



OCT 13 2009

Gerardo C. Rios, Chief
Permits Office
Air Division
U.S. EPA - Region IX
75 Hawthorne St
San Francisco, CA 94105

**Re: Proposed Authority to Construct / Certificate of Conformity (Minor Mod)
District Facility # N-1237
Project # N1093350**

Dear Mr. Rios:

Enclosed for your review is the District's engineering evaluation of an application for Authority to Construct for E & J Gallo Winery, located at 18000 W River Rd Livingston, CA, which has been issued a Title V permit. E & J Gallo Winery is requesting that a Certificate of Conformity, with the procedural requirements of 40 CFR Part 70, be issued with this project. E & J Gallo Winery has proposed to reduce the permitted NOx emissions for the boiler operating under permit unit N-1237-4 to 7 ppmvd @ 3% O2 for compliance with District Rule 4320.

Enclosed is the engineering evaluation of this application, a copy of the current Title V permit, and proposed Authority to Construct # N-1237-4-12 with Certificate of Conformity. After demonstrating compliance with the Authority to Construct, the conditions will be incorporated into the facility's Title V permit through an administrative amendment.

Please submit your written comments on this project within the 45-day comment period that begins on the date you receive this letter. If you have any questions, please contact Mr. Rupi Gill, Permit Services Manager, at (209) 557-6400.

Thank you for your cooperation in this matter.

Sincerely,



David Warner
Director of Permit Services

DW: RD/cm

Enclosures

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San Joaquin Valley Air Pollution Control District Authority to Construct

Modification of Natural Gas-Fired Boilers for Rule 4320 Compliance

Facility Name: E & J Gallo Winery Date: September 16, 2009
Mailing Address: 18000 W River Rd Engineer: Rick Dyer
Livingston, CA 95334 Lead Engineer: Nick Peirce
Contact Person: Lupe Munoz
Telephone: (209) 394-6211
Fax: (209) 341-2764
Application #(s): N-1237-4-12
Project #: N1093350
Deemed Complete: July 14, 2009

I. PROPOSAL

E&J Gallo Winery has proposed to reduce the permitted NO_x emissions from 9.0 ppmvd @ 3% O₂ to 7.0 ppmvd @ 3% O₂ for the boiler operating under permit N-1237-4 to comply with the NO_x emissions standard of Rule 4320, Advanced Emission Reduction Options for Boilers, Steam Generators and Process Heaters greater than 5.0 MMBtu/hr. This boiler has been tested in 2006 and 2007 after installing a selective catalytic reduction (SCR) system. The emission concentrations during these tests are summarized in the following table and included in Appendix C:

Test Date	NO _x	CO	NH ₃
5/30/2006	0.46 ppmvd @ 3% O ₂	2.64 ppmvd @ 3% O ₂	0.98 ppmvd @ 3% O ₂
5/1/2007	0 ppmvd @ 3% O ₂	0 ppmvd @ 3% O ₂	7.86 ppmvd @ 3% O ₂

The above table demonstrates that this boiler is operating in compliance with the proposed NO_x emission concentrations of 7.0 ppmvd @ 3% O₂. Furthermore, the applicant is not proposing any changes to the method of operation of this unit. Since there is no change to method of operation of the boiler and the unit currently satisfies the emissions limits of Rule 4320, per District Policy FYI-111, this project not a New Source Review (NSR) project. No initial source test is necessary or required for the boiler.

E & J Gallo Winery received their Title V Permit on July 6, 2000. This modification can be classified as a Title V minor modification pursuant to Rule 2520, Section 3.20, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. E &

J Gallo Winery must apply to administratively amend their Title V Operating Permit to include the requirements of the ATC issued with this project.

II. APPLICABLE RULES

District Rule 2201	New and Modified Stationary Source Review Rule (09/21/06)
District Rule 2520	Federally Mandated Operating Permits (6/21/01)
District Rule 4001	New Source Performance Standards (4/14/99)
District Rule 4101	Visible Emissions (2/17/05)
District Rule 4102	Nuisance (12/17/92)
District Rule 4201	Particulate Matter Concentration (12/17/92)
District Rule 4301	Fuel Burning Equipment (12/17/92)
District Rule 4304	Equipment Tuning Procedure for Boilers, Steam Generators and Process Heaters (10/19/95)
District Rule 4305	Boilers, Steam Generators and Process Heaters – Phase 2 (8/21/03)
District Rule 4306	Boilers, Steam Generators and Process Heaters – Phase 3 (3/17/05)
District Rule 4320	Advanced Emission Reduction Options for Boilers, Steam Generators and Process Heaters Greater Than 5.0 MMBtu/hr (10/16/08)
District Rule 4351	Boilers, Steam Generators and Process Heaters – Phase 1 (8/21/03)
District Rule 4801	Sulfur Compounds (12/17/92)
CH&SC 41700	Health Risk Assessment (Public Nuisance)
CH&SC 42301.6	School Notice

III. PROJECT LOCATION

This facility is located at 18000 W River Rd, Livingston, CA. There are no increases in hazardous air pollutants from this proposed project. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. PROCESS DESCRIPTION

The natural gas-fired boiler is used to provide steam to the various wine making and processing operations at the facility. The applicant is not proposing any modifications to the equipment or operations in this project.

V. EQUIPMENT LISTING

Pre-Project Equipment Description:

N-1237-4-11:

150 MMBTU/HR MURRAY MODEL MSF5-99 NATURAL GAS-FIRED BOILER WITH A TODD COMBUSTION MODEL SV750FGX LOW NOX BURNER, FLUE GAS

RECIRCULATION AND A CRI COMPANY SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM

Post Project Equipment Description:

N-1237-4-12:

150 MMBTU/HR MURRAY MODEL MSF5-99 NATURAL GAS-FIRED BOILER WITH A TODD COMBUSTION MODEL SV750FGX LOW NOX BURNER, FLUE GAS RECIRCULATION AND A CRI COMPANY SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM

VI. EMISSION CONTROL TECHNOLOGY EVALUATION

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.

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

A Selective Catalytic Reduction (SCR) system operates as an external control device where flue gases and a reagent, in this case ammonia, are passed through an appropriate catalyst. Ammonia, will be injected upstream of the catalyst where it reacts and reduces NO_x, over the catalyst bed, to form elemental nitrogen and other by-products. The use of a catalyst typically reduces the NO_x emissions by up to 90%.

VII. GENERAL CALCULATIONS

This project does not meet the criteria for a Rule 2201 Modification, as defined in Section 3.25 and further clarified in District guidance FYI-111, example #5, and is therefore, not subject to the requirements of Rule 2201. FYI-111 is included in Appendix D. Formal calculations for Rule 2201 compliance are not required and only the Potential to Emit (PE) for the change in NO_x emissions and the quarterly net emissions change will be calculated for emission profile purposes.

A. Assumptions

- The maximum operating schedule is 24 hours per day
- The unit is fired solely on PUC regulated natural gas
- Annual pre-project and post-project potential to emit is calculated based on 8,760 hours of operation per year
- F-Factor for Natural Gas: 8,578 dscf/MMBtu corrected to 60°F (40 CFR 60, Appendix B)
- Other assumptions will be stated as they are made.

B. Emission Factors

Pre-Project Emission Factors (EF1)

From N-1237-4-11:

Pollutant		Pre-Project Emission Factors (EF1)		Source
NO _x	Steady-State	0.011 lb/MMBtu	9 ppmvd @ 3%O ₂	N-1237-4-11
	Start-up/Shutdown	1.65 lb/hr		

Post-Project Emission Factors (EF2)

For N-1237-4-12:

Pollutant		Pre-Project Emission Factors (EF1)		Source
NO _x	Steady-State	0.008 lb/MMBtu	7 ppmvd @ 3%O ₂	Applicant
	Start-up/Shutdown	1.65 lb/hr		N-1237-4-11

C. Potential to Emit

Pre -Project Potential to Emit (PE1)

The PE1_{NOx} is taken from the previous project, N1060194.

PE1_{NOx} = 36.9 lb/day and 14,454 lb/yr.

Post-Project Potential to Emit (PE2)

ATC N-1237-4-12 will maintain the currently permitted limit for total start-up time and shutdown time to 9 hour/day and 6 hour/day, respectively. Thus,

$$\begin{aligned}
 PE2_{NOx} &= (1.65 \text{ lb/hr})(9.0 \text{ hr/day} + 6.0 \text{ hr/day}) + (0.008 \text{ lb/MMBtu})(150 \text{ MMBtu/hr}) \\
 &\quad (24 \text{ hr/day} - 9.0 \text{ hr/day} - 6.0 \text{ hr/day}) \\
 &= \mathbf{35.6 \text{ lb/day and } 12,994 \text{ lb/yr}} \quad (35.6 \text{ lb/day} \times 365 \text{ days/yr})
 \end{aligned}$$

D. 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, which is used for the District's internal tracking purposes. The emissions for will be evenly distributed throughout the year and typically calculated as follows:

$$(\text{Annual PE2} - \text{Annual PE1}) \text{ lb/year} \div 4 \text{ quarters/yr}$$

Since NO_x is the only affected pollutant involved on this project, only the QNEC for NO_x will be shown.

$$(12,994 \text{ lb/yr} - 14,454 \text{ lb/yr}) \div 4 = -365$$

The QNEC is shown below:

N-1237-4-12			
Pollutant	PE2 (lb/yr)	PE1 (lb/yr)	QNEC (lb/qtr)
NO _x	12,994	14,454	-365

VIII. COMPLIANCE

District Rule 2201 - New and Modified Stationary Source Review Rule

Section 3.25 of this Rule defines Modification, as an action including at least one of the following items:

- Any change in hours of operation, production rate, or method of operation of an existing emissions unit, which would necessitate a change in permit conditions.

The facility has not proposed a change in hours of operation, production rate, or method of operation for this boiler, which would necessitate a change in permit conditions.

- Any structural change or addition to an existing emissions unit, which would necessitate a change in, permit conditions.

The facility has not proposed a structural change or addition to an existing emissions unit, which would necessitate a change in permit conditions.

- An increase in emissions from an emissions unit caused by a modification of the Stationary Source when the emissions unit is not subject to a daily emissions limitation.

There are no emissions increases associated with this project.

- Addition of any new emissions unit, which is subject to District permitting requirements.

The facility has not proposed the addition of a new emissions unit, which would be subject to District permitting.

- A change in a permit term or condition proposed by an applicant to obtain an exemption from an applicable requirement to which the source would otherwise be subject.

The facility has not proposed a change in a permit term or condition to obtain an exemption from an applicable requirement to which the source would otherwise be subject.

As shown above and discussed in Section I (Proposal) of this document, this project is not a modification per Rule 2201.3.25 and is not subject to this rule.

District 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 pursuant to Section 3.20 of this rule.

In accordance with Rule 2520, 3.20, these modifications:

1. Do not violate requirements of any applicable federally enforceable local or federal requirement;
2. Do not relax monitoring, reporting, or recordkeeping requirements in the permit and are not significant changes in existing monitoring permit terms or conditions;
3. Do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis;
4. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include:
 - a. A federally enforceable emission cap assumed to avoid classification as a modification under any provisions of Title I of the Federal Clean Air Act; and

- b. An alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Federal Clean Air Act; and
5. Are not Title I modifications as defined in District Rule 2520 or modifications as defined in section 111 or 112 of the Federal Clean Air Act; and
6. Do not seek to consolidate overlapping applicable requirements.

The applicant has proposed to receive the Authority to Construct with a Certificate of Conformity. Therefore, the following conditions will be placed on the Authority to Construct.

- *{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 NSR Rule] Y*
- *{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] Y*

The PTO for this boiler currently lists several permit shields. These permit shields will be retained and placed on the new ATC issued for this project:

- *Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Rule 407 (Merced). [District Rule 2520, 13.2]*
- *Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: SJVUAPCD Rule 1081, 4201, 4202, 4301 and 4305. [District Rule 2520, 13.2]*

District Rule 4001 - New Source Performance Standards

40 CFR Part 60 Subpart Db:

Section 60.40b(a) states that this subpart shall apply to any steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 MW (100 million Btu/hr). As shown above, the heat input rating of this burner is 150 MMBtu/hr. However, as determined on District Project N1060194, the previous ATC project for this boiler, the boiler was installed in 1982 (prior to the 1984 applicable date) and no modification or reconstruction has occurred after the installation date. Therefore, the requirements of 40 CFR Part 60, Subpart Db do not apply to this boiler. The following condition will be retained from N-1237-4-11 and included on the permit to state this subpart does not apply to this unit.

- *The requirements of 40 CFR 60, subpart Db do not apply to this source. A permit shield is granted for this requirement. [District Rule 2520, 13.2]*

District Rule 4101 - Visible Emissions

District Rule 4101, Section 5.0, indicates that no air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour, which is dark or darker than Ringelmann 1 or equivalent to 20% opacity. The following condition will be listed on the permit to ensure continuing compliance:

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

District Rule 4102 - Nuisance

Section 4.0 prohibits discharge of air contaminants, which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result of these operations, provided the equipment is well maintained. Therefore, compliance with this rule is expected. The following condition will be listed on the permit to ensure continuing compliance:

- *{98} No air contaminant shall be released into the atmosphere, which causes a public nuisance. [District Rule 4102]*

California Health & Safety Code 41700 (Risk Management Review)

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 residence or worksite. There will be no increase in emissions as a result of this project. Therefore, a health risk assessment is not required.

District 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. There are no changes to the existing permit proposed that would change the particulate matter concentration. Therefore, continued compliance with District Rule 4201 requirements is expected. A permit condition will be included on the permit to ensure continuing compliance with this rule as well as PM requirements of the following Rule 4301.

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 not to exceed 0.1 gr/dscf @ 12% CO₂ and 10 lb/hr. According to AP 42 (Table 1.4-2, footnote c), all PM emissions from natural gas combustion are less than 1 μm in diameter.

The concentration of particulate matter can be adjusted for 12% CO₂ using the following formula:

$$C_{12\%CO_2} = ((C_{PM10}) \times (7000 \text{ gr/lb})) \div ((F\text{-Factor}) \times (CF_{12\%CO_2}))$$

Where,

- C_{PM10} = PM₁₀ emissions concentration
- F-Factor = 1,024 dscf/MMBtu (40CFR60, App. A, corrected to 60 °F)
- CF_{12%CO₂} = Correction factor for 12% CO₂

$$C_{12\%CO_2} = ((0.005 \text{ lb/MMBtu}) \times (7,000 \text{ gr/lb})) \div ((1,024 \text{ dscf/MMBtu}) \times (1.00/0.12))$$

$$= 0.0041 \text{ gr/scf}$$

This is less than the 0.1 grain per standard cubic feet permitted by Section 5.1 of this rule.

In addition, the total weight of combustion contaminants discharged to the atmosphere can be calculated as:

- NO_x = (0.008 lb/MMBtu)(150 MMBtu/hr) = 1.2 lb/hr – steady-state emissions limit
- or*
- NO_x = 1.65 lb/hr – start-up & shutdown emissions limit
- SO_x = (0.0028 lb/MMBtu)(150 MMBtu/hr) = 0.42 lb/hr
- PM₁₀ = (0.005 lb/MMBtu)(150 MMBtu/hr) = 0.75 lb/hr

Permit and Rule Limits	NO _x (lb/hr)	PM (lb/hr)	SO ₂ (lb/hr)
District Rule 4301 Limits	140	10	200
ATC N-1237-4-12	1.65*	0.75	0.42

*Worst case hourly emissions between Start-up/Shutdown and Steady-state

The above table indicates compliance with the maximum NO_x, PM, and SO_x pound per hour (lb/hr) emissions in this rule. Therefore, continued compliance is expected.

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

Pursuant to District Rules 4305 and 4306, and 4320, the permittee is required to tune the boiler during years in which annual source testing is not required (i.e. during the 36-month source testing deferment period). However, units that are equipped with an APCO-approved CEMS or an APCO-approved alternate monitoring scheme where the applicable emissions are periodically monitored are not required to perform tuning.

The permittee has chosen to periodically monitor the NO_x, CO, and O₂ emissions for each boiler by using a District-approved portable emissions analyzer.

This boiler is not required to be tuned since it follows District approved Alternate Monitoring scheme "A" (District Policy SSP 1105) where the applicable emission limits are periodically monitored. Therefore, this boiler is not subject to this Rule.

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

Pursuant to Section 2.0 of District Rule 4305, these units are subject to District Rule 4305, *Boilers, Steam Generators and Process Heaters – Phase 2*.

Since the requirements of District Rule 4320 are either equivalent or more stringent than the requirements of District Rule 4305, compliance with District Rule 4320 requirements will satisfy requirements of District Rule 4305. Therefore, no further discussion is required.

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

Pursuant to Section 2.0 of District Rule 4306, these units are subject to District Rule 4306, *Boilers, Steam Generators and Process Heaters – Phase 3*.

Since the requirements of District Rule 4320 are either equivalent or more stringent than the requirements of District Rule 4306, compliance with District Rule 4320 requirements will satisfy requirements of District Rule 4306. Therefore, no further discussion is required.

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

Pursuant to Section 2.0 of District Rule 4320, this 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.

This boiler is subject to the emission limit category listed in Section 5.2, Table 1, Category B, from District Rule 4320.

Rule 4320 Emissions Limits		
Category	Operated on gaseous fuel	
	NO _x Limit	CO Limit
B. Units with a total rated heat input greater than 20.0 MMBtu/hr, except for categories C through G units	7 ppmv or 0.008 lb/MMBtu	400 ppmv

The applicant is proposing reduce the NO_x emission limit for the boiler to 7 ppmvd @ 3% O₂ (0.008 lb/MMBtu) for compliance with Rule 4320. The CO limits already meet Rule 4320 requirements (200 ppmvd @3% O₂) and no changes are proposed for the CO limit.

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. Since the proposed boiler will meet the emissions limits of Section 5.2, the annual fee requirements are not applicable.

Section 5.4, Particulate Matter Control Requirements

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

1. Fire the boiler exclusively on PUC-quality natural gas, commercial propane, butane, or liquefied petroleum gas, or a combination of such gases;
2. Limit fuel sulfur content to no more than five grains of total sulfur per 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 boiler is fired exclusively on PUC-quality natural gas. Therefore, the requirements of this section have been satisfied and no further discussion is required.

Section 5.5, Low Use

The annual heat input from the boiler exceeds the 1.8 billion Btu heat input per calendar year criteria. Therefore, the requirements of this section do not apply.

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.

Section 5.6.1 states that the duration of each startup or each shutdown shall not exceed two hours, except as provided in Section 5.6.3.

Section 5.6.3 states an operator may apply for a permit condition to allow more than two hours for each startup or each shutdown provided the operator satisfies all of the conditions specified in Sections 5.6.3.1 through 5.6.3.3.

Section 5.6.3.1 specifies that the duration of each startup shall not exceed 12 hours and the duration of each shutdown shall not exceed nine hours.

Section 5.6.3.2 states that the APCO will only approve startup and shutdown durations longer than two hours when the applicant clearly identifies the control technologies or strategies to be used, describes the prevailing physical conditions at startup and shutdown that prevent the controls from being effective, and an estimate as to when the physical conditions will have reached a state that allows effective emissions control.

Section 5.6.3.3 requires the operator to submit necessary information as required by the APCO to determine the appropriate duration of each startup or shutdown.

On District project N1060194, the facility provided the information required to determine the appropriate startup and shutdown durations for this boiler. The increased duration times for startup and shutdown result from the operational temperature requirement of the selective catalytic reduction (SCR) system for effective emissions control. The applicant has not proposed any changes to the startup and shutdown conditions established on Project N1060194 and those conditions will be retained for this project.

The following condition will be incorporated on the ATC permit to ensure compliance with section 5.6:

- *The total duration of startup time shall not exceed 9.0 hours per day. [District Rules 2201, 4305, 4306, and 4320.5.6]*
- *The duration of startup time shall not exceed 6.0 hours per occurrence. [District Rules 2201, 4305, 4306, and 4320.5.6]*
- *The total duration of shutdown time shall not exceed 6.0 hours per day. [District Rules 2201, 4305, 4306, and 4320.5.6]*

- *The duration of shutdown time shall not exceed 3.0 hours per occurrence. [District Rules 2201, 4305, 4306, and 4320.5.6]*
- *The emission control system shall be in operation and emissions shall be minimized insofar as is technologically feasible during startup and shutdown. [District Rules 4306 and 4320].*

Compliance with Section 5.6 is expected.

Section 5.7, Monitoring Provisions

Section 5.7.1 requires that permit units subject to the emission limits specified in Section 5.2 shall either install and maintain an operational APCO-approved Continuous Emission Monitoring System (CEMS) for NO_x, CO and O₂, or install an APCO-approved Alternate Monitoring System.

Periodic monitoring of NO_x, CO, and O₂ exhaust concentrations using a District-approved portable emission monitor is the only APCO-approved alternate monitoring system for an SCR emission control system. The applicant has proposed to continue to use periodic monitoring of NO_x, CO, and O₂ exhaust concentrations and Draeger tubes to monitor NH₃ concentrations. The following conditions will be listed on the permit:

- *The permittee shall monitor and record the stack concentration of NO_x, CO, NH₃, and O₂ at least once during each month in which source testing is not performed. NO_x, CO, and O₂ monitoring shall be conducted utilizing a portable analyzer that meets District specifications or District-approved monitoring equipment. NH₃ monitoring shall be conducted utilizing Draeger tubes or a District approved equivalent method. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless it has been performed within the last month. [District Rules 4102, 4305, 4306, and 4320] N*
- *If the NO_x, CO, or NH₃ concentrations, as measured by the portable analyzer or the District-approved ammonia monitoring equipment, exceed the permitted emission levels, the permittee shall return the emissions to an acceptable level as soon as possible, but no longer than one hour after detection. If the portable analyzer shows that emissions continue to exceed the allowable levels after one hour of operation following detection, the permittee shall notify the District within the following one hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4102, 4305, 4306, and 4320]*

- *The permittee shall maintain records of: (1) the date and time of NO_x, CO, NH₃ and O₂ measurements, (2) the O₂ concentration in percent by volume and the measured NO_x, CO and NH₃ concentrations corrected to 3% O₂, (3) make and model of the portable analyzer(s), (4) portable analyzer calibration records, (5) the method of determining the NH₃ emission concentration, and (6) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4102, 4305, 4306, and 4320]*

Since this boiler is not subject to the requirements listed in Section 5.5.1 or 5.5.2, it is not subject to the requirements of Section 5.7.2 and 5.7.3.

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 applicant has proposed to use an APCO-approved alternate monitoring system using a portable emissions analyzer. Therefore, no further discussion is necessary.

Section 5.7.6 outlines requirements for monitoring SO_x emissions. Section 5.7.6.1 requires the operator of any unit that proposes to comply with Section 5.4.1.1 (fire exclusively on PUC-quality natural gas, commercial propane, butane, LPG, or a combination of these fuel gases) or Section 5.4.1.2 (fuel sulfur content limit of 5 grains/100 scf) to provide an annual fuel analysis.

The boiler is fired solely on PUC-Quality natural gas, which per District Policy APR 1720, the District assumes has a sulfur content not exceeding 1.0 grains/100 scf. Therefore, the District will accept analyses or other equivalent certification documents from the fuel supplier for demonstrating compliance with the SO_x emission monitoring requirement. The following condition will be included on the permit:

- *On and after July 1, 2010, the permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 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 permit 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 permit 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 4306. [District Rules 4305, 4306, and 4320]*

Sections 5.8.3 and 5.8.4 specify requirements for units that are equipped with a CEMS or operators that elect to monitor emissions using a portable NO_x analyzer as a part of an APCO approved Alternate Emissions Monitoring System. The applicant has proposed to use an APCO-approved alternate monitoring system using a portable emissions analyzer for each boiler. Therefore, the following permit condition will be listed on the permit as follows:

- *All NO_x, CO, NH₃, and O₂ monitoring emissions readings shall be taken with the unit operating at conditions representative of normal operation or under the conditions specified in the Permit to Operate. The NO_x, CO and O₂ analyzer and NH₃ emissions monitoring equipment shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Analyzer readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320]*

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 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. Therefore, the following permit 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 permit condition will be listed on the permit:

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

Section 6.1.2 requires that the operator of a unit subject to Section 5.5 shall record the amount of fuel use at least on a monthly basis. Since this boiler is not subject to the requirements listed in Section 5.5, they are 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. This boiler is not subject to Section 5.5.1. Therefore, the requirements of this section do not apply to this unit.

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

- *The permittee shall maintain daily records of start-up and shutdown durations and number of occurrences of each start-up and shutdown. [District Rules 2201 1070, 2201, 4305, 4306, and 4320] N*

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 applicant has not proposed the use of curtailment fuels. Therefore, the requirements of this section do not apply to this unit.

Section 6.2, Test Methods

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

Pollutant	Units	Test Method Required
NO _x	ppmv	EPA Method 7E or ARB Method 100
NO _x	lb/MMBtu	EPA Method 19

Pollutant	Units	Test Method Required
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 permit conditions will be listed on the permit as follows:

- *{109} Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]*
- *{2977 Transformed} 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]*
- *{2978 Transformed} CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320]*
- *{2979 Transformed} Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320]*
- *Source testing for ammonia slip shall be conducted utilizing BAAQMD Method ST-1B. [District Rule 1081].*

Section 6.3, Compliance Testing

Section 6.3.1 requires that these units each 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 36 months. The following permit conditions will be listed on the permit as follows:

- *Source testing to measure NO_x, CO, and NH₃ shall be conducted at least once every 12 months. After demonstrating compliance on two) consecutive annual source tests, the unit shall be tested not less than once every 36 months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every 12 months. [District Rules 2201, 4102, 4305, 4306, and 4320]¹*

¹ Initial source testing within 60 days of the start-up date of these modifications is not required since these boilers each have successfully met the 7.0 ppmv, dry corrected to 3% O₂ on the past two source tests. See Appendix C for past source test results

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

Conclusion:

Conditions will be incorporated into the permit in order to ensure compliance with each section of this rule. 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. If applicable, the emission limits, monitoring provisions, and testing requirements of this rule are satisfied when the unit is operated in compliance with Rule 4306. This facility is not located in the specified area. Therefore, this rule is not applicable.

District Rule 4801 Sulfur Compounds

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

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

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

With: n = moles of SO₂

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

P (Standard Pressure) = 14.7 psi

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

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

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

Therefore, compliance with District Rule 4801 requirement is expected.

California Health & Safety Code 42301.6 (School Notice)

Since there are increases in emissions on this project, the public notification requirements of California Health and Safety Code 42301.6 are not applicable to this project.

IX. California Environmental Quality Act (CEQA)

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

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

The District performed an Engineering Evaluation (this document) for the proposed project and determined that the activity will occur at an existing facility and the project involves negligible expansion of the existing use. Furthermore, the District determined that the activity will not have a significant effect on the environment. The District finds that the activity is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline § 15031 (Existing Facilities), and finds that the project is exempt per the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).

X. RECOMMENDATION:

Compliance with all applicable rules and regulations is expected. Issue Authority to Construct (ATC) permit N-1237-4-12 subject to the permit conditions on the attached draft ATC in Appendix A.

XI. BILLING INFORMATION:

Annual Permit Fees				
Permit Number	Previous Fee Schedule	Fee Schedule	Fee Description	Annual Fee
N-1237-4-12	3020-02-H	3020-02-H	150 MMBtu/hr	\$1,030

APPENDICES

- Appendix A: Draft Authority to Construct
- Appendix B: Current Permit to Operate
- Appendix C: Most Recent Source Test Results
- Appendix D: District Policy FYI-111

APPENDIX A

Draft Authority to Construct

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: N-1237-4-12

LEGAL OWNER OR OPERATOR: E & J GALLO WINERY
MAILING ADDRESS: 18000 W RIVER RD
LIVINGSTON, CA 95334

LOCATION: 18000 W RIVER RD
LIVINGSTON, CA 95334

EQUIPMENT DESCRIPTION:

MODIFICATION OF THE 150 MMBTU/HR MURRAY MODEL MSF5-99 NATURAL GAS-FIRED BOILER WITH A TODD COMBUSTION MODEL SV750FGX LOW NOX BURNER, FLUE GAS RECIRCULATION AND A CRI COMPANY SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM TO REDUCE NOX EMISSION CONCENTRATIONS TO 7.0 PPMVD @ 3% O2 FOR RULE 4320 COMPLIANCE

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 NSR Rule] 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. 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
4. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
5. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
6. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
7. The emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rules 4305, 4306, and 4320]

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director APCO

DRAFT

DAVID WARNER, Director of Permit Services

N-1237-4-12: Sep 21 2009 3:08PM - DYERR : Joint Inspection NOT Required

8. The unit shall only be fired on PUC-regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
9. On and after July 1, 2010, the permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320]
10. Operator shall provide that fuel hhv be certified by third party fuel supplier or determined annually by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2, 4305, 4306, and 4320, 6.2.1]
11. Operator shall maintain copies of fuel invoices and supplier certifications. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Rule 407 (Merced). [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
13. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: SJVUAPCD Rule 1081, 4201, 4202, 4301 and 4305. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
14. The requirements of 40 CFR 60, subpart Db do not apply to this source. A permit shield is granted for this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
15. Except during start-up and shutdown, emissions from the exhaust of the SCR system serving this boiler shall not exceed any of the following limits: 7 ppmvd NO_x @ 3% O₂ or 0.008 lb-NO_x/MMBtu; 0.00285 lb-SO_x/MMBtu; 0.005 lb-PM₁₀/MMBtu; 200 ppmvd CO @ 3% O₂ or 0.148 lb-CO/MMBtu; or 0.0028 lb-VOC/MMBtu. [District NSR Rule and District Rules 4305, 4306, and 4320, 5.2.1]
16. During start-up and shutdown, emissions from the exhaust of the SCR system serving this boiler shall not exceed any of the following limits: 1.65 lb-NO_x/hr; 0.00285 lb-SO_x/MMBtu; 0.005 lb-PM₁₀/MMBtu; 22.2 lb-CO/hr; or 0.0028 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320]
17. The total duration of start-up time shall not exceed 9.0 hours per day. [District Rules 2201, 4305, 4306, and 4320, 5.6]
18. The duration of startup time shall not exceed 6.0 hours per occurrence. [District Rules 2201, 4305, 4306, and 4320, 5.6]
19. The total duration of shutdown time shall not exceed 6.0 hours per day. [District Rules 2201, 4305, 4306, and 4320, 5.6]
20. The duration of shutdown time shall not exceed 3.0 hours per occurrence. [District Rules 2201, 4305, 4306, and 4320, 5.6]
21. The ammonia (NH₃) emissions shall not exceed 10 ppmvd @ 3% O₂ over a 15 minute averaging period. [District Rule 4102]
22. Source testing to measure NO_x, CO, and NH₃ emissions from this unit shall be conducted at least once every 12 months. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every 36 months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every 12 months. [District Rules 2201, 4102, 4305, 4306, and 4320 6.3.1]
23. 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 Rules 1081] Federally Enforceable Through Title V Permit
24. The source test plan shall identify which fuel the source test is going to be performed on and the basis (ppmv or lb/MMBtu) that will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]
25. 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]

CONDITIONS CONTINUE ON NEXT PAGE

26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320, 5.8.5]
27. 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, 6.2]
28. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320, 6.2]
29. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320, 6.2]
30. Source testing for ammonia slip shall be conducted utilizing BAAQMD Method ST-1B. [District Rule 4102]
31. 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
32. The permittee shall monitor and record the stack concentration of NO_x, CO, NH₃, and O₂ at least once during each month in which source testing is not performed. NO_x, CO, and O₂ monitoring shall be conducted utilizing a portable analyzer that meets District specifications or District-approved monitoring equipment. NH₃ monitoring shall be conducted utilizing Draeger tubes or a District approved equivalent method. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless it has been performed within the last month. [District Rules 4102, 4305, 4306, and 4320]
33. If the NO_x, CO, or NH₃ concentrations, as measured by the portable analyzer or the District approved ammonia monitoring equipment, exceed the permitted levels the permittee shall return the emissions to compliant levels as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer continues to show emission limit violations after 1 hour of operation following detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedence. In lieu of conducting a source test, the permittee may stipulate a violation that is subject to enforcement action has occurred. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4102, 4305, 4306, and 4320]
34. All NO_x, CO, NH₃, and O₂ monitoring emissions readings shall be taken with the unit operating at conditions representative of normal operation or under the conditions specified in the Permit to Operate. The NO_x, CO and O₂ analyzer and NH₃ emissions monitoring equipment shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Analyzer readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4102, 4305, 4306, and 4320]
35. Ammonia emission readings shall be conducted at the time the NO_x, CO and O₂ readings are taken. The readings shall be converted to ppmvd @ 3% O₂. [District Rule 4102]
36. The permittee shall maintain records of: (1) the date and time of NO_x, CO, NH₃, and O₂ measurements, (2) the O₂ concentration in percent by volume and the measured NO_x, CO, and NH₃ concentrations corrected to 3% O₂, (3) make and model of the portable analyzer(s), (4) portable analyzer calibration records, (5) the method of determining the NH₃ emission concentration, and (6) a description of any corrective action taken to maintain the emissions at or below the acceptable levels. [District Rules 4102, 4305, 4306, and 4320]
37. The permittee shall maintain daily records of start-up and shutdown durations and number of occurrences of each start-up and shutdown. [District Rules 2201 1070, 2201, 4305, 4306, and 4320]
38. All records shall be maintained and retained on-site for a minimum of 5 years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320, 6.1]

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APPENDIX B

Current Permit to Operate:

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-1237-4-11

EXPIRATION DATE: 09/30/2005

EQUIPMENT DESCRIPTION:

150 MMBTU/HR MURRAY MODEL MSF5-99 NATURAL GAS-FIRED BOILER WITH A TODD COMBUSTION MODEL SV750FGX LOW NOX BURNER, FLUE GAS RECIRCULATION AND A CRI COMPANY SELECTIVE CATALYTIC REDUCTION (SCR) 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 NSR Rule] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rules 4201 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
3. The emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
4. The unit shall only be fired on PUC-regulated natural gas. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Operator shall provide that fuel hhv be certified by third party fuel supplier or determined annually by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2, 4305, 6.2.1 and 4306, 6.2.1] Federally Enforceable Through Title V Permit
6. Operator shall maintain copies of fuel invoices and supplier certifications. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
7. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Rule 407 (Merced). [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: SJVUAPCD Rule 1081, 4201, 4202, 4301 and 4305. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
9. The requirements of 40 CFR 60, subpart Db do not apply to this source. A permit shield is granted for this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
10. Except during start-up and shutdown, emissions from the exhaust of the SCR system serving this boiler 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; 0.005 lb-PM₁₀/MMBtu; 200 ppmvd CO @ 3% O₂ or 0.148 lb-CO/MMBtu; or 0.0028 lb-VOC/MMBtu. [District NSR Rule and District Rules 4305, and 4306, 5.1] Federally Enforceable Through Title V Permit
11. During start-up and shutdown, emissions from the exhaust of the SCR system serving this boiler shall not exceed any of the following limits: 1.65 lb-NO_x/hr; 0.00285 lb-SO_x/MMBtu; 0.005 lb-PM₁₀/MMBtu; 22.2 lb-CO/hr; or 0.0028 lb-VOC/MMBtu. [District NSR Rule and District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
12. The total duration of start-up time shall not exceed 9.0 hours per day. [District NSR Rule and District Rules 4305 and 4306, 5.3.3] Federally Enforceable Through Title V Permit
13. The total duration of startup time shall not exceed 6.0 hours per occurrence. [District NSR Rule and District Rules 4305, and 4306, 5.3.3] 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.

14. The total duration of shutdown time shall not exceed 6.0 hours per day. [District NSR Rule and District Rules 4305, and 4306, 5.3.3] Federally Enforceable Through Title V Permit
15. The total duration of shutdown time shall not exceed 3.0 hours per occurrence. [District NSR Rule and District Rules 4305, and 4306, 5.3.3] Federally Enforceable Through Title V Permit
16. The ammonia (NH₃) emissions shall not exceed 10 ppmvd @ 3% O₂ over a 15 minute averaging period. [District Rule 4102]
17. 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 NSR Rule and District Rules 4102, 4305 and 4306] Federally Enforceable Through Title V Permit
18. Source testing to measure NH₃ 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 Rule 4102]
19. 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 Rules 1081] Federally Enforceable Through Title V Permit
20. The source test plan shall identify which fuel the source test is going to be performed on and the basis (ppmv or lb/MMBtu) that will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
21. 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
22. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306, 5.5.5] Federally Enforceable Through Title V Permit
23. 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, 6.2] Federally Enforceable Through Title V Permit
24. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306, 6.2] Federally Enforceable Through Title V Permit
25. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306, 6.2] Federally Enforceable Through Title V Permit
26. Source testing for ammonia slip shall be conducted utilizing BAAQMD Method ST-1B. [District Rule 4102]
27. 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
28. The permittee shall monitor and record the stack concentration of NO_x, CO and O₂ at least once during each month in which source testing is not performed. NO_x, CO and O₂ monitoring shall be conducted utilizing a portable analyzer that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless it 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.

29. If the NO_x or CO concentrations, as measured by the portable analyzer or the District approved ammonia monitoring equipment, exceed the permitted levels the permittee shall return the emissions to compliant levels as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer continues to show emission limit violations after 1 hour of operation following detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedence. In lieu of conducting a source test, the permittee may stipulate a violation that is subject to enforcement action has occurred. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
30. The permittee shall monitor and record the stack concentration of NH₃ at least once during each month in which source testing is not performed. NH₃ monitoring shall be conducted utilizing Draeger tubes or a District approved equivalent method. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless it has been performed within the last month. [District Rule 4102]
31. If the NH₃ concentrations, as measured by the portable analyzer or the District approved ammonia monitoring equipment, exceed the permitted levels the permittee shall return the emissions to compliant levels as soon as possible, but no longer than 1 hour of operation after detection. If the ammonia monitoring equipment continues to show emission limit violations after 1 hour of operation following detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedence. In lieu of conducting a source test, the permittee may stipulate a violation that is subject to enforcement action has occurred. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 4102]
32. All NO_x, CO and O₂ emission readings shall be taken with the unit operating at conditions representative of normal operation or under the conditions specified in the Permit to Operate. The NO_x, CO and O₂ analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Analyzer readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
33. Ammonia emission readings shall be conducted at the time the NO_x, CO and O₂ readings are taken. The readings shall be converted to ppmvd @ 3% O₂. [District Rule 4102]
34. NH₃ emission readings shall be taken with the unit operating at conditions representative of normal operation or under the conditions specified in the Permit to Operate. The NH₃ emission monitoring equipment shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Analyzer readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4102]
35. The permittee shall maintain records of: (1) the date and time of NO_x, CO, NH₃ and O₂ measurements, (2) the O₂ concentration in percent by volume and the measured NO_x, CO and NH₃ concentrations corrected to 3% O₂, (3) make and model of the portable analyzer, (4) portable analyzer calibration records, (5) the method of determining the NH₃ emission concentration, and (6) a description of any corrective action taken to maintain the emissions at or below the acceptable levels. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
36. The permittee shall maintain records of: (1) the date and time of NH₃ measurements, (2) the NH₃ concentrations corrected to 3% O₂, (3) the method of determining the NH₃ emission concentration, (4) the make and model of the portable analyzer if used, (5) portable analyzer calibration records if used, and (6) a description of any corrective action taken to maintain the emissions at or below the acceptable levels. [District Rule 4102]
37. The permittee shall maintain daily records of start-up and shutdown durations and number of occurrences of each. [District NSR Rule and District Rules 1070, 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.

38. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306, 6.1] Federally Enforceable Through Title V Permit

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

APPENDIX C

Most Recent Source Test Results

Facility: N 1237 E & J GALLO WINERY

Permit ID: 4

Mod#: 10

Test Tracking

Periodic Test Setup

Test Equipment Details

Test Result Details

Representative Test

Unit Identification:

Default

1 Unit Total

Description:

Add New Unit

Save

Cancel

Test Results For: Murray Boiler

Pollutant	Units	Limit	Result	Failed	O2 Correction (%)	# Runs	Description
CO	ppm @ 3% O2	200.0	0.0	<input type="checkbox"/>		3	
NH3	ppm	10.0	7.86	<input type="checkbox"/>		3	
NOx	ppm @ 3% O2	9.0	0.0	<input type="checkbox"/>		3	

5/1/2007

Add New Pollutant...

Close

Save

Facility: N 1237 E & J GALLO WINERY

Permit ID: 4

Mod#: 10

Test Tracking

Periodic Test Setup

Test Equipment Details

Test Result Details

Representative Test

Unit Identification:

Murray Boiler

1 Unit Total

Description:

Add New Unit

Save

Cancel

Test Results For: Murray Boiler

Pollutant	Units	Limit	Result	Failed	O2 Correction (%)	# Runs	Description
CO	ppm @ 3% O2	200.0	2.64	<input type="checkbox"/>		3	
NH3	ppm	10.0	0.98	<input type="checkbox"/>		3	
NOx	ppm @ 3% O2	9.0	0.46	<input type="checkbox"/>		3	

5/30/2006

Add New Pollutant...

Close

Save

APPENDIX D

District Policy FYI-111

**SAN JOAQUIN VALLEY
AIR POLLUTION CONTROL DISTRICT**

DATE: May 31, 2005, Updated 4/4/06, 7/10/07
TO: Permit Services Staff
FROM: Thomas Goff, Permit Services Manager
SUBJECT: ATC, Title V, and NSR applicability determinations, FYI 111

Determinations of ATC and Title V application requirements and Rule 2201 "modification" applicability for common equipment and permit changes.

	ATC req'd ?	TV application req'd ?	NSR mod ?	Description	Comments
1	No	Yes	No	adding monitoring or record keeping to a permit (provided the rule does not provide for any options for monitoring or recordkeeping)	Adding monitoring or recordkeeping are not changes in the method of "operation" of the emission unit even though monitoring/recordkeeping conditions must be changed.
2	Yes	Yes	No	modifying monitoring and record keeping requirements, provided the change does not lessen the stringency of an emissions limit	Changes to monitoring or recordkeeping are not changes in the method of "operation" of the emission unit even though monitoring/recordkeeping conditions must be changed.
3	No	Yes	No	imposing a TVP limit of < 0.5 psia on tanks (when existing TVP limit was solely to avoid previous version of Rule 4623) to avoid Rule 4623 requirements	Provided 1) no change in the method of operation and 2) no change in material introduced to the tank; and 3) condition change is being made solely to continue the permit exemption from Rule 4623.

	ATC req'd ?	TV application req'd ?	NSR mod ?	Description	Comments
4	No	Yes	No	imposing a throughput limit of 50 bbl/day oil on tanks to avoid Rule 4623 requirements	Only if no existing NSR requirements, no physical or operational changes, and no change to the method of operation is proposed (i.e. historical throughput is less than 50 bbl/day crude oil.
5	Yes	Yes	No	revising emission limits to lower values to comply with Regulation IV rule	Not a modification provided that the unit currently meets the revised emission limits and there is no change to the method of operation needed, e.g. no change to water injection rate for a GTE.
6	Yes	Yes	Yes	tanks/process equipment receiving crude oil via new piping that was previously processed in other tanks/process equipment	NSR mod of tanks/process equipment if there is an increase in actual emissions from an emissions unit and the emission unit is not subject to a daily emissions limitation (see 3.26.1.3). Tanks with VR will not have an increase in actual emissions and are not "modified" per Rule 2201. Note: If no new piping required, ATC not required (and not an NSR modification).
7	Yes	Yes	Yes	tanks/process equipment receiving crude oil from new TEOR well development	NSR mod of tanks/process equipment if there is an increase in actual emissions from an emissions unit and the emission unit is not subject to a daily emissions limitation (see 3.26.1.3). Tanks with VR will not have an increase in actual emissions and are not "modified" per Rule 2201 unless there is an increase in the VOC content of the vapors handled in the vapor control system fugitive components.
8	No	Yes	No	revising approved test methods	Not a change in the method of operation.
9	Yes	Yes	No	replacement of a IC engine catalyst with a non-identical catalyst	Replacing catalyst qualifies as a RR per 2201 3.33. Per 3.26.1.2, a RR is not a structural change therefore 3.26.1.2 does not apply and 3.26.1.1, 1.3, 1.4 or 1.5 do not apply.
10	Yes	Yes	No	specifying startup and shutdown duration for Rules 4305 (8/21/03) and 4306 (9/18/03)	Not a change in the method of operation. Previous version of Rule 4305 allowed excursions from emission limits for startups and shutdowns of undefined durations. Specifying durations is not a change in the method of operation.

	ATC req'd ?	TV application req'd ?	NSR mod ?	Description	Comments
11	Yes	Yes	No	modification of a tank vapor control system to connect a new tank to it	Not a change in the method of operation; not an NSR modification of the vapor control system provided emission limits at vapor disposal device do not have to be increased.
12	Yes	Yes	No	correcting the rating for combustion equipment (provided the equipment has not been replaced or modified to increase the rating without an ATC)	Not an NSR mod provided there is no structural change or no change in the method of operation. If rating increased (due solely to a correction), a daily fuel use limit must be imposed that is equivalent to previously authorized equipment rating.
13	Yes	Yes	No	replacing combustion air blower, adding a variable frequency drive to existing combustion air blower	Not a change in the method of operation or structural change that requires a change in permit conditions. Changes must not increase rating of the unit nor the emissions.
14	Yes	Yes	No	allowing use of various burner diffuser plates	Changing burner diffuser qualifies as a routine replacement. Routine replacements are not structural changes. None of the other criteria in Rule 2201 3.26 are applicable. Therefore, changing diffuser plates is not an NSR modification.
15	No	Yes	No	imposing hour and fuel meter requirements for Rule 4702	When a rule does not include options for compliance with a requirement, an ATC is not required.
16	Yes	Yes	No	imposing a limit on the content of vapors handled by a vapor control system 10% by weight or less	If the VOC content of the vapors are shown historically to not have exceeded 10% by weight, imposing such a limit does not represent a change in the method of operation and is not an NSR modification.
17	No	Yes	No	clarifying equipment description, no change to permit conditions	Clarifying the equipment description (e.g. adding a serial number), provided there is no operational or physical change to the equipment, is not an NSR modification.

	ATC req'd ?	TV application req'd ?	NSR mod ?	Description	Comments
18	Yes	Yes	Yes	revising equipment description, with or without changes to permit conditions	Revising the equipment description where there is an operational or physical change to the equipment.
19	Yes	Yes	No	Allowing a steam generator currently allowed to burn waste gas to burn waste gas from a different source (provided that the steam generator can continue to meet it's emission limits)	Not a change in the method of operation as the steam generator is was previously approved to burn waste gas.
20	Yes	Yes	No	Allowing a vapor control system to vent to a different permitted disposal device	Not a change in the method of operation of the vapor control system provided that the vapor control system can continue to meet it's control efficiency requirement.