



February 25, 2021

Mr. Rene Soto
Bronco Wine Company
PO Box 789
Ceres, CA 95307

Re: Proposed ATC / Certificate of Conformity (Significant Mod)
Facility Number: N-1665
Project Number: N-1201116

Dear Mr. Soto:

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. This project authorizes the modification of one 12.6 MMBtu/hr natural gas-fired boiler to replace the existing burner with a new low NOx burner.

The notice of preliminary decision for this project has been posted on the District's website (www.valleyair.org). 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. Errol Villegas, Permit Services Manager, at (559) 230-5900.

Thank you for your cooperation in this matter.

Sincerely,

Brian Clements
Director of Permit Services

Enclosures

cc: Courtney Graham, CARB (w/enclosure) via email
cc: Laura Yannayon, EPA (w/enclosure) via EPS

Samir Sheikh
Executive Director/Air Pollution Control Officer

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

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

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

San Joaquin Valley Air Pollution Control District
Authority to Construct Application Review
Retrofit of Natural Gas-Fired Boiler for Rule 4320 Compliance

Facility Name:	Bronco Wine Company	Date:	February 25, 2021
Mailing Address:	PO Box 789 Ceres, CA 95307	Engineer:	Dustin Brown
Contact Person:	Rene Soto	Lead Engineer:	Derek Fukuda
Telephone:	(209) 272-3259		
Cell Phone:	(209) 289-3064		
E-Mail:	Rene.Soto@BroncoWine.com		
Application #(s):	N-1665-1-7		
Project #:	N-1201116		
Deemed Complete:	March 25, 2020		

I. Proposal

Bronco Wine Company has submitted an Authority to Construct (ATC) application to modify an existing 12.6 MMBtu/hr natural gas-fired boiler by replacing the existing burner with a new Cleaver Brooks, model Profire MTHG-126 burner. After this modification, the new burner will be capable of achieving NO_x emissions of 9 ppmvd @ 3% O₂ and will bring this unit in to compliance with the NO_x emission limits of District Rule 4320.

Bronco Wine Company received their Title V Permit on April 7, 2008. This modification can be classified as a Title V significant modification pursuant to Rule 2520, 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. Bronco Wine Company must apply to administratively amend their Title V permit.

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (8/15/19)
Rule 2410	Prevention of Significant Deterioration (6/16/11)
Rule 2520	Federally Mandated Operating Permits (8/15/19)
Rule 4001	New Source Performance Standards (4/14/99)
Rule 4002	National Emissions Standards for Hazardous Air Pollutants (5/20/04)
Rule 4101	Visible Emissions (2/17/05)
Rule 4102	Nuisance (12/17/92)
Rule 4201	Particulate Matter Concentration (12/17/92)
Rule 4301	Fuel Burning Equipment (12/17/92)
Rule 4305	Boilers, Steam Generators, and Process Heaters – Phase 2 (8/21/03)
Rule 4306	Boilers, Steam Generators, and Process Heaters – Phase 3 (12/17/20)

Rule 4320 Advanced Emission Reduction Options for Boilers, Steam Generators,
 and Process Heaters Greater than 5.0 MMBtu/hr (12/17/20)
Rule 4351 Boilers, Steam Generators and Process Heaters – Phase 1 (8/21/03)
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 6342 Bystrum Road in Ceres, 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

Bronco Wine Company operates a winery at this location. The facility operates this natural gas-fired boiler to provide heat and steam for their wine production operations. This boiler operates as a secondary backup unit to the primary boiler operating under permit N-1665-514-2. Within this project, they have proposed to replace the existing burner on this unit with a new Cleaver Brooks, model Profire MTHG-12.6 ultra-low NOx burner to achieve NOx emissions of less than 9 ppmvd @ 3% O₂. There will be no other changes to their facility or wine production operations as a result of this project.

V. Equipment Listing

Pre-Project Equipment Description:

N-1665-1-6: 12.6 MMBTU/HR HURST MODEL 300 NATURAL GAS-FIRED BOILER WITH ST JOHNSON MODEL RX 300F ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION SYSTEM

Proposed Modification:

Replace the existing burner with a new Cleaver Brooks, model Profire MTHG-126, ultra-low NOx natural gas-fired burner capable of achieving NOx emissions of 9 ppmvd @ 3% O₂.

N-1665-1-7: MODIFICATION OF 12.6 MMBTU/HR HURST MODEL 300 NATURAL GAS-FIRED BOILER WITH ST JOHNSON MODEL RX 300F ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION SYSTEM: REPLACE EXISTING BURNER WITH A NEW CLEAVER BROOKS MODEL PROFIRE MTHG-126 ULTRA LOW NOX BURNER TO ACHIEVE NOX EMISSIONS OF 9 PPMVD @ 3% O₂

Post-Project Equipment Description:

N-1665-1-7: 12.6 MMBTU/HR HURST MODEL 300 NATURAL GAS-FIRED BOILER WITH A CLEAVER BROOKS MODEL PROFIRE MTHG-126 ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION SYSTEM

VI. Emission Control Technology Evaluation

Emissions from natural gas-fired boilers include NO_x, CO, VOC, PM₁₀, and SO_x.

NO_x is the major pollutant of concern when burning natural gas. NO_x formation is either due to thermal fixation of atmospheric nitrogen in the combustion air (thermal NO_x) or due to conversion of chemically bound nitrogen in the fuel (fuel NO_x). Due to the low fuel nitrogen content of natural gas, nearly all NO_x emissions are thermal NO_x. Formation of thermal NO_x is affected by four furnace zone factors: (1) nitrogen concentration, (2) oxygen concentration, (3) peak temperature, and (4) time of exposure at peak temperature.

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

Flue gas recirculation (FGR) reduces NO_x emissions by recirculating a percentage of the exhaust gas back into the wind box. This reduces the oxygen concentration in the air-fuel mixture and regulates the combustion process, lowering the combustion temperature. The lowered availability of oxygen in conjunction with lowered combustion temperature reduces the formation of NO_x.

VII. General Calculations

A. Assumptions

- To streamline emission calculations, PM_{2.5} emissions are assumed to be equal to PM₁₀ emissions
- Prior to and after this modification, this unit will only be fired on PUC-regulated natural gas (current permit limit and proposed by the applicant)
- Maximum operating schedule for this boiler will be 24 hours/day and 8,760 hours/year (current permit limit and proposed by the applicant)
- Natural gas heating value: 1,000 Btu/scf (District Practice)
- F-Factor for natural gas: 8,578 dscf/MMBtu corrected to 60°F (40 CFR 60, Appendix B)

B. Emission Factors

Pre-Project Emission Factors:

The current permit for this boiler contains emission factors for all pollutants. The pre-project emissions factors are summarized in the table below:

Pre-Project Natural Gas Combustion Emission Factors			
Pollutant	lb/MMBtu	ppmv (@ 3% O ₂)	Source
NO _x	0.018	15	Current Permit
SO _x	0.00285		District Policy APR-1720 and Current Permit
PM ₁₀	0.003	--	District Practice ⁽¹⁾
CO	0.148	200	Current Permit
VOC	0.004	--	Current Permit

Post-Project Emission Factors:

For the new burner, the emission factors for NO_x and CO were proposed by the applicant and burner manufacturer. For the VOC emission factor, the applicant has proposed to utilize the same emission factor that is on the current permit. The PM₁₀ emission factor is taken from current District practice for natural gas fuel combustion in boilers. The SO_x emission factor is based on District Policy APR-1720. The emission factors are summarized in the following table:

Post-Project Natural Gas Combustion Emission Factors			
Pollutant	lb/MMBtu	ppmv (@ 3% O ₂)	Source
NO _x	0.011	9	Burner Manufacturer
SO _x	0.00285		District Policy APR-1720
PM ₁₀	0.003	--	District Practice
CO	0.148	200	Burner Manufacturer
VOC	0.004	--	Current Permit/Proposed by Applicant

⁽¹⁾ The current permit limits the PM10 emissions from the existing boiler/burner to 0.005 lb/MMBtu. Based on information in the facility files, a source for the existing PM10 emission limit could not be found and it has been included on the permit for this boiler since 1998. District policy APR 1110, Use of Revised Generally Accepted Emission Factors, states that existing emission factors should be revised at the time of permit modification if better emission data has become available since the time of the previous permitting action. Based on numerous source test results and current District practice, the PM10 emissions from boilers fired on PUC-quality natural gas are not expected to exceed 0.003 lb/MMBtu. Based on this current District practice, the revised emission factor of 0.003 lb/MMBtu more appropriately represents the current PM10 emissions from natural gas-fired boilers. Therefore, in accordance with District Policy APR 1110, the pre-project emission factor will be revised and re-established using the updated PM10 emission factor.

According to boiler manufacturers, low NO_x burners will achieve their rated emissions within one to two minutes of initial startup and do not require a special shutdown procedure. Because of the short duration before achieving the rated emission factor following startup, the emissions factors for this unit during startup and shutdown will be assumed to be the same as the steady state emission factors shown in the table above.

C. Calculations

1. Pre-Project Potential to Emit (PE1)

Daily PE1:

The current permit for this boiler does not contain any daily operating limits. Therefore, the NO_x, CO, VOC, PM₁₀ and SO_x daily PE values will be calculated using the pre-project emission factors listed above, the maximum heat input rating of the burner, and the maximum hours of operation during any given day.

$$\text{PE (lb/day)} = \text{EF (lb/MMBtu)} \times \text{Burner Rating (MMBtu/hr)} \times 24 \text{ (hr/day)}$$

Pollutant	Emission Factor (lb/MMBtu)	Burner Rating (MMBtu/hr)	Operating Hours (hr/day)	Daily PE1 (lb/day)
NO _x	0.018	12.6	24	5.4
SO _x	0.00285	12.6	24	0.9
PM ₁₀	0.003	12.6	24	0.9
CO	0.148	12.6	24	44.8
VOC	0.004	12.6	24	1.2

Annual PE1:

The current permit for this boiler does not contain any annual operating limits. Therefore, the NO_x, CO, VOC, PM₁₀ and SO_x annual PE values will be calculated using the pre-project emission factors listed above, the maximum heat input rating of the burner, and the maximum hours of operation during any given year.

$$\text{PE (lb/year)} = \text{EF (lb/MMBtu)} \times \text{Burner Rating (MMBtu/hr)} \times 8,760 \text{ (hr/year)}$$

Pollutant	Emission Factor (lb/MMBtu)	Burner Rating (MMBtu/hr)	Operating Hours (hr/year)	Annual PE1 (lb/year)
NO _x	0.018	12.6	8,760	1,987
SO _x	0.00285	12.6	8,760	315
PM ₁₀	0.003	12.6	8,760	331
CO	0.148	12.6	8,760	16,336
VOC	0.004	12.6	8,760	442

2. Post-Project Potential to Emit (PE2)

Daily PE (PE2):

After this modification, the boiler will have the potential to burn natural gas for an entire day. Therefore, the NO_x, CO, VOC, PM₁₀ and SO_x daily PE values will be calculated using the post-project emission factors listed above, the maximum heat input rating of the burner, and the maximum hours of operation during any given day.

$$PE \text{ (lb/day)} = EF \text{ (lb/MMBtu)} \times \text{Burner Rating (MMBtu/hr)} \times 24 \text{ (hr/day)}$$

Pollutant	Emission Factor (lb/MMBtu)	Burner Rating (MMBtu/hr)	Operating Hours (hr/day)	Daily PE2 (lb/day)
NO _x	0.011	12.6	24	3.3
SO _x	0.00285	12.6	24	0.9
PM ₁₀	0.003	12.6	24	0.9
CO	0.148	12.6	24	44.8
VOC	0.004	12.6	24	1.2

Annual PE2:

After this modification, the applicant is not proposing to include an annual operating limit for this boiler. Therefore, the NO_x, CO, VOC, PM₁₀ and SO_x annual PE values will be calculated using the post-project emission factors listed above, the maximum heat input rating of the burner, and the maximum hours of operation during any given year.

$$PE \text{ (lb/year)} = EF \text{ (lb/MMBtu)} \times \text{Burner Rating (MMBtu/hr)} \times 8,760 \text{ (hr/year)}$$

Pollutant	Emission Factor (lb/MMBtu)	Burner Rating (MMBtu/hr)	Operating Hours (hr/year)	Annual PE2 (lb/year)
NO _x	0.011	12.6	8,760	1,214
SO _x	0.00285	12.6	8,760	315
PM ₁₀	0.003	12.6	8,760	331
CO	0.148	12.6	8,760	16,336
VOC	0.004	12.6	8,760	442

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

Pursuant to District Rule 2201, the 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 (AER) that have occurred at the source, and which have not been used on-site.

As shown above, the proposed modification does not result in an increase in potential emissions for any criteria pollutant. Therefore, new SSPE1 calculations are not required and will not be performed as a part of this evaluation. The table below summarizes the last SSPE2 calculations performed for this facility under ATC project N-1173153.

SSPE1 (lb/year)					
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE1	3,480	728	1,667	21,773	661,794

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

Pursuant to District Rule 2201, the SSPE2 is the PE from all units with valid ATCs or PTOs at the Stationary Source and the quantity of ERCs which have been banked since September 19, 1991 for AER that have occurred at the source, and which have not been used on-site.

As discussed above, the only expected change in emissions from this facility are from the proposed modifications to the existing boiler. The SSPE2 is summarized in the table below

SSPE2 (lb/year)					
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE1	3,480	728	1,667	21,773	661,794
N-1665-1-6 (current PTO)	-1,987	-315	-331	-16,336	-442
N-1665-1-7 (new ATC)	1,214	315	331	16,336	442
SSPE2	2,707	728	1,667	21,773	661,794

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

Pursuant to the SSPE2 calculations performed in project for N-1173153, the emission totals for this facility are as follows:

Rule 2201 Major Source Determination (lb/year)						
	NO_x	SO_x	PM₁₀	PM_{2.5}	CO	VOC
SSPE1	3,480	728	1,667	1,667	21,773	661,794
SSPE2	2,707	728	1,667	1,667	21,773	661,794
Major Source Threshold	20,000	140,000	140,000	140,000	200,000	20,000
Major Source?	No	No	No	No	No	Yes

Note: PM2.5 assumed to be equal to PM10

This source is an existing Major Source for VOC emissions and will remain a Major Source for VOC. No change in other pollutants are proposed or expected as a result of this project.

Rule 2410 Major Source Determination:

Based on information in the facility files, the emission totals for this facility are as follows:

PSD Major Source Determination (tons/year)						
	NO₂	VOC	SO₂	CO	PM	PM₁₀
Estimated Facility PE before Project Increase	1.4	330.9	0.4	10.9	0.8	0.8
PSD Major Source Thresholds	250	250	250	250	250	250
PSD Major Source?	No	Yes	No	No	No	No

As shown above, the facility is an existing PSD major source for at least one pollutant.

6. Baseline Emissions (BE)

The BE calculation (in lb/year) is performed pollutant-by-pollutant basis to determine the amount of offsets required. As discussed below, this project is exempt from offsets pursuant to Rule 2201, Section 4.6.8. Therefore, BE calculations are not required and will not be performed as a part of this project.

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 shown above, this facility is not a major source for NO_x, SO_x, PM₁₀ or CO emissions. Therefore, this project cannot constitute an SB 288 major modification for these pollutants.

Since this facility is a major source for VOC emissions, the project's PE2 is compared to the SB 288 Major Modification Thresholds in the following table in order to determine if the SB 288 Major Modification calculation is required.

SB 288 Major Modification Thresholds			
Pollutant	Project PE2 (lb/year)	Threshold (lb/year)	SB 288 Major Modification Calculation Required?
VOC	442	50,000	No

Since the SB 288 Major Modification Threshold for VOC emissions was not surpassed with this project, this project does not constitute an SB 288 Major Modification.

8. Federal Major Modification

District Rule 2201 states that a Federal Major Modification is the same as a "Major Modification" as defined in 40 CFR 51.165 and part D of Title I of the CAA.

As demonstrated above, this facility is not a major source for NO_x, SO_x, and PM₁₀ emissions. In addition, in accordance with Rule 2201, Section 3.18, there are no Federal Major Modification thresholds for CO emissions. Therefore, this project cannot constitute a Federal Major Modification and no further analysis is required for NO_x, SO_x, PM₁₀, and CO emissions.

However, this facility is a Major Source for VOC emissions. Therefore, further analysis is required to determine if this project is a Federal Major Modification for VOC.

Step 1: Project Emissions Increase

For modified existing emissions units, according to 40 CFR 51.165(a)(2)(ii)(C), the project's emission increase for each pollutant is equal to the sum of the differences between the projected actual emissions (PAE) and the baseline actual emissions (BAE). Please note that in step 1, since the District is classified as extreme non-attainment for ozone, no NOx and VOC emission decreases associated with the proposed project shall be accounted for.

$$\text{Project Emissions Increase} = \sum(\text{PAE} - \text{BAE})$$

As described in 40 CFR 51.165(a)(1)(xxviii)(B), when using historical data and company's expected business activity to determine PAE, the portion of the emissions after the project that the existing unit could have accommodated (Unused Baseline Capacity, UBC) before the project (during the same 24-month baseline period used to determine BAE) and that are unrelated to the particular project (including emissions increases due to product demand growth) are to be excluded.

Otherwise, according to 40 CFR 51.165(a)(1)(xxvii)(B)(4), when determining PAE, in lieu of using the method described in 40 CFR 51.165 (a)(1)(xxviii)(B)(1)-(3), *Projected Actual Emissions*, the owner/operator may elect to use emissions unit's Potential to Emit. If appropriate projected actual emissions are not provided by the applicant, then the emissions unit's Potential to Emit is used to calculate the emissions increase.

Since the project proponent has not provided information required to calculate PAE, the District will use the PE2 to calculate the emissions increase:

$$\text{Project Emissions Increase} = \sum(\text{PE2} - \text{BAE})$$

Projected Actual Emissions (PAE)

Bronco Wine Company has indicated that they want the ability to use this boiler operation up to its full potential to emit. Therefore, the PAE will be set equal to the post project annual PE2 value calculated above.

$$\text{PAE} = 442 \text{ lb-VOC/year}$$

Baseline Actual Emissions (BAE)

For emission units (other than electric utility steam generating units), according to 40 CFR 51.165(a)(1)(xxxv)(B), the BAE are calculated as the average, in tons/year, at which the emissions unit actually emitted during any 24-month period selected by the operator within the previous 10-year period.

The boiler being modified in this project is a backup unit to their primary boiler operating under permit N-1665-514-2. Historically, the boiler has not needed to operate on a regular basis. Therefore, 2018 and 2019 will be used as the 24-month period in determining the BAE.

Based on the fuel usages rates for this boiler provided to the District by Bronco Wine Company as a part of their annual emission inventory statements, the average fuel usage rate for the most recent 24-month period (2018 and 2019) is summarized below:

Year	Fuel Usage (MMscf/year)
2018	4.91
2019	3.09
Average	4.0

Using a natural gas heating value of 1,000 Btu/scf and the VOC emission factor listed above, the BAE for this boiler is as follows:

$$\text{BAE} = \text{Avg Fuel Usage (MMscf/yr)} \times \text{Heating Value (Btu/scf)} \times \text{EF (lb-VOC/MMBtu)}$$

$$\text{BAE} = 4.0 \text{ MMscf/yr} \times 1,000 \text{ Btu/scf} \times 0.004 \text{ lb-VOC/MMBtu}$$

$$\text{BAE} = 16 \text{ lb-VOC/year}$$

Project Emissions Increase

$$\text{Project Emissions Increase} = \text{PE2} - \text{BAE}$$

$$\text{Project Emissions Increase} = 442 \text{ lb-VOC/year} - 16 \text{ lb-VOC/year}$$

$$\text{Project Emissions Increase} = 426 \text{ lb-VOC/year}$$

Conclusion

In conclusion, the project's combined total emission increases are summarized and are compared to the Federal Major Modification Thresholds in the following table.

Federal Major Modification Thresholds for Emission Increases			
Pollutant	Total Emissions Increase (lb/yr)	Threshold (lb/yr)	Federal Major Modification?
VOC*	426	0	Yes

*If there is any emission increases in NO_x or VOC, this project is a Federal Major Modification and no further analysis is required.

Since there is an increase in VOC emissions, this project constitutes a Federal Major Modification. The federal offset quantity required for this project is discussed below.

Federal Offset Quantity

In accordance with the Clean Air Act, Section 182(e)(2), the offset requirements of this part shall not be applicable in areas designated as Extreme non-attainment to a modification of an existing source if such modification consists of installation of equipment required to comply with an applicable attainment implementation plan or permit.

The District is designated as Extreme non-attainment for ozone (NO_x and VOC emissions). As discussed above, the proposed project is to replace the burner on an existing boiler. The burner replacement is being done to bring the unit in to compliance with District Rule 4320. District Rule 4320 was adopted as a part of the District's 2007 Ozone Attainment Plan. Since this project involves the installation of equipment to comply with District Rule 4320 and the 2007 Ozone Attainment Plan, this project is not subject to federal offset requirements.

Therefore,

VOC FOQ = 0 lb/year

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

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

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

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 PSD Major Source. Because the project is not located within 10 km (6.2 miles) 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. Project Emission Increase – Significance Determination

a. Evaluation of Calculated Post-project Potential to Emit for New or Modified Emissions Units vs PSD Significant Emission Increase Thresholds

As a screening tool, the post-project potential to emit from all new and modified units is compared to the PSD significant emission increase thresholds, and if the total potentials to emit from all new and modified units are below the applicable thresholds, no further PSD analysis is needed.

PSD Significant Emission Increase Determination: Potential to Emit (tons/year)					
	NO₂	SO₂	CO	PM	PM₁₀
Total PE from New and Modified Units	0.6	0.16	8.17	0.17	0.17
PSD Significant Emission Increase Thresholds	40	40	100	25	15
PSD Significant Emission Increase?	No	No	No	No	No

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

10. Quarterly Net Emissions Change (QNEC)

The QNEC is calculated solely to establish emissions that are used to complete the District’s PAS emissions profile screen. Detailed QNEC calculations are included in Appendix D.

VIII. Compliance Determination

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

Pursuant to District Rule 2201, Section 4.1, BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis. Unless specifically exempted by Rule 2201, BACT shall be required for the following actions*:

- 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 Adjusted Increase in Permitted Emissions (AIPE) exceeding two pounds per day, and/or
- d. Any new or modified emissions unit, in a stationary source project, which results in an SB 288 Major Modification or a Federal Major Modification, as defined by the rule.

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

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

As discussed in Section I above, there are no new emissions units associated with this project. Therefore, BACT for new units with PE > 2 lb/day purposes is not triggered.

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

$$\text{AIPE} = \text{PE}_2 - \text{HAPE}$$

Where,

AIPE = Adjusted Increase in Permitted Emissions, (lb/day)

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

HAPE = Historically Adjusted Potential to Emit, (lb/day)

$$\text{HAPE} = \text{PE}_1 \times (\text{EF}_2/\text{EF}_1)$$

Where,

PE₁ = The emissions unit's PE prior to modification or relocation, (lb/day)

EF₂ = The emissions unit's permitted emission factor for the pollutant after modification or relocation. If EF₂ is greater than EF₁ then EF₂/EF₁ shall be set to 1

EF₁ = The emissions unit's permitted emission factor for the pollutant before the modification or relocation

$$\text{AIPE} = \text{PE}_2 - (\text{PE}_1 * (\text{EF}_2 / \text{EF}_1))$$

The AIPE for this boiler is summarized in the following table:

Pollutant	PE2 (lb/day)	PE1 (lb/day)	EF2 (lb/MMBtu)	EF1 (lb/MMBtu)	AIPE (lb/day)
NOx	3.3	5.4	0.011	0.018	0
SOx	0.9	0.9	0.00285	0.00285	0
PM10	0.9	0.9	0.003	0.003	0
CO	44.8	44.8	0.148	0.148	0
VOC	1.2	1.2	0.004	0.004	0

As demonstrated above, the AIPE is not greater than 2.0 lb/day for any pollutant. Therefore, BACT is not triggered.

d. SB 288/Federal Major Modification

As discussed in Sections VII.C.7 and VII.C.8 above, this project does constitute a Federal Major Modification for VOC emissions. Therefore, BACT is triggered for VOC for the boiler being modified in this project.

2. BACT Guideline

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

The District’s current BACT Clearinghouse Guideline 1.1.1, covers boilers rated at less than or equal to 20.0 MMBtu/hr. However, BACT Guideline 1.1.1 has been rescinded and is no longer an active guideline. Therefore, a project specific top-down BACT analysis will be performed for the purposes of this project.

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 C), BACT has been satisfied with the following:

VOC: Natural Gas-Firing

The following condition will be included on the ATC as a mechanism to assure continued compliance with the BACT requirements:

- The unit shall only be fired on PUC-regulated natural gas. [District Rules 2201 and 4320]

B. Offsets

1. Offset Applicability

Pursuant to District Rule 2201, Section 4.5, offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the SSPE2 equals or exceeds the offset threshold levels in Table 4-1 of Rule 2201.

The SSPE2 is compared to the offset thresholds in the following table.

Offset Determination (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE2	2,707	728	1,667	21,773	661,794
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets triggered?	No	No	No	No	Yes

2. Quantity of Offsets Required

As seen above, the SSPE2 is greater than the offset thresholds for VOC emissions only. However, per District Rule 2201, Section 4.6.8, for existing facilities, the installation or modification of an emission control technique performed solely for the purpose of compliance with the requirements of District, State or Federal air pollution control laws, regulations, or orders shall be exempt from offset requirements for all air pollutants, provided all of the following conditions are met:

- There shall be no increase in the physical or operational design of the existing facility, except for those changes to the design needed for the installation or modification of the emission control technique itself;
- There shall be no increase in the permitted rating or permitted operating schedule of the permitted unit;
- There shall be no increase in emissions from the stationary source that will cause or contribute to any violation of a National Ambient Air Quality Standard, Prevention of Significant Deterioration increment, or Air Quality Related Value in Class I areas; and
- The project shall not result in an increase in permitted emissions or potential to emit of more than 25 tons per year of NO_x, or 25 tons per year of VOC, or 15 tons per year of SO_x, or 15 tons per year of PM₁₀, or 50 tons per year of CO.

Bronco Wine Company is proposing to replace the existing burner on this boiler with a new natural gas-fired ultra-low NOx burner. After this change, the boiler will be operating in compliance with applicable requirements of District Rule 4320. The modification does not result in an increase in the permitted rating of the boiler and the applicant is not proposing to increase its physical or operational design. In addition, as shown in the table below, the project does not result in an increase in emissions from the facility.

Pollutant	Daily PE1 (lb/day)	Daily PE2 (lb/day)	Annual PE1 (lb/year)	Annual PE2 (lb/year)
NOx	5.4	3.3	1,987	1,214
SOx	0.9	0.9	315	315
PM10	0.9	0.9	331	331
CO	44.8	44.8	16,336	16,336
VOC	1.2	1.2	442	442

Therefore, the proposed modification meets all of the criteria listed above and is exempt from the offset requirements of this rule.

C. Public Notification

1. Applicability

Pursuant to District Rule 2201, Section 5.4, public noticing is required for:

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

a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications

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 Section VII.C.7 of this evaluation, this project is a Federal Major Modification. Therefore, public noticing is required for this project for Federal Major Modification purposes.

b. PE > 100 lb/day

Applications which include a new emissions unit with a PE greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements. As seen in Section VII.C.2 above, this project does not include a new emissions unit which has daily emissions greater than 100 lb/day for any pollutant, therefore public noticing for PE > 100 lb/day purposes is not required.

c. Offset Threshold

Public notification is required if the pre-project Stationary Source Potential to Emit (SSPE1) is increased to a level exceeding the offset threshold levels. The following table compares the SSPE1 with the SSPE2 in order to determine if any offset thresholds have been surpassed with this project.

Offset Thresholds				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO _x	2,707	3,480	20,000 lb/year	No
SO _x	728	728	54,750 lb/year	No
PM ₁₀	1,667	1,667	29,200 lb/year	No
CO	21,773	21,773	200,000 lb/year	No
VOC	661,794	661,794	20,000 lb/year	No

As demonstrated 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 SSIPE of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE = SSPE2 – SSPE1.

SSIPE Public Notice Thresholds					
Pollutant	SSPE2 (lb/year)	SSPE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO _x	2,707	3,480	-773	20,000 lb/year	No
SO _x	728	728	0	20,000 lb/year	No
PM ₁₀	1,667	1,667	0	20,000 lb/year	No
CO	21,773	21,773	0	20,000 lb/year	No
VOC	661,794	661,794	0	20,000 lb/year	No

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

e. Title V Significant Permit Modification

As shown in the Discussion of Rule 2520 below, this project constitutes a Title V significant modification. Therefore, public noticing for Title V significant modifications is required for this project.

2. Public Notice Action

As discussed above, public noticing is required for this project for Federal Major Modification and Title V significant modification purposes. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB), Environmental Protection Agency (EPA), and a public notice will be electronically published on the District's website prior to the issuance of the ATC for this equipment.

D. Daily Emission Limits (DELs)

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 and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT.

Proposed Rule 2201 (DEL) Conditions:

- The unit shall only be fired on PUC-regulated natural gas. [District Rules 2201 and 4320]
- Emissions shall not exceed any of the following limits: 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu; 0.00285 lb-SO_x/MMBtu; 0.003 lb-PM₁₀/MMBtu, 200 ppmvd CO @ 3% O₂ or 0.148 lb-CO/MMBtu; or 0.004 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320]

E. Compliance Assurance

1. Source Testing

This boiler is subject to District Rule 4305, *Boilers, Steam Generators and Process Heaters, Phase 2*, District Rule 4306, *Boilers, Steam Generators and Process Heaters, Phase 3*, and District Rule 4320, *Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5 MMBtu/hr*. Source testing requirements, in accordance with these rules will be discussed in more detail in Section VIII of this evaluation below.

2. Monitoring

This boiler is subject to District Rule 4305, *Boilers, Steam Generators and Process Heaters, Phase 2*, District Rule 4306, *Boilers, Steam Generators and Process Heaters, Phase 3*, and District Rule 4320, *Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5 MMBtu/hr*. Monitoring requirements, in accordance with these rules will be discussed in more detail in Section VIII of this evaluation below.

3. Recordkeeping

This boiler is subject to District Rule 4305, *Boilers, Steam Generators and Process Heaters, Phase 2*, District Rule 4306, *Boilers, Steam Generators and Process Heaters, Phase 3*, and District Rule 4320, *Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5 MMBtu/hr*. Recordkeeping, in accordance with these rules will be discussed in more detail in Section VIII of this evaluation below.

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

Rule 2410 Prevention of Significant Deterioration

As shown in Section VII.C.9 above, this project does not result in a new PSD major source or PSD major modification. No further discussion is required.

Rule 2520 Federally Mandated Operating Permits

This facility is subject to this Rule, and has received their Title V Operating Permit. The proposed modification is a Minor Modification to the Title V Permit.

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 is not a major modification, as defined in Rule 2201. As discussed above, this project triggers a Federal Major Modification. 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). 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 may construct/operate under the ATCs upon submittal of the Title V administrative amendment application. The following conditions will be included on each ATC and will assure compliance with the requirements of Rule 2520:

- 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 NSR Rule]
- 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]

Rule 4001 New Source Performance Standards (NSPS)

40 CFR Part 60, Subpart Dc applies to Small Industrial-Commercial-Industrial Steam Generators between 10 MMBtu/hr and 100 MMBtu/hr (post-6/9/89 construction, modification or, reconstruction)

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

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

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

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

Rule 4101 Visible Emissions

Rule 4101 states that no person shall discharge into the atmosphere emissions of any air contaminant aggregating more than 3 minutes in any hour which is as dark as or darker than Ringelmann 1 (or 20% opacity). As the pipeline heater will be fired solely on natural gas, visible emissions are not expected to exceed Ringelmann 1 or 20% opacity. The following condition will be included on the ATC as a mechanism to assure ongoing compliance:

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

Rule 4102 Nuisance

Rule 4102 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. The following condition will be added to the permit to further assure compliance with this rule.

- 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.

As demonstrated above, there are no increases in emissions associated with this project. In addition, pursuant to information provided by the applicant, the new burner should have the same exhaust parameters as the existing burner. Therefore, a health risk assessment is not necessary and no further risk analysis is required.

Rule 4201 Particulate Matter Concentration

Section 3.0 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 maximum particulate matter concentration for this natural gas-fired pipeline heater at dry standard conditions can be calculated as follows:

F-Factor: 8,578 dscf/MMBtu at 60 °F

PM₁₀ Emission Factor: 0.003 lb-PM₁₀/MMBtu (From Section VII.B)

Percentage of PM as PM₁₀ in Exhaust: 100%

$$\text{Grain Loading (GL)} = \left(\frac{0.003 \text{ lb} - \text{PM}}{\text{MMBtu}} \times \frac{7,000 \text{ grain}}{\text{lb} - \text{PM}} \right) \div \left(\frac{8,578 \text{ ft}^3}{\text{MMBtu}} \right)$$

$$\text{GL} = 0.002 \text{ grain/dscf} < 0.1 \text{ grain/dscf}$$

Therefore, the following condition will be listed on the permit as a mechanism to ensure compliance:

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

District Rule 4301 Fuel Burning Equipment

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

District Rule 4301 Limits			
Pollutant	NO ₂	Total PM	SO ₂
N-1665-1-7 (lb/hr)	0.14	0.04	0.04
Rule Limit (lb/hr)	140	10	200

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

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

This unit is natural gas-fired with a maximum heat input of 12.6 MMBtu/hr. Pursuant to Section 2.0 of District Rule 4305, the unit is subject to District Rule 4305, *Boilers, Steam Generators and Process Heaters – Phase 2*.

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

Since the emissions limits of District Rules 4306 and 4320 and all other requirements of these rules are equivalent or more stringent than District Rule 4305 requirements, compliance with District Rules 4306 and 4320 requirements will satisfy requirements of District Rule 4305.

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

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

This unit is natural gas-fired with a maximum heat input of 12.6 MMBtu/hr. Pursuant to Section 2.0 of District Rule 4306, the unit is subject to District Rule 4306, *Boilers, Steam Generators and Process Heaters – Phase 3*.

The boiler being modified in this project is natural gas-fired with a maximum heat input of 12.6 MMBtu/hr. Pursuant to Section 2.0 of District Rule 4320, the unit is subject to District Rule 4320.

Section 5.1, NO_x and CO Emissions Limits

Section 5.1 requires that except for units subject to Section 5.2, NO_x and carbon monoxide (CO) emissions shall not exceed the limits specified in the following table. All ppmv emission limits specified in this section are referenced at dry stack gas conditions and 3.00 percent by volume stack gas oxygen.

With a maximum heat input of 12.6 MMBtu/hr, the applicable NO_x emission limit category is listed in Section 5.1, Table 1, Category A, from District Rule 4306. In addition, units shall not be operated in a manner to which exceeds a carbon monoxide (CO) emissions limit of 400 ppmv.

Table 1: Tier 1 Rule 4306 NO _x Emissions Limits		
Category	NO _x Limits	CO Limits
A. Units with a total rated heat input equal to or less than 20.0 MMBtu/hr, except for Categories C through I units	a) Standard Schedule 15 ppmv or 0.018 lb/MMBtu; or	400 ppmv @ 3% O ₂
	b) Enhanced Schedule 9 ppmv or 0.011 lb/MMBtu	400 ppmv @ 3% O ₂

The proposed unit is subject to Category A of the emission limits specified in Table 1 of Section 5.2 as this unit is not operated as a low use unit and is not located at an oilfield, refinery or wastewater treatment plant. The applicant has proposed the following emission limits:

the proposed NO_x emission factor is 9 ppmvd @ 3% O₂ (0.011 lb/MMBtu), and the proposed CO emission factor is 200 ppmvd @ 3% O₂ (0.148 lb/MMBtu)

Therefore, compliance with Section 5.2 of District Rule 4306 is expected.

The following condition will be included on the permit to assure continued compliance with the NO_x and CO requirements of this rule:

- Emissions rates from the natural gas-fired unit shall not exceed any of the following limits: 9 ppmv NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.003 lb-PM₁₀/MMBtu, 200 ppmv CO @ 3% O₂ or 0.148 lb-CO/MMBtu, 0.004 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320]

Section 5.2, Low Use

Section 5.2 specifies requirements for units with maximum annual heat input limits of less than 9 billion Btu's per calendar year. Bronco Wine Company is proposing to operate this boiler as a full time unit with a heat input of greater than 9 billion Btu's per calendar year. Therefore, the proposed unit is not subject to the requirements of this section.

Section 5.3, Startup and Shutdown Provisions

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

According to the burner manufacturer, low NO_x burners will achieve their rated emissions within one to two minutes of initial startup and do not require a special shutdown procedure. Because of the short duration before achieving the rated steady state emission factor following startup, this unit will be subject to the applicable emission limits of Section 5.1 at all times and the boiler will not utilize the startup and shutdown provisions specified within this section.

Section 5.4, Monitoring Provisions

Section 5.4.1 specifies requirements for units that simultaneously fire gaseous and liquid fuels. Bronco Wine Company is not proposing to fire this boiler simultaneously on gaseous and liquid fuels. Therefore, the requirements of this section are not applicable.

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

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

- The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320]
- If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee

shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320]

- All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320]
- The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320]

Sections 5.7.2 and 5.7.3 specify monitoring requirements for units that are subject to the low use requirements specified in Section 5.5. As discussed above, the proposed boiler is not subject to the low use requirements of Section 5.5. Therefore, the requirements of Sections 5.7.2 and 5.7.3 are not applicable to this unit.

Section 5.7.4 allows units operated at seasonal sources and subject to 40 CFR 60 Subpart Db to install a parametric monitoring system in lieu of a CEMS. The boiler being modified in this project is not operated at a seasonal source. Therefore, this unit is not subject to the requirements of this section.

Section 5.7.6 outlines requirements for monitoring SO_x emissions. The following condition will be listed on the permit in order to ensure compliance with the requirements:

- Permittee shall determine sulfur content of combusted gas annually or shall demonstrate that the combusted gas is provided from a PUC or FERC regulated source. [District Rules 1081 and 4320]

Section 5.5, Compliance Determination

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

- The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]

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

- 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 4320. [District Rules 4305, 4306, and 4320]

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

- All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320]

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

- 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]

Section 6.1, Recordkeeping

Section 6.1 requires that the records required by Sections 6.1.1 through 6.1.4 shall be maintained for five calendar years and shall be made available to the APCO upon request. Failure to maintain records or information contained in the records that demonstrate noncompliance with the applicable requirements of this rule shall constitute a violation of this rule.

The following condition will be listed on the permit as a mechanism to assure continued compliance:

- All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320]

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

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

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 facility has not proposed the use of startup and shutdown provisions, thus, the requirements of this section do not apply to these units.

Section 6.2, Test Methods

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

Test Methods		
Pollutant	Units	Test Method Required
NO _x	ppmv	EPA Method 7E or ARB Method 100
NO _x	lb/MMBtu	EPA Method 19
CO	ppmv	EPA Method 10 or ARB Method 100
Stack Gas O ₂	%	EPA Method 3 or 3A, or ARB Method 100

Stack Gas Velocities	ft/min	EPA Method 2
Stack Gas Moisture Content	%	EPA Method 4

The following conditions will be listed on the permits as a mechanism to assure continued compliance:

- 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_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 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 (O₂) 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 these units be tested to determine compliance with the applicable requirements of section 5.1 not less than once every 12 months. Upon demonstrating compliance on two consecutive compliance source tests, the following source test may be deferred for up to thirty-six months. Since the applicant is proposing to install a new burner as a part of the proposed project, initial source testing will also be required within 60 days of startup.

The following conditions will be listed on the permit to assure continued compliance with this section:

- Source testing to measure NO_x 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]
- Source testing to measure NO_x and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320]

- The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

Section 6.4, Emission Control Plan (ECP)

Section 6.4.1 requires that the operator of any unit shall submit to the APCO for approval an Emissions Control Plan according to the compliance schedule in Section 7.0 of District Rule 4320.

The proposed unit will be in compliance with the NO_x emissions limits listed in Table 1 of Section 5.1 and the periodic monitoring and source testing requirements required by this rule. The unit is not currently subject to the Tier 2 emission limits listed in Table 2 of Section 5.1 and does not need to fully comply with the applicable emission limits listed in Table 2 until 2023 or 2029. Therefore, the facility will need to submit an emission control plan by May 1, 2022, or by May 1, 2028 (depending on which compliance schedule the fall under) describing how this boiler will comply with the emission limits in Table 2. The following condition will be included on the ATC to assure compliance with the emission control plan requirements of this section:

- The owner or operator of a boiler subject to the Tier 2 emission requirements of District Rules 4306 and 4320 shall submit to the APCO an emission control plan pursuant to Section 6.4 of each rule, and shall comply with all other applicable deadlines in Section 7.0 of these rules. [District Rules 4306 and 4320]

Section 7.0, Compliance Schedule

Section 7.1 indicates that an operator of a boiler must be in compliance with both the ATC deadline and compliance deadlines listed in Tables 1 and 2 of Section 5.1.

The unit will be in compliance with the NO_x emissions limits listed in Table 1 of Section 5.1 and with the periodic monitoring and source testing requirements required by this rule. The unit is not subject to the NO_x emission limits listed in Table 2 of Section 5.1 and does not need to fully comply with the emission limits in Table 2 until 2023 or 2029. Therefore, the facility will submit an emission control plan by May 1, 2022 describing how this boiler will comply with the applicable NO_x emission limits. Therefore, the requirements of the compliance schedule section are satisfied. No further discussion is required.

Conclusion

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

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

The boiler being modified in this project is natural gas-fired with a maximum heat input of 12.6 MMBtu/hr. Pursuant to Section 2.0 of District Rule 4320, the unit is subject to District Rule 4320.

Section 5.2, NO_x and CO Emissions Limits

Section 5.2 requires that except for units subject to Sections 5.3, NO_x and carbon monoxide (CO) emissions shall not exceed the limits specified in the following table. All ppmv emission limits specified in this section are referenced at dry stack gas conditions and 3.00 percent by volume stack gas oxygen.

With a maximum heat input of 12.6 MMBtu/hr, the applicable NO_x emission limit category is listed in Section 5.2, Table 1, Category A, from District Rule 4320. In addition, units shall not be operated in a manner to which exceeds a carbon monoxide (CO) emissions limit of 400 ppmv.

Table 1: Tier 1 Rule 4320 NO _x Emissions Limits		
Category	NO _x Limits	CO Limits
B. Units with a total rated heat input > 5.0 MMBtu/hr to ≤ 20.0 MMBtu/hr, except for Categories C through G units	a) Standard Schedule 9 ppmv or 0.011 lb/MMBtu; or	400 ppmv @ 3% O ₂
	b) Enhanced Schedule 6 ppmv or 0.007 lb/MMBtu	400 ppmv @ 3% O ₂

The proposed unit is subject to Category A of the emission limits specified in Table 1 of Section 5.2 as this unit is not operated as a low use unit and is not located at an oilfield, refinery or wastewater treatment plant. The applicant has proposed the following emission limits:

the proposed NO_x emission factor is 9 ppmvd @ 3% O₂ (0.011 lb/MMBtu), and the proposed CO emission factor is 200 ppmvd @ 3% O₂ (0.148 lb/MMBtu)

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

The following condition will be included on the permit to assure continued compliance with the NO_x and CO requirements of this rule:

- Emissions rates from the natural gas-fired unit shall not exceed any of the following limits: 9 ppmv NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.003 lb-PM₁₀/MMBtu, 200 ppmv CO @ 3% O₂ or 0.148 lb-CO/MMBtu, 0.004 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320]

Section 5.3, Annual Fee Calculation

Annual Fees are required if the unit will not be meeting the emission limits in Section 5.2 of this rule. Prior to this modification, the boiler was not operating in compliance with the Rule 4320 NOx emission limit as specified in Section 5.2. The facility was utilizing the fee paying option under this section for this boiler. However, after this project, the new burner will be capable of meeting the applicable NOx emission limit in Section 5.2 and the annual fee paying requirements of this section will no longer be 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 for the steam generator:

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 (5) grains of total sulfur per one hundred (100) standard cubic feet;
3. Install and properly operate an emission control system that reduces SO₂ emissions by at least 95% by weight; or limit exhaust SO₂ to less than or equal to 9 ppmv corrected to 3.0% O₂;

The facility has proposed that the boiler will be fired exclusively on PUC-regulated natural gas. Therefore, the requirements of this section will be satisfied. The following condition will assure continued compliance:

- The unit shall only be fired on PUC-regulated natural gas. [District Rules 2201 and 4320]

Section 5.5, Low Use

Section 5.5 specifies requirements for units with maximum annual heat input limits of less than 1.8 billion Btu's per calendar year. Bronco Wine Company is proposing to operate this boiler as a full time unit with a heat input of greater than 1.8 billion Btu's per calendar year. Therefore, the proposed unit is not subject to the requirements of this section.

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

According to the burner manufacturer, low NO_x burners will achieve their rated emissions within one to two minutes of initial startup and do not require a special shutdown procedure. Because of the short duration before achieving the rated steady state emission factor following startup, this unit will be subject to the applicable emission limits of Section 5.2 at all times and the boiler will not utilize the startup and shutdown provisions specified within this section.

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_x, CO and O₂, or install and maintain APCO-approved alternate monitoring.

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

- The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320]
- If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320]
- All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320]

- The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320]

Sections 5.7.2 and 5.7.3 specify monitoring requirements for units that are subject to the low use requirements specified in Section 5.5. As discussed above, the proposed boiler is not subject to the low use requirements of Section 5.5. Therefore, the requirements of Sections 5.7.2 and 5.7.3 are not applicable to this unit.

Section 5.7.4 allows units operated at seasonal sources and subject to 40 CFR 60 Subpart Db to install a parametric monitoring system in lieu of a CEMS. The boiler being modified in this project is not operated at a seasonal source. Therefore, this unit is not subject to the requirements of this section.

Section 5.7.6 outlines requirements for monitoring SO_x emissions. The following condition will be listed on the permit in order to ensure compliance with the requirements:

- Permittee shall determine sulfur content of combusted gas annually or shall demonstrate that the combusted gas is provided from a PUC or FERC regulated source. [District Rules 1081 and 4320]

Section 5.8, Compliance Determination

Section 5.8.1 requires that the operator of any unit shall have the option of complying with either the applicable heat input (lb/MMBtu) emission limits or the concentration (ppmv) emission limits specified in Section 5.1. The emission limits selected to demonstrate compliance shall be specified in the source test proposal pursuant to Rule 1081 (Source Sampling). Therefore, the following condition will be listed on the permits as follows:

- The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]

Section 5.8.2 requires that all emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. Therefore, the following condition will be listed on the permit as follows:

- 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 4320. [District Rules 4305, 4306, and 4320]

Section 5.8.4 requires that for emissions monitoring pursuant to Sections 5.7.1 and 6.3.1 using a portable NO_x analyzer as part of an APCO approved Alternate Emissions Monitoring System, emission readings shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15-consecutive-minute sample reading or by taking at least five (5) readings evenly spaced out over the 15-consecutive-minute period. Therefore, the following previously listed permit condition will be on the permit as follows:

- All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320]

Section 5.8.5 requires that for emissions source testing performed pursuant to Section 6.3.1 for the purpose of determining compliance with an applicable standard or numerical limitation of this rule, the arithmetic average of three (3) 30-consecutive-minute test runs shall apply. If two (2) of three (3) runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. Therefore, the following condition will be listed on the permit as follows:

- 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]

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 noncompliance with the applicable requirements of this rule shall constitute a violation of this rule.

The following condition will be listed on the permit as a mechanism to assure continued compliance:

- All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320]

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 units are not subject to the requirements listed in Section 5.5, it is not subject to Section 6.1.2 requirements.

Section 6.1.3 requires that the operator of a unit subject to Section 5.5.1 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. The units are not subject to Section 6.1.3. Therefore, the requirements of this section do not apply to these units.

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 facility has not proposed the use of startup and shutdown provisions, thus, the requirements of this section do not apply to these units.

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 facility has not proposed the use of curtailment fuels; therefore, the requirements of this section do not apply to these units.

Section 6.2, Test Methods

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

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

The following conditions will be listed on the permits as a mechanism to assure continued compliance:

- 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_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 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 (O₂) 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 these units 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 following source test may be deferred for up to thirty-six months. Since the applicant is proposing to install a new burner as a part of the proposed project, initial source testing will also be required within 60 days of startup.

The following conditions will be listed on the permit to assure continued compliance with this section:

- Source testing to measure NO_x 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]
- Source testing to measure NO_x and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320]
- The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

Section 6.4, Emission Control Plan (ECP)

Section 6.4.1 requires that the operator of any unit shall submit to the APCO for approval an Emissions Control Plan according to the compliance schedule in Section 7.0 of District Rule 4320.

The proposed unit will be in compliance with the NO_x emissions limits listed in Table 1 of Section 5.2 and the periodic monitoring and source testing requirements required by this rule. The unit is not currently subject to the Tier 2 NO_x emission limits listed in Table 2 of Section 5.2 and does not need to fully comply with the applicable Tier 2 NO_x emission limits listed in Table 2 until 2023. Therefore, the facility will need to submit an emission control plan by May 1, 2022 describing how this boiler will comply with the NO_x emission limits in Table 2. The following condition will be included on the ATC to assure compliance with the emission control plan requirements of this section:

- The owner or operator of a boiler subject to the Tier 2 emission requirements of District Rules 4306 and 4320 shall submit to the APCO an emission control plan pursuant to Section 6.4 of each rule, and shall comply with all other applicable deadlines in Section 7.0 of these rules. [District Rules 4306 and 4320]

Section 7.0, Compliance Schedule

Section 7.0 indicates that an operator of steam generator must be in compliance with both the ATC deadline and compliance deadlines listed in Tables 1 and 2 of Section 5.2.

The unit will be in compliance with the NO_x emissions limits listed in Table 1 of Section 5.2 and with the periodic monitoring and source testing requirements required by this rule. The unit is not subject to the NO_x emission limits listed in Table 2 of Section 5.2 and does not need to fully comply with the emission limits in Table 2 until 2023. Therefore, the facility will submit an emission control plan by May 1, 2022 describing how this boiler will comply with the applicable NO_x emission limits. Therefore, the requirements of the compliance schedule section are satisfied. No further discussion is required.

Conclusion

Conditions will be incorporated into the permit in order to ensure compliance with each section of this rule (see attached draft ATC in Appendix A). Therefore, compliance with District Rule 4320 requirements is expected.

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

This rule applies to boilers, steam generators, and process heaters at NO_x Major Sources that are not located west of Interstate 5 in Fresno, Kings, or Kern counties. The facility in this project is not a NO_x Major Source; therefore, the provisions of this rule do not apply.

Rule 4801 Sulfur Compounds

Section 3.1 states that a person shall not discharge into the atmosphere sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding a concentration of two-tenths (0.2) percent by volume calculated as sulfur dioxide (SO₂) at the point of discharge on a dry basis averaged over 15 consecutive minutes.

Using the ideal gas equation, the sulfur compound emissions are calculated as follows:

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

With:

N = moles SO₂

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

P (Standard Pressure) = 14.7 psi

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

EPA F-Factor: 8,578 dscf/MMBtu at 60 °F

$$\frac{0.00285 \text{ lb} - \text{SO}_x}{\text{MMBtu}} \times \frac{\text{MMBtu}}{8,578 \text{ dscf}} \times \frac{1 \text{ lb} - \text{mol}}{64 \text{ lb}} \times \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot ^\circ\text{R}} \times \frac{520^\circ\text{R}}{14.7 \text{ psi}} \times \frac{1,000,000 \text{ parts}}{\text{million}} = \frac{2.0 \text{ parts}}{\text{million}}$$

$$\text{Sulfur Concentration} = \frac{2.0 \text{ parts}}{\text{million}} < 2,000 \text{ ppmv (or 0.2\%)}>$$

Therefore, compliance with District Rule 4801 requirements is expected.

California Health & Safety Code 42301.6 (School Notice)

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

California Environmental Quality Act (CEQA)

CEQA requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The District adopted its *Environmental Review Guidelines* (ERG) in 2001. The basic purposes of CEQA are to:

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

Greenhouse Gas (GHG) Significance Determination

It is determined that no other agency has prepared or will prepare an environmental review document for the project. Thus the District is the Lead Agency for this project.

On December 17, 2009, the District's Governing Board adopted a policy, APR 2005, *Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency*, for addressing GHG emission impacts when the District is Lead Agency under CEQA and approved the District's guidance document for use by other agencies when addressing GHG impacts as lead agencies under CEQA. Under this policy, the District's determination of significance of project-specific GHG emissions is founded on the principal that projects with GHG emission reductions consistent with AB 32 emission reduction targets are considered to have a less than significant impact on global climate change. Consistent with District Policy 2005, projects complying with an approved GHG emission reduction plan or GHG mitigation program, which avoids or substantially reduces GHG emissions within the geographic area in which the project is located, would be determined to have a less than significant individual and cumulative impact for GHG emission.

The California Air Resources Board (ARB) adopted a Cap-and-Trade regulation as part one of the strategies identified for AB 32. This Cap-and-Trade regulation is a statewide plan, supported by a CEQA compliant environmental review document, aimed at reducing or mitigating GHG emissions from targeted industries. Facilities subject to the Cap-and-Trade regulation are subject to an industry-wide cap on overall GHG emissions. 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. Further, the cap decreases over time, resulting in an overall decrease in GHG emissions.

Under District policy APR 2025, *CEQA Determinations of Significance for Projects Subject to ARB's GHG Cap-and-Trade Regulation*, the District finds that the Cap-and-Trade is a regulation plan approved by ARB, consistent with AB32 emission reduction targets, and supported by a CEQA compliant environmental review document. As such, consistent with District Policy 2005, projects complying with Cap-and-Trade requirements are determined to have a less than significant individual and cumulative impact for GHG emissions.

The GHG emissions increases associated with this project result from the combustion of fossil fuel(s), other than jet fuel, delivered from suppliers subject to the Cap-and-Trade regulation. Therefore, as discussed above, consistent with District Policies APR 2005 and APR 2025, the District concludes that the GHG emissions increases associated with this project would have 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 for each emissions unit affected by the project the potential project emission increase is equal to or less than 2 lb/day per pollutant. Therefore, the potential project emission increase is considerably below all annual criteria emissions CEQA significant thresholds. The activity will occur at an existing facility and involves negligible expansion of the existing or former use. Furthermore, the District determined that the activity will not have a significant effect on the environment. Therefore, the District finds that the activity is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline § 15301 (Existing Facilities), and finds that the project is exempt per the common sense exemption that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).

Indemnification Agreement/Letter of Credit Determination

According to District Policy APR 2010 (CEQA Implementation Policy), when the District is the Lead or Responsible Agency for CEQA purposes, an indemnification agreement and/or a letter of credit may be required. The decision to require an indemnity agreement and/or a letter of credit is based on a case-by-case analysis of a particular project's potential for litigation risk, which in turn may be based on a project's potential to generate public concern, its potential for significant impacts, and the project proponent's ability to pay for the costs of litigation without a letter of credit, among other factors.

The criteria pollutant emissions and toxic air contaminant emissions associated with the proposed project are not significant, and there is minimal potential for public concern for this particular type of facility/operation. Therefore, an Indemnification Agreement and/or a Letter of Credit will not be required for this project in the absence of expressed public concern.

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Issue ATC N-1665-1-7 subject to the permit conditions on the attached draft ATC in Appendix A.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
N-1665-1-7	3020-02-G	12.6 MMBtu/hr	\$980

Appendixes

- A: Draft ATC N-1665-1-7
- B: Current PTO N-1665-1-6
- C: Top-Down BACT Analysis for VOC Emissions
- D: QNEC Calculations

APPENDIX A

Draft ATC N-1665-1-7

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: N-1665-1-7

LEGAL OWNER OR OPERATOR: BRONCO WINE COMPANY
MAILING ADDRESS: PO BOX 789 - ATTN: ENV COMPLIANCE
CERES, CA 95307

LOCATION: 6342 BYSTRUM RD
CERES, CA 95307

EQUIPMENT DESCRIPTION:

MODIFICATION OF 12.6 MMBTU/HR HURST MODEL 300 NATURAL GAS-FIRED BOILER WITH ST JOHNSON MODEL RX 300F ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION SYSTEM: REPLACE EXISTING BURNER WITH A NEW CLEAVER BROOKS MODEL PROFIRE MTHG-126 ULTRA LOW NOX BURNER TO ACHIEVE NOX EMISSIONS OF 9 PPMVD @ 3% O2

CONDITIONS

1. {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
2. {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
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. 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
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
6. 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

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Samir Sheikh, Executive Director / APCO

Brian Clements, Director of Permit Services

N-1665-1-7 : Feb 25 2021 10:34AM - BROWND : Joint Inspection NOT Required

7. The unit shall only be fired on PUC-regulated natural gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
8. Emissions rates from the natural gas-fired unit shall not exceed any of the following limits: 9 ppmv NO_x @ 3% O₂ or 0.008 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.003 lb-PM₁₀/MMBtu, 200 ppmv CO @ 3% O₂ or 0.148 lb-CO/MMBtu, 0.004 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. Source testing to measure NO_x 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
14. Source testing to measure NO_x and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. 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
16. 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
17. 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 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

18. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 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 (O₂) 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. 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
22. 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
23. Permittee shall determine sulfur content of combusted gas annually or shall demonstrate that the combusted gas is provided from a PUC or FERC regulated source. [District Rules 1081 and 4320] Federally Enforceable Through Title V Permit
24. 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
25. The owner or operator of a boiler subject to the Tier 2 emission requirements of District Rules 4306 and 4320 shall submit to the APCO an emission control plan pursuant to Section 6.4 of each rule, and shall comply with all other applicable deadlines in Section 7.0 of these rules. [District Rules 4306 and 4320]

DRAFT

APPENDIX B

Current PTO N-1665-1-6

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-1665-1-6

EXPIRATION DATE: 04/30/2024

EQUIPMENT DESCRIPTION:

12.6 MMBTU/HR HURST MODEL 300 NATURAL GAS-FIRED BOILER WITH ST JOHNSON MODEL RX 300F ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION SYSTEM

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The unit shall only be fired on PUC-regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Emissions rates from the natural gas-fired unit shall not exceed any of the following limits: 15 ppmv NO_x @ 3% O₂ or 0.018 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.005 lb-PM₁₀/MMBtu, 200 ppmv CO @ 3% O₂ or 0.148 lb-CO/MMBtu, 0.004 lb-VOC/MMBtu. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit
5. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit
6. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
7. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] 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.

8. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
9. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
10. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
11. This unit shall be tested for compliance with the NO_x and CO emissions limits at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit
12. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
13. 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
14. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
15. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
16. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
17. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
18. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320] Federally Enforceable Through Title V Permit
19. Permittee shall determine sulfur content of combusted gas annually or shall demonstrate that the combusted gas is provided from a PUC or FERC regulated source. [District Rules 1081 and 4320] 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.

20. 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

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

APPENDIX C

Top-Down BACT Analysis for VOC Emissions

Top-Down BACT Analysis for 12.5 MMBtu/hr Natural Gas-Fired Boiler

The District does not currently have an approved BACT Guideline for this source category. The District's BACT Clearinghouse previously included guideline 1.1.1, which applied to boilers that were rated at equal to or less than 20 MMBtu/hr. However, guideline 1.1.1 has been rescinded and is currently not an active guideline. Therefore, a project-specific BACT analysis is required for the proposed modification of this 12.5 MMBtu/hr natural gas-fired boiler.

BACT Analysis for VOC Emissions:

VOC emissions result from the incomplete combustion of various elements in the natural gas fuel.

a. Step 1 - Identify all control technologies

As discussed above, the SJVUAPCD BACT Clearinghouse previously contained guideline 1.1.1, which identified BACT requirements for boilers rated at less than 20 MMBtu/hr as firing on natural gas fuel or propane as a backup fuel. The BACT guideline was rescinded due to the fact that the NO_x emission requirements of Rule 4320 were more stringent than the NO_x requirements specified in BACT guideline 1.1.1.

However, Rule 4320 does not specify any requirements for VOC emissions. In addition, District Rule 4320 Section 3.7 indicates that PUC-quality natural gas is a high methane gas with at least 80% methane by volume. Because PUC-quality natural gas is mostly composed of methane, an exempt non-VOC compound, combustion of natural gas generally does not result in significant VOC emissions.

Therefore, it will be assumed that the previous requirements specified within BACT guideline 1.1.1 remain valid and will be used as BACT for VOC emissions for the purposes of this project and will be set equal to the following:

- 1) Natural gas with LPG backup or propane fired

No technologically feasible alternatives or control alternatives identified as alternate basic equipment for this class and category of source are listed.

b. Step 2 - Eliminate technologically infeasible options

There are no technologically infeasible options to eliminate from step 1.

c. Step 3 - Rank remaining options by control effectiveness

- 1) PUC-Quality Natural Gas (Achieved in Practice)

d. Step 4 - Cost Effectiveness Analysis

The only option listed above has been identified as achieved in practice. Therefore, the option is required and is not subject to a cost analysis.

e. Step 5 - Select BACT

Pursuant to the above BACT Analysis, BACT for VOC emissions from the process heater is the use of PUC-quality natural gas as fuel. The applicant has proposed to use only PUC-quality natural gas (regulated by the PUC or FERC) as fuel. Therefore, the BACT requirements for VOC emissions from the modification of the existing 12.5 MMBtu/hr boiler will be satisfied.

APPENDIX D

QNEC Calculations

Quarterly Net Emissions Change (QNEC)

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

QNEC = PE2 - PE1, where:

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

Using the values in Sections VII.C.2 and VII.C.1 in the evaluation above, quarterly PE2 and quarterly PE1 can be calculated as follows (a sample calculation for NO_x emissions is shown below):

$$\begin{aligned} PE2_{quarterly} &= PE2_{annual} \div 4 \text{ quarters/year} \\ &= 4,600 \text{ lb/year} \div 4 \text{ qtr/year} \\ &= 1,150 \text{ lb NO}_x/\text{qtr} \end{aligned}$$

$$\begin{aligned} PE1_{quarterly} &= PE1_{annual} \div 4 \text{ quarters/year} \\ &= 1,987 \text{ lb/year} \div 4 \text{ qtr/year} \\ &= 1,150 \text{ lb NO}_x/\text{qtr} \end{aligned}$$

Quarterly NEC [QNEC]			
Pollutant	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO _x	303.5	496.75	-193.25
SO _x	78.75	78.75	0
PM ₁₀	82.75	82.75	0
CO	4,084	4,084	0
VOC	110.5	110.5	0