 30, 2013, to perform a Risk Management Review for a emergency firewater pump powered by a 175 bhp diesel fired internal combustion engine.

II. Analysis

Technical Services performed a screening level health risk assessment using the District's Diesel Exhaust Risk Screening spreadsheet.

The following parameters were used for the review:

| Analysis Parameters | | | | | | |
|---------------------|--------|--------------------------|--------------|---------------|------------|----------|
| Unit #s | bhp-hr | PM ₁₀ g/hp-hr | Receptor (m) | Quad | Hours/Year | Load% |
| 454-0 | 175 | 0.09 | 213 | 2 | 100 | 100 |
| Location Type | | | Urban | Receptor Type | | Business |

III. Conclusion

The individual cancer risk associated with the operation of the proposed emergency firewater pump powered by a diesel IC engine is **3.7E-07**; which is less than the 1 in a million threshold. In accordance with the District's Risk Management Policy, the project is approved as proposed **without** Toxic Best Available Control Technology (T-BACT).

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

IV. Attachments

- A. RMR request from the project engineer
- B. Additional information from the applicant/project engineer
- C. DICE Screening Risk Tool
- D. Facility Summary

Appendix D Emission Data Sheet

Rating Specific Emissions Data - John Deere Power Systems



JOHN DEERE

Nameplate Rating Information

| | |
|--------------------------------|--------------------|
| Clarke Model | JU6H-UFADKO |
| Power Rating (BHP / kW) | 175 / 131 |
| Certified Speed (RPM) | 2350, 2400 |

Rating Data

| | | |
|-----------------------------|-------------------------|----------------|
| Rating | 6068HFC28E | |
| Certified Power (kW) | 149 | |
| Rated Speed | 2400 | |
| Vehicle Model Number | Clarke Fire Pump | |
| Units | g/kW-hr | g/hp-hr |
| NOx | 3.4 | 2.6 |
| HC | 0.2 | 0.2 |
| NOx + HC | 3.6 | 2.7 |
| Pm | 0.16 | 0.12 |
| CO | 1.4 | 1.1 |

Certificate Data

| | | |
|-------------------------------|-------------------------|--|
| Engine Model Year | 2013 | |
| EPA Family Name | DJDXL06.8120 | |
| EPA JD Name | 350HAK | |
| EPA Certificate Number | DJDXL06.8120-002 | |
| CARB Executive Order | Not Applicable | |
| Parent of Family | 6068HFG82A | |
| Units | g/kW-hr | |
| NOx | 3.8 | |
| HC | 0.1 | |
| NOx + HC | 3.9 | |
| Pm | 0.12 | |
| CO | 1.2 | |

* The emission data listed is measured from a laboratory test engine according to the test procedures of 40 CFR 89 or 40 CFR 1039, as applicable. The test engine is intended to represent nominal production hardware, and we do not guarantee that every production engine will have identical test results. The family parent data represents multiple ratings and this data may have been collected at a different engine speed and load. Emission results may vary due to engine manufacturing tolerances, engine operating conditions, fuels used, or other conditions beyond our control.

This information is property of Deere & Company. It is provided solely for the purpose of obtaining certification or permits of Deere powered equipment. Unauthorized distribution of this information is prohibited.

JDPS 2/28/2013

Appendix E

SSPE1 Calculations

Note: *FID's N-3386 and N-7478 are the same Stationary Source*

N-3386 (Excluding ERC's)

The SSPE1 contributions are from the Application Review document for project N-1130542.

| Permit Unit | Pollutant (lb/year) | | | | |
|---------------------------------------|---------------------|-----------------|------------------|---------------|---------------|
| | NO _x | SO _x | PM ₁₀ | CO | VOC |
| N-3386-1-10 | 1,022 | 256 | 1,278 | 21,024 | 256 |
| N-3386-2-8 | 1,650 | 261 | 1,283 | 27,130 | 247 |
| N-3386-3-7 | 1,627 | 255 | 679 | 1,967 | 257 |
| N-3386-5-3 | 0 | 0 | 3,696 | 0 | 0 |
| N-3386-6-3 | 0 | 0 | 105 | 0 | 0 |
| N-3386-10-3 | 0 | 0 | 0 | 0 | 861 |
| N-3386-13-3 | 0 | 0 | 0 | 0 | 0 |
| N-3386-16-3 | 0 | 0 | 0 | 0 | 0 |
| N-3386-17-3 | 0 | 0 | 0 | 0 | 0 |
| N-3386-23-6 | 107 | 0 | 6 | 135 | 16 |
| N-3386-24-4 | 0 | 0 | 0 | 0 | 569 |
| N-3386-26-3 | 89 | 0 | 3 | 64 | 24 |
| N-3386-27-2 | 710 | 1 | 11 | 74 | 32 |
| N-3386-28-4 | 324 | 0 | 15 | 185 | 49 |
| N-3386-29-3 | 3,499 | 5 | 81 | 233 | 10 |
| N-3386-31-1 | 0 | 0 | 0 | 0 | 0 |
| N-3386-33-1 thru -430-1 and -467-1 | 0 | 0 | 0 | 0 | 32,160 |
| N-3386-469-2 | 0 | 0 | 225 | 0 | 633 |
| N-3386-470-1 | 0 | 0 | 0 | 0 | 532 |
| N-3386-471-1 | 0 | 0 | 0 | 0 | |
| N-3386-472-1 | 0 | 0 | 0 | 0 | |
| N-3386-473-1 | 0 | 0 | 0 | 0 | |
| N-3386-474-1 | 0 | 0 | 613 | 0 | 0 |
| N-3386-475-1 | 0 | 0 | 64,509 | 0 | 0 |
| N-3386-476-0 | 0 | 0 | 0 | 0 | 133 |
| N-3386-477-0 | 0 | 0 | 0 | 0 | 133 |
| N-3386-478-0 | 0 | 0 | 0 | 0 | 133 |
| N-3386-479-0 | 0 | 0 | 0 | 0 | 133 |
| N-3386-480-0 | 0 | 0 | 0 | 0 | 133 |
| N-3386-481-0 | 0 | 0 | 0 | 0 | 133 |
| N-3386-482-0 | 0 | 0 | 0 | 0 | 133 |
| N-3386-483-0 | 0 | 0 | 0 | 0 | 133 |
| Total | 9,028 | 778 | 72,504 | 50,812 | 36,710 |

N-7478 (Excluding ERC's)

The SSPE contributions are from the Application Review document for project N-1130542.

| Permit Unit | Pollutant (lb/year) | | | | |
|--------------|---------------------|-----------------|------------------|--------------|----------------|
| | NO _x | SO _x | PM ₁₀ | CO | VOC |
| N-7478-1-4 | 2,628 | 75 | 200 | 2,208 | 89,556 |
| N-7478-2-4 | 3,504 | 100 | 266 | 2,943 | 123,271 |
| N-7478-3-3 | 0 | 0 | 0 | 0 | 4,931 |
| N-7478-4-2 | 471 | 1 | 7 | 70 | 32 |
| N-7478-5-1 | 0 | 0 | 0 | 0 | 101 |
| N-7478-6-1 | 0 | 0 | 0 | 0 | 139 |
| N-7478-7-1 | 0 | 0 | 0 | 0 | 216 |
| N-7478-8-1 | 0 | 0 | 0 | 0 | 273 |
| N-7478-9-1 | 0 | 0 | 0 | 0 | 23 |
| N-7478-10-1 | 0 | 0 | 0 | 0 | 23 |
| N-7478-11-1 | 0 | 0 | 0 | 0 | 296 |
| N-7478-12-1 | 0 | 0 | 0 | 0 | 4,136 |
| N-7478-13-1 | 0 | 0 | 0 | 0 | 4,111 |
| N-7478-14-1 | 0 | 0 | 0 | 0 | 3,145 |
| N-7478-15-1 | 0 | 0 | 0 | 0 | 3,123 |
| N-7478-16-1 | 0 | 0 | 0 | 0 | 3,138 |
| N-7478-17-1 | 0 | 0 | 0 | 0 | 3,133 |
| N-7478-18-1 | 0 | 0 | 0 | 0 | 3,148 |
| N-7478-19-1 | 0 | 0 | 0 | 0 | 3,139 |
| N-7478-20-1 | 0 | 0 | 0 | 0 | 3,148 |
| N-7478-21-1 | 0 | 0 | 0 | 0 | 3,134 |
| N-7478-22-1 | 0 | 0 | 0 | 0 | 3,139 |
| N-7478-23-1 | 0 | 0 | 0 | 0 | 3,153 |
| N-7478-24-1 | 0 | 0 | 0 | 0 | 3,155 |
| N-7478-25-1 | 0 | 0 | 0 | 0 | 5,643 |
| N-7478-26-2 | 0 | 0 | 0 | 0 | 2,465 |
| N-7478-27-2 | 0 | 0 | 0 | 0 | 2,465 |
| N-7478-28-1 | 0 | 0 | 0 | 0 | 74 |
| N-7478-29-1 | 0 | 0 | 0 | 0 | 74 |
| N-7478-30-1 | 0 | 0 | 0 | 0 | 74 |
| N-7478-31-1 | 0 | 0 | 0 | 0 | 74 |
| N-7478-32-1 | 0 | 0 | 0 | 0 | 74 |
| N-7478-33-0 | 0 | 0 | 0 | 0 | 456 |
| N-7478-34-0 | 0 | 0 | 0 | 0 | 456 |
| N-7874-35-0 | 0 | 0 | 0 | 0 | 456 |
| Total | 6,603 | 176 | 473 | 5,221 | 273,974 |

SSPE1

| Facility | Pollutant (lb/year) | | | | |
|-------------|---------------------|-----------------|------------------|--------|---------|
| | NO _x | SO _x | PM ₁₀ | CO | VOC |
| N-3386 | 9,028 | 778 | 72,504 | 50,812 | 36,710 |
| N-7478 | 6,603 | 176 | 473 | 5,221 | 273,974 |
| ERC N-260-2 | 125 | 0 | 0 | 0 | 0 |
| ERC N-260-3 | 0 | 0 | 0 | 783 | 0 |
| ERC N-964-1 | 0 | 0 | 0 | 0 | 90,000 |
| Total | 15,756 | 954 | 72,977 | 56,816 | 400,684 |

Facility N-3386 has had reductions that resulted in the banking of ERC's.

Certificate N-260-2 (NO_x):

Amount Banked: 758 lb/yr
Amount used on site: 633 lb/yr
 SSPE Contribution 125 lb/yr

Certificate N-260-3 (CO):

Amount Banked: 783 lb/yr
Amount used on site: 0 lb/yr
 SSPE Contribution 783 lb/yr

Facility N-7478 has had one reduction that resulted in the banking of ERC's.

Certificate N-964-1 (VOC):

Amount Banked: 90,000 lb/yr
Amount used on site: 0 lb/yr
 SSPE Contribution 90,000 lb/yr

Appendix F TV-009 Form

San Joaquin Valley Unified Air Pollution Control District

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

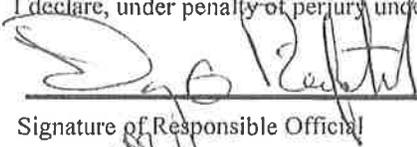
- SIGNIFICANT PERMIT MODIFICATION ADMINISTRATIVE
 MINOR PERMIT MODIFICATION AMENDMENT

| | |
|--|----------------------|
| COMPANY NAME: E&J Gallo Winery | FACILITY ID: N- 3386 |
| 1. Type of Organization: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input type="checkbox"/> Partnership <input type="checkbox"/> Utility | |
| 2. Owner's Name: E&J Gallo Winery | |
| 3. Agent to the Owner: Christine Ryan | |

II. COMPLIANCE CERTIFICATION (Read each statement carefully and initial all circles for confirmation):

- Based on information and belief formed after reasonable inquiry, the equipment identified in this application will continue to comply with the applicable federal requirement(s).
- Based on information and belief formed after reasonable inquiry, the equipment identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.
- Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.
- Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

I declare, under penalty of perjury under the laws of the state of California, that the forgoing is correct and true:


 Signature of Responsible Official

7/22/13
 Date

Doug Riefsteck
 Name of Responsible Official (please print)

Vice President of Operations
 Title of Responsible Official (please print)