



**DEC 26 2013**

Mr. Phil Castro  
E & J Gallo Winery  
5610 E Olive Ave  
Fresno, CA 93727

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)  
District Facility # C-447  
Project # C-1133176**

Dear Mr. Castro:

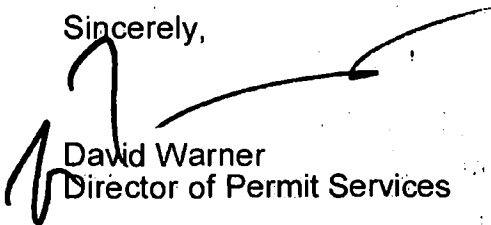
Enclosed for your review is the District's analysis of an application for Authority to Construct for the facility identified above. You requested that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The applicant proposes to install one 99 MMBtu/hr natural gas/biogas-fired boiler to replace one 75 MMBtu/hr natural gas/biogas-fired boiler listed in permit C-447-3-12.

After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the District intends to issue the Authority to Construct with a Certificate of Conformity. Please submit your comments within the 30-day public comment period, as specified in the enclosed public notice. Prior to operating with modifications authorized by the Authority to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

If you have any questions, please contact Mr. Jim Swaney, Permit Services Manager, at (559) 230-5900.

Thank you for your cooperation in this matter.

Sincerely,



David Warner  
Director of Permit Services

Enclosures

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

**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. Gattysburg Avenue  
Fresno, CA 93728-0244  
Tel: (558) 230-6000 FAX: (558) 230-6061

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

**San Joaquin Valley Air Pollution Control District**  
**Authority to Construct Application Review**  
*Natural Gas/Biogas-Fired Boiler*

Facility Name:	E & J Gallo Winery	Date:	December 5, 2013
Mailing Address:	5610 E Olive Ave Fresno, CA 93727	Engineer:	Stanley Tom
Contact Persons:	Phil Castro	Lead Engineer:	Joven Refuerzo
Telephone:	(559) 458-2588		
Application No:	C-447-329-0		
Project #:	C-1133176		
Deemed Complete:	November 14, 2013		

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## **I. PROPOSAL**

E & J Gallo Winery requests an Authority to Construct (ATC) permit to install one 99 MMBtu/hr natural gas/biogas-fired boiler at its wine production facility located in Fresno, CA.

The applicant proposes to remove one 75 MMBtu/hr natural gas/biogas-fired boiler (existing PTO C-447-3-12 included in Appendix A) upon implementation of the ATC permit in this project. Therefore, the following condition will be placed on the ATC permit in this project:

- Within 90 days of startup of the equipment authorized by this Authority to Construct, Permit to Operate C-447-3 shall be surrendered to the District and the associated equipment shall be removed or rendered inoperable. [District Rule 2201]

E & J Gallo Winery has received their Title V Permit. This modification can be classified as a Title V significant modification pursuant to Rule 2520, Section 3.29, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. E & J Gallo Winery must apply to administratively amend their Title V Operating Permit to include the requirements of the ATCs issued with this project.

## **II. APPLICABLE RULES**

Rule 2201	New and Modified Stationary Source Review Rule (4/21/11)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4001	New Source Performance Standards (4/14/99)
Rule 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 4304 Equipment Tuning Procedure for Boilers, Steam Generators and Process Heaters (10/19/95)  
Rule 4305 Boilers, Steam Generators and Process Heaters – Phase 2 (8/21/03)  
Rule 4306 Boilers, Steam Generators and Process Heaters – Phase 3 (10/16/08)  
Rule 4320 Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr (10/16/08)  
Rule 4351 Boilers, Steam Generators and Process Heaters – Phase 1 (08/21/03)  
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 5610 E Olive Avenue in Fresno, CA. The equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

### **IV. PROCESS DESCRIPTION**

E & J Gallo Winery will operate this natural gas/biogas-fired boiler to provide heat and steam for their wine production operations at this location. The facility is requesting to install a selective catalytic reduction system on the exhaust of the boiler. The facility is also requesting to install a NO<sub>x</sub> and O<sub>2</sub> in-stack monitoring system to comply with the Compliance Assurance Monitoring (CAM) requirements of 40 CFR Part 64.

### **V. EQUIPMENT LISTING**

C-447-329-0

99 MMBTU/HR VICTORY ENERGY OPERATIONS NATURAL GAS/BIOGAS-FIRED BOILER EQUIPPED WITH A COEN VERIFLAME MODEL COEN VERIFLAME 99 LOW NOX BURNER, FLUE GAS RECIRCULATION SYSTEM, AND O2 CONTROLLER SERVED BY A NATIONWIDE MODEL CATASTAK SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM

### **VI. EMISSION CONTROL TECHNOLOGY EVALUATION**

The boiler is equipped with a Low-NO<sub>x</sub> burner that reduces NO 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.

The boiler is equipped with a flue gas recirculation system. The use of flue gas recirculation can reduce nitrogen oxides (NO<sub>x</sub>) 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<sub>x</sub> is formed by high flame temperatures, the lower flame temperatures produced by FGR serve to reduce thermal NO<sub>x</sub>.

The boiler is equipped with a Selective Catalytic Reduction System (SCR). Selective Catalytic Reduction systems selectively reduce NO<sub>x</sub> emissions by injecting ammonia (NH<sub>3</sub>) into the exhaust gas stream upstream of a catalyst. Nitrogen oxides, NH<sub>3</sub>, and O<sub>2</sub> react on the surface of the catalyst to form molecular nitrogen (N<sub>2</sub>) and H<sub>2</sub>O. SCR is capable of over 90 percent NO<sub>x</sub> reduction. Titanium oxide is the SCR catalyst material most commonly used, though vanadium pentoxide, noble metals, or zeolites are also used. The ideal operating temperature for a conventional SCR catalyst is 600 to 750 °F. Exhaust gas temperatures greater than the upper limit (750 °F) will cause NO<sub>x</sub> and NH<sub>3</sub> to pass through the catalyst unreacted. Ammonia slip will be limited to 10 ppmvd @ 3% O<sub>2</sub> for the boiler.

## VII. GENERAL CALCULATIONS

### A. Assumptions

#### C-447-3-12

- 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)
- Outlet H<sub>2</sub>S concentration: 50 ppmv (PTO C-447-3-12)
- Fuel usage will be less than 1,353,000 scf of natural gas per day. (PTO C-447-3-12)
- Total duration of start-up time will not exceed 9.0 hr/day, nor 6.0 hr per start-up event. (PTO C-447-3-12)
- Total duration of shut-down time will not exceed 6.0 hr/day, nor 3.0 hr per shutdown event. (PTO C-447-3-12)

#### C-447-329-0

- The nominal Biogas Higher Heating Value (HHV) is 691 Btu/scf. (Project C-1073739)
- Outlet H<sub>2</sub>S concentration: 50 ppmv (Project C-1073739)
- 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)
- Total duration of start-up time will not exceed 5.0 hr/day, nor 4.0 hr/start-up event. (Per Applicant)
- Total duration of shut-down time will not exceed 2.0 hr/day, nor 2.0 hr per shutdown event. (Per Applicant)

**B. Emission Factors**

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

C-447-3-12

<b>Boiler C-447-3-12 (Steady State)</b>		
<b>EF1</b>		<b>Source</b>
NO <sub>x</sub>	7 ppmvd @ 3% O <sub>2</sub> or 0.008 lb/MMBtu	Applicant
SO <sub>x</sub>	0.00285 lb/MMBtu (Natural Gas) 0.012 lb/MMBtu (Biogas)*	PTO C-447-3-12
PM <sub>10</sub>	0.0024 lb/MMBtu	PTO C-447-3-12
CO	200 ppmvd CO @ 3% O <sub>2</sub> or 0.148 lb/MMBtu	PTO C-447-3-12
VOC	0.0027 lb/MMBtu	PTO C-447-3-12
NH <sub>3</sub>	10 ppmvd @ 3% O <sub>2</sub>	PTO C-447-3-12
<b>Boiler C-447-3-12 (Startup/Shutdown)</b>		
<b>Emission rate</b>		<b>Source</b>
NO <sub>x</sub>	0.83 lb-NOx/hr	PTO C-447-3-12
SO <sub>x</sub>	0.45 lb-SOx/hr	PTO C-447-3-12
PM <sub>10</sub>	0.18 lb-PM10/hr	PTO C-447-3-12
CO	11.1 lb-CO/hr	PTO C-447-3-12
VOC	0.20 lb-VOC/hr	PTO C-447-3-12

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

C-447-329-0

<b>Boiler C-447-329-0 (Steady State)</b>		
<b>EF2</b>		<b>Source</b>
NO <sub>x</sub>	5 ppmvd @ 3% O <sub>2</sub> or 0.006 lb/MMBtu	Applicant
SO <sub>x</sub>	0.00285 lb/MMBtu (Natural Gas) 0.012 lb/MMBtu (Biogas)*	Applicant
PM <sub>10</sub>	0.0076 lb/MMBtu	Applicant
CO	200 ppmvd CO @ 3% O <sub>2</sub> or 0.146 lb/MMBtu	Applicant
VOC	0.0055 lb/MMBtu	Applicant
NH <sub>3</sub>	10 ppmvd @ 3% O <sub>2</sub>	Applicant
<b>Boiler C-447-329-0 (Startup/Shutdown)</b>		
<b>Emission rate</b>		<b>Source</b>
NO <sub>x</sub>	0.83 lb-NOx/hr	Applicant

$$* \frac{50 \text{ parts } H_2 S}{1,000,000 \text{ parts}} \times \frac{1 \text{ lb-mol}}{379.5 \text{ ft}^3} \times \frac{34 \text{ lb} \cdot H_2 S}{1 \text{ lb-mol} \cdot H_2 S} \times \frac{64 \text{ lb} \cdot SO_2}{34 \text{ lb} \cdot H_2 S} \times \frac{\text{ft}^3}{691 \text{ Btu}} \times \frac{1,000,000 \text{ Btu}}{\text{MMBtu}} = 0.012 \frac{\text{lb } SO_x}{\text{MMBtu}}$$

## C. Calculations

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

#### C-447-3-12

The highest NOx emission rate occurs when operating in startup and shutdown modes for the maximum permitted time during each day. Startup and shutdown emissions are limited to 15 hr/day (total) and 0.83 lb-NOx/hr by the current Permit to Operate (C-447-3-12). Therefore, daily startup and shutdown emissions will be equal to:

$$\text{Startup/Shutdown NOx} = 0.83 \text{ lb/hr} \times 15 \text{ hr/day} = 12.5 \text{ lb-NOx}$$

The total daily fuel usage is limited to 1,353,000 scf/day. Using the natural gas higher heating value, the maximum daily heat input is:

$$\begin{aligned} \text{Maximum Daily Heat Input} &= 1,353,000 \text{ scf/day} \times 1000 \text{ Btu/scf} \times 1 \text{ MMBtu}/10^6 \text{ Btu} \\ \text{Maximum Daily Heat Input} &= 1,353 \text{ MMBtu/day} \end{aligned}$$

The steady state NOx emissions will be based upon the remaining heat input, assuming 15 hours of startup/shutdown per day. Based on the assumptions made in project C-1054133 for unit C-447-3, the hourly startup/shutdown rates were based upon full-fire of the unit during startup and shutdown. The remaining heat input is then:

$$\begin{aligned} \text{Heat Input Remaining} &= 1,353 \text{ MMBtu/day} - 15 \text{ hr} \times 75 \text{ MMBtu/hr} \\ \text{Heat Input Remaining} &= 228 \text{ MMBtu/day} \end{aligned}$$

Steady State NOx emissions are then:

$$\text{Steady State NOx} = 228 \text{ MMBtu/day} \times 0.008 \text{ lb/MMBtu} = 1.8 \text{ lb-NOx/day}$$

$$\text{Total Daily Emissions} = 12.5 \text{ lb-NOx} + 1.8 \text{ lb-NOx} = 14.3 \text{ lb-NOx/day}$$

$$\text{Total Annual Emissions} = 14.3 \text{ lb-NOx/day} \times 365 \text{ days/year} = 5,220 \text{ lb-NOx/year}$$

<b>Pre-Project Potential to Emit (Permit C-447-3-12)</b>			
<b>Pollutant</b>	<b>Daily PE1 (lb/day)</b>	<b>Annual PE1 (lb/year)</b>	<b>Source</b>
NO <sub>x</sub>	14.3	5,220	See Calculation Above
SO <sub>x</sub>	10.9	3,979	Project C-1093032
PM <sub>10</sub>	3.2	1,168	Project C-1093032
CO	200.2	73,073	Project C-1093032
VOC	3.7	1,351	Project C-1093032
NH <sub>3</sub>	6.1	2,227	Project C-1093032

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

### C-447-329-0

The highest NO<sub>x</sub> emission rate occurs when operating the boiler in startup and shutdown modes for the maximum permitted time during each day. Startup and shutdown emissions are limited to 7.0 hr/day (total) and 0.83 lb-NO<sub>x</sub>/hr. Therefore, daily startup and shutdown emissions will be equal to:

$$\text{Startup/Shutdown NO}_x = 0.83 \text{ lb/hr} \times 7.0 \text{ hr/day} = 5.81 \text{ lb-NO}_x$$

Steady-state NO<sub>x</sub> emissions for the remaining 17 hours of the day will be based on the 99 MMBtu/hr boiler rating and an emissions factor of 0.006 lb-NO<sub>x</sub>/MMBtu.

$$\text{Steady State NO}_x = 17 \text{ hr/day} \times 0.006 \text{ lb/MMBtu} \times 99 \text{ MMBtu/hr} = 10.1 \text{ lb-NO}_x$$

$$\text{Total Daily Emissions} = 5.81 \text{ lb-NO}_x + 10.1 \text{ lb-NO}_x = 15.9 \text{ lb-NO}_x/\text{day}$$

$$\text{Total Annual Emissions} = 15.9 \text{ lb-NO}_x/\text{day} \times 365 \text{ days/year} = 5,804 \text{ lb-NO}_x/\text{year}$$

### Ammonia (NH<sub>3</sub>) from SCR

The proposed daily NH<sub>3</sub> emissions can be calculated as follows:

$$\text{PE} = \text{ppm} \times \text{MW} \times (2.64 \times 10^{-9}) \times \text{ff} \times \text{BR} \times [20.9 / (20.9 - \text{O}_2\%)] \times 24 \text{ hour/day}$$

Where:

- ppm is the emission concentration in ppmvd @ 3% O<sub>2</sub>
- MW is the molecular weight of the pollutant (MW<sub>NH<sub>3</sub></sub> = 17 lb/lb-mol)
- $2.64 \times 10^{-9}$  is one over the molar specific volume (lb/MMscf, at 60 °F)
- ff is the F-factor for natural gas (8,578 scf/MMBtu, at 60 °F)
- BR is the rating of the boiler (MMBtu/hr)
- O<sub>2</sub> is the stack oxygen content to which the emission concentrations are corrected (3%)

$$\begin{aligned} \text{Daily PE (lb/day)} &= 10 \times 17 \times (2.64 \times 10^{-9}) \text{ (lb-mol/MMscf)} \times 8,578 \text{ (scf/MMBtu)} \times \\ & 99 \text{ (MMBtu/hr)} \times [20.9 / (20.9 - 3.0)] \times 24 \text{ (hour/day)} \\ &= 10.7 \text{ lb-NH}_3/\text{day} \end{aligned}$$

$$\begin{aligned} \text{Annual PE (lb/year)} &= (10.7 \text{ lb-NH}_3/\text{day}) \times (365 \text{ day/year}) \\ &= 3,906 \text{ lb-NH}_3/\text{year} \end{aligned}$$

Pollutant	Daily PE2			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE2 (lb/day)
SO <sub>x</sub>	0.012	99	24	28.5
PM <sub>10</sub>	0.0076	99	24	18.1
CO	0.146	99	24	346.9
VOC	0.0055	99	24	13.1

Pollutant	Annual PE2			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/year)	Annual PE2 (lb/year)
SO <sub>x</sub>	0.012	99	8,760	10,407
PM <sub>10</sub>	0.0076	99	8,760	6,591
CO	0.146	99	8,760	126,617
VOC	0.0055	99	8,760	4,770

Post-Project Potential to Emit (Permit C-447-329-0)		
Pollutant	Daily PE2 (lb/day)	Annual PE2 (lb/year)
NO <sub>x</sub>	15.9	5,804
SO <sub>x</sub>	28.5	10,407
PM <sub>10</sub>	18.1	6,519
CO	349.3	127,484
VOC	13.1	4,770
NH <sub>3</sub>	10.7	3,906

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

Pursuant to 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.

Facility emissions are already above the Offset and Major Source Thresholds for VOC emissions; therefore, SSPE1 calculations are not necessary for VOC.



From project C-1113298,

<b>Pre-Project Stationary Source Potential to Emit [SSPE1] (lb/year)</b>					
Permit Unit	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	CO	VOC
Pre-Project SSPE (SSPE1 <sub>PERMIT UNITS</sub> )	57,012	23,887	16,121	451,947	---
ERC C-37-3	---	---	---	84,488	---
Pre Project SSPE (SSPE1 <sub>total</sub> )	57,012	23,887	16,121	536,435	---

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

Pursuant to 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.

Facility emissions are already above the Offset and Major Source Thresholds for VOC emissions; therefore, SSPE2 calculations are not necessary for VOC.

<b>Post Project Stationary Source Potential to Emit [SSPE2] (lb/year)</b>					
Permit Unit	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	CO	VOC
SSPE1 <sub>total</sub>	57,012	23,887	16,121	536,435	---
C-447-3-12	5,220	3,979	1,168	73,073	---
C-447-329-0	5,804	10,407	6,519	127,484	---
Post Project SSPE (SSPE2 <sub>total</sub> )	57,596	30,315	21,472	590,846	---

#### 5. Major Source Determination

##### Rule 2201 Major Source Determination

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

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

<b>Rule 2201 Major Source Determination (lb/year)</b>					
	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	CO	VOC
Pre-Project SSPE (SSPE1)	57,012	23,887	16,121	536,435	> 20,000
Post Project SSPE (SSPE2)	57,596	30,315	21,472	590,846	> 20,000
Major Source Threshold	20,000	140,000	140,000	200,000	20,000
Major Source?	Yes	No	No	Yes	Yes

**Rule 2410 Major Source Determination**

As determined in Section VII.D.4 of this document, this facility is an existing Rule 2201 major source for VOC emissions. The following table summarizes the potential VOC emissions from previous permitting actions for this stationary source before the proposed project.

<b>Project Number</b>	<b>Proposed Permitting Actions</b>	<b>PE (lb-VOC/year)</b>	<b>PE (ton-VOC/year)</b>
C-1071388	Applying for In-house PTOs for existing wine storage and fermentation tanks	389,736,660	194,868
<b>Total</b>		<b>389,736,660</b>	<b>194,868</b>

As indicated above, the SSPE VOC emission before the proposal project is calculated to be 389,736,660 pounds per year, equivalent to 194,868 tons per year.

The facility 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 threshold for VOC is applicable.

<b>PSD Major Source Determination (tons/year)</b>	
	VOC
Facility PE before Project Increase	194,868
PSD Major Source Thresholds	250
PSD Major Source?	<b>Yes</b>

As shown above, the facility is an existing Major Source for PSD for VOC. Therefore, the facility is an existing Major Source for PSD.

**6. Baseline Emissions (BE)**

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

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 3.21

This facility is not a Major Source for SO<sub>x</sub> and PM<sub>10</sub>; therefore, BE is equal to PE1 for these pollutants. The facility is a Major Source for NO<sub>x</sub>, CO, and VOC emissions.

Pursuant to District Rule 2201, baseline emissions are equal to pre-project emissions for clean emission units. District Rule 2201 states that any unit that is equipped with emission control technology that meets the requirements for achieved in practice BACT as accepted by the APCO during the five years immediately prior to the submission of a complete application is considered a Clean Emission Unit.

#### C-447-3-12

##### **a. BE NO<sub>x</sub>**

The District adopted District Rule 4320 on October 16, 2008. The NO<sub>x</sub> emission limit requirements in District Rule 4320 are lower than the limits contained within BACT Guideline 1.1.2 which has since been rescinded; therefore a project specific BACT analysis will be performed to determine BACT for this project. District Rule 4320 limits natural gas boilers with heat input ratings greater than 20 MMBtu/hr to 7 ppmv @ 3% O<sub>2</sub>. Since this emission limit is required by the rule, it will be considered the Achieved in Practice control technology for the BACT analysis. Boiler C-447-3 is currently limited to NO<sub>x</sub> emissions of 7 ppmv @ 3% O<sub>2</sub>; therefore, this boiler is a Clean Emission Unit for NO<sub>x</sub> and the baseline NO<sub>x</sub> emissions for this unit is equal to PE1.

##### **b. BE CO and VOC**

Boiler C-447-3 is fired on natural gas. Pursuant to Guideline 1.1.2 which has since been rescinded, Achieved-in-Practice BACT for CO and VOC emissions is the use of natural gas fuel with LPG as backup. Boiler C-447-3 is currently authorized to fire on natural gas fuel; therefore, this boiler is a Clean Emission Unit for CO and VOC emissions and the baseline CO and VOC emissions for this unit is equal to PE1.

#### C-447-329-0

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

## 7. SB 288 Major Modification

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

As discussed in Section VII.C.5 above, the facility is an existing Major Source for NO<sub>x</sub>, CO and VOC emissions; however, there is not a SB 288 Major Modification threshold for CO emissions. Therefore, the project can only trigger a SB 288 Major Modification for NO<sub>x</sub> and VOC emissions. The emissions unit within this project does not have a total potential to emit greater than SB 288 Major Modification threshold for any pollutant (see table below). Therefore, the project cannot be a significant increase and does not trigger a SB 288 Major Modification for any pollutant.

<b>SB 288 Major Modification Thresholds (Existing Major Source)</b>			
<b>Pollutant</b>	<b>Project PE (lb/year)</b>	<b>Threshold (lb/year)</b>	<b>Major Modification?</b>
NO <sub>x</sub>	5,804	50,000	No
VOC	4,770	50,000	No

## 8. Federal Major Modification

As discussed in Section VII.C.5 above, the facility is not a Major Source for SO<sub>x</sub> or PM<sub>10</sub> emissions; therefore, the project does not constitute a Federal Major Modification for SO<sub>x</sub> or PM<sub>10</sub> emissions.

District Rule 2201, Section 3.17 states that Federal Major Modifications are the same as "Major Modification" as defined in 40 CFR 51.165 and part D of Title I of the CAA. SB 288 Major Modifications are not federal major modifications if they meet the criteria of the "Less-Than-Significant Emissions Increase" exclusion.

A Less-Than-Significant Emissions Increase exclusion is for an emissions increase for the project, or a Net Emissions Increase for the project (as defined in 40 CFR 51.165 (a)(2)(ii)(B) through (D), and (F)), that is not significant for a given regulated NSR pollutant, and therefore is not a federal major modification for that pollutant.

- To determine the post-project projected actual emissions from existing units, the provisions of 40 CFR 51.165 (a)(1)(xxviii) shall be used.
- To determine the pre-project baseline actual emissions, the provisions of 40 CFR 51.165 (a)(1)(xxxv)(A) through (D) shall be used.
- If the project is determined not to be a federal major modification pursuant to the provisions of 40 CFR 51.165 (a)(2)(ii)(B), but there is a reasonable possibility that the project may result in a significant emissions increase, the owner or operator shall comply with all of the provisions of 40 CFR 51.165 (a)(6) and (a)(7).

- Emissions increases calculated pursuant to this section are significant if they exceed the significance thresholds specified in the table below.

<b>Significant Threshold (lb/year)</b>	
Pollutant	Threshold (lb/year)
NO <sub>x</sub>	0
VOC	0

The Net Emissions Increases (NEI) for purposes of determination of a “Less-Than-Significant Emissions Increase” exclusion will be calculated below to determine if this project qualifies for such an exclusion.

Since this project consists of both existing and new emissions units, the “hybrid test” specified in 40 CFR(a)(2)(ii)(F) is applicable and requires that the NEI determination be based on the sum of the individual NEI determinations for existing emissions units (NEI<sub>E</sub>) and new emissions units (NEI<sub>N</sub>) pursuant to 40 CFR(a)(2)(ii)(C) and (D) respectively. Therefore,

$$NEI = NEI_E + NEI_N$$

Net Emission Increase for Existing Units (NEI<sub>E</sub>)

Per 40 CFR 51.165 (a)(1)(xxviii) and 40 CFR 51.165 (a)(2)(ii)(C) for all existing units,

$$NEI_E = PAE - BAE$$

where,

BAE = Baseline Actual Emissions which are the actual emissions created by the project during the baseline period. The BAE are calculated pursuant to 40 CFR 51.165 (a)(1)(xxxv)(A) through (D).

The baseline period is the two years immediately prior to the submission of a complete application. The facility provided the following data as the historical fuel use for the boiler listed in permit C-447-3-12.

<b>Historical Natural Gas Usage (MMBtu) (Permit C-447-3-12)</b>					
Year	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Total
2011	-	-	-	35,281	-
2012	34,320	41,004	58,058	56,837	-
2013	29,863	39,402	67,442	-	-
Average	32,092	40,203	62,750	46,059	181,104

In 2011, the boiler listed in permit C-447-3-12 source tested at 0.0045 lb-NO<sub>x</sub>/MMBtu. The VOC emission factor is taken from the current PTO.

Baseline Actual Emissions (Permit C-447-3-12)					
NO <sub>x</sub>	0.0045	(lb/MMBtu) x	181,104	(MMBtu/year) =	815 (lb/year)
VOC	0.0027	(lb/MMBtu) x	181,104	(MMBtu/year) =	489 (lb/year)

PAE = Projected Actual Emissions which are the post-project projected actual emissions of the existing units in this project pursuant to 40 CFR 51.165 (a)(1)(xxviii).

The boiler listed in permit C-447-3-12 will be taken out of service with the installation of the new boiler in this project. Therefore, PAE = 0.

PAE (NO<sub>x</sub>) = 0 tons-NO<sub>x</sub>/year  
PAE (VOC) = 0 tons-VOC/year

NEI<sub>E</sub> is thus calculated as follows:

$$NEI_E = PAE - BAE$$

NEI<sub>E</sub> (NO<sub>x</sub>) = 0 – 815 lb-NO<sub>x</sub>/year = -815 lb-NO<sub>x</sub>/year  
NEI<sub>E</sub> (VOC) = 0 – 489 lb-VOC/year = -489 lb-VOC/year

Net Emission Increase for New Units (NEI<sub>N</sub>)

Per 40 CFR 51.165 (a)(2)(ii)(D) for new emissions units in this project,

$$NEI_N = PE2_N - BAE$$

BAE = 0 for the new unit therefore NEI<sub>N</sub> = PE2<sub>N</sub>

NEI<sub>N</sub> (NO<sub>x</sub>) = 5,804 lb/year  
NEI<sub>N</sub> (VOC) = 4,770 lb/year

The NEI for this project is thus calculated as follows:

$$NEI = NEI_E + NEI_N$$

**NEI (NO<sub>x</sub>) = 5,804 – 815 lb-NO<sub>x</sub>/year = 4,989 lb-NO<sub>x</sub>/year**  
**NEI (VOC) = 4,770 – 489 lb-VOC/year = 4,281 lb-VOC/year**

The NEI for this project will be greater than the federal Major Modification threshold of 0 lb/year for NO<sub>x</sub> and VOC. Therefore, this project does not qualify for a "Less-Than-Significant Emissions Increase" exclusion and is thus determined to be a Federal Major Modification for NO<sub>x</sub> and VOC.

## 9. Rule 2410 – Prevention of Significant Deterioration

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

- 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. Project Location Relative to Class 1 Area

As demonstrated in the "PSD Major Source Determination" Section above, the facility was determined to be a existing major source for PSD. Because the project is not located within 10 km of a Class 1 area – modeling of the emission increase is not required to determine if the project is subject to the requirements of Rule 2410.

### II. Significance of Project Emission Increase Determination

#### a. Potential to Emit of attainment/unclassified pollutant for New or Modified Emission Units vs PSD Significant Emission Increase Thresholds

As a screening tool, the potential to emit from all new and modified units is compared to the PSD significant emission increase thresholds, and if total potential to emit from all new and modified units is below this threshold, no further analysis will be needed.

<b>PSD Significant Emission Increase Determination: Potential to Emit (tons/year)</b>						
	NO2	SO2	CO	PM	PM10	CO2e
Total PE from New and Modified Units	2.9	5.2	63.7	3.3	3.3	50,735
PSD Significant Emission Increase Thresholds	40	40	100	25	15	75,000
PSD Significant Emission Increase?	N	N	N	N	N	N

## Greenhouse Gas Emissions Evaluation

### Basis and Assumptions

- Emission factors and global warming potentials (GWP) are taken from EPA 40 CFR Part 98, Subpart A, Tables C-1 and C-2:

#### *Natural Gas*

CO2 53.02 kg/MMBtu (116.89 lb/MMBtu)  
 CH4  $1.0 \times 10^{-3}$  kg/MMBtu (0.0022 lb/MMBtu)  
 N2O  $1.0 \times 10^{-4}$  kg/MMBtu (0.00022 lb/MMBtu)

#### *Biogas*

CO2 52.07 kg/MMBtu (114.79 lb/MMBtu)  
 CH4  $3.2 \times 10^{-3}$  kg/MMBtu (0.00705 lb/MMBtu)  
 N2O  $6.3 \times 10^{-4}$  kg/MMBtu (0.00139 lb/MMBtu)

GWP for CH4 = 21 lb-CO2(eq) per lb-CH4  
 GWP for N2O = 310 lb-CO2(eq) per lb-N2O

### Calculations

Assuming worst case the unit is fired on natural gas exclusively,

$$\begin{aligned} \text{CO2 Emissions} &= 99 \text{ MMBtu/hr} \times 116.89 \text{ lb/MMBtu} \times 8,760 \text{ hr/year} \\ &= 101,371,683.6 \text{ lb-CO2(eq)/year} \end{aligned}$$

$$\begin{aligned} \text{CH4 Emissions} &= 99 \text{ MMBtu/hr} \times 0.0022 \text{ lb/MMBtu} \times 8,760 \text{ hr/year} \\ &\quad \times 21 \text{ lb-CO2(eq) per lb-CH4} \\ &= 40,066.488 \text{ lb-CO2(eq)/year} \end{aligned}$$

$$\begin{aligned} \text{N2O Emissions} &= 99 \text{ MMBtu/hr} \times 0.00022 \text{ lb/MMBtu} \times 8,760 \text{ hr/year} \\ &\quad \times 310 \text{ lb-CO2(eq) per lb-N2O} \\ &= 59,145.768 \text{ lb-CO2(eq)/year} \end{aligned}$$

$$\begin{aligned} \text{Total} &= (101,371,683.6 + 40,066.488 + 59,145.768) \text{ lb-CO2(eq)/year} \\ &= 101,470,895.9 \text{ lb-CO2(eq)/year} \end{aligned}$$

$$\begin{aligned} \text{Total} &= 101,470,895.9 \text{ lb-CO2(eq)/year} \div 2,000 \text{ lb/ton} \\ &= \mathbf{50,735 \text{ short tons-CO2(eq)/year}} \end{aligned}$$



As demonstrated above, because the project has a total potential to emit from all new and modified emission units below the PSD significant emission increase thresholds, this project is not subject to the requirements of Rule 2410 due to a significant emission increase and no further discussion is required.

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

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

QNEC = PE2 - PE1, where:

- QNEC = Quarterly Net Emissions Change for each emissions unit, lb/qtr.
- PE2 = Post Project Potential to Emit for each emissions unit, lb/qtr.
- PE1 = Pre-Project Potential to Emit for each emissions unit, lb/qtr.

Quarterly NEC [QNEC]			
	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO <sub>x</sub>	1,451	0	1,451
SO <sub>x</sub>	2,602	0	2,602
PM <sub>10</sub>	1,630	0	1,630
CO	31,871	0	31,871
VOC	1,193	0	1,193

## VIII. COMPLIANCE

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

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

##### 1. BACT Applicability

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

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

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

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

As seen in Section VII.C.2 of this evaluation, the applicant is proposing to install a new natural gas/biogas-fired boiler with a PE greater than 2 lb/day for NO<sub>x</sub>, SO<sub>x</sub>, PM<sub>10</sub>, CO, and VOC. BACT is triggered for NO<sub>x</sub>, SO<sub>x</sub>, PM<sub>10</sub>, CO, and VOC since the PEs are greater than 2 lbs/day.

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

As discussed in Section I above, there are no emissions units being relocated from one stationary source to another; therefore BACT is not triggered.

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

As discussed in Section I above, there are no modified emissions units associated with this project; therefore BACT is not triggered.

**d. SB 288/Federal Major Modification**

As discussed in Section VII.C.7 above, this project does constitute a Federal Major Modification for NO<sub>x</sub> and VOC emissions; therefore BACT is triggered.

**2. BACT Guideline**

The District adopted District Rule 4320 on October 16, 2008. The NO<sub>x</sub> emission limit requirements in District Rule 4320 are lower than the limits contained within BACT Guideline 1.1.2 which has since been rescinded; therefore a project specific BACT analysis will be performed to determine BACT for this project. District Rule 4320 limits natural gas boilers with heat input ratings greater than 20 MMBtu/hr to 7 ppmv @ 3% O<sub>2</sub>. Since this emission limit is required by the rule, it will be considered the Achieved in Practice control technology for the BACT analysis. District Rule 4320 also contains an enhanced schedule option that allows applicants additional time to meet the requirements of the rule. The enhanced schedule NO<sub>x</sub> emission limit requirement is 5 ppmv @ 3% O<sub>2</sub>. Since this is an enhanced option in the rule, it will be considered the Technologically Feasible control technology for the BACT analysis. (See Appendix B)

**3. Top-Down BACT Analysis**

Per Permit Services Policies and Procedures for BACT, a Top-Down BACT analysis shall be performed as a part of the application review for each application subject to the BACT requirements pursuant to the District's NSR Rule.

Pursuant to the attached Top-Down BACT Analysis (see Appendix B), BACT has been satisfied with the following:

NO<sub>x</sub>: 5 ppmvd @ 3% O<sub>2</sub> (0.006 lb/MMBtu)  
SO<sub>x</sub>: Natural gas fuel with LPG backup

PM<sub>10</sub>: Natural gas fuel with LPG backup  
CO: 200 ppmvd @ 3% O<sub>2</sub> (0.147 lb/MMBtu)  
VOC: Natural gas fuel with LPG backup

The facility shall be required to meet these emission limits when fired on natural gas or biogas. Emissions from all pollutants, except SO<sub>x</sub>, are expected to be lower when fired on biogas. Therefore, as a worst case scenario source testing will be performed on natural gas fuel upon startup and periodically thereafter. The biogas H<sub>2</sub>S content will be monitored at the biogas scrubber outlet.

## B. Offsets

### 1. Offset Applicability

Pursuant to Rule 2201, offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the Post Project Stationary Source Potential to Emit (SSPE2) equals to or exceeds the offset threshold levels in Table 4-1 of Rule 2201.

The following table compares the post-project facility-wide annual emissions in order to determine if offsets will be required for this project.

Offset Determination (lb/year)					
	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	CO	VOC
Post Project SSPE (SSPE2)	57,596	30,315	21,472	590,846	> 20,000
Offset Threshold	20,000	54,750	29,200	200,000	20,000
Offsets triggered?	Yes	No	No	Yes	Yes

### 2. Quantity of Offsets Required

As seen above, the SSPE2 is greater than the offset thresholds for NO<sub>x</sub>, CO, and VOC only; therefore offset calculations will be required for this project.

#### Quantity of CO Offsets Required

Increases in CO emissions in attainment areas are exempt from offsets per District Rule 2201 Section 4.6.1, if the applicant demonstrates to the satisfaction of the APCO, that the Ambient Air Quality Standards are not violated in the areas to be affected, and such emissions will be consistent with Reasonable Further Progress, and will not cause or contribute to a violation of the Ambient Air Quality Standards. The District has performed an Ambient Air Quality Analysis for CO (see Appendix E) and determined that this project will not cause Ambient Air Quality Standards to be violated. Therefore, this project will qualify for the CO emissions offset exemption.

Per Sections 4.7.1 and 4.7.3, the quantity of offsets in pounds per year for NO<sub>x</sub> and VOC is calculated as follows for sources with an SSPE1 greater than the offset threshold levels before implementing the project being evaluated.

Offsets Required (lb/year) =  $(\Sigma[PE2 - BE] + ICCE) \times DOR$ , for all new or modified emissions units in the project,

Where,

PE2 = Post Project Potential to Emit, (lb/year)

BE = Baseline Emissions, (lb/year)

ICCE = Increase in Cargo Carrier Emissions, (lb/year)

DOR = Distance Offset Ratio, determined pursuant to Section 4.8

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)

The facility is proposing to install a new emissions unit; therefore Baseline Emissions are equal to zero. Also, there is only one emissions unit associated with this project and there are no increases in cargo carrier emissions; therefore offsets can be determined as follows:

Offsets Required (lb/year) =  $(\Sigma[PE2 - BE] + ICCE) \times DOR$

### NO<sub>x</sub>

PE2 (C-447-329-0) = 5,804 lb/year

BE (C-447-329-0) = 0 lb/year

PE2 (C-447-3-12) = 0 lb/year

BE (C-447-3-12) = 5,220 lb/year

ICCE = 0 lb/year

Offsets Required (lb/year) =  $([5,804 - 0] + [0 - 5,220] + 0) \times DOR$   
 $= 584 \times DOR$   
 $= 584 \text{ lb NO}_x/\text{year}$

Calculating the appropriate quarterly emissions to be offset is as follows:

<u>1<sup>st</sup> Quarter</u>	<u>2<sup>nd</sup> Quarter</u>	<u>3<sup>rd</sup> Quarter</u>	<u>4<sup>th</sup> Quarter</u>
146	146	146	146

The project is a Federal Major Modification and therefore the correct offset ratio for NO<sub>x</sub> is 1.5:1.

Assuming an offset ratio of 1.5:1, the amount of NO<sub>x</sub> ERCs that need to be withdrawn is:

$$\begin{aligned} \text{Offsets Required (lb/year)} &= ([5,804 - 0] + [0 - 5,220] + 0) \times 1.5 \\ &= 584 \times 1.5 \\ &= 876 \text{ lb NO}_x\text{/year} \end{aligned}$$

Calculating the appropriate quarterly emissions to be offset is as follows:

<u>1<sup>st</sup> Quarter</u>	<u>2<sup>nd</sup> Quarter</u>	<u>3<sup>rd</sup> Quarter</u>	<u>4<sup>th</sup> Quarter</u>
219	219	219	219

The applicant has stated that the facility plans to use ERC certificates N-1123-2, N-1011-2, N-1010-2, N-768-2, N-900-2 to offset the increases in NO<sub>x</sub> emissions associated with this project. The above certificates have available quarterly NO<sub>x</sub> credits as follows:

	<u>1<sup>st</sup> Quarter</u>	<u>2<sup>nd</sup> Quarter</u>	<u>3<sup>rd</sup> Quarter</u>	<u>4<sup>th</sup> Quarter</u>
ERC #N-1123-2	5,637	5,635	6,593	8,534
ERC #N-1011-2	0	0	0	0
ERC #N-1010-2	0	0	0	0
ERC #N-768-2	10,768	8,401	11,933	6,637
ERC #N-900-2	63,691	64,821	66,246	61,340
Total	80,096	78,857	84,772	76,511

As seen above, the facility has sufficient credits to fully offset the quarterly NO<sub>x</sub> emissions increases associated with this project.

### VOC

$$\begin{aligned} \text{PE2 (C-447-329-0)} &= 4,770 \text{ lb/year} \\ \text{BE (C-447-329-0)} &= 0 \text{ lb/year} \\ \text{PE2 (C-447-3-12)} &= 0 \text{ lb/year} \\ \text{BE (C-447-3-12)} &= 1,351 \text{ lb/year} \\ \text{ICCE} &= 0 \text{ lb/year} \end{aligned}$$

$$\begin{aligned} \text{Offsets Required (lb/year)} &= ([4,770 - 0] + [0 - 1,351] + 0) \times \text{DOR} \\ &= 3,419 \times \text{DOR} \\ &= 3,419 \text{ lb VOC/year} \end{aligned}$$

Calculating the appropriate quarterly emissions to be offset is as follows:

<u>1<sup>st</sup> Quarter</u>	<u>2<sup>nd</sup> Quarter</u>	<u>3<sup>rd</sup> Quarter</u>	<u>4<sup>th</sup> Quarter</u>
854	855	855	855

The project is a Federal Major Modification and therefore the correct offset ratio for VOC is 1.5:1.

Assuming an offset ratio of 1.5:1, the amount of VOC ERCs that need to be withdrawn is:

$$\begin{aligned} \text{Offsets Required (lb/year)} &= ([4,770 - 0] + [0 - 1,351] + 0) \times 1.5 \\ &= 3,419 \times 1.5 \\ &= 5,129 \text{ lb VOC/year} \end{aligned}$$

Calculating the appropriate quarterly emissions to be offset is as follows:

<u>1<sup>st</sup> Quarter</u>	<u>2<sup>nd</sup> Quarter</u>	<u>3<sup>rd</sup> Quarter</u>	<u>4<sup>th</sup> Quarter</u>
1,282	1,282	1,282	1,283

The applicant has stated that the facility plans to use ERC certificates S-4090-1, S-4126-1, S-4116-1, C-1229-1, to offset the increases in VOC emissions associated with this project. The above certificates have available quarterly VOC credits as follows:

	<u>1<sup>st</sup> Quarter</u>	<u>2<sup>nd</sup> Quarter</u>	<u>3<sup>rd</sup> Quarter</u>	<u>4<sup>th</sup> Quarter</u>
ERC #S-4090-1	15,055	15,054	14,985	14,869
ERC #S-4126-1	5,042	4,977	4,963	4,954
ERC #S-4116-1	39,167	39,208	39,128	39,028
ERC #C-1229-1	8,075	8,075	8,041	8,040
ERC #S-3805-1	18,000	18,000	18,000	18,000
Total	85,339	85,314	85,117	84,891

As seen above, the facility has sufficient credits to fully offset the quarterly VOC emissions increases associated with this project.

**Proposed Rule 2201 (offset) Conditions:**

- Prior to operating equipment under this Authority to Construct, permittee shall surrender NO<sub>x</sub> emission reduction credits for the following quantity of emissions: 1st quarter - 146 lb, 2nd quarter - 146 lb, 3rd quarter - 146 lb, and fourth quarter - 146 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 04/21/11). [District Rule 2201]
- Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 854 lb, 2nd quarter - 855 lb, 3rd quarter - 855 lb, and fourth quarter - 855 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 04/21/11). [District Rule 2201]
- ERC Certificate Numbers N-1123-2, N-1011-2, N-1010-2, N-768-2, N-900-2, S-4090-1, S-4126-1, S-4116-1 (or a certificate split from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201]

**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 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.

As demonstrated in VII.C.8, this project does constitute a Federal Major Modification for NO<sub>x</sub> and VOC; therefore, public noticing for Federal Major Modification purposes is required.

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

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

<b>PE &gt; 100 lb/day Public Notice Thresholds</b>			
<b>Pollutant</b>	<b>PE2 (lb/day)</b>	<b>Public Notice Threshold</b>	<b>Public Notice Triggered?</b>
NO <sub>x</sub>	15.9	100 lb/day	No
SO <sub>x</sub>	28.5	100 lb/day	No
PM <sub>10</sub>	18.1	100 lb/day	No
CO	349.3	100 lb/day	Yes
VOC	13.1	100 lb/day	No

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

**c. 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 <sub>x</sub>	57,012	57,596	20,000 lb/year	No
SO <sub>x</sub>	23,887	30,315	54,750 lb/year	No
PM <sub>10</sub>	16,121	21,472	29,200 lb/year	No
CO	536,435	590,846	200,000 lb/year	No
VOC	> 20,000	> 20,000	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.

**d. 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 SSIPE is compared to the SSIPE Public Notice thresholds in the following table:

Stationary Source Increase in Permitted Emissions [SSIPE] – Public Notice					
Pollutant	Project PE2 (lb/year)	Project PE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO <sub>x</sub>	5,804	5,220	584	20,000 lb/year	No
SO <sub>x</sub>	10,407	3,979	6,428	20,000 lb/year	No
PM <sub>10</sub>	6,519	1,168	5,351	20,000 lb/year	No
CO	127,484	73,073	54,411	20,000 lb/year	Yes
VOC	4,770	1,351	3,419	20,000 lb/year	No

As demonstrated above, the SSIPE for CO was greater than 20,000 lb/year; therefore public noticing for SSIPE purposes is required.

**2. Public Notice Action**

As discussed above, public noticing is required for this project for CO emissions in excess of 100 lb/day, SSIPE greater than 20,000 lb/year for CO, and Federal Major Modification for NO<sub>x</sub> and VOC. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB), US Environmental Protection Agency (EPA), and a public notice will be published in a local newspaper of general circulation prior to the issuance of the ATC permit for this equipment.



## D. Daily Emission Limits (DELs)

Daily Emissions Limitations (DELs) and other enforceable conditions are required by Rule 2201 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. The DEL must be contained in the latest ATC permit 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.

### C-447-329-0

- The unit shall only be fired on PUC-regulated natural gas and/or on scrubbed biogas from C-447-226. [District Rules 2201 and 4320]
- The H<sub>2</sub>S content of the scrubbed biogas fuel shall not exceed 50 ppmv. [District Rules 2201 and 4320]
- Except during start-up and shutdown, emissions from this unit shall not exceed any of the following limits: 5 ppmvd NO<sub>x</sub> @ 3% O<sub>2</sub> or 0.006 lb-NO<sub>x</sub>/MMBtu; 0.0022 lb-PM<sub>10</sub>/MMBtu; 200 ppmvd CO @ 3% O<sub>2</sub> (equivalent to 0.147 lb-CO/MMBtu); or 0.0027 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320]
- During start-up and shutdown, emissions from this unit shall not exceed any of the following limits: 0.83 lb-NO<sub>x</sub>/hr; 0.0022 lb-PM<sub>10</sub>/MMBtu; 200 ppmvd CO @ 3% O<sub>2</sub> (equivalent to 0.147 lb-CO/MMBtu); or 0.0055 lb-VOC/MMBtu.. [District Rules 2201, 4305, 4306, and 4320]
- The total duration of start-up time shall not exceed 5.0 hours per day. [District Rules 2201, 4305, 4306, and 4320]
- The total duration of start-up time shall not exceed 4.0 hours per occurrence. [District Rules 2201, 4305, 4306, and 4320]
- The total duration of shutdown time shall not exceed 2.0 hours per day. [District Rules 2201, 4305, 4306, and 4320]
- The total duration of shutdown time shall not exceed 2.0 hours per occurrence. [District Rules 2201, 4305, 4306, and 4320]
- The ammonia emissions shall not exceed 10 ppmvd @ 3% O<sub>2</sub>. [District Rule 4102]

## E. Compliance Assurance

### 1. Source Testing

The boiler is subject to the source testing requirements of District Rule 4320. The source testing requirements will be discussed in Section VIII, *District Rule 4320*, of this evaluation.

### 2. Monitoring

The boiler is subject to the monitoring requirements of District Rule 4320. Therefore, the monitoring requirements will be discussed in Section VIII, *District Rule 4320*, of this evaluation.

### **3. Recordkeeping**

The boiler is subject to the recordkeeping requirements of District Rule 4320. Therefore, the recordkeeping requirements will be discussed in Section VIII, *District Rule 4320*, of this evaluation.

In addition to the District Rule 4320 recordkeeping requirements, the following requirement will be included on the Authority to Construct:

- Records of the daily natural gas and biogas consumption shall be maintained on the premises. [District Rules 2201 and 2520]

### **4. Reporting**

No reporting is required to demonstrate compliance with Rule 2201.

## **F. Ambient Air Quality Analysis**

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

The proposed location is in an attainment area for NO<sub>x</sub>, CO, and SO<sub>x</sub>. As shown by the AAQA summary sheet the proposed equipment will not cause a violation of an air quality standard for NO<sub>x</sub>, CO, or SO<sub>x</sub>.

The proposed location is in a non-attainment area for the state's PM<sub>10</sub> as well as federal and state PM<sub>2.5</sub> thresholds. As shown by the AAQA summary sheet the proposed equipment will not cause a violation of an air quality standard for PM<sub>10</sub> and PM<sub>2.5</sub>.

## **G. Compliance Certification**

Section 4.15.2 of this Rule requires the owner of a new Major Source or a source undergoing a Title I Modification to demonstrate to the satisfaction of the District that all other Major Sources owned by such person and operating in California are in compliance or are on a schedule for compliance with all applicable emission limitations and standards. As discussed in Sections VIII-Rule 2201-C.1.a and VIII-Rule 2201-C.1.b, this facility is a major source and this project does constitute a Title I modification, therefore this requirement is applicable. Included in Appendix C is the facility's compliance certification.

## **H. Alternate Siting Analysis**

The current project occurs at an existing facility. The applicant proposes to install a 99 MMBtu/hr natural gas/biogas-fired boiler.

Since the project will provide steam to be used at the same location, the existing site will result in the least possible impact from the project. Alternative sites would involve the relocation and/or construction of various support structures on a much greater scale, and would therefore result in a much greater impact.

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

This facility is subject to this Rule, and has received their Title V Operating Permit. Section 3.29 defines a significant permit modification as a "permit amendment that does not qualify as a minor permit modification or administrative amendment."

Section 3.20.5 states that a minor permit modification is a permit modification that does not meet the definition of modification as given in Section 111 or Section 112 of the Federal Clean Air Act. Since this project is a Title I modification (i.e. Federal Major Modification), the proposed project is considered to be a modification under the Federal Clean Air Act. As a result, the proposed project constitutes a Significant Modification to the Title V Permit pursuant to Section 3.29.

As discussed above, the facility has applied for a Certificate of Conformity (COC) (see Attachment D); therefore, the facility must apply to modify their Title V permit with an administrative amendment, prior to operating with the proposed modifications. Continued compliance with this rule is expected. The facility shall not implement the changes requested until the final permit is issued.

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

#### **40 CFR Part 60 Subpart Db Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units**

NSPS Subpart Db applies to steam generating units that are constructed, reconstructed, or modified after June 19, 1984 and have a maximum design heat input greater than 100 MMBtu/hr.

Boiler C-447-329-0 is rated less than 100 MMBtu/hr; therefore, Subpart Db does not apply to the boiler.

#### **40 CFR Part 60 Subpart Dc Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units**

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<sub>x</sub> and PM<sub>10</sub>. The 99 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 Recordkeeping 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 unit is 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 SO<sub>2</sub> 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 SO<sub>2</sub> 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.

#### **40 CFR Part 64**

Except for back-up utility units that are exempt under paragraph (b)(2), Section 64.2 states that the requirements of this subpart shall apply to a pollutant-specific emissions unit at a major source that is required to obtain a Part 70 or 71 permit if the unit satisfies all of the following criteria:

- 1) the unit must have an emission limit for the pollutant;
- 2) the unit must have add-on controls for the pollutant; these are devices such as flue gas recirculation (FGR), baghouses, catalytic oxidizers, etc; and
- 3) the unit must have a pre-control potential to emit of greater than the major source thresholds.

Pollutant	Major Source Threshold (lb/year)
VOC	20,000
NO <sub>x</sub>	20,000
CO	200,000
PM <sub>10</sub>	140,000
SO <sub>x</sub>	140,000

The permit for this boiler contains emission limits for NO<sub>x</sub>, CO, VOC, PM<sub>10</sub> and SO<sub>x</sub> emissions. However, this boiler is not equipped with any add on control devices for CO, VOC, PM<sub>10</sub> or SO<sub>x</sub> emissions. Therefore, the CAM requirements of 40 CFR 64 are not applicable for these pollutants.

This boiler is equipped with a selective catalytic reduction (SCR) system and a flue gas recirculation (FGR) system. Both of these systems provide control for NO<sub>x</sub> emissions. Typically the District assumes that an SCR system in combination with an FGR system will achieve a minimum of 90% control for the NO<sub>x</sub> emissions generated in a natural gas fired boiler. Therefore, the uncontrolled NO<sub>x</sub> emission rate from this boiler can be determined using the emission factor and maximum heat input rating of the boiler and the control efficiency of the SCR and FGR systems.

#### NO<sub>x</sub> Emissions

Controlled Emission Factor = 0.006 lb/MMBtu  
 Heat Input Rating = 99 MMBtu/hr  
 Maximum Operating Schedule = 8,760 hours/year  
 SCR + FGR System Control Efficiency = 90%

$$\text{Annual Uncontrolled PE} = \frac{[0.006 \text{ lb/MMBtu} \times 99 \text{ MMBtu/hour} \times 8,760 \text{ hours/year}]}{(1 - 0.90)}$$

Annual Uncontrolled PE = 52,034 lb/year

As shown above, the uncontrolled PE for NO<sub>x</sub> emissions is greater than the major source thresholds. Therefore, the boiler is subject to the requirements of 40 CFR 64.

This boiler is equipped with a selective catalytic reduction (SCR) system. SCR does not control CO or VOC emissions. The boiler will not be equipped with an oxidation catalyst.

### **§64.3 - Monitoring Design Criteria**<sup>1</sup>

This section specifies the design criteria for the CAM system. Paragraph (a) (General criteria) requires that the CAM system be designed to obtain data for one or more appropriate indicators of emission control system performance and requires the owner to establish appropriate ranges or designated conditions for the selected indicators such that operation within the ranges provides a reasonable assurance of ongoing compliance with emission limitations or standards for the anticipated range of operating conditions.

As shown above, the natural gas fired boiler is served by a selective catalytic reduction (SCR) system. A Selective Catalytic Reduction (SCR) system operates as an external control device where flue gases and a reagent, in this case ammonia, are passed through an appropriate catalyst. Ammonia, will be injected upstream of the catalyst where it reacts and reduces NO<sub>x</sub>, over the catalyst bed, to form elemental nitrogen and other by-products.

E&J Gallo Winery has chosen to satisfy CAM requirements by installing in-stack NO<sub>x</sub> and O<sub>2</sub> analyzers upstream of the stack sampling locations used during source testing. The in-stack analyzers will take NO<sub>x</sub> and O<sub>2</sub> measurements at least once each day that the boiler operates. The post-project potential to emit for NO<sub>x</sub> for the boiler is 5,804 lb per year which is below the major source threshold. Therefore, in-stack monitoring of NO<sub>x</sub> once per day is sufficient.

Paragraph (b) (*Performance criteria*) requires the owner or operator to establish and maintain the following:

- Specifications to ensure that representative data are collected

In addition to the in-stack NO<sub>x</sub> and O<sub>2</sub> analyzers, a computerized central processing unit (CPU) will be installed where the NO<sub>x</sub> and O<sub>2</sub> analyzer readings will be downloaded and saved for archiving. Therefore, sufficient data will be collected for the boiler to ensure it is operating in compliance to justify the once daily readings as representative normal operating conditions.

- Verification procedures for startup of new monitoring equipment
- Quality assurance and control practices to ensure continuing validity of data

Periodic NO<sub>x</sub> source testing is required at least once every 36 months and monitoring of the NH<sub>3</sub> slip with Draeger tubes is performed at least once per month. These periodic direct emission measurements ensure that the boiler and the SCR system are operating properly. In addition, the boiler is serviced and/or tuned in accordance with the manufacturer's recommendations.

- Data collection frequency and procedures

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<sup>1</sup> Monitoring design criteria was submitted by the applicant in their Title V permit renewal submittal, see project N-1053014.

E&J Gallo Winery will be required to measure and record the NO<sub>x</sub> and O<sub>2</sub> readings from this boiler at least once daily. These records shall be maintained by the facility and shall be made available upon request.

Paragraph (c) (Evaluation factors) requires the owner or operator to take into account site specific factors in the design of the CAM system.

(c) Evaluation factors. In designing monitoring to meet the requirements of this section, the owner or operator shall take into account site-specific factors including the applicability of existing monitoring equipment and procedures, the ability of the monitoring to account for process and control device operational variability, the reliability and latitude built into the control technology, and the level of actual emissions relative to the compliance limitation.

No additional site specific information will need to be accounted for in the design of the proposed CAM system.

(d) Special criteria for the use of continuous emission monitoring system (CEMS), continuous opacity monitoring system (COMS) or predictive emission monitoring system (PEMS)

A CEMS, COMS, or PEMS is not necessary or required for the subject emission unit. Therefore, the requirements of this section are not applicable and no further discussion is required.

#### **§64.4 - Submittal Requirements**

This section specifies submittal requirements for the owner or operator which ensure the CAM system will comply with the design criteria of §64.3. E&J Gallo Winery has submitted a complete CAM system proposal that specifies the parameters to be monitored in accordance with §64.3 above. Therefore, E&J Gallo Winery has satisfied the requirements of the submittal requirements of this section.

#### **§64.5 - Deadlines for Submittals**

This section specifies required timing for submittals required under §64.4.

*Large pollutant-specific emissions units* (those with controlled emissions exceeding major source thresholds) are required to make the submittals as a part of the initial Title V permit application where the application has either not been filed or has not been deemed complete. Where the initial Title V permit has been issued without implementation of 40 CFR 64, the owner or operator must make the required submittals as a part of a subsequent application for any significant permit revision. If the required information is not submitted by either of these deadlines, it must be submitted as a part of the application for the Title V permit renewal.



For *other pollutant-specific emissions units*, the required submittal deadline is the application for Title V permit renewal. E&J Gallo Winery has submitted their CAM proposal with this project. Therefore, E&J Gallo Winery has satisfied the submittal deadline requirements of this section.

#### **§64.6 - Approval of Monitoring**

This section stipulates the following:

- A requirement that the permitting authority act to approve the proposed monitoring by confirming that the monitoring submitted complies with the requirements of §64.3.
- An allowance for the permitting authority to condition the approval based on collecting additional data on the indicators to be monitored, including performance or compliance testing.
- The minimum conditions that must be placed on the permit in the event that the proposed monitoring is approved by the permitting authority including a milestone schedule for completion of any conditional approval actions required by the owner or operator, such as installations, testing, or verification of operational status.
- Actions required by the permitting authority in the event that the proposed monitoring is not approved.

The CAM submittal requirements and stipulations for approval of such submittals pursuant to §64.4, §64.5, and §64.6 have been completed in conjunction with the application and review process for this Title V permit application. Therefore, E&J Gallo Winery is in compliance with the requirements of this section.

#### **§64.7 - Operation of Approved Monitoring**

This section stipulates the following:

- Requirements that the owner or operator 1) commence the monitoring upon receipt of a Title V permit that includes such monitoring, 2) properly maintain the monitoring system, and 3) conduct all monitoring in a continuous mode with the exception of outage periods associated with monitor malfunction and repair and with quality assurance and control activities.
- Actions required by the owner or operator in response to excursions or exceedances.
- A requirement for the owner or operator to document any need for improved monitoring based upon either an identification of a failure of the monitoring system to identify an excursion or exceedance or upon the results of compliance or performance testing that identifies a need to modify the monitoring.

The following condition will be included on the ATC permit to ensure compliance with this section:

- The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR 64]

### **§64.8 - Quality Improvement Plan (QIP) Requirements**

This section stipulates that the Administrator or the permitting authority may require that the facility develop and implement a QIP in the event of a determination of a need for improved monitoring pursuant to §64.7. §64.8 also identifies the minimum elements required in the QIP, and requires that the facility implement the QIP as expeditiously as possible, with implementation not exceeding 180 days after the date that the need for implementation was identified unless the permitting authority is notified.

The following condition will be included on the ATC permit to ensure compliance with this section:

- If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR 64]

### **§64.9 - Reporting and Recordkeeping Requirements**

This section stipulates the minimum reporting and recordkeeping requirements for facilities subject to 40 CFR 64.

The following condition will be included on the ATC permit to ensure compliance with this section:

- The permittee shall comply with the record keeping and reporting requirements of 40 CFR part 64.9. [40 CFR Part 64.9]

### **§64.10 - Savings Provisions**

This section states that the purpose of 40 CFR 64 is to require, as a part of the issuance of a Title V permit, improved or new monitoring at those emissions units where monitoring requirements do not exist or are inadequate to meet the requirements of 40 CFR 64. In addition, §64.10 states that nothing in 40 CFR 64 shall excuse an owner or operator from any other requirements of federal, state or local law or restrict or abrogate the authority of the Administrator or of the permitting authority.

Therefore, compliance with the requirements of 40 CFR Part 64 is expected.

### **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:

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

**Rule 4102 Nuisance**

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:

- 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.

An HRA is not required for a project with a total facility prioritization score of less than one. According to the Technical Services Memo for this project (Appendix E), the total facility prioritization score including this project was greater than one. Therefore, a health risk assessment was required to determine the short-term acute and long-term chronic exposure from this project.

The cancer risk for this project is shown below:

HRA Summary		
Unit	Cancer Risk	T-BACT Required
C-447-329-0	0.12 per million	No

**Discussion of T-BACT**

BACT for toxic emission control (T-BACT) is required if the cancer risk exceeds one in one million. As demonstrated above, T-BACT is not required for this project because the HRA indicates that the risk is not above the District's thresholds for triggering T-BACT requirements; therefore, compliance with the District's Risk Management Policy is expected.

District policy APR 1905 also specifies that the increase in emissions associated with a proposed new source or modification not have acute or chronic indices, or a cancer risk greater than the District's significance levels (i.e. acute and/or chronic indices greater than 1 and a cancer risk greater than 10 in a million). As outlined by the HRA Summary in Appendix E of this report, the emissions increases for this project was determined to be less than significant.

**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. The following analysis applies to each of the natural gas-fired boilers.

F-Factor for NG/LPG: 8,578 dscf/MMBtu at 60 °F  
 Maximum PM<sub>10</sub> Emission Factor: 0.0076 lb-PM<sub>10</sub>/MMBtu  
 Percentage of PM as PM<sub>10</sub> in Exhaust: 100%  
 Exhaust Oxygen (O<sub>2</sub>) Concentration: 3%

$$GL = \left( \frac{0.0076 \text{ lb-PM}}{\text{MMBtu}} \times \frac{7,000 \text{ grain}}{\text{lb-PM}} \right) / \left( \frac{8,578 \text{ ft}^3}{\text{MMBtu}} \right) = 0.0018 \text{ grains/dscf}$$

Therefore, compliance with Rule 4201 requirements is expected. The following condition will be listed on the permit.

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

**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 ≤ 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. As shown below, each unit's maximum hourly emission rates are below the Rule 4301 limits.

District Rule 4301 Limits			
Unit	NO <sub>2</sub>	Total PM	SO <sub>2</sub>
C-447-329-0	0.66	0.75	1.19
<b>Rule 4301 Limit</b>	<b>140 lb/hr</b>	<b>10 lb/hr</b>	<b>200 lb/hr</b>

As shown above, compliance with this rule is expected.

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

This rule includes tune-up requirements for boilers. Boiler tuning is not required if monitoring the emissions with a portable analyzer. E&J Gallo Winery has chosen to monitor emissions monthly using a portable analyzer. Therefore, compliance with this Rule is not required.

**Rule 4305 Boilers, Steam Generators, and Process Heaters – Phase II**

Each boiler is subject to District Rule 4305, *Boilers, Steam Generators and Process Heaters – Phase 2*. In addition, each boiler is also subject to 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*.

Since emissions limits of District 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.

**Rule 4306 Boilers, Steam Generators, and Process Heaters – Phase III**

Each boiler is subject to District Rule 4306, *Boilers, Steam Generators and Process Heaters – Phase 3*. In addition, each boiler is also subject to *District Rule 4320, Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr*.

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.

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

The boiler is subject to District Rule 4320 requirements pursuant to Section 2.0 of District Rule 4320.

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

Section 5.2 requires NO<sub>x</sub> 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.

The boiler is rated greater than 20 MMBtu/hr; thus, the applicable emission limit category is Section 5.2, Table 1, Category B, from District Rule 4320.

Rule 4320 Emissions Limits		
Category	Operated on gaseous fuel	
	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 (Standard Schedule)	7 ppmv or 0.008 lb/MMBtu	400 ppmv

The boiler will be limited to 5 ppmvd NO<sub>x</sub> and 200 ppmvd CO, all corrected to 3% O<sub>2</sub>. Thus, compliance with the District Rule 4320 NO<sub>x</sub> and CO emission limits is expected.

Section 5.3, Annual Fee Calculation

Annual Fees are required if an emissions unit will not be meeting the emission limits in Section 5.2 of this rule. Since the proposed boiler will each meet the emissions limits of Section 5.2, the annual fee requirements are not applicable.

Section 5.4, Particulate Matter Control Requirements

Section 5.4.1 of this rule requires the operator to comply with one of the following requirements:

1. Fire the boiler exclusively on 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 grains of total sulfur per one hundred (100) standard cubic feet;
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>;

Boiler C-447-329-0 is fired on both PUC-regulated natural gas and biogas. The use of PUC-regulated gas meets the PM10 requirements. The biogas is currently limited to 50 ppmv H<sub>2</sub>S. This is converted into grains/100 scf below:

$$\frac{\text{Grains}}{100\text{scf}} = \frac{50\text{PartsH}_2\text{S}}{10^6\text{Parts}} \times \frac{\text{lb-mol}}{379.6\text{ft}^3} \times \frac{34\text{lb-H}_2\text{S}}{\text{lb-mol}} \times \frac{32\text{lb-S}}{34\text{lb-H}_2\text{S}} \times \frac{7000\text{grains}}{\text{lb}} \times 100\text{SCF}$$

Grains/100 scf = 3.0

Therefore, the biogas meets the five grains of total sulfur per 100 standard cubic feet standard and boiler C-447-329-0 is expected to comply.

Section 5.5, Low Use

Each boiler's annual heat input will exceed the 1.8 billion Btu heat input per calendar year criteria limit addressed by this section. Thus, the requirements of Section 5.5 are not applicable.

### Section 5.6, Startup and Shutdown Provisions

Section 5.6 states that on and after the full compliance deadline in Section 5.0, the applicable emission limits of Sections 5.2 Table 1 and 5.5.2 shall not apply during start-up or shutdown provided an operator complies with the requirements specified in Sections 5.6.1 through 5.6.5

The applicant has stated the National Board of Boilers and Pressure Vessel Inspectors recommends warming up boilers no faster than one hour for every 100 degrees Fahrenheit of temperature rise to allow expansion of boiler components without overstressing the steel.

The following proposed startup/shutdown provisions will be listed on the permit:

- The total duration of start-up time shall not exceed 5.0 hours per day. [District Rules 2201, 4305, 4306, and 4320]
- The total duration of start-up time shall not exceed 4.0 hours per occurrence. [District Rules 2201, 4305, 4306, and 4320]
- The total duration of shutdown time shall not exceed 2.0 hours per day. [District Rules 2201, 4305, 4306, and 4320]
- The total duration of shutdown time shall not exceed 2.0 hours per occurrence. [District Rules 2201, 4305, 4306, and 4320]
- The permittee shall record the daily startup and shutdown duration times of the boiler. [District Rules 2201, 4305, 4306, and 4320]

### Section 5.7, Monitoring Provisions

Section 5.7.1 requires that permit units subject to District Rule 4320, Section 5.2 emissions limits shall either install and maintain Continuous Emission Monitoring (CEM) equipment for NO<sub>x</sub>, CO and O<sub>2</sub>, or install and maintain APCO-approved alternate monitoring.

For boiler C-447-329-0, the facility will use pre-approved alternate monitoring scheme H (pursuant to District Policy SSP-1105), which requires that monitoring of NO<sub>x</sub>, CO, O<sub>2</sub>, and ammonia slip emission 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<sub>x</sub>, CO, NH<sub>3</sub>, 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. NH<sub>3</sub> monitoring shall be conducted utilizing Draeger tubes or a District approved equivalent method. 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 five days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320]

- If the NO<sub>x</sub>, CO or NH<sub>3</sub> concentrations, as measured by the portable analyzer or the District approved ammonia monitoring equipment, exceed the permitted levels, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than one hour of operation after detection. If the portable analyzer or the ammonia monitoring equipment continue to show emission limit violations after 1 hour of operation following detection, the permittee shall notify the District within the following one 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 4102, 4305, 4306, and 4320]
- All NO<sub>x</sub>, CO, O<sub>2</sub> and NH<sub>3</sub> 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 NO<sub>x</sub>, CO and O<sub>2</sub> analyzer as well as the NH<sub>3</sub> emission monitoring equipment 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 readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4102, 4305, 4306, and 4320]
- The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, NH<sub>3</sub> and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent by volume and the measured NO<sub>x</sub>, CO and NH<sub>3</sub> concentrations corrected to 3% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) the method of determining the NH<sub>3</sub> emission concentration, and (6) a description of any corrective action taken to maintain the emissions at or below the acceptable levels. [District Rules 4102, 4305, 4306, and 4320]

Section 5.7.6 outlines requirements for monitoring SO<sub>x</sub> emissions. For units that are complying with Section 5.4.1.1 or 5.4.1.2 of this Rule, the facility must provide an annual fuel analysis to the District unless a more frequent sampling and reporting period is included in the Permit to Operate. This boiler is complying using Sections 5.4.1.1 or 5.4.1.2.

This unit is fired on PUC-Regulated natural gas. Therefore, the following requirement will be included on the permit to comply with the SO<sub>x</sub> emissions monitoring requirement:

- The permittee shall submit an analysis showing the natural gas fuel 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]



Additionally, this boiler can be fired on biogas from permit unit C-447-226. Permit unit C-447-226 includes a scrubber that reduces the H<sub>2</sub>S concentration of the biogas at the scrubber outlet to 50 ppmv or lower. The weekly/monthly monitoring performed for unit C-447-226 satisfies the SO<sub>x</sub> monitoring requirements of District Rule 4320 for this boiler. The H<sub>2</sub>S monitoring requirement listed on District permit C-447-226 will be restated on the boiler permit as follows:

- The permittee shall monitor the biogas H<sub>2</sub>S concentration at the outlet of the biogas scrubber (Permit to Operate C-447-226) on a weekly basis. If the biogas H<sub>2</sub>S concentration does not exceed 50 ppmv for four consecutive weeks, monitoring may be conducted on a monthly basis. If the H<sub>2</sub>S concentration at the outlet exceeds 50 ppmv, weekly monitoring shall resume. [District Rule 4320]

### Section 6.1, Recordkeeping

Section 6.1 requires that the records required by Sections 6.1.1 through 6.1.5 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 non-compliance with the applicable requirements of this rule shall constitute a violation of this rule.

The following condition will be listed on the permit to ensure compliance:

- All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320]

Section 6.1.2 requires that the operator of a unit subject to Section 5.5 shall record the amount of fuel use at least on a monthly basis. Since the boiler is not subject to the requirements listed in Section 5.5, Section 6.1.2 requirements are not applicable.

Section 6.1.3 requires that the operator of a unit subject to Section 5.5.1 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. These boilers are not subject to Sections 5.5.1 or 6.3.1. Therefore, the requirements of this section do not apply.

Section 6.1.4 requires that the operator of a unit with startup or shutdown provisions keep records of the duration of the startup or shutdowns. The following condition will be listed on the permit:

- The permittee shall record the daily startup and shutdown duration times of the boiler. [District Rules 2201, 4305, 4306, and 4320]

Section 6.1.5 requires that the operator of a unit fired on liquid fuel during PUC-quality natural gas curtailment periods record the sulfur content of the fuel, amount of fuel used, and duration of the natural gas curtailment period. The boiler is not fired on liquid fuels. Therefore, the requirements of this section do not apply.

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 <sub>x</sub>	ppmv	EPA Method 7E or ARB Method 100
NO <sub>x</sub>	lb/MMBtu	EPA Method 19
CO	ppmv	EPA Method 10 or ARB Method 100
Stack Gas O <sub>2</sub>	%	EPA Method 3 or 3A, or ARB Method 100
Stack Gas Velocities	ft/min	EPA Method 2 or 19
Stack Gas Moisture Content	%	EPA Method 4

The following permit conditions will be listed on the permit:

- 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]
- 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]
- CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320]
- 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]

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. Upon demonstrating compliance on two consecutive compliance source tests, the source test may be deferred for up to thirty-six months. The following condition will be included on the permit:

- Source testing to measure natural gas combustion NO<sub>x</sub>, CO, and NH<sub>3</sub> emissions from this unit shall be conducted at least once every twelve months. After demonstrating compliance on two consecutive annual source tests when unit is fired on natural gas/biogas, the unit shall be tested not less than once every 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 months. [District Rules 2201, 4102, 4305, 4306, and 4320]

Conclusion

Compliance with District Rule 4320 requirements is expected.

## 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. 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.

## 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.

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

$$\text{Volume SO}_2 = \frac{nRT}{P}$$

With:

N = moles SO<sub>2</sub>

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

P (Standard Pressure) = 14.7 psi

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

### Natural Gas Combustion

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

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

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

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

### Biogas Combustion

It is assumed that the F-Factor for the biogas is nearly equivalent to the F-Factor for natural gas.

F-Factor for Biogas: 8,872 dscf/MMBtu (Per Engineering Evaluation for Project C-1091102)

$$\frac{0.012 \text{ lb} - \text{SO}_x}{\text{MMBtu}} \times \frac{\text{MMBtu}}{8,578 \text{ dscf}} \times \frac{1 \text{ lb} \cdot \text{mol}}{64 \text{ lb}} \times \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot ^\circ\text{R}} \times \frac{520^\circ\text{R}}{14.7 \text{ psi}} \times \frac{1,000,000 \cdot \text{parts}}{\text{million}} = 8.3 \frac{\text{parts}}{\text{million}}$$

$$\text{Sulfur Concentration} = 8.3 \frac{\text{parts}}{\text{million}} < 2,000 \text{ ppmv (or 0.2\%)} < 2,000 \text{ ppmv (or 0.2\%)}$$

### 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; 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.

### Greenhouse Gas (GHG) Significance Determination

Facilities subject to the Cap and Trade regulation are subject to an industry-wide cap on overall GHG emissions. As such, any growth in emissions must be accounted for under that cap, such that a corresponding and equivalent reduction in emissions must occur to allow any increase. Therefore, it is reasonable to conclude that implementation of the Cap and Trade program will and must fully mitigate project-specific GHG emissions.

Regardless of, and independent to, the above significance determination, the District finds that, through compliance with the Cap and Trade regulation, project-specific GHG emissions would be fully mitigated. The District therefore concludes that projects occurring at facilities subject to ARB's Cap and Trade regulation would have a less than significant individual and cumulative impact on global climate change.

This facility is a covered entity under ARB's Cap and Trade Program. Therefore, this project has a less than significant individual and cumulative 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-447-329-0 subject to the permit conditions on the attached draft Authority to Construct permit in Appendix F.

### X. BILLING INFORMATION

Permit Number	Fee Schedule	Fee Description	Annual Fee
C-447-329-0	3020-02-H	99 MMBtu/hr	\$1,030

### Appendices

- A: Current Permit to Operate
- B: Top Down BACT Analysis
- C: Compliance Certification
- D: Certificate of Conformity
- E: Risk Management Review and Ambient Air Quality Analysis
- F: Draft Authority to Construct

# **Appendix A**

Current Permit to Operate

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** C-447-3-12

**EXPIRATION DATE:** 06/30/2016

**EQUIPMENT DESCRIPTION:**

75.0 MMBTU/HR BIGELOW BIOGAS/NATURAL GAS-FIRED BOILER, S/N 12722, WITH A TODD MODEL V.485.FGX LOW NOX BURNER, FLUE GAS RECIRCULATION SYSTEM, O2 TRIM CONTROLLER, AND CO TRIM CONTROLLER SERVED BY A CRI COMPANY MODEL SHELL DNOX LFR SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND A NOX AND O2 IN-STACK EMISSION MONITORING SYSTEM

## 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] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO<sub>2</sub>, nor 10 lb/hr. [District Rules 4201, 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
3. The unit shall only be fired on PUC-regulated natural gas and/or on scrubbed biogas from C-447-226. [District Rules 2201, and 4301, 4320 and 4801, and Fresno County Rule 406] Federally Enforceable Through Title V Permit
4. The combined biogas and natural gas fuel usage for this unit shall not exceed 1,353,000 standard cubic feet during any given day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. H<sub>2</sub>S content of the scrubbed biogas fuel shall not exceed 50 ppmv. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
6. Except during start-up and shutdown, emissions from this unit shall not exceed any of the following limits: 7 ppmvd NO<sub>x</sub> @ 3% O<sub>2</sub> or 0.008 lb-NO<sub>x</sub>/MMBtu; 200 ppmvd CO @ 3% O<sub>2</sub> or 0.148 lb-CO/MMBtu; 0.0027 lb-VOC/MMBtu; or 0.0024 lb-PM<sub>10</sub>/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
7. During start-up and shutdown, emissions from this unit shall not exceed any of the following limits: 0.83 lb-NO<sub>x</sub>/hr; 11.1 lb-CO/hr; 0.20 lb-VOC/hr; 0.18 lb-PM<sub>10</sub>/hr; or 0.45 lb-SO<sub>x</sub>/hr. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
8. The total duration of start-up time shall not exceed 9.0 hours per day. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. The total duration of start-up time shall not exceed 6.0 hours per occurrence. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. The total duration of shutdown time shall not exceed 6.0 hours per day. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. The total duration of shutdown time shall not exceed 3.0 hours per occurrence. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during start-up and shutdown. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. The ammonia (NH<sub>3</sub>) emissions from the exhaust of the SCR system serving this boiler shall not exceed 10 ppmvd @ 3% O<sub>2</sub>. [District Rule 4102]

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

14. 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] Federally Enforceable Through Title V Permit
15. Source testing to measure natural gas/biogas combustion NO<sub>x</sub>, CO, and NH<sub>3</sub> emissions from this unit shall be conducted at least once every twelve months. After demonstrating compliance on two consecutive annual source tests when unit is fired on natural gas, the unit shall be tested not less than once every 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 months. [District Rules 2201, 4102, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. 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] Federally Enforceable Through Title V Permit
17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. 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] Federally Enforceable Through Title V Permit
19. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. 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] Federally Enforceable Through Title V Permit
21. Source testing for ammonia slip shall be conducted utilizing BAAQMD method ST-1B. [District Rules 1081 and 4102] Federally Enforceable Through Title V Permit
22. 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] Federally Enforceable Through Title V Permit
23. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
24. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, NH<sub>3</sub>, and O<sub>2</sub> at least once during each month in which source testing is not performed. NO<sub>x</sub>, CO, and O<sub>2</sub> monitoring shall be conducted utilizing a portable analyzer that meets District specifications or District-approved monitoring equipment. NH<sub>3</sub> monitoring shall be conducted utilizing Draeger tubes or a District approved equivalent method. 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 it has been performed within the last month. [District Rules 4102, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. If the NO<sub>x</sub>, CO or NH<sub>3</sub> concentrations, as measured by the portable analyzer or the District approved ammonia monitoring equipment, exceed the permitted levels, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than one hour of operation after detection. If the portable analyzer or the ammonia monitoring equipment continue to show emission limit violations after one hour of operation following detection, the permittee shall notify the District within the following one 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] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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26. All NO<sub>x</sub>, CO, O<sub>2</sub> and NH<sub>3</sub> 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 NO<sub>x</sub>, CO and O<sub>2</sub> analyzer as well as the NH<sub>3</sub> emission monitoring equipment 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 readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. NH<sub>3</sub> emission readings shall be conducted at the time the NO<sub>x</sub>, CO and O<sub>2</sub> readings are taken. The readings shall be converted to ppmvd @ 3% O<sub>2</sub>. [District Rule 4102]
28. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, NH<sub>3</sub>, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent by volume and the measured NO<sub>x</sub>, CO, and NH<sub>3</sub> concentrations corrected to 3% O<sub>2</sub>, (3) make and model of the portable analyzer, (4) portable analyzer calibration records, (5) the method of determining the NH<sub>3</sub> emission concentration, and (6) a description of any corrective action taken to maintain the emissions at or below the acceptable levels. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. Operator shall maintain copies of fuel invoices and supplier certifications. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
30. Operator shall provide that fuel hhv be certified by third party fuel supplier or determined annually by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. Permittee shall determine sulfur content of combusted natural gas annually or shall demonstrate that the combusted natural gas is provided from a PUC or FERC regulated source. [District Rules 1081 and 4320] Federally Enforceable Through Title V Permit
32. The permittee shall monitor the biogas H<sub>2</sub>S concentration at the outlet of the biogas scrubber (Permit to Operate C-447-226) on a weekly basis. If the biogas H<sub>2</sub>S concentration does not exceed 50 ppmv for four consecutive weeks, monitoring may be conducted on a monthly basis. If the H<sub>2</sub>S concentration at the outlet exceeds 50 ppmv, weekly monitoring shall resume. [District Rule 4320] Federally Enforceable Through Title V Permit
33. The permittee shall maintain daily records of start-up and shutdown durations and number of occurrences of each. [District Rules 1070, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
34. The permittee shall maintain daily and cumulative annual records of the amount of natural gas and biogas consumed by this boiler, in standard cubic feet. [District Rule 2201] Federally Enforceable Through Title V Permit
35. The permittee shall take readings of the NO<sub>x</sub> concentration and O<sub>2</sub> percent, by volume, using the in-stack monitoring system at least once per each day that the boiler operates. [District Rule 2201 and 40 CFR Part 64.9] Federally Enforceable Through Title V Permit
36. During times when the in-stack monitoring system is down for maintenance or repairs, the permittee shall use a District approved portable analyzer to record daily NO<sub>x</sub> and O<sub>2</sub> concentrations. The permittee shall maintain records of the portable analyzer readings including the date(s) and reason the in-stack monitoring system was not operating. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
37. The permittee shall maintain daily records of the NO<sub>x</sub> and O<sub>2</sub> concentration from the in-stack monitoring system. These records shall be made available for District inspection upon request. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
38. The permittee shall compare the NO<sub>x</sub> and O<sub>2</sub> concentrations from the in-stack monitoring system with the concentration of NO<sub>x</sub> and O<sub>2</sub> readings from calibration gas cylinders for NO<sub>x</sub> and O<sub>2</sub> at least once during each month that the boiler operates. The permittee shall maintain these comparison readings and these records shall be available for District inspection upon request. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit

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

39. If the NO<sub>x</sub> or O<sub>2</sub> concentrations, as measured by the in-stack monitoring system, exceed the permitted levels the permittee shall return the emissions to compliant levels as soon as possible, but no longer than 1 hour of operation after detection. If the in-stack monitoring system continues to show emission limit violations after 1 hour of operation following 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 that is subject to enforcement action has occurred. 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 4102, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
40. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR Part 64.7] Federally Enforceable Through Title V Permit
41. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64.8] Federally Enforceable Through Title V Permit
42. The permittee shall comply with the record keeping and reporting requirements of 40 CFR part 64.9. [40 CFR Part 64.9] Federally Enforceable Through Title V Permit
43. All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
44. Compliance with permit conditions in the Title V permit shall be deemed compliance with subsumed requirements of County Rules 408 (Fresno) and Rule 404 (Fresno); and SJVUAPCD Rule 4301. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
45. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: County Rule 406 (Fresno); and SJVUAPCD Rule 4801. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
46. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201, 4301, and 4305. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
47. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 1081 and County Rule 108.1 (Fresno). [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
48. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source because it is not used to produce electricity for sale and was constructed prior to June 9, 1989 without modifications or reconstruction. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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

# **Appendix B**

## **Top Down BACT Analysis**

## **Top Down BACT Analysis for Boiler Permit Unit C-447-329-0**

### **Top-Down BACT Analysis for NO<sub>x</sub> Emissions**

#### **Step 1 - Identify All Possible Control Technologies**

The SJVUAPCD BACT Clearinghouse Guideline 1.1.2 (Boiler > 20.0 MMBtu/hr, Natural gas fired, base-loaded or with small load swings) has been rescinded. The District adopted District Rule 4320 on October 16, 2008. The NO<sub>x</sub> emission limit requirements in District Rule 4320 are lower than the current BACT limits listed in BACT Guideline 1.1.2; therefore a project specific BACT analysis will be performed to determine BACT for this project.

Rule 4320 limits natural gas boilers with heat input ratings greater than 20 MMBtu/hr to 7 ppmv @ 3% O<sub>2</sub>. Since this emission limit is required by the rule, it will be considered the Achieved in Practice control technology for the BACT analysis. District Rule 4320 also contains an enhanced schedule option that allows applicants additional time to meet the requirements of the rule. The enhanced schedule NO<sub>x</sub> emission limit requirement is 5 ppmv @ 3% O<sub>2</sub>. Since this is an enhanced option in the rule, it will be considered the Technologically Feasible control technology for the BACT analysis.

The SJVUAPCD BACT Clearinghouse Guideline 1.1.2 has been rescinded. Therefore, a new BACT analysis is required. The following are possible control technologies:

- 1) 5 ppmvd @ 3% O<sub>2</sub> - Technologically Feasible
- 2) 7 ppmvd @ 3% O<sub>2</sub> - Achieved in Practice

#### **Step 2 - Eliminate Technologically Infeasible Options**

There are no technologically infeasible options.

#### **Step 3 – Rank Remaining Control Technologies by Control Efficiency**

- 1) 5 ppmvd @ 3% O<sub>2</sub> - Technologically Feasible
- 2) 7 ppmvd @ 3% O<sub>2</sub> - Achieved in Practice

#### **Step 4 – Cost Effectiveness Analysis**

The applicant has proposed to limit the NO<sub>x</sub> emissions of their boiler to 5 ppmv @ 3% O<sub>2</sub>; therefore the applicant is proposing the most effective control technology and a cost effective analysis is not required.

#### **Step 5 - Select BACT**

BACT for NO<sub>x</sub> emissions from this boiler is NO<sub>x</sub> emissions of 5 ppmv @ 3% O<sub>2</sub>. The applicant has proposed to install a 5 ppmv @ 3% O<sub>2</sub> low NO<sub>x</sub> burner; therefore BACT for NO<sub>x</sub> emissions is satisfied.

The facility shall be required to meet this emission limit when fired on natural gas or biogas. Emissions from all pollutants, except SO<sub>x</sub>, are expected to be lower when fired on biogas. Therefore, as a worst case scenario source testing will be performed on natural gas fuel upon startup and periodically thereafter.

## **Top Down BACT Analysis for SO<sub>x</sub> and PM<sub>10</sub> Emissions**

### **Step 1 - Identify All Possible SO<sub>x</sub> and PM<sub>10</sub> Control Technologies**

The SJVUAPCD BACT Clearinghouse Guideline 1.1.2 (Boiler > 20.0 MMBtu/hr, Natural gas fired, base-loaded or with small load swings) has been rescinded. The District adopted District Rule 4320 on October 16, 2008. Therefore, a project specific BACT analysis will be performed to determine BACT for this project.

Rule 4320 requires SO<sub>x</sub> and PM<sub>10</sub> control by complying with SO<sub>x</sub> limits. The rule specified that the sulfur content of the fuel be limited to no more than 5 grains/100 scf, or fire the unit with PUC-quality natural gas, commercial propane, butane, or liquefied petroleum gas, or a combination of such gases, or operate an emissions 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>. The following can be considered BACT and are technologically possible options:

- 1) PUC Natural gas, commercial propane, butane, or liquefied petroleum gas, or a combination of such gases. (Achieved in Practice).
- 2) Limit sulfur content of the fuel to no more than 5 grains/100 scf.
- 3) Operate an emissions 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>

### **Step 2 - Eliminate Technologically Infeasible Options**

All control options are technologically feasible.

### **Step 3 - Rank Remaining Control Technologies by Control effectiveness**

- 1) PUC Natural gas, commercial propane, butane, or liquefied petroleum gas, or a combination of such gases. (Achieved in Practice).
- 2) Limit sulfur content of the fuel to no more than 5 grains/100 scf.
- 3) Operate an emissions 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>

### **Step 4 - Cost Effectiveness Analysis**

The applicant has proposed to use PUC-regulated natural gas fuel or biogas with a sulfur content no more than 5 grains/100 scf for the boiler, which meets the most stringent emission requirements of BACT. Therefore, BACT is satisfied and a cost effective analysis does not need to be performed.

### **Step 5 - Select BACT**

The applicant is proposing to use PUC-regulated natural gas fuel or biogas with a sulfur content no more than 5 grains/100 scf for the boiler. This proposed control satisfies the District's BACT requirement.

## **Top Down BACT Analysis for CO Emissions**

### **Step 1 - Identify All Possible CO Control Technologies**

The SJVUAPCD BACT Clearinghouse Guideline 1.1.2 (Boiler > 20.0 MMBtu/hr, Natural gas fired, base-loaded or with small load swings) has been rescinded. The District adopted District Rule 4320 on October 16, 2008. Therefore, a project specific BACT analysis will be performed to determine BACT for this project.

District Rule 4320 identifies the following technologies:

- 1) 400 ppmvd @ 3% O<sub>2</sub> - Achieved-In-Practice

### **Step 2 - Eliminate Technologically Infeasible Options**

None of the above listed technologies are technologically infeasible.

### **Step 3 - Rank Remaining Control Technologies by Control Effectiveness**

- 1) 400 ppmvd @ 3% O<sub>2</sub> - Achieved-In-Practice

### **Step 4 - Cost Effectiveness Analysis**

The applicant has proposed a CO emission limit that meets 400 ppmvd @ 3% O<sub>2</sub>. Since the applicant has chosen the most effective control technology in step 3, a cost effectiveness analysis is not required.

### **Step 5 - Select BACT**

BACT for CO emissions from this boiler is CO emissions of 400 ppmv @ 3% O<sub>2</sub>. The applicant has proposed a CO emission limit of 200 ppmv @ 3% O<sub>2</sub>; therefore BACT for CO emissions is satisfied.

The facility shall be required to meet this emission limit when fired on natural gas or biogas. Emissions from all pollutants, except SO<sub>x</sub>, are expected to be lower when fired on biogas. Therefore, as a worst case scenario source testing will be performed on natural gas fuel upon startup and periodically thereafter.

## **Top Down BACT Analysis for VOC Emissions**

### **Step 1 - Identify All Possible VOC Control Technologies**

The SJVUAPCD BACT Clearinghouse Guideline 1.1.2 (Boiler > 20.0 MMBtu/hr, Natural gas fired, base-loaded or with small load swings) has been rescinded. The District adopted District Rule 4320 on October 16, 2008. Therefore, a project specific BACT analysis will be performed to determine BACT for this project.

The SJVAPCD BACT Clearinghouse Guideline 1.1.2 identifies the following technologies:

- 1) Natural gas fuel with LPG backup - Achieved-In-Practice

### **Step 2 - Eliminate Technologically Infeasible Options**

None of the above listed technologies are technologically infeasible.

### **Step 3 - Rank Remaining Control Technologies by Control Effectiveness**

- 1) Natural gas fuel with LPG backup - Achieved-In-Practice

### **Step 4 - Cost Effectiveness Analysis**

The applicant has proposed the use of natural gas/biogas. Since the applicant has chosen the most effective control technology in step 3, a cost effectiveness analysis is not required.

### **Step 5 - Select BACT**

BACT for VOC emissions from this boiler is natural gas fuel. The applicant has proposed natural gas/biogas fuel; therefore BACT for VOC emissions is satisfied.

Emissions from all pollutants, except SO<sub>x</sub>, are expected to be lower when fired on biogas. Therefore, as a worst case scenario source testing will be performed on natural gas fuel upon startup and periodically thereafter.

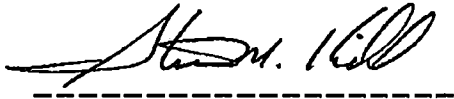


# **Appendix C**

## **Compliance Certification**

C-447  
E&J Gallo Winery-Fresno  
Compliance Certification Statement  
For Federal Major Permit Modifications  
Compliance with District Rule 2201, Section 4.15.2

"I certify under penalty of law that all major stationary sources (Title V facilities) operated under my control in California are compliant with all applicable air emissions limitations and standards. The facilities included in this certification statement include the E&J Gallo Winery-Fresno, the E&J Gallo Winery-Livingston, and the E&J Gallo Winery-Modesto."



-----  
Mr. Steve Kidd  
Vice President of Operations

11/08/13  
Date

# **Appendix D**

## **Certificate of Conformity**

**San Joaquin Valley  
Unified Air Pollution Control District**

**TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM**

**I. TYPE OF PERMIT ACTION (Check appropriate box)**

Federal Major Permit MODIFICATION  
 MINOR PERMIT MODIFICATION

ADMINISTRATIVE  
AMENDMENT

COMPANY NAME: E&J Gallo Winery - Fresno	FACILITY ID C 447
1. Type of Organization: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input type="checkbox"/> Partnership <input type="checkbox"/> Utility	
2. Owner's Name: E&J Gallo Winery-Fresno	
3. Agent to the Owner: Mr. Phil Castro	

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

*PO* Based on information and belief formed after reasonable inquiry, the equipment identified in this application will continue to comply with the applicable federal requirement(s).

*PO* Based on information and belief formed after reasonable inquiry, the equipment identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.

*PO* Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.

*PO* Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

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

  
\_\_\_\_\_

Signature of Responsible Official

11/08/13  
\_\_\_\_\_

Date

Mr. Phil Castro  
\_\_\_\_\_

Name of Responsible Official (please print)

Plant Manager – Fresno Winery  
\_\_\_\_\_

Title of Responsible Official (please print)

## **Appendix E**

### **Risk Management Review and Ambient Air Quality Analysis**

# San Joaquin Valley Air Pollution Control District Risk Management Review

To: Stanley Thom, AQE – Permit Services  
 From: Joe Aguayo, AQS – Technical Services  
 Date: November 27, 2013  
 Facility Name: E & J Gallo Winery  
 Location: 5610 E. Olive Ave  
 Fresno, CA 93727  
 Application #(s): C-447-329-0  
 Project #: C-1133176

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## A. RMR SUMMARY

RMR Summary			
Categories	99 MMBtu/hr boiler (Unit 329-0)	Project Totals	Facility Totals
Prioritization Score	>1.0	>1.0	>1.0
Acute Hazard Index	0.00	0.00	0.06
Chronic Hazard Index	0.00	0.12	0.23
Maximum Individual Cancer Risk ( $10^{-6}$ )	0.1	0.1	1.8
T-BACT Required?	No		
Special Permit Conditions?	Yes		

### Proposed Permit Conditions

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

#### Unit # 329-0

- The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction.

## B. RMR REPORT

### I. Project Description

Technical Services received a request on November 14, 2013, to perform an Ambient Air Quality Analysis and a Risk Management Review for a 99 MMBtu/hr natural gas/biogas-fired boiler.

## II. Analysis

Technical Services performed a prioritization using the District's HEARTs database. Since the total facility prioritization score was greater than one, a refined health risk assessment was required. Emissions calculated using emission factors for external combustion of natural gas were input into the HEARTs database. The AERMOD model was used, with the parameters outlined below and meteorological data for 2005-2009 from Fresno to determine the dispersion factors (i.e., the predicted concentration or X divided by the normalized source strength or Q) for a receptor grid. These dispersion factors were input into the Hot Spots Analysis and Reporting Program (HARP) risk assessment module to calculate the chronic and acute hazard indices and the carcinogenic risk for the project.

The following parameters were used for the review:

Analysis Parameters Unit 329-0			
Source Type	Point	Location Type	Rural
Stack Height (m)	15.24	Closest Receptor (m)	30.48
Stack Diameter. (m)	1.07	Type of Receptor	Residential
Stack Exit Velocity (m/s)	38.06	Max Hours per Year	8760
Stack Exit Temp. (°K)	388.71	Fuel Type	NG
Burner Rating (MMBtu/hr)	99		

Technical Services performed modeling for criteria pollutants CO, NO<sub>x</sub>, SO<sub>x</sub> and PM<sub>10</sub>; as well as a RMR. The emission rates used for criteria pollutant modeling were 14.4 lb/hr CO, 0.59 lb/hr NO<sub>x</sub>, 0.28 lb/hr SO<sub>x</sub>, and 0.75 lb/hr PM<sub>10</sub>. The engineer supplied the maximum fuel rate for the boiler used during the analysis.

The results from the Criteria Pollutant Modeling are as follows:

### Criteria Pollutant Modeling Results\*

Boiler	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>2</sup>	Pass <sup>2</sup>

\*Results were taken from the attached PSD spreadsheet.

<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).

### **III. Conclusion**

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

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

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

### **IV. Attachments**

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



# **Appendix F**

Draft Authority to Construct Permit

San Joaquin Valley  
Air Pollution Control District

## AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT  
**DRAFT**

**PERMIT NO:** C-447-329-0

**LEGAL OWNER OR OPERATOR:** E & J GALLO WINERY  
**MAILING ADDRESS:** 5610 E OLIVE AVE  
FRESNO, CA 93727

**LOCATION:** 5610 E OLIVE AVE  
FRESNO, CA 93727

**EQUIPMENT DESCRIPTION:**

99 MMBTU/HR VICTORY ENERGY OPERATIONS NATURAL GAS/BIOGAS-FIRED BOILER EQUIPPED WITH A COEN VERIFLAME MODEL COEN VERIFLAME 99 LOW NOX BURNER, FLUE GAS RECIRCULATION SYSTEM, AND O2 CONTROLLER SERVED BY A NATIONWIDE MODEL CATASTAK SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM

## CONDITIONS

1. Within 90 days of startup of the equipment authorized by this Authority to Construct, Permit to Operate C-447-3 shall be surrendered to the District and the associated equipment shall be removed or rendered inoperable. [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
3. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
4. Prior to operating equipment under this Authority to Construct, permittee shall surrender NOx emission reduction credits for the following quantities of emissions: 1st quarter - 146 lb, 2nd quarter - 146 lb, 3rd quarter - 146 lb, and fourth quarter - 146 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 4/21/11). [District Rule 2201] Federally Enforceable Through Title V Permit

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-447-329-0 : Dec 11 2013 9:41AM - REFUERZJ : Joint Inspection NOT Required

5. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 854 lb, 2nd quarter - 855 lb, 3rd quarter - 855 lb, and fourth quarter - 855 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 4/21/11). [District Rule 2201] Federally Enforceable Through Title V Permit
6. ERC Certificate Numbers N-1123-2, N-1011-2, N-1010-2, N-768-2, N-900-2, S-4090-1, S-4126-1, S-4116-1 (or a certificate split from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct [District Rule 2201] Federally Enforceable Through Title V Permit
7. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
8. 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] Federally Enforceable Through Title V Permit
9. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
10. All equipment shall be constructed, maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District Rule 2201] Federally Enforceable Through Title V Permit
11. 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] Federally Enforceable Through Title V Permit
12. 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 Rule 2201 and 40 CFR 60.48 (c)(g)] Federally Enforceable Through Title V Permit
13. The unit shall only be fired on PUC-regulated natural gas and/or on scrubbed biogas from C-447-226. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
14. The H<sub>2</sub>S content of the scrubbed biogas fuel shall not exceed 50 ppmv. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
15. Except during start-up and shutdown, emissions from this unit shall not exceed any of the following limits: 5 ppmvd NO<sub>x</sub> @ 3% O<sub>2</sub> or 0.006 lb-NO<sub>x</sub>/MMBtu; 0.0076 lb-PM<sub>10</sub>/MMBtu; 200 ppmvd CO @ 3% O<sub>2</sub> (equivalent to 0.147 lb-CO/MMBtu); or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. During start-up and shutdown, emissions from this unit shall not exceed any of the following limits: 0.83 lb-NO<sub>x</sub>/hr; 0.0076 lb-PM<sub>10</sub>/MMBtu; 200 ppmvd CO @ 3% O<sub>2</sub> (equivalent to 0.147 lb-CO/MMBtu); or 0.0055 lb-VOC/MMBtu.. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. The total duration of start-up time shall not exceed 5.0 hours per day. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. The total duration of startup time shall not exceed 4.0 hours per occurrence. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. The total duration of shutdown time shall not exceed 2.0 hours per day. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. The total duration of shutdown time shall not exceed 2.0 hours per occurrence. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. The permittee shall maintain daily records of start-up and shutdown durations and number of occurrences of each. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. The ammonia (NH<sub>3</sub>) emissions shall not exceed 10 ppmvd @ 3% O<sub>2</sub> over a 15 minute averaging period. [District Rule 4102]

DRAFT  
CONDITIONS CONTINUE ON NEXT PAGE

23. 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] Federally Enforceable Through Title V Permit
24. Source testing to measure natural gas combustion NO<sub>x</sub>, CO, and NH<sub>3</sub> emissions from this unit shall be conducted at least once every twelve months. After demonstrating compliance on two consecutive annual source tests when unit is fired on natural gas, the unit shall be tested not less than once every 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 months. [District Rules 2201, 4102, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. Nitrogen oxide (NO<sub>x</sub>) emission concentrations in ppmv referenced at dry stack emissions shall be corrected to 3% O<sub>2</sub> and lb/MMBtu rates shall be calculated as lb NO<sub>2</sub>/MMBtu of heat input (hhv). [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. 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] Federally Enforceable Through Title V Permit
27. 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. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. 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] Federally Enforceable Through Title V Permit
29. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. 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] Federally Enforceable Through Title V Permit
31. Source testing for ammonia slip shall be conducted utilizing BAAQMD Method ST-1B. [District Rule 4102]
32. 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] Federally Enforceable Through Title V Permit
33. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
34. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
35. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, NH<sub>3</sub>, 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. NH<sub>3</sub> monitoring shall be conducted utilizing Draeger tubes or a District approved equivalent method. 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 five days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4102, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
36. If the NO<sub>x</sub>, CO or NH<sub>3</sub> concentrations, as measured by the portable analyzer or the District approved ammonia monitoring equipment, exceed the permitted levels, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than one hour of operation after detection. If the portable analyzer or the ammonia monitoring equipment continue to show emission limit violations after one hour of operation following detection, the permittee shall notify the District within the following one 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] Federally Enforceable Through Title V Permit

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37. All NO<sub>x</sub>, CO, O<sub>2</sub> and NH<sub>3</sub> 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 NO<sub>x</sub>, CO and O<sub>2</sub> analyzer as well as the NH<sub>3</sub> emission monitoring equipment 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 readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
38. NH<sub>3</sub> emission readings shall be conducted at the time the NO<sub>x</sub>, CO and O<sub>2</sub> readings are taken. The readings shall be converted to ppmvd @ 3% O<sub>2</sub>. [District Rule 4102]
39. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, NH<sub>3</sub>, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent by volume and the measured NO<sub>x</sub>, CO, and NH<sub>3</sub> concentrations corrected to 3% O<sub>2</sub>, (3) make and model of the portable analyzer, (4) portable analyzer calibration records, (5) the method of determining the NH<sub>3</sub> emission concentration, and (6) a description of any corrective action taken to maintain the emissions at or below the acceptable levels. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
40. Operator shall provide that fuel hlv be certified by third party fuel supplier or determined annually by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
41. Permittee shall determine sulfur content of combusted natural gas annually or shall demonstrate that the combusted natural gas is provided from a PUC or FERC regulated source. [District Rules 1081 and 4320] Federally Enforceable Through Title V Permit
42. The permittee shall monitor the biogas H<sub>2</sub>S concentration at the outlet of the biogas scrubber (Permit to Operate C-447-226) on a weekly basis. If the biogas H<sub>2</sub>S concentration does not exceed 50 ppmv for four consecutive weeks, monitoring may be conducted on a monthly basis. If the H<sub>2</sub>S concentration at the outlet exceeds 50 ppmv, weekly monitoring shall resume. [District Rule 4320] Federally Enforceable Through Title V Permit
43. The permittee shall take readings of the NO<sub>x</sub> concentration and O<sub>2</sub> percent, by volume, using the in-stack monitoring system at least once per each day that the boiler operates. [District Rule 2201 and 40 CFR Part 64.9] Federally Enforceable Through Title V Permit
44. During times when the in-stack monitoring system is down for maintenance or repairs, the permittee shall use a District approved portable analyzer to record daily NO<sub>x</sub> and O<sub>2</sub> concentrations. The permittee shall maintain records of the portable analyzer readings including the date(s) and reason the in-stack monitoring system was not operating. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
45. The permittee shall maintain daily records of the NO<sub>x</sub> and O<sub>2</sub> concentration from the in-stack monitoring system. These records shall be made available for District inspection upon request. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
46. The permittee shall compare the NO<sub>x</sub> and O<sub>2</sub> concentrations from the in-stack monitoring system with the concentration of NO<sub>x</sub> and O<sub>2</sub> readings from calibration gas cylinders for NO<sub>x</sub> and O<sub>2</sub> at least once during each month that the boiler operates. The permittee shall maintain these comparison readings and these records shall be available for District inspection upon request. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
47. If the NO<sub>x</sub> or O<sub>2</sub> concentrations, as measured by the in-stack monitoring system, exceed the permitted levels the permittee shall return the emissions to compliant levels as soon as possible, but no longer than 1 hour of operation after detection. If the in-stack monitoring system continues to show emission limit violations after 1 hour of operation following 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 that is subject to enforcement action has occurred. 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 4102, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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48. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR Part 64.7] Federally Enforceable Through Title V Permit
49. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64.8] Federally Enforceable Through Title V Permit
50. The permittee shall comply with the record keeping and reporting requirements of 40 CFR part 64.9. [40 CFR Part 64.9] Federally Enforceable Through Title V Permit
51. 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)] Federally Enforceable Through Title V Permit
52. All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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