



**San Joaquin Valley**

**AIR POLLUTION CONTROL DISTRICT**



**HEALTHY AIR LIVING™**

APR 01 2013

James Conder  
Golden Valley Grape Juice  
11770 Road 27-1/2  
Madera, CA 93637

**Re: Notice of Preliminary Decision - Authority to Construct  
Project Number: C-1123691**

Dear Mr. Conder:

Enclosed for your review and comment is the District's analysis of Golden Valley Grape Juice's application for an Authority to Construct for the modification to retrofit boiler unit - 4 with a new burner for Rule 4320 compliance, at 11770 Road 27-1/2 in Madera.

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. Jesse A. Garcia of Permit Services at (559) 230-5918.

Sincerely,



David Warner  
Director of Permit Services

DW:jag

Enclosures

**Seyed Sadredin**

Executive Director/Air Pollution Control Officer

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**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  
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**Southern Region**

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



APR 01 2013

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-1123691**

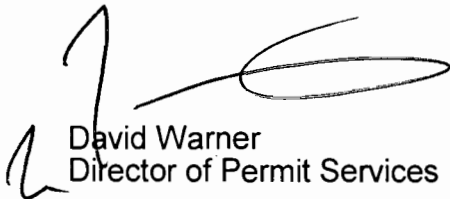
Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of Golden Valley Grape Juice's application for an Authority to Construct for the modification to retrofit boiler unit - 4 with a new burner for Rule 4320 compliance, at 11770 Road 27-1/2 in Madera.

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. Jesse A. Garcia of Permit Services at (559) 230-5918.

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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 Golden Valley Grape Juice for the modification to retrofit boiler unit -4 with a new burner for Rule 4320 compliance, at 11770 Road 27-1/2 in Madera.

The analysis of the regulatory basis for this proposed action, Project #C-1123691, is available for public inspection at [http://www.valleyair.org/notices/public\\_notices\\_idx.htm](http://www.valleyair.org/notices/public_notices_idx.htm) and at any District office. For additional information, please contact the District at (559) 230-6000. Written comments on this project must be submitted by May 6, 2013 to **DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, 1990 EAST GETTYSBURG AVENUE, FRESNO, CA 93726.**



District Rule 4301 Fuel Burning Equipment (12/17/92)  
District Rule 4305 Boilers, Steam Generators and Process Heaters – Phase 2 (8/21/03)  
District Rule 4306 Boilers, Steam Generators and Process Heaters – Phase 3 (10/16/08)  
District Rule 4320 Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr (10/16/08)  
District Rule 4351 Boilers, Steam Generators and Process Heaters – Phase 1 (8/21/03)  
District 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

This facility is located at 11770 Road 27 ½ in Madera, CA. Since there is not an increase in hazardous air emissions, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

### IV. PROCESS DESCRIPTION

Golden Valley Grape Juice operates a natural gas-fired boiler used to provide heat used in the production of grape juice. In order to comply with District Rule 4320 NO<sub>x</sub> requirements, the applicant is proposing to retrofit the existing unit to achieve 5 ppmvd-NO<sub>x</sub> @ 3% O<sub>2</sub> (0.0062 lb-NO<sub>x</sub>/MMBtu).

### V. EQUIPMENT LISTING

#### *Pre-Project Equipment Description:*

**C-3280-4-0:** 42 MMBTU/HR HURST MODEL SERIES 500 NATURAL GAS-FIRED BOILER WITH AN ADVANCE COMBUSTION TECH MODEL MGA 42 LONOX ULTRA LOW NOX BURNER

#### *ATC Equipment Description:*

**C-3280-4-1:** MODIFICATION OF 42 MMBTU/HR HURST MODEL SERIES 500 NATURAL GAS-FIRED BOILER WITH AN ADVANCE COMBUSTION TECH MODEL MGA 42 LONOX ULTRA LOW NOX BURNER: REPLACE BURNER WITH ERI MFT ULN BURNER HEAD, LOWER NOX EMISSION FACTOR TO 5 PPMV @ 3% O<sub>2</sub> AND INCREASE CO EMISSION FACTOR TO 200 PPMV @ 3% O<sub>2</sub> FOR RULE 4320 COMPLIANCE

#### *Post Project Equipment Description:*

**C-3280-4-1:** 42 MMBTU/HR HURST MODEL SERIES 500 NATURAL GAS-FIRED BOILER WITH A ERI MODEL ERI-MFT/ULN ULTRA LOW NOX BURNER

## VI. EMISSION CONTROL TECHNOLOGY EVALUATION

The unit will be equipped with an ultra low-NO<sub>x</sub> burner capable of achieving NO<sub>x</sub> and CO emissions of 5 ppmvd @ 3% O<sub>2</sub> and 200 ppmvd @ 3% O<sub>2</sub>, respectively, and is fired on PUC-quality natural gas.

Ultra Low-NO<sub>x</sub> burners reduce NO<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub>. 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.

### Sulfur Control

Add application specific proposal to comply with the PM/SO<sub>x</sub> requirements of Rule 4320.

## VII. GENERAL CALCULATIONS

### A. Assumptions

- The maximum operating schedule is 24 hours per day
- Annual pre-project and post-project potential to emit is calculated based on 8,760 hours of operation per year
- 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

#### *Pre-Project Emission Factors (EF1)*

For this unit, the EF1 are listed in the table below.

Pollutant	Pre-Project Emission Factors (EF1)		Source
NO <sub>x</sub>	0.011 lb-NO <sub>x</sub> /MMBtu	9 ppmvd NO <sub>x</sub> (@ 3%O <sub>2</sub> )	Current Permit
SO <sub>x</sub>	0.00285 lb-SO <sub>x</sub> /MMBtu		Current Permit
PM10	0.0076 lb-PM10/MMBtu		Current Permit
CO	0.0517 lb-CO/MMBtu	70 ppmvd CO (@ 3%O <sub>2</sub> )	Current Permit
VOC	0.0055 lb-VOC/MMBtu	13 ppmvd VOC (@ 3%O <sub>2</sub> )	Current Permit

**Post-Project Emission Factors (EF2)**

For this unit, post-project emission factors are listed in the table below.

Pollutant	Post-Project Emission Factors (EF2)		Source
NO <sub>x</sub>	0.0062 lb-NO <sub>x</sub> /MMBtu	5 pmvd NO <sub>x</sub> (@ 3%O <sub>2</sub> )	Proposed
SO <sub>x</sub>	0.00285 lb-SO <sub>x</sub> /MMBtu		District Policy APR 1720
PM <sub>10</sub>	0.0076 lb-PM <sub>10</sub> /MMBtu		AP-42 (07/98) Table 1.4-2
CO	0.1478 lb-CO/MMBtu	200 ppmvd CO (@ 3%O <sub>2</sub> )	Proposed
VOC	0.0055 lb-VOC/MMBtu		Current Permit

**C. Calculations**

**1. Pre-Project Potential to Emit (PE1)**

The PE1 for each pollutant is calculated with the following equation:

▪  $PE1 = EF \text{ (lb/MMBtu)} \times \text{Heat Input (MMBtu/hr)} \times \text{Op. Sched. (hr/day or hr/year)}$

Pollutant	Daily PE1			
	EF1 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE1 (lb/day)
NO <sub>x</sub>	0.011	42	24	11.1
SO <sub>x</sub>	0.00285	42	24	2.9
PM <sub>10</sub>	0.0076	42	24	7.7
CO	0.0517	42	24	53.0
VOC	0.0055	42	24	5.5

Pollutant	Annual PE1			
	EF1 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/year)	Annual PE1 (lb/year)
NO <sub>x</sub>	0.011	42	8,760	4,047
SO <sub>x</sub>	0.00285	42	8,760	1,049
PM <sub>10</sub>	0.0076	42	8,760	2,796
CO	0.0517	42	8,760	19,021
VOC	0.0055	42	8,760	2,024

## 2. Post-Project Potential to Emit (PE2)

The PE2 for each pollutant is calculated with the following equation:

- $PE2 = EF \text{ (lb/MMBtu)} \times \text{Heat Input (MMBtu/hr)} \times \text{Op. Sched. (hr/day or hr/year)}$

Pollutant	Daily PE2			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE2 (lb/day)
NO <sub>x</sub>	0.0062	42	24	6.2
SO <sub>x</sub>	0.00285	42	24	2.9
PM <sub>10</sub>	0.0076	42	24	7.7
CO	0.1478	42	24	149.0
VOC	0.0055	42	24	5.5

Pollutant	Annual PE2			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/year)	Annual PE2 (lb/year)
NO <sub>x</sub>	0.0062	42	8,760	2,281
SO <sub>x</sub>	0.00285	42	8,760	1,049
PM <sub>10</sub>	0.0076	42	8,760	2,796
CO	0.1478	42	8,760	54,379
VOC	0.0055	42	8,760	2,024

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

SSPE1 calculations are necessary to aid the following determinations:

- If the facility is becoming a new Major Source,
- An offset threshold will be surpassed, or
- A Stationary Source Increase in Permitted Emissions (SSIPE) public notice is triggered

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.



<b>Pre Project Stationary Source Potential to Emit [SSPE1] (lb/year)</b>					
Permit	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	CO	VOC
C-3280-1-1	1,080	18	420	4,380	84
C-3280-4-0	4,047	1,049	2,796	19,021	2,024
C-3280-5-0	99	0	1	11	5
Pre Project SSPE1	5,226	1,067	3,217	23,412	2,113

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

SSPE2 calculations are necessary to aid the following determinations:

- If the facility is becoming a new Major Source,
- An offset threshold will be surpassed, or
- An SSPE public notice is triggered

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.

The Post-Project Stationary Source Potential to Emit (SSPE2) is summarized in the following table.

<b>Post Project Stationary Source Potential to Emit [SSPE2] (lb/year)</b>					
Permit	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	CO	VOC
C-3280-1-1	1,080	18	420	4,380	84
C-3280-4-1	2,281	1,049	2,796	54,379	2,024
C-3280-5-0	99	0	1	11	5
Post Project SSPE2	3,460	1,067	3,217	58,770	2,113

#### 5. Major Source Determination

##### Rule 2201 Major Source Determination:

A Major Source Determination is necessary in order to:

- Identify new Major Sources and
- Aid BE determinations, for amount of offsets required calculations

Pursuant to Section 3.24 of District Rule 2201, a major source is a stationary source a Post-Project Stationary Source Potential to Emit (SSPE2), equal to or exceeding one or more of the Major Source threshold values (excluding ERCs banked onsite that have not been used onsite).

Since CO is the only criteria pollutant being increase as a result of this project, the following table will compare only the CO SSPE2 to the Major Source threshold:

Major Source		
SSPE2 (lb/yr)	CO Major Source Threshold (lb/yr)	Major Source?
58,770	200,000	No

**Rule 2410 Major Source Determination:**

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 (tons/year)							
	NO2	VOC	SO2	CO	PM	PM10	CO2e
Estimated Facility PE before Project Increase	2.6	1.1	0.5	11.7	1.6	1.6	31,411 <sup>1</sup>
PSD Major Source Thresholds	250	250	250	250	250	250	100,000
PSD Major Source ? (Y/N)	N	N	N	N	N	N	N

As shown above, the facility is not an existing major source for PSD for at least one pollutant. Therefore the facility is not an existing major source for PSD.

**6. Baseline Emissions (BE)**

The BE calculation (in lb/year) is performed on a pollutant-by-pollutant basis to determine the amount of offsets required, where necessary, when the SSPE1 is greater than the offset threshold. This project is exempt from offsets pursuant to Rule 2201, Section 4.6.8. Therefore, BE calculations are not required.

**7. SB 288 Major Modification**

As discussed in Section VII.C.5 above, the facility is not a Major Source; therefore, the project does not constitute a SB 288 Major Modification.

<sup>1</sup> CO2e = CO2e<sub>Natural Gas</sub> + CO2e<sub>Diesel</sub>  
CO2e<sub>Natural Gas</sub> = C-3280-4-1 + C-3280-7-0 = [(42 MMBtu/hr \* 8,760 hr/yr) + (19.5 MMBtu/hr \* 8,760 hr/yr)] \* 0.0583  
ton-CO2e/MMBtu = 31,409 ton-CO2e/yr  
CO2e<sub>Diesel</sub> = C-3280-5-0 = (147 bhp) \* (50 hrs/yr) \* (0.0002058644 ton-CO2e/hp-hr) = 1.5 ton-CO2e/yr  
CO2e = CO2e<sub>Natural Gas</sub> + CO2e<sub>Diesel</sub> = 31,409 ton-CO2e/yr + 1.5 ton-CO2e/yr = 31,411 ton-CO2e/yr

## 8. Federal Major Modification

As discussed in Section VII.C.5 above, the facility is not a Major Source; therefore, the project does not constitute a Federal Major Modification.

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

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:

- NO<sub>2</sub> (as a primary pollutant)
- SO<sub>2</sub> (as a primary pollutant)
- CO
- PM
- PM<sub>10</sub>
- Greenhouse gases (GHG): CO<sub>2</sub>, N<sub>2</sub>O, CH<sub>4</sub>, HFCs, PFCs, and SF<sub>6</sub>

The first step of this PSD evaluation consists of determining whether the facility is an existing PSD Major Source or not (See Section VII.C.5 of this document).

In the case the facility is an existing PSD Major Source, the second step of the PSD evaluation is to determine if the project results in a PSD significant increase.

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

In the case the facility is new source, the second step of the PSD evaluation is to determine if this new facility will become a new PSD major Source as a result of the project and if so, to determine which pollutant will result in a PSD significant increase.

### I. Potential to Emit for New or Modified Emission Units vs PSD Major Source Thresholds

As a screening tool, the project potential to emit from all new and modified units is compared to the PSD major source threshold, and if total project potential to emit from all new and modified units 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)							
	NO2	VOC	SO2	CO	PM	PM10	CO2e
Total PE from New and Modified Units	1.7	1.1	0.5	29.4	1.6	1.6	31,411
PSD Major Source threshold	250	250	250	250	250	250	100,000
New PSD Major Source?	N	N	N	N	N	N	N

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.

### 10. Quarterly Net Emissions Change (QNEC)

The QNEC will be calculated for each pollutant, for each unit, as the difference between the quarterly PE2 and the quarterly PE1. The QNEC for each pollutant is shown in the table(s) below:

QNEC			
Pollutant	PE2 (lb/yr)	PE1 (lb/yr)	QNEC (lb/qtr)
NO <sub>x</sub>	2,281	4,047	-441.50
VOC	1,049	1,049	0
CO	2,796	2,796	0
PM10	54,379	19,021	9,589.5
SO <sub>x</sub>	2,024	2,024	0

## VIII. COMPLIANCE

### District Rule 2201 New and Modified Stationary Source Review Rule

#### A. Best Available Control Technology (BACT)

##### 1. BACT Applicability

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

- a. Any new emissions unit with a potential to emit exceeding two pounds per day,
- b. The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
- c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or

- d. Any new or modified emissions unit, in a stationary source project, which results in an SB288 Major Modification or a Federal Major Modification, as defined by the rule.

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

However, BACT shall not be required for the following:

- 4.2.3 For existing facilities, the installation or modification of an emission control technique performed solely for the purpose of compliance with the requirements of District, State or Federal air pollution control laws, regulations, or orders, as approved by the APCO, shall be exempt from Best Available Control Technology for all air pollutants, provided all of the following conditions are met:
- 4.2.3.1 There shall be no increase in the physical or operational design of the existing facility, except for those changes to the design needed for the installation or modification of the emission control technique itself;
  - 4.2.3.2 There shall be no increase in the permitted rating or permitted operating schedule of the permitted unit;
  - 4.2.3.3 There shall be no increase in emissions from the stationary source that will cause or contribute to any violation of a National Ambient Air Quality Standard, Prevention of Significant Deterioration increment, or Air Quality Related Value in Class I areas; and
  - 4.2.3.4 The project shall not result in an increase in permitted emissions or potential to emit of more than 25 tons per year of NO<sub>x</sub>, or 25 tons per year of VOC, or 15 tons per year of SO<sub>x</sub>, or 15 tons per year of PM<sub>10</sub>, or 50 tons per year of CO.
  - 4.2.3.5 The project shall not constitute a Federal Major Modification.

The increase in CO emissions is less than 50 tons per year. Therefore, each of the above-listed criteria are met, and BACT is not triggered for any pollutant.

## **2. BACT Guideline**

Since BACT is not triggered, the proposed operation is not subject to any BACT guideline. No further discussion is required.

## **3. Top-Down BACT Analysis**

Since BACT is not triggered, the proposed operation is not subject to a top-down BACT analysis. No further discussion is required.

## **B. Offsets**

### **1. Offset Applicability**

The proposed modifications are solely for compliance with Rule 4320, and are exempt from offsets if the following criteria are satisfied. Rule 2201, Section 4.6.8 provides the following exemption from offsets.

Emission offsets shall not be required for the following:

- 4.6.8 For existing facilities, the installation or modification of an emission control technique performed solely for the purpose of compliance with the requirements of District, State or Federal air pollution control laws, regulations, or orders, as approved by the APCO, shall be exempt from offset requirements for all air pollutants provided all of the following conditions are met:
- 4.6.8.1 There shall be no increase in the physical or operational design of the existing facility, except for those changes to the design needed for the installation or modification of the emission control technique itself;
  - 4.6.8.2 There shall be no increase in the permitted rating or permitted operating schedule of the permitted unit;
  - 4.6.8.3 There shall be no increase in emissions from the stationary source that will cause or contribute to any violation of a National Ambient Air Quality Standard, Prevention of Significant Deterioration increment, or Air Quality Related Value in Class I areas; and
  - 4.6.8.4 The project shall not result in an increase in permitted emissions or potential to emit of more than 25 tons per year of NO<sub>x</sub>, or 25 tons per year of VOC, or 15 tons per year of SO<sub>x</sub>, or 15 tons per year of PM-10, or 50 tons per year of CO.
  - 4.6.8.5 The project shall not constitute a Federal Major Modification.

Since the above-listed criteria are met, offsets are not triggered for any pollutant.

## **2. Quantity of Offsets Required**

As seen above, the project meets the exemption requirements of section 4.6.8 of District Rule 2201; therefore offset calculations are not necessary and offsets are not required for this project.

## **C. Public Notification**

### **1. Applicability**

Public noticing is required for:

- a. New Major Sources, Federal Major Modifications, and SB288 Major Modifications,
- b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
- c. Any project which results in the offset thresholds being surpassed, and/or
- d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant

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

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

**b. PE > 100 lb/day**

Applications which include a new emissions unit with a PE greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements. There are no new emissions units associated with this project; therefore public noticing is not required for this project for Potential to Emit exceeding the 100 lb/day limit.

**c. Offset Threshold**

Public notification is required if the Pre-Project Stationary Source Potential to Emit (SSPE1) is increased from a level below the offset threshold to a level exceeding the emissions offset threshold, for any pollutant.

Since there is an increase in CO emissions as a result of this project, the following table compares the CO offset threshold to the SSPE1 and SSPE2 levels.

Offset Threshold			
SSPE1 <sub>CO</sub> (lb/yr)	SSPE2 <sub>CO</sub> (lb/yr)	CO Offset Threshold (lb/yr)	Threshold Exceeded due to Project
23,412	58,770	200,000	No

**d. SSIPE > 20,000 lb/year**

An SSIPE exceeding 20,000 pounds per year for any one pollutant triggers public notice, where SSIPE = SSPE2 - SSPE1.

Since there is an increase in CO emissions as a result of this project, the following table compares the CO SSIPE to the 20,000 lb/year threshold.

SSIPE Threshold				
SSPE1 <sub>CO</sub> (lb/yr)	SSPE2 <sub>CO</sub> (lb/yr)	SSIPE <sub>CO</sub> (lb/yr)	SSIPE <sub>CO</sub> Threshold (lb/yr)	Threshold Exceeded due to Project
23,412	58,770	35,358	20,000	Yes

## 2. Public Notice Action

As discussed above, public noticing is required for this project for CO emissions in excess of 20,000 lb/year. 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.

The DELs for the unit is based on the use of natural gas as a fuel and will be stated in the form of emission factors as shown:

- {3200} Emissions from the natural gas-fired unit shall not exceed any of the following limits: 5 ppmvd NO<sub>x</sub> @ 3% O<sub>2</sub> or 0.0062 lb-NO<sub>x</sub>/MMBtu, 0.00285 lb-SO<sub>x</sub>/MMBtu, 0.0076 lb-PM10/MMBtu, 200 ppmvd CO @ 3% O<sub>2</sub> or 0.1478 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320]

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]

### E. Compliance Assurance

#### 1. Source Testing

This unit is subject to District Rule 4305, *Boilers, Steam Generators and Process Heaters, Phase 2*, District Rule 4306, *Boilers, Steam Generators and Process Heaters, Phase 3*, and District Rule 4320 *Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr*. Source testing requirements, in accordance with District Rules 4305, 4306, and 4320 will be discussed in Section VIII, District Rule 4320 of this evaluation.

#### 2. Monitoring

As required by District Rule 4305, *Boilers, Steam Generators and Process Heaters, Phase 2*, District Rule 4306, *Boilers, Steam Generators and Process Heaters, Phase 3*, and District Rule 4320 *Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr*, this unit is subject to monitoring requirements. Monitoring requirements, in accordance with District Rules 4305, 4306, and 4320 will be discussed in Section VIII, District Rule 4320 of this evaluation.



### 3. Recordkeeping

As required by *District Rule 4305, Boilers, Steam Generators and Process Heaters, Phase 2, District Rule 4306, Boilers, Steam Generators and Process Heaters, Phase 3, and District Rule 4320 Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr*, this unit is subject to recordkeeping requirements. Recordkeeping requirements, in accordance with District Rules 4305, 4306, and 4320 will be discussed in Section VIII, District Rule 4320 of this evaluation.

The following permit condition will be listed on 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, 4306, and 4320]

### 4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

### F. Ambient Air Quality Analysis (AAQA)

Section 4.14.1 of Rule 2201 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 a State or National ambient air quality standard (AAQS). An AAQA will be performed for all New Source Review (NSR) public notice projects. As previously discussed this project requires that a public notice be performed prior to the issuance of an ATC. The Technical Services Division of the SJVAPCD conducted the required analysis. Refer to Appendix III of this document for the AAQA summary sheet.

The results from Criteria Pollutant Modeling are as follows:

Unit C-3280-4-1	1 Hour	3 Hours	8 Hours	24 Hours	Annual
CO	Pass	X	Pass	X	X
NO <sub>x</sub>	Pass <sup>1</sup>	X	X	X	Pass
SO <sub>x</sub>	Pass	Pass	X	Pass	Pass
PM <sub>10</sub>	X	X	X	Pass <sup>2</sup>	Pass <sup>2</sup>
PM <sub>2.5</sub>	X	X	X	Pass <sup>3</sup>	Pass <sup>3</sup>

\*Results were taken from the PSD spreadsheets submitted with the AAQA request.

<sup>1</sup>The project was compared to the 1-hour NO<sub>2</sub> National Ambient Air Quality Standard that became effective on April 12, 2010 using the District's approved procedures.

<sup>2</sup>The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51. 165 (b)(2).

<sup>3</sup>For this case as per District procedure, minor PM<sub>2.5</sub> sources are modeled only for primary PM<sub>2.5</sub> concentrations, and these concentrations are compared to the 24-hour SIL of 1.2 ug/m<sup>3</sup> and the annual SIL of 0.3 ug/m<sup>3</sup>.

As shown, the calculated contribution of criteria pollutants will not exceed the EPA significance level. This project is not expected to cause or make worse a violation of an air quality standard.

### **District Rule 2410 Prevention of Significant Deterioration**

The prevention of significant deterioration (PSD) program is a construction permitting program for new major stationary sources and major modifications to existing major stationary sources located in areas classified as attainment or in areas that are unclassifiable for any criteria air pollutant.

As demonstrated above, this project is not subject to the requirements of Rule 2410 due to a significant emission increase and no further discussion is required.

### **District Rule 2520 Federally Mandated Operating Permits**

Golden Valley Grape Juice does not have a Title V permit at this time. Therefore, Rule 2520 requirements for modifications are not applicable.

### **District Rule 4001 New Source Performance Standards**

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)

40 CFR Part 60, Subpart A, section 14, defines the meaning of modification to which the standards are applicable. §60.14, paragraph (e)(5) states that the following will not be considered as a modification: *“the addition or use of any system or device whose primary function is the reduction of air pollutants, except when an emission control system is removed or replaced by a system which the Administrator determines to be less environmentally beneficial”*.

No newly constructed or reconstructed units are proposed in this project, nor is the unit being modified (as defined above). Since the permittee is retrofitting the unit with an equivalent size, or smaller, burner for compliance with District rules and regulations, the requirements of these sections are not triggered due to the proposed modification.

### **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 Ringelmann 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.

Since the applicant is not proposing an increase in fuel usage with this project, a health risk assessment is not necessary and no further risk analysis is required.

### 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 NG:	8,578 dscf/MMBtu at 60 °F
PM10 Emission Factor:	0.0076 lb-PM10/MMBtu
Percentage of PM as PM10 in Exhaust:	100%
Exhaust Oxygen (O <sub>2</sub> ) Concentration:	3%
Excess Air Correction to F Factor =	$\frac{20.9}{(20.9 - 3)} = 1.17$

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

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

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 SO<sub>2</sub>, NO<sub>2</sub>, and combustion contaminants (defined as total PM in Rule 1020). This rule also limits combustion

contaminants to  $\leq 0.1$  gr/scf. According to AP 42 (Table 1.4-2, footnote c), all PM emissions from natural gas combustion are less than 1  $\mu\text{m}$  in diameter.

<b>District Rule 4301 Limits</b>			
<b>Pollutant</b>	<b>NO<sub>2</sub></b>	<b>Total PM</b>	<b>SO<sub>2</sub></b>
ATC #C-3280-4-1 (lb/hr)	0.3	03	0.1
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 4305 Boilers, Steam Generators and Process Heaters – Phase 2**

The subject unit is subject to Rule 4305, *Boilers, Steam Generators and Process Heaters – Phase 2*.

In addition, the unit is also subject to District Rule 4320. Since emissions limits of Rule 4320 and all other requirements are equivalent or more stringent than District Rule 4305 requirements, compliance with District Rule 4320 requirements will satisfy requirements of District Rule 4305.

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 subject to District Rule 4306, *Boilers, Steam Generators and Process Heaters – Phase 3*.

Since emissions limits of District Rule 4320 and all other requirements are equivalent or more stringent than District Rule 4306 requirements, compliance with District Rule 4320 requirements will satisfy requirements of District Rule 4306.

Therefore, compliance with District Rule 4306 requirements is expected and no further discussion is required.

**Rule 4320 – Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr**

**Section 5.2 NO<sub>x</sub> and CO Emission Limits**

The units are subject to the following NO<sub>x</sub> limits in Table 1, as shown below.

The applicant has proposed to meet the enhanced schedule NO<sub>x</sub> emission limit.

Rule 4320 Emissions Limits				
Category	Operated on gaseous fuel		Operated on liquid fuel	
	NO <sub>x</sub> Limit	CO Limit	NO <sub>x</sub> Limit	CO Limit
B. Units with a total rated heat input > 20.0 MMBtu/hr, except for Categories C through G units	a) Standard Schedule 7 ppmv or 0.008 lb/MMBtu; or	400 ppmv	40 ppmv or 0.052 lb/MMBtu	400 ppmv
	b) Enhanced Schedule 5 ppmv or 0.0062 lb/MMBtu			

- the proposed NO<sub>x</sub> emission factor is 5 ppmvd @ 3% O<sub>2</sub> (0.0062 lb/MMBtu), and
- the proposed CO emission factor is 200 ppmvd @ 3% O<sub>2</sub> (0.1478 lb/MMBtu).

Therefore, compliance with Section 5.2 of District Rule 4320 is expected.

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

**Section 5.4 Particulate Matter Control Requirements**

Section 5.4 of the rule requires one of four options for control of particulate matter: 1) combustion of PUC-quality natural gas, commercial propane, butane, or liquefied petroleum gas, or a combination of such gases, 2) limit fuel sulfur content to no more than five (5) grains of total sulfur per one hundred (100) standard cubic, 3) install and properly operate an emission control system that reduces SO<sub>2</sub> emissions by at least 95% by weight; or limit exhaust SO<sub>2</sub> to less than or equal to 9 ppmv corrected to 3.0% O<sub>2</sub> or 4) refinery units, which require modification of refinery equipment to reduce sulfur emissions, shall be in compliance with the applicable requirement in Section 5.4.1 no later than July 1, 2013.

The applicant proposes to solely combust PUC-quality natural gas; therefore, compliance with this section is expected.

## **Section 5.6, Startup and Shutdown Provisions**

Applicable emissions limits are not required during startup and shutdown provided the duration of each start-up or each shutdown shall not exceed two hours, the emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during start-up or shutdown or operator has submitted an application for a Permit to Operate condition to allow more than two hours for each start-up or each shutdown provided the operator meets all of the conditions specified in Sections 5.6.3.1 through 5.6.3.3.

Applicant has not requested startup and shutdown provisions

## **Section 5.7, Monitoring Provisions**

Section 5.7 requires either use of a APCO approved Continuous Emissions Monitoring System (CEMS) for NO<sub>x</sub>, CO, and oxygen, or implementation of an APCO-approved Alternate Monitoring System.

In order to satisfy the requirements of District Rule 4320, the applicant has proposed to use pre-approved alternate monitoring scheme A (pursuant to District Policy SSP-1105), which requires that monitoring of NO<sub>x</sub>, CO, and O<sub>2</sub> 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:

- {4063} The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub> at least once every month (in which a source test is not performed) using a portable analyzer 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, 4306, and 4320]
- {4064} If either the NO<sub>x</sub> or CO concentrations corrected to 3% O<sub>2</sub>, 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, 4306, and 4320]
- {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, 4306, and 4320]

- {4066} The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent by volume and the measured NO<sub>x</sub> and CO concentrations corrected to 3% O<sub>2</sub>, (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, 4306, and 4320]

### **5.7.6 Monitoring SO<sub>x</sub> Emissions**

Section 5.7.6.1 Operators complying with Sections 5.4.1.1 or 5.4.1.2 shall provide an annual fuel analysis to the District unless a more frequent sampling and reporting period is included in the Permit To Operate. Sulfur analysis shall be performed in accordance with the test methods in Section 6.2.

Section 5.7.6.2 Operators complying with Section 5.4.1.3 by installing and operating a control device with 95% SO<sub>x</sub> reduction shall propose the key system operating parameters and frequency of the monitoring and recording. The monitoring option proposed shall be submitted for approval by the APCO.

Section 5.7.6.3 Operators complying with Section 5.4.1.3 shall perform an annual source test unless a more frequent sampling and reporting period is included in the Permit To Operate. Source tests shall be performed in accordance with the test methods in Section 6.2.

- {4265} On and after January 1, 2014, the permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contacts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320]

### **Section 5.8, Compliance Determination**

The unit currently operates in compliance with the Compliance Determination requirements of Section 5.8. No proposed changes to these requirements are proposed.

### **Section 6.1 Recordkeeping**

No proposed changes to recordkeeping requirements are proposed.

## **Section 6.2 Test Methods**

No proposed changes to test methods are proposed.

## **Section 6.3 Compliance Testing**

Section 6.3.1 requires that this unit be tested to determine compliance with the applicable requirements of section 5.2 not less than once every 12 months (no more than 30 days before or after the required annual source test date). Upon demonstrating compliance on two consecutive compliance source tests, the following source test may be deferred for up to thirty-six months.

Section 6.3.1.1 Units that demonstrate compliance on two consecutive 12-month source tests may defer the following 12-month source test for up to 36 months (no more than 30 days before or after the required 36-month source test date). During the 36-month source testing interval, the operator shall tune the unit in accordance with the provisions of Section 5.5.1, and shall monitor, on a monthly basis, the unit's operational characteristics recommended by the manufacturer to ensure compliance with the applicable emission limits specified in Section 5.2.

Section 6.3.1.2 Tune-ups required by Sections 5.5.1 and 6.3.1 do not need to be performed for units that operate and maintain an APCO approved CEMS or an APCO approved Alternate Monitoring System where the applicable emission limits are periodically monitored.

Section 6.3.1.3 If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits specified in Section 5.2, the source testing frequency shall revert to at least once every 12 months.

The following permit conditions will be listed on the permit as follows:

- {3467} Source testing to measure NO<sub>x</sub> and CO emissions from this unit while fired on natural gas shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306, and 4320]
- {3466} Source testing to measure NO<sub>x</sub> 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, 4306, and 4320]
- {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

Sections 6.3.2.1 through 6.3.2.7 address the requirements of group testing which is not proposed in this project. Therefore these sections are not applicable.



## **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 4320 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<sub>x</sub> 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 4320. 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 SO<sub>2</sub>, on a dry basis averaged over 15 consecutive minutes.

Compliance with the requirements of Rule 4320 ensures that the much higher emission limits of Rule 4801 will be met. Continued compliance is expected.

## **California Environmental Quality Act (CEQA)**

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 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; and
- 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 all project specific emission unit(s) are exempt from Best Available Control Technology (BACT) requirements. Furthermore, the District has determined that potential emission increases would have a less than significant health impact on sensitive receptors.

Issuance of permits for emissions units not subject to BACT requirements and with health impact less than significant is a matter of ensuring conformity with applicable District rules and regulations and does not require discretionary judgment or

deliberation. Thus, the District concludes that this permitting action constitutes a ministerial approval. 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.

**IX. RECOMMENDATION**

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period, issue Authority to Construct C-3280-4-1 subject to the permit conditions on the attached draft Authority to Construct in Appendix II.

**X. BILLING INFORMATION**

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
C-3280-4-1	3020-02- H	42 MMBtu/hr	\$ 953

**APPENDICES**

- Appendix I: Current Permit To Operate (PTO)*
- Appendix II: Draft Authority to Construct (ATC)*
- Appendix III: HRA and AAQA Summary*

## **APPENDIX I**

Current Permit To Operate

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** C-3280-4-0

**EXPIRATION DATE:** 03/31/2014

**EQUIPMENT DESCRIPTION:**

42 MMBTU/HR HURST MODEL SERIES 500 NATURAL GAS-FIRED BOILER WITH AN ADVANCE COMBUSTION TECH MODEL MGA 42 LONOX ULTRA LOW NOX BURNER

## PERMIT UNIT REQUIREMENTS

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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 rates from the unit shall not exceed any of the following limits: 9 ppmvd NO<sub>x</sub> @ 3% O<sub>2</sub> or 0.011 lb-NO<sub>x</sub>/MMBtu, 0.00285 lb-SO<sub>x</sub>/MMBtu, 0.0076 lb-PM<sub>10</sub>/MMBtu, 70 ppmvd CO @ 3% O<sub>2</sub> or 0.0517 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, and 4306]
7. 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]
8. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub> 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]
9. If either the NO<sub>x</sub> or CO concentrations corrected to 3% O<sub>2</sub>, 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]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

10. 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]
11. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 3% O<sub>2</sub>, (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]
12. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306]
13. Source testing to measure NO<sub>x</sub> 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]
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<sub>x</sub> 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 (O<sub>2</sub>) 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. Permittee shall maintain records of fuel supplier certification showing that fuel burned is PUC-regulated. [District Rule 1070]
21. Permittee shall maintain records of the amount of fuel combusted each calendar month. [40 CFR 60.48c(g)]
22. 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.

## **APPENDIX II**

Draft ATC

San Joaquin Valley  
Air Pollution Control District

## AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT  
**DRAFT**

PERMIT NO: C-3280-4-1

LEGAL OWNER OR OPERATOR: GOLDEN VALLEY GRAPE JUICE

MAILING ADDRESS: 11770 ROAD 27-1/2  
MADERA, CA 93637

LOCATION: 11770 ROAD 27-1/2  
MADERA, CA 93637

### EQUIPMENT DESCRIPTION:

MODIFICATION OF 42 MMBTU/HR HURST MODEL SERIES 500 NATURAL GAS-FIRED BOILER WITH AN ADVANCE COMBUSTION TECH MODEL MGA 42 LONOX ULTRA LOW NOX BURNER: REPLACE BURNER WITH ERI MFT ULN BURNER HEAD, LOWER NOX EMISSION FACTOR TO 5 PPMV @ 3% O2 AND INCREASE CO EMISSION FACTOR TO 200 PPMV @ 3% O2 FOR RULE 4320 COMPLIANCE

## CONDITIONS

- {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]
- {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
- {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]
- {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
- {2964} The unit shall only be fired on PUC-regulated natural gas. [District Rule 2201]
- Emissions rates from the unit shall not exceed any of the following limits: 5 ppmvd NOx @ 3% O2 or 0.0062 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 200 ppmvd CO @ 3% O2 or 0.1478 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320]
- 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, 4306 and 4320]

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

DAVID WARNER, Director of Permit Services

C-3280-4-1: Mar 27 2013 10:03AM - GARCIAJ : Joint Inspection NOT Required

8. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub> 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, 4306 and 4320]
9. If either the NO<sub>x</sub> or CO concentrations corrected to 3% O<sub>2</sub>, 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, 4306 and 4320]
10. 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, 4306 and 4320]
11. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 3% O<sub>2</sub>, (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, 4306 and 4320]
12. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320]
13. Source testing to measure NO<sub>x</sub> 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, 4306 and 4320]
14. {109} 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<sub>x</sub> 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, 4306 and 4320]
16. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320]
17. Stack gas oxygen (O<sub>2</sub>) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320]
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, 4306 and 4320]
19. {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
20. Permittee shall maintain records of fuel supplier certification showing that fuel burned is PUC-regulated. [District Rule 1070]
21. Permittee shall maintain records of the amount of fuel combusted each calendar month. [40 CFR 60.48c(g)]

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CONDITIONS CONTINUE ON NEXT PAGE



22. 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, 4306 and 4320]

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## **APPENDIX III**

### HRA and AAQA Summary

**San Joaquin Valley Air Pollution Control District  
Risk Management Review  
REVISED**

To: Jesse A. Garcia – Permit Services  
 From: Cheryl Lawler – Technical Services  
 Date: February 27, 2013  
 Facility Name: Golden Valley Grape Juice  
 Location: 11770 Road 27 ½, Madera  
 Application #(s): C-3280-4-1  
 Project #: C-1123691

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**A. RMR SUMMARY**

<b>RMR Summary</b>			
<b>Categories</b>	<b>Natural Gas Burner (Unit 4-1)</b>	<b>Project Totals</b>	<b>Facility Totals</b>
<b>Prioritization Score</b>	0.11	0.11	>1
<b>Acute Hazard Index</b>	0.00	0.00	0.00
<b>Chronic Hazard Index</b>	0.00	0.00	0.00
<b>Maximum Individual Cancer Risk</b>	<b>6.40E-07</b>	6.40E-07	2.60E-06
<b>T-BACT Required?</b>	<b>No</b>		
<b>Special Permit Conditions?</b>	<b>No</b>		

**B. RMR REPORT**

**I. Project Description**

Technical Services received a request on February 27, 2013, to re-run a Risk Management Review (RMR) and Ambient Air Quality Analysis (AAQA) for a 42 MMBtu/hr natural gas burner with a fixed raincap. The project was re-run because the hourly CO emission rate was revised from 2.21 lb/hr to 6.21 lb/hr.

**II. Analysis**

For the Risk Management Review, toxic emissions for the burner were calculated using 2001 Ventura County Air Pollution Control District emission factors for natural gas fired external combustion. In accordance with the District's *Risk Management Policy for Permitting New and Modified Sources* (APR 1905-1, March 2, 2001), risks from the proposed project were prioritized using the procedures in the 1990 CAPCOA Facility Prioritization Guidelines and incorporated in the District's HEART's database. The prioritization score was less than 1.0 (see RMR Summary Table); however, the facility's

combined prioritization scores totaled to greater than one. Therefore, a refined Health Risk Assessment was required and performed for the project. AERMOD was used with point source parameters outlined below and concatenated 5-year meteorological data from Madera to determine maximum dispersion factors at the nearest residential and business receptors. The dispersion factors were input into the HARP model to calculate the Chronic and Acute Hazard Indices and the Carcinogenic Risk.

The following parameters were used for the review:

Analysis Parameters C-3280-4-1			
Source Type	Point	Closest Receptor (m)	244
Stack Height (m)	9.14	Closest Receptor Type	Residence & Business
Stack Diameter (m)	0.61	Project Location Type	Rural
Temperature (K)	477	Natural Gas Rates (mmscf)	0.04 hr 368 yr
Stack Gas Velocity (m/s)	14.15		

Technical Services also performed modeling for criteria pollutants CO, NO<sub>x</sub>, SO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>, as well as the RMR. Emission rates used for criteria pollutant modeling were 6.21 lb/hr CO, 0.26 lb/hr NO<sub>x</sub>, 0.12 lb/hr SO<sub>x</sub>, 0.32 lb/hr PM<sub>10</sub>, and 0.32 PM<sub>2.5</sub>.

The results from the Criteria Pollutant Modeling are as follows:

**Criteria Pollutant Modeling Results\***  
Values are in µg/m<sup>3</sup>

Natural Gas Burner	1 Hour	3 Hours	8 Hours	24 Hours	Annual
CO	Pass	X	Pass	X	X
NO <sub>x</sub>	Pass <sup>2</sup>	X	X	X	Pass
SO <sub>x</sub>	Pass	Pass	X	Pass	Pass
PM <sub>10</sub>	X	X	X	Pass <sup>1</sup>	Pass <sup>1</sup>
PM <sub>2.5</sub>	X	X	X	Pass <sup>3</sup>	Pass <sup>3</sup>

\*Results were taken from the attached PSD spreadsheet.

<sup>1</sup>The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).

<sup>2</sup>The project was compared to the 1-hour NO<sub>2</sub> National Ambient Air Quality Standard that became effective on April 12, 2010, using the District's approved procedures.

<sup>3</sup>For this case as per District procedure, minor PM<sub>2.5</sub> sources are modeled only for primary PM<sub>2.5</sub> concentrations, and these concentrations are compared to the 24-hour SIL of 1.2 ug/m<sup>3</sup> and the annual SIL of 0.3 ug/m<sup>3</sup>.

### III. Conclusions

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

The acute and chronic indices are below 1.0; and the maximum individual cancer risk associated with the unit is **6.40E-07**, which is less than the 1 in a million threshold. In accordance with the District's Risk Management Policy, the unit is approved **without** Toxic Best Available Control Technology (T-BACT).

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:**

RMR Request Form  
Prioritization  
Refined Modeling Results  
AAQA Results  
Facility Summary