



OCT 20 2010

Bill Misaki
Vie-Del Winery #1
P.O. Box 2908
Fresno, CA 93745-2908

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: C-1103147

Dear Mr. Misaki:

Enclosed for your review and comment is the District's analysis of Vie-Del Winery #1's application for an Authority to Construct for the rental boiler operation as a temporary replacement emission unit while permit unit C-1344-1 is under repair, at 11903 S. Chestnut Ave.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 30-day public comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Manuel Salinas of Permit Services at (559) 230-5833.

Sincerely,

David Warner
Director of Permit Services

DW:ms

Enclosures

Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5585



OCT 20 2010

Mike Tollstrup, Chief
Project Assessment Branch
Stationary Source Division
California Air Resources Board
PO Box 2815
Sacramento, CA 95812-2815

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: C-1103147

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of Vie-Del Winery #1's application for an Authority to Construct for the rental boiler operation as a temporary replacement emission unit while permit unit C-1344-1 is under repair, at 11903 S. Chestnut Ave.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 30-day public comment period which begins on the date of publication of the public notice.

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Fresno Bee
Fresno Bee

**NOTICE OF PRELIMINARY DECISION
FOR THE PROPOSED ISSUANCE OF
AN AUTHORITY TO CONSTRUCT**

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Unified Air Pollution Control District solicits public comment on the proposed issuance of Authority to Construct to Vie-Del Winery #1 for the rental boiler operation as a temporary replacement emission unit while permit unit C-1344-1 is under repair, at 11903 S. Chestnut Ave.

The analysis of the regulatory basis for this proposed action, Project #C-1103147, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. Written comments on this project must be submitted within 30 days of the publication date of this notice to **DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, 1990 EAST GETTYSBURG AVENUE, FRESNO, CA 93726.**

San Joaquin Valley Air Pollution Control District
Authority to Construct Application Review
Natural Gas-Fired Boiler
Temporary Replacement Emissions Unit (TREU)

Facility Name: Vie-Del Winery #1
Mailing Address: P.O. Box 2908
Fresno, CA 93745-2908
Contact Person: Bill Misaki
Telephone: (559) 834-2525
Fax: (559) 834-1348
E-Mail: billm@vie-del.com
Application #(s): C-1344-6-0
Project #: C-1103147
Deemed Complete: October 12, 2010

Date: October 12, 2010
Engineer: Manuel Salinas
Lead Engineer: Joven Refuerzo

I. Proposal

Vie-Del Winery #1 is applying for an Authority to Construct (ATC) for the installation of a new 60.0 MMBtu/hr natural gas-fired boiler. In addition, the facility is proposing to follow Alternate Monitoring Scheme "A" using a portable analyzer pursuant to District Policy SSP-1105. The new boiler will be installed as a Temporary Replacement Emission Unit (TREU) while repairs are made to the existing boiler, Permit to Operate (PTO) C-1344-1-6 (see Appendix A).

Pursuant to Rule 2201, Section 3.39, the new boiler can be class and categorized as a TREU if it meets the following requirements

- The Potential to Emit from a TREU must not exceed the Potential to Emit from the existing emissions unit.
- If a TREU is used to replace a TREU, the combined time at the Stationary Source for the two TREU shall not exceed a total of 180 days in any twelve-month period.
- An emissions unit not removed from the Stationary Source within 180 days is not a TREU.

The following conditions will be added to the permit to assure the unit is operated as a TREU.

- This unit may be operated only while permit unit C-1344-1-6 is shutdown for maintenance or repair. [District Rule 2201]
- This unit must be removed from service within 180 days from the date of implementation of this Authority to Construct. The permittee shall maintain records indicating the days of operation of this boiler. [District Rules 1070 and 2201]

Background

The facility's original ATC application was submitted for a TREU for unit C-1344-1-6. During preliminary calculations, it was determined that the TREU boiler would trigger a public notice for exceeding 100 lb-CO per day. The facility could not wait for the 30 day public notice period so they elected to limit the daily fuel usage of the TREU boiler to a value that would reduce the daily CO emission below the 100 lb-day limit (ATC C-1344-5-0, see Appendix A).

The facility has now submitted a new ATC application for a TREU that does not limit the daily fuel usage of the TREU boiler. The application in this project will entail a public notice and will replace the PTO issued in project number C-1102864. PTO C-1344-5-0 and ATC '6-0 will be connected to assure the TREU boiler is not operated for more than 180 days.

The following conditions will be added to the permit.

- This Authority to Construct (ATC) cancels and supercedes Permit to Operate C-1344-5-0. [District Rule 2201]
- Combined operation of this Authority to Construct (ATC) and Permit to Operate C-1344-5-0 shall not exceed 180 days from the date of implementation of ATC C-1344-5-0. [District Rules 1070 and 2201]

II. Applicable Rules

| | |
|--|---|
| Rule 2201 | New and Modified Stationary Source Review Rule (12/18/08) |
| Rule 2520 | Federally Mandated Operating Permits (6/21/01) |
| Rule 4001 | New Source Performance Standards (4/14/99) |
| Rule 4002 | National Emissions 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 4301 | Fuel Burning Equipment (12/17/92) |
| Rule 4305 | Boilers, Steam Generators and Process Heaters – Phase II (8/21/03) |
| Rule 4306 | Boilers, Steam Generators and Process Heaters – Phase III (3/17/05) |
| Rule 4801 | Sulfur Compounds (12/17/92) |
| CH&SC 41700 | Health Risk Assessment |
| CH&SC 42301.6 | School Notice |
| 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 facility is located at 11903 S. Chestnut Avenue in Fresno, CA. The equipment is located within 1,000 feet of the outer boundary of a K-12 school. Pursuant to California Health and Safety Code 42301.6, since this project will not result in an increase in emissions, a school notice is not required.

IV. Process Description

Vie-Del Winery #1 operates a natural gas-fired boiler used to create steam and hot water used in the facility's winery operation. The applicant is proposing to install a new boiler with NO_x emissions of 9 ppmvd-NO_x @ 3% O₂ (0.0108 lb-NO_x/MMBtu).

The maximum operating schedule used for Potential to Emit calculation is 24 hr/day.

V. Equipment Listing

C-1344-6-0: 60.0 MMBTU/HR KEYSTONE MODEL 14M-200 NATURAL GAS-FIRED BOILER WITH A TODD MODEL T260IGXMXI LOW-NO_x BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM, USED AS A TEMPORARY REPLACEMENT EMISSIONS UNIT (TREU) FOR UNIT C-1344-1

VI. Emission Control Technology Evaluation

Ultra Low-NO_x burners reduce NO_x formation by producing lower flame temperatures (and longer flames) than conventional burners. Conventional burners thoroughly mix all the fuel and air in a single stage just prior to combustion, whereas low-NO_x burners delay the mixing of fuel and air by introducing the fuel (or sometimes the air) in multiple stages. Generally, in the first combustion stage, the air-fuel mixture is fuel rich. In a fuel rich environment, all the oxygen will be consumed in reactions with the fuel, leaving no excess oxygen available to react with nitrogen to produce thermal NO_x. In the secondary and tertiary stages, the combustion zone is maintained in a fuel-lean environment. The excess air in these stages helps to reduce the flame temperature so that the reaction between the excess oxygen with nitrogen is minimized.

Use of flue gas re-circulation (FGR) can reduce nitrogen oxides (NO_x) emissions by 60% to 70%. In an FGR system, a portion of the flue gas is re-circulated back to the inlet air. As flue gas is composed mainly of nitrogen and the products of combustion, it is much lower in oxygen than the inlet air and contains virtually no combustible hydrocarbons to burn. Thus, flue gas is practically inert. The addition of an inert mass of gas to the combustion reaction serves to absorb heat without producing heat, thereby lowering the flame temperature. Since thermal NO_x is formed by high flame temperatures, the lower flame temperatures produced by FGR serve to reduce thermal NO_x.

VII. General Calculations

A. Assumptions

- The unit will not be operated more than 180 days in any 12 month periods (TREU)
- The unit is fired solely on PUC regulated natural gas
- Natural Gas Heating Value: 1,000 Btu/scf (District Practice)
- F-Factor for Natural Gas: 8,578 dscf/MMBtu corrected to 60°F (40 CFR 60, Appendix B)

B. Emission Factors

The emission factors for unit C-1344-1-6 and C-1344-6-0 are listed in the tables below. As shown in the tables below, the emission factors for the new boiler are lower than or equal the existing boiler. Therefore, the new boiler satisfies the emission factor criteria of a TREU.

C-1344-1-6:

| Pollutant | Emission Factors | | Source |
|-----------------|-----------------------------------|--|----------------|
| NO _x | 0.011 lb-NO _x /MMBtu | 9 ppmvd NO _x (@ 3%O ₂) | Current Permit |
| SO _x | 0.00285 lb-SO _x /MMBtu | | Current Permit |
| PM10 | 0.0076 lb-PM10/MMBtu | | Current Permit |
| CO | 0.1035 lb-CO/MMBtu | 140 ppmvd CO (@ 3%O ₂) | Current Permit |
| VOC | 0.0055 lb-VOC/MMBtu | | Current Permit |

C-1344-6-0:

| Pollutant | Emission Factors | | Source |
|-----------------|-----------------------------------|--|------------------------------|
| NO _x | 0.011 lb-NO _x /MMBtu | 9 ppmvd NO _x (@ 3%O ₂) | Per Applicant |
| SO _x | 0.00285 lb-SO _x /MMBtu | | District Policy APR 1720 |
| PM10 | 0.0076 lb-PM10/MMBtu | | AP-42 (07/98) Table 1.4-2 |
| CO | 0.1035 lb-CO/MMBtu | 140 ppmvd CO (@ 3%O ₂) | Per Applicant |
| VOC | 0.0055 lb-VOC/MMBtu | | AP-42 (07/98) Table 1.4-2 |

C. Calculations

1. Pre-Project Potential to Emit (PE1)

Since this is a new emissions unit, PE1 = 0 for all pollutants.

2. Post Project Potential to Emit (PE2)

The potential to emit for the boiler is calculated as follows, and summarized in the table below:

$$\begin{aligned}
 PE2_{NO_x} &= (0.011 \text{ lb/MMBtu}) \times (60.0 \text{ MMBtu/hour}) \times (24 \text{ hours/day}) \\
 &= \mathbf{15.84 \text{ lb NO}_x/\text{day}}
 \end{aligned}$$

$$PE2_{SOx} = (0.00285 \text{ lb/MMBtu}) \times (60.0 \text{ MMBtu/hour}) \times (24 \text{ hours/day})$$

$$= 4.1 \text{ lb } SO_x/\text{day}$$

$$PE2_{PM10} = (0.0076 \text{ lb/MMBtu}) \times (60.0 \text{ MMBtu/hour}) \times (24 \text{ hours/day})$$

$$= 10.9 \text{ lb } PM_{10}/\text{day}$$

$$PE2_{CO} = (0.1035 \text{ lb/MMBtu}) \times (60.0 \text{ MMBtu/hour}) \times (24 \text{ hours/day})$$

$$= 149.0 \text{ lb } CO/\text{day}$$

$$PE2_{VOC} = (0.0055 \text{ lb/MMBtu}) \times (60.0 \text{ MMBtu/hour}) \times (24 \text{ hours/day})$$

$$= 7.9 \text{ lb } VOC/\text{day}$$

| Post Project Potential to Emit (PE2) | | |
|---|-----------------------------|--------------------------------|
| | Daily Emissions (lb/day) | Annual Emissions (lb/year)* |
| NO _x | 15.84 | 2,851 |
| SO _x | 4.1 | 738 |
| PM ₁₀ | 10.9 | 1,962 |
| CO | 149.0 | 26,820 |
| VOC | 7.9 | 1,422 |

* Annual Emissions = Daily Emissions x 180 day/year

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 Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) 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.

| Pre-Project Stationary Source Potential to Emit [SSPE1] (lb/year) | | | | | |
|--|-----------------|-----------------|------------------|----------------|---------------|
| Permit Unit | NO _x | SO _x | PM ₁₀ | CO | VOC |
| C-1344-1-6 | 5,782 | 1,498 | 3,995 | 54,400 | 2,891 |
| C-1344-2-4 | 6,938 | 1,798 | 4,793 | 65,280 | 3,469 |
| C-1344-3-2 | 1,266 | 36 | 96 | 1,063 | 25,179 |
| C-1344-5-0 | -- | -- | -- | -- | -- |
| Pre-Project SSPE (SSPE1) | 13,986 | 3,332 | 8,884 | 120,743 | 31,539 |

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 Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) 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.

Existing Unit C-1344-1-6:

Emissions from this unit will be calculated to demonstrate that the TREU boiler will have lower annual emissions than the existing boiler for all criteria pollutants. Emission factors were taken from the existing permit (C-1344-1-6).

| Pollutant | Potential Emissions From Unit C-1344-1-6 | | | |
|------------------|--|------------------------------|-----------------------|---------------------|
| | Emission Factors (lb/MMBtu) | Heat Input Rating (lb/MMBtu) | Annual Operation (hr) | Emissions (lb/year) |
| NO _x | 0.011 | 60.0 | 8,760 | 5,782 |
| SO _x | 0.00285 | 60.0 | 8,760 | 1,498 |
| PM ₁₀ | 0.0076 | 60.0 | 8,760 | 3,995 |
| CO | 0.1035 | 60.0 | 8,760 | 54,400 |
| VOC | 0.0055 | 60.0 | 8,760 | 2,891 |

The following table compares the emissions from the new TREU boiler and the boiler it will be replacing, unit C-1344-6-0.

| Pollutant | Emission Comparison | | |
|------------------|--------------------------|------------------------------|---------------------|
| | TREU Boiler (C-1344-6-0) | Existing Boiler (C-1344-1-6) | Emissions Increase? |
| NO _x | 2,851 | 5,782 | No |
| SO _x | 738 | 1,498 | No |
| PM ₁₀ | 1,962 | 3,995 | No |
| CO | 26,820 | 54,400 | No |
| VOC | 1,422 | 2,891 | No |

Since the existing permit unit has a higher potential to emit than the proposed TREU, and the existing permit unit will not be operated while proposed permit unit C-1344-6-0 is in operation, the SSPE2 for this facility will be equal to the potential to emit from the existing permit unit.

| Post-Project Stationary Source Potential to Emit [SSPE2] (lb/year) | | | | | |
|--|-----------------|-----------------|------------------|----------------|---------------|
| Permit Unit | NO _x | SO _x | PM ₁₀ | CO | VOC |
| C-1344-1-6 (project) | 5,782 | 1,498 | 3,995 | 54,400 | 2,891 |
| C-1344-2-4 | 6,938 | 1,798 | 4,793 | 65,280 | 3,469 |
| C-1344-3-2 | 1,266 | 36 | 96 | 1,063 | 25,179 |
| C-1344-5-0(Deleted) | -- | -- | -- | -- | -- |
| C-1344-6-0 (project) | -- | -- | -- | -- | -- |
| Post-Project SSPE (SSPE2) | 13,986 | 3,332 | 8,884 | 120,743 | 31,539 |

5. Major Source Determination

Pursuant to Section 3.24 of District Rule 2201, a Major Source is a stationary source with post-project emissions or a Post Project Stationary Source Potential to Emit (SSPE2), equal to or exceeding one or more of the following threshold values. However, Section 3.24.2 states, "for the purposes of determining major source status, the SSPE2 shall not include the quantity of emission reduction credits (ERC) 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 source is an existing Major Source for VOC emissions and will remain a Major Source for VOC. No change in other pollutants are proposed or expected as a result of this project.

6. Baseline Emissions (BE)

The BE calculation (in lbs/year) is performed pollutant-by-pollutant for each unit within the project, to calculate the QNEC and if applicable, to determine the amount of offsets required.

Pursuant to Section 3.7 of District Rule 2201, 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 3.22 of District Rule 2201.

C-1344-6-0:

Since this is a new emissions unit, BE = PE1 = 0 for all pollutants.

7. SB 288 Major Modification

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.*" project does not constitute a Major Modification.

As discussed in Section VII.C.5 above, the facility is an existing Major Source for VOC; however, the project by itself would need to be a significant increase in order to trigger a Major Modification. The emissions unit(s) within this project do(es) not have a total potential to emit which is greater than Major Modification thresholds (see table below). Therefore, the project cannot be a significant increase and the project does not constitute a Major Modification.

| Major Modification Thresholds (Existing Major Source) | | | |
|--|-----------------------------|----------------------------|----------------------------|
| Pollutant | Project PE (lb/year) | Threshold (lb/year) | Major Modification? |
| NO _x | 2,851 | 50,000 | No |
| SO _x | 738 | 80,000 | No |
| PM ₁₀ | 1,962 | 30,000 | No |
| VOC | 1,422 | 50,000 | No |

8. Federal Major Modification

District Rule 2201, Section 3.17 states that Federal Major Modifications are the same as "Major Modification" defined in 40 CFR 51.165 and part D of Title I of the CAA.

The applicant is proposing the installation of a TREU boiler to be operated when the existing boiler is non-operational due to repairs. Pursuant to 40 CFR 51.165 (a)(1)(v)(C)(1), routine maintenance and repair is not considered a physical change in the method of operation and therefore is not considered a major modification. The facility has stated that the installation of the TREU boiler is to allow for normal operation of their facility while repairs are made to the boiler. Since routine repairs are being made to the existing boiler and the installation and operation of the TREU boiler is part of the routine repair process, the installation of the TREU boiler is not considered a major modification.

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

Pursuant to Section 4.2.5 of District Rule 2201, this permit unit is exempt from BACT requirements as a Temporary Replacement Emissions Unit (TREU) if the following requirements are met:

- The emissions unit will be at a Stationary Source for less than 180 days in any twelve month period,

A condition will be placed on the permit limiting operation of the natural gas-fired boiler to less than 180 days in any twelve month period.

- the Potential to Emit from a TREU must not exceed the Potential to Emit from the existing emissions unit,
The proposed TREU boiler has the same heat input rating (60.0 MMBtu/hr) as the existing boiler (C-1344-1-6), and equivalent or lower emissions factors for all criteria pollutants; therefore there will be no increase in the potential to emit associated with the installation of the new natural gas-fired boiler.
- and replaces an existing emissions unit which is shutdown for maintenance or repair.

The existing boiler (unit C-1344-1-6) is being taken out of service for maintenance. A condition will be added to the permits to ensure compliance.

Therefore, the permit unit is exempted from BACT.

B. Offsets

Pursuant to Section 4.6.5 of District Rule 2201, this permit unit is exempt from offsets as a Temporary Replacement Emissions Unit (TREU) if the following requirements are met:

- The emissions unit will be at a Stationary Source for less than 180 days in any twelve month period,
- the Potential to Emit from a TREU must not exceed the Potential to Emit from the existing emissions unit,
- and replaces an existing emissions unit which is shutdown for maintenance or repair.

Since the project was already shown to meet the conditions for the BACT exemption, the project will also qualify for the offset exemption. Therefore, no offsets will be required for this project.

C. Public Notification

1. Applicability

Public noticing is required for:

- a. Any new Major Source, which is a new facility that is also a Major Source,
- b. Major Modifications,
- c. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
- d. Any project which results in the offset thresholds being surpassed, and/or
- e. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant.

a. New Major Source

New Major Sources are new facilities, which are also Major Sources. Since this is not a new facility, public noticing is not required for this project for New Major Source purposes.

b. Major Modification

As demonstrated in VII.C.7, this project does not constitute a Major Modification; therefore, public noticing for Major Modification purposes is not required.

c. PE > 100 lb/day

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 | 15.84 | 100 lb/day | No |
| SO _x | 4.1 | 100 lb/day | No |
| PM ₁₀ | 10.9 | 100 lb/day | No |
| CO | 149.0 | 100 lb/day | Yes |
| VOC | 7.9 | 100 lb/day | No |

Therefore, public noticing for PE > 100 lb/day purposes is required.

d. Offset Threshold

The following table compares the SSPE1 with the SSPE2 in order to determine if any offset thresholds have been surpassed with this project.

| Offset Threshold | | | | |
|-------------------------|------------------------|------------------------|-------------------------|--------------------------------|
| Pollutant | SSPE1 (lb/year) | SSPE2 (lb/year) | Offset Threshold | Public Notice Required? |
| NO _x | 13,986 | 13,986 | 20,000 lb/year | No |
| SO _x | 3,332 | 3,332 | 54,750 lb/year | No |
| PM ₁₀ | 8,884 | 8,884 | 29,200 lb/year | No |
| CO | 120,743 | 120,743 | 200,000 lb/year | No |
| VOC | 31,539 | 31,539 | 20,000 lb/year | No |

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

e. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a Stationary Source Increase in Permitted Emissions (SSIPE) of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE is calculated as the Post Project Stationary Source Potential to Emit (SSPE2) minus the Pre-Project Stationary Source Potential to Emit (SSPE1), i.e. $SSIPE = SSPE2 - SSPE1$. The values for SSPE2 and SSPE1 are calculated according to Rule 2201, Sections 4.9 and 4.10, respectively. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table:

| Stationary Source Increase in Permitted Emissions [SSIFE] – Public Notice | | | | | |
|--|--------------------|--------------------|--------------------|----------------------------------|----------------------------|
| Pollutant | SSPE2 (lb/year) | SSPE1 (lb/year) | SSIFE (lb/year) | SSIFE Public Notice Threshold | Public Notice Required? |
| NO _x | 13,986 | 13,986 | 0 | 20,000 lb/year | No |
| SO _x | 3,332 | 3,332 | 0 | 20,000 lb/year | No |
| PM ₁₀ | 8,884 | 8,884 | 0 | 20,000 lb/year | No |
| CO | 120,743 | 120,743 | 0 | 20,000 lb/year | No |
| VOC | 31,539 | 31,539 | 0 | 20,000 lb/year | No |

As demonstrated above, the SSIFEs for all pollutants were less than 20,000 lb/year; therefore public noticing for SSIFE purposes is not required.

2. Public Notice Action

As discussed above, public noticing is required for this project for CO emissions in excess of 100 lb/day. 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 for this equipment.

D. Daily Emission Limits (DELs)

Daily Emissions Limitations (DELs) and other enforceable conditions are required by Section 3.15 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. Per Sections 3.15.1 and 3.15.2, 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. DELs are also required to enforce the applicability of BACT.

Proposed Rule 2201 (DEL) Conditions:

- Emissions rates from the natural gas-fired unit shall not exceed any of the following limits: 9 ppmv NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.0076 lb-PM10/MMBtu, 140 ppmv CO @ 3% O₂ or 0.1035 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, and 4306]

In addition, the following permit conditions will appear on the permit:

- {2964} The unit shall only be fired on PUC-regulated natural gas. [District Rule 2201]
- {2965} A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of natural gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201, 4305, and 4306]

E. Compliance Assurance

This unit is subject to District Rule 4305, *Boilers, Steam Generators and Process Heaters, Phase 2*, and District Rule 4306, *Boilers, Steam Generators and Process Heaters, Phase 3*. Source testing requirements, in accordance with District Rules 4305 and 4306, will be discussed in Section VIII, *District Rules 4305 and 4306*, of this evaluation.

2. Monitoring

As required by District Rule 4305, *Boilers, Steam Generators and Process Heaters, Phase 2*, and District Rule 4306, *Boilers, Steam Generators and Process Heaters, Phase 3*, this unit is subject to monitoring requirements. Monitoring requirements, in accordance with District Rules 4305 and 4306, will be discussed in Section VIII, *District Rules 4305 and 4306*, of this evaluation.

3. Recordkeeping

As required by District Rule 4305, *Boilers, Steam Generators and Process Heaters, Phase 2*, and District Rule 4306, *Boilers, Steam Generators and Process Heaters, Phase 3* this unit is subject to recordkeeping requirements. Recordkeeping requirements, in accordance with District Rules 4305 and 4306, will be discussed in Section VIII, *District Rules 4305 and 4306*, of this evaluation.

The following permit condition will be listed on permit as follows:

- {2981} Records of monthly and annual heat input of the unit shall be maintained. [District Rules 2201, 4305, and 4306]
- {2983} 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 Rules 1070, 4305, and 4306]

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis

Section 4.14.1 of this Rule requires that an ambient air quality analysis (AAQA) 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 Technical Services Division of the SJVAPCD conducted the required analysis. Refer to Appendix E of this document for the AAQA summary sheet.

Conclusion

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

Rule 2520 Federally Mandated Operating Permits

Pursuant to their current operating permit, this facility is an existing major source; however, the facility has not received their Title V permit. The facility has been notified that they must submit a Title V permit application for their facility to comply with Rule 2520 - *Federally Mandated Operating Permits*. Since the facility has been notified of their need to submit an Title V permit application, no action is required at this time.

Rule 4001 New Source Performance Standards (NSPS)

This rule incorporates NSPS from Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR); and applies to all new sources of air pollution and modifications of existing sources of air pollution listed in 40 CFR Part 60. 40 CFR Part 60, Subpart Dc applies to Small Industrial-Commercial-Industrial Steam Generators between 10 MMBtu/hr and 100 MMBtu/hr (post-6/9/89 construction, modification or, reconstruction). Subpart Dc has standards for SO_x and PM₁₀. The 60.0 MMBtu/hr boiler is subject to Subpart Dc requirements.

60.42c – Standards for Sulfur Dioxide

Since coal is not combusted by the boiler in this project, the requirements of this section are not applicable.

60.43c – Standards for Particulate Matter

The boiler is not fired on coal, combusts mixtures of coal with other fuels, combusts wood, combusts mixture of wood with other fuels, or oil; therefore it will not be subject to the requirements of this section.

60.44c – Compliance and Performance Tests Methods and Procedures for Sulfur Dioxide.

Since the boiler in this project is not subject to the sulfur dioxide requirements of this subpart, no testing to show compliance is required. Therefore, the requirements of this section are not applicable to the boiler in this project.

60.45c – Compliance and Performance Test Methods and Procedures for Particulate Matter

Since the boiler in this project is not subject to the particulate matter requirements of this subpart, no testing to show compliance is required. Therefore, the requirements of this section are not applicable to the boiler in this project.

60.46c – Emission Monitoring for Sulfur Dioxide

Since the boiler in this project is not subject to the sulfur dioxide requirements of this subpart, no monitoring is required. Therefore, the requirements of this section are not applicable to the boiler in this project.

60.47c – Emission Monitoring for Particulate Matter

Since the boiler in this project is not subject to the particulate matter requirements of this subpart, no monitoring is required. Therefore, the requirements of this section are not applicable to the boiler in this project.

60.48c – Reporting and Recordingkeeping Requirements

Section 60.48c (a) states that the owner or operator of each affected facility shall submit notification of the date of construction or reconstruction, anticipated startup, and actual startup, as provided by §60.7 of this part. This notification shall include:

- (1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

The design heat input capacity and type of fuel combusted at the facility will be listed on the unit's equipment description. No conditions are required to show compliance with this requirement.

- (2) If applicable, a copy of any Federally enforceable requirement that limits the annual capacity factor for any fuel mixture of fuels under §60.42c or §40.43c.

This requirement is not applicable since the units are not subject to §60.42c or §40.43c.

- (3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

The facility has not proposed an annual capacity factor; therefore one will not be required.

- (4) Notification if an emerging technology will be used for controlling SO₂ emissions. The Administrator will examine the description of the control device and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of §60.42c(a) or (b)(1), unless and until this determination is made by the Administrator

This requirement is not applicable since the unit will not be equipped with an emerging technology used to control SO₂ emissions.

Section 60.48 c (g) states that the owner or operator of each affected facility shall record and maintain records of the amounts of each fuel combusted during each day. The following conditions will be added to the permit to assure compliance with this section.

- A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of fuel combusted in the unit shall be installed, utilized and maintained. [District Rules 2201 and 40 CFR 60.48 (c)(g)]
- Permittee shall maintain daily records of the type and quantity of fuel combusted by the boiler. [District Rules 2201 and 40 CFR 60.48 (c)(g)]

Section 60.48 c (i) states that all records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record. District Rule 4320 requires that records be kept for five years.

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

This rule incorporates NESHAPs from Part 61, Chapter I, Subchapter C, Title 40, CFR and the NESHAPs from Part 63, Chapter I, Subchapter C, Title 40, CFR; and applies to all sources of hazardous air pollution listed in 40 CFR Part 61 or 40 CFR Part 63. However, no subparts of 40 CFR Part 61 or 40 CFR Part 63 apply to natural gas-fired boilers.

District Rule 4101 Visible Emissions

District Rule 4101, Section 5.0, indicates 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 dark or darker than Ringlemann 1 or equivalent to 20% opacity.

A permit condition will be listed on the permit as follows:

- {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]

Therefore, compliance with District Rule 4101 requirements is expected.

District Rule 4102 Nuisance

Section 4.0 prohibits discharge of air contaminants, which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result of these operations, provided the equipment is well maintained. Therefore, compliance with this rule is expected.

A permit condition will be listed on the permit as follows:

- {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 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.

In this project, the unit being temporarily replaced (C-1344-1-6) is a 60.0 MMBtu/hr natural gas-fired boiler. The facility is proposing the installation of a 60.0 MMBtu/hr natural gas-fired boiler. Based on the facility’s proposal, the hourly and annual fuel usage from the existing unit (C-1344-1-6) are the same as the hourly and annual fuel usage from the proposed unit (C-1344-6-0) and the existing unit cannot be operated while the new unit is being operated. Therefore, there will not be an increase in emissions or natural gas usage by the new boiler and a Health Risk Assessment is not necessary

District Rule 4201 Particulate Matter Concentration

Section 3.1 prohibits discharge of dust, fumes, or total particulate matter into the atmosphere from any single source operation in excess of 0.1 grain per dry standard cubic foot.

F-Factor for Natural Gas: 8,710 dscf/MMBtu at 68 °F, equivalent to

$$\text{Corrected } F - \text{factor} = \left(\frac{8,710 \text{dscf}}{\text{MMBtu}} \right) \times \left(\frac{60^\circ F + 459.6}{68^\circ F + 459.6} \right) = 8,578 \frac{\text{dscf}}{\text{MMBtu}} \text{ at } 60^\circ F$$

PM10 Emission Factor: 0.0076 lb-PM10/MMBtu
 Percentage of PM as PM10 in Exhaust: 100%
 Exhaust Oxygen (O₂) Concentration: 3%
 Excess Air Correction to F Factor = $\frac{20.9}{(20.9 - 3)} = 1.17$

$$GL = \left(\frac{0.0076 \text{ lb} - \text{PM}}{\text{MMBtu}} \times \frac{7,000 \text{ grain}}{\text{lb} - \text{PM}} \right) / \left(\frac{8,578 \text{ ft}^3}{\text{MMBtu}} \times 1.17 \right)$$

$$GL = 0.0053 \text{ grain/dscf} < 0.1 \text{ grain/dscf}$$

Therefore, compliance with District Rule 4201 requirements is expected and a permit condition will be listed on the permit as follows:

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

District Rule 4301 Fuel Burning Equipment

This rule specifies maximum emission rates in lb/hr for SO₂, NO₂, and combustion contaminants (defined as total PM in Rule 1020). This rule also limits combustion contaminants to ≤ 0.1 gr/scf. According to AP 42 (Table 1.4-2, footnote c), all PM emissions from natural gas combustion are less than 1 μm in diameter.

| District Rule 4301 Limits | | | |
|----------------------------------|-----------------|----------|-----------------|
| Pollutant | NO ₂ | Total PM | SO ₂ |
| ATC #C-1344-6-0 (lb/hr) | 0.7 | 0.5 | 0.2 |
| Rule Limit (lb/hr) | 140 | 10 | 200 |

The above table indicates compliance with the maximum lb/hr emissions in this rule; therefore, continued compliance is expected.

District Rule 4304 - Equipment Tuning Procedure for Boilers, Steam Generators and Process Heaters

Pursuant to District Rules 4305 and 4306, Section 6.3.1, the boiler is not required to tune since it follows a District approved Alternate Monitoring scheme where the applicable emission limits are periodically monitored. Therefore, the unit is not subject to this rule.

District Rule 4305 Boilers, Steam Generators and Process Heaters – Phase 2

The unit is natural gas-fired with a maximum heat input of 60.0 MMBtu/hr. Pursuant to Section 2.0 of District Rule 4305, the unit is subject to District Rule 4305, *Boilers, Steam Generators and Process Heaters – Phase 2*.

In addition, the unit is also subject to District Rule 4306, *Boilers, Steam Generators and Process Heaters – Phase 3*.

Since emissions limits of District Rule 4306 and all other requirements are equivalent or more stringent than District Rule 4305 requirements, compliance with District Rule 4306 requirements will satisfy requirements of District Rule 4305.

Conclusion

Therefore, compliance with District Rule 4305 requirements is expected and no further discussion is required.

District Rule 4306 Boilers, Steam Generators and Process Heaters – Phase 3

The unit is natural gas-fired with a maximum heat input of 60.0 MMBtu/hr. Pursuant to Section 2.0 of District Rule 4306, the unit is subject to District Rule 4306.

Section 5.1, NO_x and CO Emissions Limits

Section 5.1.1 requires that except for units subject to Sections 5.2, NO_x and carbon monoxide (CO) emissions shall not exceed the limits specified in the following table. All ppmv emission limits specified in this section are referenced at dry stack gas conditions and 3.00 percent by volume stack gas oxygen. Emission concentrations shall be corrected to 3.00 percent oxygen in accordance with Section 8.1.

With a maximum heat input of 60.0 MMBtu/hr, the applicable emission limit category is listed in Section 5.1.1, Table 1, Category B, from District Rule 4306.

| Rule 4306 Emissions Limits | | | | |
|--|--------------------------------|----------|------------------------------------|----------|
| Category | Operated on gaseous fuel | | Operated on liquid fuel | |
| | NO _x Limit | CO Limit | NO _x Limit | CO Limit |
| B. Units with a rated heat input greater than 20.0 MMBtu/hr, except for categories C, D, E, F, G, H, and I units | 9 ppmv or 0.011 lb/MMBtu | 400 ppmv | 40 ppmv or 0.052 lb/MMBtu | 400 ppmv |

For the unit:

- the proposed NO_x emission factor is 9 ppmvd @ 3% O₂ (0.011 lb/MMBtu), and
- the proposed CO emission factor is 140 ppmvd @ 3% O₂ (0.1035 lb/MMBtu).

Therefore, compliance with Section 5.1 of District Rule 4306 is expected.

A permit condition listing the emissions limits will be listed on permit as shown in the DEL section above.

Section 5.2, Low Use

The unit annual heat input will exceed the 9 billion Btu heat input per calendar year criteria limit addressed by this section. Since the unit is not subject to Section 5.2, the requirements of this section do not apply to the unit.

Section 5.3, Startup and Shutdown Provisions

Section 5.3 states that on and after the full compliance schedule specified in Section 7.1, the applicable emission limits of Sections 5.1, 5.2.2 and 5.2.3 shall not apply during start-up or shutdown provided an operator complies with the requirements specified in Sections 5.3.1 through 5.3.4.

According to boiler manufacturers, low NO_x burners will achieve their rated emissions within one to two minutes of initial startup and do not require a special shutdown procedure. Because of the short duration before achieving the rated emission factor following startup, the unit will be subject to the applicable emission limits of Sections 5.1, 5.2.2 and 5.2.3 while in operation.

Section 5.4, Monitoring Provisions

Section 5.4.2 requires that permit units subject to District Rule 4306, Section 5.1 emissions limits shall either install and maintain Continuous Emission Monitoring (CEM) equipment for NO_x, CO and O₂, or install and maintain APCO-approved alternate monitoring.

In order to satisfy the requirements of District Rule 4306, the applicant has proposed to use pre-approved alternate monitoring scheme A (pursuant to District Policy SSP-1105), which requires that monitoring of NO_x, CO, and O₂ exhaust concentrations shall be conducted at least once per month (in which a source test is not performed) using a portable analyzer. The following conditions will be incorporated into the permit in order to ensure compliance with the requirements of the proposed alternate monitoring plan:

- The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ within 7 days of startup of the unit and at least once every month thereafter using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306]
- {4064} If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306]
- {4065} All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306]
- {4066} The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent by volume and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306]

Since the unit is not subject to the requirements listed in Section 5.2.1 or 5.2.2, it is not subject to Section 5.4.3 requirements.

Since the unit is not subject to the requirements of category H (maximum annual heat input between 9 billion and 30 billion Btu/year) listed in Section 5.1.1, it is not subject to Section 5.4.4 requirements.

Section 5.5, Compliance Determination

Section 5.5.1 requires that the operator of any unit shall have the option of complying with either the applicable heat input (lb/MMBtu) emission limits or the concentration (ppmv) emission limits specified in Section 5.1. The emission limits selected to demonstrate compliance shall be specified in the source test proposal pursuant to Rule 1081 (Source Sampling).

Since this unit will operate less than 180 days at this site, annual source testing will not be required. In lieu of initial source testing, the unit will be tested with a portable analyzer within 7 days of startup to verify compliance with the proposed NO_x and CO emissions factors. Therefore the requirements of this section do not apply to this unit.

Section 5.5.2 requires that all emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. Therefore, the following permit condition will be listed on the permit as follows:

- {2972} All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306]

Section 5.5.4 requires that for emissions monitoring pursuant to Sections 5.4.2, 5.4.2.1, and 6.3.1 using a portable NO_x analyzer as part of an APCO approved Alternate Emissions Monitoring System, emission readings shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15-consecutive-minute sample reading or by taking at least five (5) readings evenly spaced out over the 15-consecutive-minute period.

Therefore, since the applicant proposed to use a portable analyzer to satisfy the monitoring requirements of District Rule 4306, the following permit condition will be listed on the permit as follows:

- {2937} All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a

15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306]

Section 5.5.5 requires that for emissions source testing performed pursuant to Section 6.3.1 for the purpose of determining compliance with an applicable standard or numerical limitation of this rule, the arithmetic average of three (3) 30-consecutive-minute test runs shall apply. If two (2) of three (3) runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. Therefore, the following permit condition will be listed on the permit as follows:

Since this unit will operate less than 180 days at this site, annual source testing will not be required. In lieu of initial source testing, the unit will be tested with a portable analyzer within 7 days of startup to verify compliance with the proposed NO_x and CO emissions factors. Therefore the requirements of this section do not apply to this unit.

Section 6.1, Recordkeeping

Section 6.1 requires that the records required by Sections 6.1.1 through 6.1.3 shall be maintained for five calendar years and shall be made available to the APCO upon request. Failure to maintain records or information contained in the records that demonstrate noncompliance with the applicable requirements of this rule shall constitute a violation of this rule.

A permit condition will be listed on the permit as follows:

- {2983} 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 Rules 1070, 4305, and 4306]

Section 6.1.2 requires that the operator of a unit subject to Section 5.2 shall record the amount of fuel use at least on a monthly basis. Since the unit is not subject to the requirements listed in Section 5.2, it is not subject to Section 6.1.2 requirements.

Section 6.1.3 requires that the operator of a unit subject to Section 5.2.1 or 6.3.1 shall maintain records to verify that the required tune-up and the required monitoring of the operational characteristics have been performed. The unit is not subject to Section 6.1.3. Therefore, the requirements of this section do not apply to the unit.

Section 6.2, Test Methods

Section 6.2 identifies the following test methods as District-approved source testing methods for the pollutants listed:

| Pollutant | Units | Test Method Required |
|----------------------------|----------|---------------------------------------|
| NO _x | ppmv | EPA Method 7E or ARB Method 100 |
| NO _x | lb/MMBtu | EPA Method 19 |
| CO | ppmv | EPA Method 10 or ARB Method 100 |
| Stack Gas O ₂ | % | EPA Method 3 or 3A, or ARB Method 100 |
| Stack Gas Velocities | ft/min | EPA Method 2 |
| Stack Gas Moisture Content | % | EPA Method 4 |

Since this unit will operate less than 180 days at this site, annual source testing will not be required. In lieu of initial source testing, the unit will be tested with a portable analyzer within 7 days of startup to verify compliance with the proposed NO_x and CO emissions factors. Therefore the requirements of this section do not apply to this unit.

Section 6.3, Compliance Testing

Section 6.3.1 requires that this unit be tested to determine compliance with the applicable requirements of section 5.1 and 5.2.3 not less than once every 12 months. Upon demonstrating compliance on two consecutive compliance source tests, the following source test may be deferred for up to thirty-six months.

Since this unit will operate less than 180 days at this site, annual source testing will not be required. In lieu of initial source testing, the unit will be tested with a portable analyzer within 7 days of startup to verify compliance with the proposed NO_x and CO emissions factors. The following previously proposed condition will be added to the permit to assure compliance with this section.

- The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ within 7 days of startup of the unit and at least once every month thereafter using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306]

In addition, since the applicant has proposed to use pre-approved Alternate Monitoring Scheme "A" using a portable analyzer, the tune-up requirements listed in Section 6.3.1 are not applicable to the boiler. Section 6.3.1 also requires that, during the 36-month source testing interval, the owner/operator shall monthly monitor the operational characteristics recommended by the unit manufacturer. Since the pre-approved Alternate Monitoring Scheme "A" using a portable analyzer requires monthly monitoring of NO_x, CO, and O₂ exhaust emissions concentrations, operational characteristics monitoring requirement is satisfied, and no further discussion is required.

Section 6.4, Emission Control Plan (ECP)

Section 6.4.1 requires that the operator of any unit shall submit to the APCO for approval an Emissions Control Plan according to the compliance schedule in Section 7.0 of District Rule 4306.

The proposed modified unit will be in compliance with the emissions limits listed in table 1, Section 5.1 of this rule and with periodic monitoring and source testing requirements. Therefore, this current application for the new proposed unit satisfies the requirements of the Emission Control Plan, as listed in Section 6.4 of District Rule 4306. No further discussion is required.

Section 7.0, Compliance Schedule

Section 7.0 indicates that an operator with multiple units at a stationary source shall comply with this rule in accordance with the schedule specified in Table 2, Section 7.1 of District Rule 4306.

The unit will be in compliance with the emissions limits listed in table 1, Section 5.1 of this rule, and periodic monitoring and source testing as required by District Rule 4306. Therefore, requirements of the compliance schedule, as listed in Section 7.1 of District Rule 4306, are satisfied. No further discussion is required.

Conclusion

Conditions will be incorporated into the permit in order to ensure compliance with each section of this rule, see attached draft permit(s). Therefore, compliance with District Rule 4306 requirements is expected.

District Rule 4351 Boilers, Steam Generators and Process Heaters – Phase 1

This rule applies to boilers, steam generators, and process heaters at NO_x Major Sources that are not located west of Interstate 5 in Fresno, Kings, or Kern counties. If applicable, the emission limits, monitoring provisions, and testing requirements of this rule are satisfied when the unit is operated in compliance with Rule 4306. Therefore, compliance with this rule is expected.

District Rule 4801 Sulfur Compounds

A person shall not discharge into the atmosphere sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding in concentration at the point of discharge: 0.2 % by volume calculated as SO₂, on a dry basis averaged over 15 consecutive minutes.

Using the ideal gas equation and the emission factors presented in Section VII, the sulfur compound emissions are calculated as follows:

$$\text{Volume SO}_2 = \frac{n RT}{P}$$

With:

N = moles SO₂

T (Standard Temperature) = 60°F = 520°R

P (Standard Pressure) = 14.7 psi

R (Universal Gas Constant) = $\frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot ^\circ\text{R}}$

EPA F-Factor for Natural Gas: 8,710 dscf/MMBtu at 68 °F, equivalent to

$$\text{Corrected } F - \text{factor} = \left(\frac{8,710 \text{ dscf}}{\text{MMBtu}} \right) \times \left(\frac{60^\circ F + 459.6}{68^\circ F + 459.6} \right) = 8,578 \frac{\text{dscf}}{\text{MMBtu}} \text{ at } 60^\circ F$$

Natural Gas Combustion:

$$\frac{0.00285 \text{ lb} - \text{SO}_x}{\text{MMBtu}} \times \frac{\text{MMBtu}}{8,578 \text{ dscf}} \times \frac{1 \text{ lb} \cdot \text{mol}}{64 \text{ lb}} \times \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot ^\circ\text{R}} \times \frac{520^\circ\text{R}}{14.7 \text{ psi}} \times \frac{1,000,000 \cdot \text{parts}}{\text{million}} = 1.97 \frac{\text{parts}}{\text{million}}$$

$$\text{Sulfur Concentration} = 1.97 \frac{\text{parts}}{\text{million}} < 2,000 \text{ ppmv (or 0.2\%)}$$

Therefore, compliance with District Rule 4801 requirements is expected.

California Health & Safety Code 42301.6 (School Notice)

This facility is located within 1,000 feet of a school. Regardless, there is no increase in emissions of any hazardous air pollutants with this project; therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

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.

Greenhouse Gas (GHG) Significance Determination

The proposed installation of a TREU boiler in this project will not result in an increase in project specific greenhouse gas emissions. The TREU boiler will only operate for 180 day and only when the unit it is being replace is not in operation. The nature of the TREU boiler is for it to operate in place of an existing boiler while that boiler is being repaired or having maintenance performed in it. The TREU boiler is therefore not operated any more than the existing boiler it is temporarily replacing. The District therefore concludes that the project would have a less than cumulatively significant impact on global climate change.

District CEQA Findings

The District is the Lead Agency for this project because there is no other agency with broader statutory authority over this project. The District performed an Engineering Evaluation (this document) for the proposed project and determined that the activity will occur at an existing facility and the project involves negligible expansion of the existing use. Furthermore, the District determined that the activity will not have a significant effect on the environment. The District finds that the activity is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline § 15031 (Existing Facilities), and finds that the project is exempt per the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period, issue Authority to Construct C-1344-6-0 subject to the permit conditions on the attached draft Authority to Construct in Appendix C.

X. Billing Information

| Annual Permit Fees | | | |
|---------------------------|--------------|----------------------|------------|
| Permit Number | Fee Schedule | Fee Description | Annual Fee |
| C-1344-6-0 | 3020-02-H | 60.0 MMBtu/hr boiler | \$1,030.00 |

Appendices

- A: Existing PTO to be Temporarily Replaced and Unimplemented ATC
- B: SSPE Calculations
- C: Draft ATC
- D: AAQA

APPENDIX A

Existing PTO to be Temporarily Replaced and Unimplemented ATC

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-1344-1-6

EXPIRATION DATE: 04/30/2012

EQUIPMENT DESCRIPTION:

60.0 MMBTU/HR MURRAY IRON WORKS MODEL MG4E-25 NATURAL GAS-FIRED BOILER, WITH ADVANCED COMBUSTION TECHNOLOGY MODEL GIDION MGW-60 9 PPM ULTRA LOW NOX BURNER WITH FLUE GAS RECIRCULATION

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. 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. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
5. The unit shall only be fired on PUC-regulated natural gas. [District Rule 2201]
6. Emissions from the natural gas-fired unit shall not exceed any of the following limits: 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 140 ppmvd CO @ 3% O₂ or 0.1035 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu [District Rules 2201, 4305, and 4306]
7. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306]
8. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306]
9. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

10. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306]
11. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306]
12. Source testing to measure NO_x and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306]
13. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306]
14. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
15. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305 and 4306]
16. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306]
17. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306]
18. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306]
19. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
20. 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 Rules 1070, 4305, and 4306]

These terms and conditions are part of the Facility-wide Permit to Operate.

INSPECTION

ISSUANCE DATE: 10/07/2010

LEGAL OWNER OR OPERATOR: VIE-DEL WINERY #1
MAILING ADDRESS: P O BOX 2908
 FRESNO, CA 93745-2908

WORKSHEET

LOCATION: 11903 S CHESTNUT AVE
 FRESNO, CA 93725

INSPECT PROGRAM PARTICIPANT: NO

EQUIPMENT DESCRIPTION:

60.0 MMBTU/HR KEYSTONE MODEL 14M-200 NATURAL GAS-FIRED BOILER WITH A TODD MODEL T260IGXMXI LOW-NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM, USED AS A TEMPORARY REPLACEMENT EMISSIONS UNIT (TREU) FOR UNIT C-1344-1

CONDITIONS

1. This unit may be operated only while permit unit C-1344-1-6 is shutdown for maintenance or repair. [District Rule 2201]
2. This unit must be removed from service within 180 days from the date of implementation of this Authority to Construct. The permittee shall maintain records indicating the days of operation of this boiler. [District Rules 1070 and 2201]
3. {1407} All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]
4. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
5. {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]
6. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
7. {2964} The unit shall only be fired on PUC-regulated natural gas. [District Rule 2201]
8. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of fuel combusted in the unit shall be installed, utilized and maintained. [District Rules 2201, 4305, 4306, and 40 CFR 60.48 (c)(g)]
9. Daily natural gas fuel usage shall not exceed 966 MMBtu/day. [District Rule 2201]
10. Emissions rates from the natural gas-fired unit shall not exceed any of the following limits: 9 ppmv NOx @ 3% O2 or 0.011 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 140 ppmv CO @ 3% O2 or 0.1035 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, and 4306]
11. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 within 7 days of startup of the unit and at least once every month thereafter using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306]
12. {2972} All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306]

- INSPECTION WORKSHEET
13. {2936} If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306]
 14. {2937} All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306]
 15. {2938} The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306]
 16. Permittee shall maintain daily records of the type and quantity of fuel combusted by the boiler. [District Rules 2201 and 40 CFR 60.48 (c)(g)]
 17. {2981} Records of monthly and annual heat input of the unit shall be maintained. [District Rules 2201, 4305, and 4306]
 18. {2983} 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 Rules 1070, 4305, and 4306]

APPENDIX B

SSPE Calculations

Pre Project Stationary Source Potential to Emit

Unit C-1344-1-6:

$$\begin{aligned} PE_{NO_x} &= (0.011 \text{ lb/MMBtu}) * (60.0 \text{ MMBtu/hr}) * (8,760 \text{ hr/yr}) = 5,782 \text{ lb NO}_x/\text{year} \\ PE_{SO_x} &= (0.00285 \text{ lb/MMBtu}) * (60.0 \text{ MMBtu/hr}) * (8,760 \text{ hr/yr}) = 1,498 \text{ lb SO}_x/\text{year} \\ PE_{PM_{10}} &= (0.0076 \text{ lb/MMBtu}) * (60.0 \text{ MMBtu/hr}) * (8,760 \text{ hr/yr}) = 3,995 \text{ lb PM}_{10}/\text{year} \\ PE_{CO} &= (0.1035 \text{ lb/MMBtu}) * (60.0 \text{ MMBtu/hr}) * (8,760 \text{ hr/yr}) = 54,400 \text{ lb CO/year} \\ PE_{VOC} &= (0.0055 \text{ lb/MMBtu}) * (60.0 \text{ MMBtu/hr}) * (8,760 \text{ hr/yr}) = 2,891 \text{ lb VOC/day} \end{aligned}$$

Unit C-1344-2-4:

$$\begin{aligned} PE_{NO_x} &= (0.011 \text{ lb/MMBtu}) * (72.0 \text{ MMBtu/hr}) * (8,760 \text{ hr/yr}) = 6,938 \text{ lb NO}_x/\text{year} \\ PE_{SO_x} &= (0.00285 \text{ lb/MMBtu}) * (72.0 \text{ MMBtu/hr}) * (8,760 \text{ hr/yr}) = 1,798 \text{ lb SO}_x/\text{year} \\ PE_{PM_{10}} &= (0.0076 \text{ lb/MMBtu}) * (72.0 \text{ MMBtu/hr}) * (8,760 \text{ hr/yr}) = 4,793 \text{ lb PM}_{10}/\text{year} \\ PE_{CO} &= (0.1035 \text{ lb/MMBtu}) * (72.0 \text{ MMBtu/hr}) * (8,760 \text{ hr/yr}) = 65,280 \text{ lb CO/year} \\ PE_{VOC} &= (0.0055 \text{ lb/MMBtu}) * (72.0 \text{ MMBtu/hr}) * (8,760 \text{ hr/yr}) = 3,469 \text{ lb VOC/day} \end{aligned}$$

Unit C-1344-3-2:

Evaporative Emissions

$$PE_{VOC} = 25,109 \text{ lb-VOC/year}$$

Emissions from Natural Gas Combustion

$$\begin{aligned} PE_{NO_x} &= (0.1 \text{ lb/MMBtu}) * (1.445 \text{ MMBtu/hr}) * (8,760 \text{ hr/yr}) = 1,266 \text{ lb NO}_x/\text{year} \\ PE_{SO_x} &= (0.00285 \text{ lb/MMBtu}) * (1.445 \text{ MMBtu/hr}) * (8,760 \text{ hr/yr}) = 36 \text{ lb SO}_x/\text{year} \\ PE_{PM_{10}} &= (0.0076 \text{ lb/MMBtu}) * (1.445 \text{ MMBtu/hr}) * (8,760 \text{ hr/yr}) = 96 \text{ lb PM}_{10}/\text{year} \\ PE_{CO} &= (0.084 \text{ lb/MMBtu}) * (1.445 \text{ MMBtu/hr}) * (8,760 \text{ hr/yr}) = 1,063 \text{ lb CO/year} \\ PE_{VOC} &= (0.0055 \text{ lb/MMBtu}) * (1.445 \text{ MMBtu/hr}) * (8,760 \text{ hr/yr}) = 70 \text{ lb VOC/day} \end{aligned}$$

Total Annual Emissions for Unit -3-2 = Evaporative Emissions + Combustion Emissions

$$NO_x = 1,266 \text{ lb NO}_x/\text{year}$$

$$SO_x = 36 \text{ lb SO}_x/\text{year}$$

$$PM_{10} = 96 \text{ lb PM}_{10}/\text{year}$$

$$CO = 1,063 \text{ lb CO/year}$$

$$VOC = 25,109 \text{ lb-VOC/year} + 70 \text{ lb VOC/day} = 25,179 \text{ lb VOC/year}$$

APPENDIX C

Draft ATC

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: C-1344-6-0

LEGAL OWNER OR OPERATOR: VIE-DEL WINERY #1
MAILING ADDRESS: P O BOX 2908
FRESNO, CA 93745-2908

LOCATION: 11903 S CHESTNUT AVE
FRESNO, CA 93725

EQUIPMENT DESCRIPTION:

60.0 MMBTU/HR KEYSTONE MODEL 14M-200 NATURAL GAS-FIRED BOILER WITH A TODD MODEL T260IGMXI LOW-NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM, USED AS A TEMPORARY REPLACEMENT EMISSIONS UNIT (TREU) FOR UNIT C-1344-1

CONDITIONS

1. This unit may be operated only while permit unit C-1344-1-6 is shutdown for maintenance or repair. [District Rule 2201]
2. This Authority to Construct (ATC) cancels and supercedes Permit to Operate C-1344-5-0. [District Rule 2201]
3. Combined operation of this Authority to Construct (ATC) and Permit to Operate C-1344-5-0 shall not exceed 180 days from the date of implementation of ATC C-1344-5-0. [District Rules 1070 and 2201]
4. This unit must be removed from service within 180 days from the date of implementation of this Authority to Construct. The permittee shall maintain records indicating the days of operation of this boiler. [District Rules 1070 and 2201]
5. {1407} All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]
6. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. {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]
8. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
9. {2964} The unit shall only be fired on PUC-regulated natural gas. [District Rule 2201]

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

DAVID WARNER, Director of Permit Services

C-1344-6-0 : Oct 18 2010 11:54AM - SALINASM : Joint Inspection NOT Required

10. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of fuel combusted in the unit shall be installed, utilized and maintained. [District Rules 2201, 4305, 4306, and 40 CFR 60.48 (c)(g)]
11. Emissions rates from the natural gas-fired unit shall not exceed any of the following limits: 9 ppmv NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 140 ppmv CO @ 3% O₂ or 0.1035 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, and 4306]
12. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ within 7 days of startup of the unit and at least once every month thereafter using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306]
13. {2972} All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306]
14. {2936} If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306]
15. {2937} All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306]
16. {2938} The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306]
17. Permittee shall maintain daily records of the type and quantity of fuel combusted by the boiler. [District Rules 2201 and 40 CFR 60.48 (c)(g)]
18. {2981} Records of monthly and annual heat input of the unit shall be maintained. [District Rules 2201, 4305, and 4306]
19. {2983} 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 Rules 1070, 4305, and 4306]

DRAFT

APPENDIX D

AAQA

San Joaquin Valley Air Pollution Control District Risk Management Review

To: Manuel Salinas, AQE – Permit Services
 From: Jennifer Hart, AQS – Technical Services
 Date: October 15, 2010
 Facility Name: Vie-Del Winery #1
 Location: 11903 S Chestnut Ave, Fresno
 Application #(s): C-1344-6-0
 Project #: C-1103147

A. RMR SUMMARY

| RMR Summary | | | |
|--|-------------------------|-------------------|--------------------|
| Categories | NG Boiler (Unit 6-0) | Project Totals | Facility Totals |
| Prioritization Score | 0.08 | 0.08 | 0.09 |
| Acute Hazard Index | N/A ¹ | N/A ¹ | N/A ¹ |
| Chronic Hazard Index | N/A ¹ | N/A ¹ | N/A ¹ |
| Maximum Individual Cancer Risk (10 ⁻⁶) | N/A ¹ | N/A ¹ | N/A ¹ |
| T-BACT Required? | No | | |
| Special Permit Conditions? | Yes | | |

1. Cancer risk, Acute and Chronic Hazard Indices were not calculated since the prioritization score was less than 1.0

Proposed Permit Conditions

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

Unit # 6-0

1. This unit must not operate more than 180 days.
2. The unit shall only be fired on PUC-regulated natural gas.

B. RMR REPORT

I. Project Description

Technical Services received a request on October 13, 2010, to perform an Ambient Air Quality Analysis and a Risk Management Review for 60 MMBtu/Hr natural gas-fired boiler with a low NOx burner and flue gas recirculation (FGR) system. This unit will be a temporary replacement emissions unit (TREU) for unit C-1344-1.

II. Analysis

Toxic emissions for this proposed unit were calculated using Ventura County's emission factors for natural gas external combustion sources between 10 and 100 MMBtu/hr. In accordance with the District's *Risk Management Policy for Permitting New and Modified Sources* (APR 1905, March 2, 2001), risks from the proposed unit's toxic emissions were prioritized using the procedure in the 1990 CAPCOA Facility Prioritization Guidelines and incorporated in the District's HEARTs database. The prioritization score for this proposed unit was less than 1.0 (see RMR Summary Table). Therefore, no further analysis was necessary.

The following parameters were used for the review:

| Analysis Parameters Unit 3-0 | | | |
|---------------------------------|-------|--------------------|-------------|
| Rating (MMBtu/Hr) | 60 | Max Hours per Year | 4,320 |
| Closest Receptor (m) | 152.4 | Fuel Type | Natural Gas |

Technical Services performed modeling for criteria pollutants CO, NO_x, SO_x and PM₁₀; as well as a RMR. The emission rates used for criteria pollutant modeling were 6.2 lb/hr CO, 0.7 lb/hr NO_x, 0.2 lb/hr SO_x, and 0.5 lb/hr PM₁₀. The engineer supplied the maximum fuel rate for the IC engine used during the analysis.

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 | Pass | X | Pass | X | X |
| NO _x | Pass ¹ | X | X | X | Pass |
| SO _x | Pass ² | Pass | X | Pass | Pass |
| PM ₁₀ | X | X | X | Pass ³ | Pass ³ |

*Results were taken from the attached PSD spreadsheet.

¹The project was compared to the 1-hour NO₂ National Ambient Air Quality Standard that became effective on April 12, 2010 using the District's approved procedures.

²The project was compared to the 1-hour SO₂ National Ambient Air Quality Standard that became effective on August 23, 2010 using the District's approved procedures.

³The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).

III. Conclusion

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

The prioritization score is less than 1.0. **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 conditions 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.

Attachments:

- A. RMR request from the project engineer
- B. Additional information from the applicant/project engineer
- C. Toxic emissions summary
- D. Prioritization score
- E. AAQA Results
- F. NO₂ NAAQS Report
- G. AERMOD Non-Regulatory Option Checklist