



SEP 06 2011

Mike Bartosch
County of Fresno Facility Services
4590 E Kings Canyon Rd
Fresno, CA 93702

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: C-1112232

Dear Mr. Bartosch:

Enclosed for your review and comment is the District's analysis of County of Fresno Facility Services's application for an Authority to Construct for modifying the burners on two boilers to comply with District Rule 4320 and converting a third boiler to dormant status, at 445 S. Cedar Ave, Fresno, California.

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

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. George Heinen of Permit Services at (559) 230-5811.

Sincerely,

David Warner
Director of Permit Services

DW:GH

Enclosures

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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

Central Region (Main Office)
1990 E. Gettysburg Avenue
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34946 Flyover Court
Bakersfield, CA 93308-9725
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SEP 06 2011

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

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: C-1112232

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of County of Fresno Facility Services's application for an Authority to Construct for modifying the burners on two boilers to comply with District Rule 4320 and converting a third boiler to dormant status, at 445 S. Cedar Ave, Fresno, California.

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

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Fresno Bee
Fresno Bee

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

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Unified Air Pollution Control District solicits public comment on the proposed issuance of Authority to Construct to County of Fresno Facility Services for modifying the burners on two boilers to comply with District Rule 4320 and converting a third boiler to dormant status, at 445 S. Cedar Ave, Fresno, California.

The analysis of the regulatory basis for this proposed action, Project #C-1112232, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. Written comments on this project must be submitted within 30 days of the publication date of this notice to **DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, 1990 EAST GETTYSBURG AVENUE, FRESNO, CA 93726.**

San Joaquin Valley Air Pollution Control District Authority to Construct

Retrofit of Natural Gas-Fired Boilers for Rule 4320 Compliance

Facility Name: County of Fresno Facility Services
Date: September 1, 2011
Mailing Address: 4590 E Kings Canyon
Fresno, CA 93702
Engineer: G. Heinen
Lead Engineer: S. Gill
Contact Person: Mr. Mike Bartosch
Telephone: (559)600-7243
Fax: (559)6007265
Application #(s): C-1333-1-4, C-1333-2-4, and C-133-10-2
Project #: C-1112232
Deemed Complete: July 11, 2011

I. PROPOSAL

County of Fresno Facilities Services requests Authority to Construct (ATC) permits for the modification of three boilers at the University Medical Center. The applicant proposes to modify the two existing boilers to meet the 9 ppmvd @ 3% O₂ (equivalent to 0.011 lb/MMBtu) nitrogen oxides (NO_x) emission requirements of District Rule 4320 *Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr*. The third boiler would be converted to Dormant Unit status. There will be an increase in potential emissions of Carbon Monoxide (CO) as a result of this project. This increase will trigger a public notice, as discussed later in this report.

These modifications are proposed solely to comply with District Rule 4320 requirements. Since there is a change to the permit terms and the method of operation of the units, these changes are modifications pursuant to District Rule 2201, *New and Modified Stationary Source Review Rule*.

No change in alternate monitoring is proposed. The facility currently follows Alternate Monitoring Scheme "A" using a portable analyzer, according to District Policy SSP-1105, and is requesting to maintain the current monitoring arrangement.

See Appendix I: Current Permit to Operate (PTO)

II. APPLICABLE RULES

District Rule 2201 New and Modified Stationary Source Review Rule (4/21/11)
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 4305 Boilers, Steam Generators and Process Heaters – Phase 2 (8/21/03)
District Rule 4306 Boilers, Steam Generators and Process Heaters – Phase 3 (10/16/08)
District Rule 4320 Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr (10/16/08)
District Rule 4351 Boilers, Steam Generators and Process Heaters – Phase 1 (8/21/03)
District Rule 4801 Sulfur Compounds (12/17/92)
CH&SC 41700 Health Risk Assessment
CH&SC 42301.6 School Notice
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

III. PROJECT LOCATION

This facility is located at 445 S. Cedar Ave., Fresno, California. Since the facility is not within 1,000 feet of a school boundary, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. PROCESS DESCRIPTION

County of Fresno Facility Services operates three natural gas-fired units to provide steam used at their medical center and offices complex. In order to comply with District Rule 4320 NO_x requirements, the applicant is proposing to modify the combustion control system on two existing 15 ppmv units to achieve 9 ppmvd-NO_x @ 3% O₂ (0.011 lb-NO_x/MMBtu) and convert the third unit to Dormant Unit status, prior to the rule compliance deadline.

The units are currently permitted to operate with 0.05% (500 ppmw) sulfur diesel fuel as a back-up fuel during natural gas curtailments. Rule 4320 drops the maximum sulfur content of the fuel to 0.0015% (15 ppmw), which reflects the current state and federal ultra-low sulfur diesel standard.

The applicant proposes to increase the CO limit from 200 ppmv to the R4320 limit of 400 ppmv. As discussed later, the actual final CO limit will be determined based on monitoring of the emissions during normal operations with NO_x emissions minimized. Because the burners will be optimized to meet the 9 ppmv NO_x limits, CO levels are expected to increase from current levels but it is uncertain how high they may increase. In any event, the final CO will not exceed 400 ppmv so that number will be used for calculation purposes.

V. EQUIPMENT LISTING

Pre-Project Equipment Description:

C-1333-1-3: 12.2 MMBTU/HR CLEAVER BROOKS MODEL CB 200-300-150 NATURAL GAS-FIRED BOILER WITH A CLEAVER BROOKS MODEL LE(15) 200-300 LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) SYSTEM AND FUEL OIL #2 AS BACKUP FUEL

C-1333-2-3: 12.2 MMBTU/HR CLEAVER BROOKS MODEL CB 200-300-150 NATURAL GAS-FIRED BOILER WITH A CLEAVER BROOKS MODEL LE(15) 200-300 LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) SYSTEM AND FUEL OIL #2 AS BACKUP FUEL

C-133-10-1: 12.2 MMBTU/HR CLEAVER BROOKS MODEL CB 200-300-150 NATURAL GAS-FIRED BOILER WITH A CLEAVER BROOKS MODEL LE(15) 200-300 LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) SYSTEM AND FUEL OIL #2 AS BACKUP FUEL

ATC Equipment Description:

C-1333-1-3: MODIFICATION OF 12.2 MMBTU/HR CLEAVER BROOKS MODEL CB 200-300-150 NATURAL GAS-FIRED BOILER WITH A CLEAVER BROOKS MODEL LE(15) 200-300 LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) SYSTEM AND FUEL OIL #2 AS BACKUP FUEL: MODIFY BURNER TO COMPLY WITH RULE 4320 EMISSION LIMITS.

C-1333-2-3: MODIFICATION OF 12.2 MMBTU/HR CLEAVER BROOKS MODEL CB 200-300-150 NATURAL GAS-FIRED BOILER WITH A CLEAVER BROOKS MODEL LE(15) 200-300 LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) SYSTEM AND FUEL OIL #2 AS BACKUP FUEL: MODIFY BURNER TO COMPLY WITH RULE 4320 EMISSION LIMITS.

C-133-10-1: MODIFICATION OF 12.2 MMBTU/HR CLEAVER BROOKS MODEL CB 200-300-150 NATURAL GAS-FIRED BOILER WITH A CLEAVER BROOKS MODEL LE(15) 200-300 LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) SYSTEM AND FUEL OIL #2 AS BACKUP FUEL: CONVERT TO DORMANT UNIT STATUS

Post Project Equipment Description:

C-1333-1-4: 12.2 MMBTU/HR CLEAVER BROOKS MODEL CB 200-300-150 NATURAL GAS-FIRED BOILER WITH A CLEAVER BROOKS MODEL LE(15) 200-300 LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) SYSTEM AND FUEL OIL #2 AS BACKUP FUEL

C-1333-2-4: 12.2 MMBTU/HR CLEAVER BROOKS MODEL CB 200-300-150 NATURAL GAS-FIRED BOILER WITH A CLEAVER BROOKS MODEL LE(15) 200-300 LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) SYSTEM AND FUEL OIL #2 AS BACKUP FUEL

C-133-10-2: 12.2 MMBTU/HR CLEAVER BROOKS MODEL CB 200-300-150 NATURAL GAS-FIRED BOILER WITH A CLEAVER BROOKS MODEL LE(15) 200-300 LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) SYSTEM AND FUEL OIL #2 AS BACKUP FUEL (Dormant Unit)

VI. EMISSION CONTROL TECHNOLOGY EVALUATION

The non-dormant units will be equipped with modified low-NO_x burners capable of achieving NO_x and CO emissions of 9 ppmvd @ 3% O₂ and 400 ppmvd @ 3% O₂, respectively, and are fired on PUC-quality natural gas as the primary fuel and #2 diesel fuel oil as an emergency back-up fuel.

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 units are equipped with flue gas recirculation systems (FGR). Use of 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.

The current permit limits the units to firing on Public Utility Commission (PUC) – regulated natural gas. PUC-regulated natural gas caps the allowable amount of sulfur contained in the fuel. Excess sulfur must be removed from the gas prior to approval by the PUC. California diesel fuel is also regulated to contain no more than 15 ppmv sulfur. The sulfur cap limits the amount of sulfur available to generate sulfur oxides (SO_x) during combustion. Since SO_x is a precursor to particulate matter (PM), controlling SO_x will also reduce PM emissions. Use of PUC-regulated natural gas and low-sulfur diesel for emergency operation are considered a compliant method of PM emission control under Section 5.4 of Rule 4320.

VII. GENERAL CALCULATIONS

A. Assumptions

- The maximum operating schedule is 24 hours per day
- The units are fired on PUC-quality natural gas as the primary fuel and #2 Diesel fuel oil as the back-up fuel.
- Since the final CO emission level is not known, the rule limit of 400 ppmv, as proposed by the applicant, will be used for worst-case calculation purposes. The final CO limit will be determined based on monitoring actual operational readings.

- Annual pre-project and post-project emissions from Diesel fuel are calculated based on 216 hours per year (168 hours/year plus 48 hours for equipment testing, based on Rules 4306 and 4320).
- Annual pre-project and post-project emissions from natural gas are calculated based on 8,544 hours of operation per year (8,760 hr/yr – 216 hr/yr).
- Heating Value for Natural Gas: 1,000 Btu/scf (District Practice)
- F-Factor for Natural Gas: 8,578 dscf/MMBtu corrected to 60°F (40 CFR 60, Appendix B)
- Heating Value for #2 Diesel fuel oil: 140 MMBtu/1,000 gallons (AP42, Section 1.3)
- F-Factor for #2 Diesel fuel oil: 8,710 dscf/MMBtu at 68 F (40 CFR 60)
- Pre-project sulfur content of the diesel fuel is currently limited by permit condition to 0.05% by weight (500 ppmv).
- Post-project sulfur content of the diesel fuel would be limited by permit condition to 15 ppmv (Rule 4320).
- Sulfur content of the diesel fuel oil was determined using the following equation from EPA AP-42, table 1.3-1:
 - SO₂ (S ppmv) = 142S (lb/1,000 gal) x 1,000 gal/140 MMBtu
 - SO₂ (15 ppmv) = 142 (0.0015%)/140 lb/MMBtu
= 0.0015 lb/MMBtu
 - SO₂ (500 ppmv) = 142 (0.05%)/140 lb/MMBtu
= 0.0507 lb/MMBtu

B. Emission Factors

Pre-Project Emission Factors (EF1)

For these units, the EF1 are listed in the table below.

The units will primarily fire on PUC-regulated natural gas. Pursuant to District Policy APR 1110 (Use of Revised EFs), the SO_x EF, for both pre- and post-Project, will be revised to the generally accepted EF of 0.00285 lb-SO_x/MMBtu, as identified in District Policy APR 1720 (Generally Accepted SO_x Emission Factor for Combustion of PUC-quality Natural Gas).

Pollutant	Pre-Project Emission Factors (EF1) (PUC-regulated natural gas)		Source
NO _x	0.018 lb-NO _x /MMBtu	15 ppmvd NO _x (@ 3%O ₂)	Current Permit
SO _x	0.00285 lb-SO _x /MMBtu		District Policy APR 1710
PM10	0.0076 lb-PM10/MMBtu		Current Permit
CO	0.15 lb-CO/MMBtu	200 ppmvd CO (@ 3%O ₂)	Current Permit
VOC	0.0042 lb-VOC/MMBtu		Current Permit

Pollutant	Pre-Project Emission Factors (EF1) (#2 Diesel fuel oil)		Source
NO _x	0.19 lb-NO _x /MMBtu	150 ppmvd NO _x (@ 3%O ₂)	Current Permit
SO _x	0.0507 lb-SO _x /MMBtu		Current Permit
PM10	0.0143 lb-PM10/MMBtu		Current Permit
CO	0.16 lb-CO/MMBtu	200 ppmvd CO (@ 3%O ₂)	Current Permit
VOC	0.022 lb-VOC/MMBtu		Current Permit

Post-Project Emission Factors (EF2)

For these units, post-project emission factors are listed in the table below. The application only listed NO_x and CO limits so emission factors for the remaining pollutants were assumed to be the same as on the current permit. Applicant was contacted about lowering the CO limit to reflect actual emissions but preferred to use the rule limit until actual operating data can be obtained over a period of time and for various operating conditions.

Pollutant	Post-Project Emission Factors (EF2) (PUC-regulated natural gas)		Source
NO _x	0.011 lb-NO _x /MMBtu	9 pmvd NO _x (@ 3%O ₂)	Rule 4320 limit
SO _x	0.00285 lb-SO _x /MMBtu		District Policy
PM10	0.0076 lb-PM10/MMBtu		Current permit
CO	0.296 lb-CO/MMBtu	400 ppmvd CO (@ 3%O ₂)	Rule 4320 limit
VOC	0.0042 lb-VOC/MMBtu		Current permit

Pollutant	Post-Project Emission Factors (EF2) (#2 Diesel fuel oil)		Source
NO _x	0.19 lb-NO _x /MMBtu	150 ppmvd NO _x (@ 3%O ₂)	Rule 4320 limit
SO _x	0.0015 lb-SO _x /MMBtu		Rule 4320 limit
PM10	0.0143 lb-PM10/MMBtu		Current Permit
CO	0.16 lb-CO/MMBtu	200 ppmvd CO (@ 3%O ₂)	Current Permit
VOC	0.022 lb-VOC/MMBtu		Current Permit

According to burner 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. The application indicated the emissions during startup and shutdown were the same as during steady state operation so no special provisions are necessary for these operation periods.

C. Calculations

Since the boilers are identical, emissions are the same for each of the units, only one set of calculations is shown. The post-project emissions from the dormant unit will be the same as its pre-project emissions, for NSR purposes.

1. Pre-Project Potential to Emit (PE1)

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

- PE1 = EF (lb/MMBtu) × Heat Input (MMBtu/hr) × Op. Sched. (hr/day or hr/year)

Pollutant	Daily PE1 - Natural gas firing			
	EF1 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE1 (lb/day)
NO _x	0.018	12.2	24	5.3
SO _x	0.00285	12.2	24	0.8
PM ₁₀	0.0076	12.2	24	2.2
CO	0.150	12.2	24	43.9
VOC	0.0042	12.2	24	1.2

Pollutant	Annual PE1 - Natural gas firing			
	EF1 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/year)	Annual PE1 (lb/year)
NO _x	0.018	12.2	8,544	1,876
SO _x	0.00285	12.2	8,544	297
PM ₁₀	0.0076	12.2	8,544	792
CO	0.150	12.2	8,544	15,636
VOC	0.0042	12.2	8,544	438

Pollutant	Daily PE1 - Diesel fuel oil firing			Daily PE1 (lb/day)
	EF1 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	
NO_x	0.190	12.2	24	55.6
SO_x	0.05070	12.2	24	14.8
PM₁₀	0.0143	12.2	24	4.2
CO	0.160	12.2	24	46.8
VOC	0.0220	12.2	24	6.4

Pollutant	Annual PE1 - Diesel fuel oil firing			Annual PE1 (lb/year)
	EF1 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/year)	
NO_x	0.190	12.2	216	501
SO_x	0.05070	12.2	216	134
PM₁₀	0.0143	12.2	216	38
CO	0.160	12.2	216	422
VOC	0.0220	12.2	216	58

2. Post-Project Potential to Emit (PE2)

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

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

Pollutant	Daily PE2 - Natural gas firing			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE2 (lb/day)
NO _x	0.0110	12.2	24	3.2
SO _x	0.00285	12.2	24	0.8
PM ₁₀	0.0076	12.2	24	2.2
CO	0.296	12.2	24	86.7
VOC	0.0042	12.2	24	1.2

Pollutant	Annual PE2 - Natural gas firing			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/year)	Annual PE2 (lb/year)
NO _x	0.011	12.2	8,544	1,147
SO _x	0.00285	12.2	8,544	297
PM ₁₀	0.0076	12.2	8,544	792
CO	0.296	12.2	8,544	30,854
VOC	0.0042	12.2	8,544	438

Pollutant	Daily PE2 - Diesel fuel oil firing			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE2 (lb/day)
NO _x	0.1900	12.2	24	55.6
SO _x	0.00150	12.2	24	0.4
PM ₁₀	0.0143	12.2	24	4.2
CO	0.160	12.2	24	46.8
VOC	0.0220	12.2	24	6.4

Pollutant	Annual PE2 - Diesel fuel oil firing			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/year)	Annual PE2 (lb/year)
NO _x	0.190	12.2	216	501
SO _x	0.00150	12.2	216	4
PM ₁₀	0.0143	12.2	216	38
CO	0.160	12.2	216	422
VOC	0.0220	12.2	216	58

Since the units may fire on either natural gas or diesel (during a natural gas curtailment), the daily PE1 is the highest of either the natural gas or diesel fuel fired

quantity for the particular pollutant. As shown on the following table, the daily PE for CO will increase and the daily PE for SOx will decrease for the two modified units.

Daily PE1 (lb/day)					
Pollutant	NOx	SOx	PM10	CO	VOC
Natural gas	5.3	0.8	2.2	43.9	1.2
Diesel fuel oil	55.6	14.8	4.2	46.8	6.4
PE1	55.6	14.8	4.2	46.8	6.4
Daily PE2 (lb/day)					
Pollutant	NOx	SOx	PM10	CO	VOC
Natural gas	3.2	0.8	2.2	86.7	1.2
Diesel fuel oil	55.6	0.4	4.2	46.8	6.4
PE2	55.6	0.8	4.2	86.7	6.4
PE2 - PE1	0	-14.0	0	39.9	0

The total Annual PE is calculated as the sum of the Annual PE for each of the two different fuel types. This assumes the unit is fired on the diesel for the maximum time allowed and then fired on natural gas for the remainder of the year. As shown on the following table, the daily PE for CO will increase and the daily PE for NOx and SOx will decrease for each of the two modified units.

Annual PE1					
Pollutant (lb/year)					
Pollutant	NOx	SOx	PM10	CO	VOC
Natural gas	1,876	297	792	15,636	438
Diesel fuel oil	501	134	38	422	58
Total	2,377	431	830	16,058	496
Annual PE2					
Pollutant	NOx	SOx	PM10	CO	VOC
Natural gas	1,147	297	792	30,854	438
Diesel fuel oil	501	4	38	422	58
Total	1,648	301	830	31,276	496
PE2 -1 PE2	-729	-130	0	15,218	0

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

SSPE1 calculations are necessary to aid the following determinations:

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

Pursuant to Section 4.9 of District Rule 2201, the Pre-Project Stationary Source Potential to Emit (SSPE1) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site. The following table is based on the currently permitted emission units and emission profiles. The facility does not have any ERC.

Pre-Project Stationary Source Potential to Emit (SSPE1)					
	Pollutant (lb/year)				
Permit	NOx	SOx	PM10	CO	VOC
C-1333-1-3	2,377	431	830	16,058	496
C-1333-2-3	2,377	431	830	16,058	496
C-1333-3-1	6,200	1,500	440	1,400	500
C-1333-4-1	6,200	1,500	440	1,400	500
C-1333-5-0	333	0	0	0	27
C-1333-10-1	2,377	431	830	16,058	496
SSPE1	19,864	4,293	3,370	50,974	2,515

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

Pursuant to Section 4.10 of District Rule 2201, the Post-Project Stationary Source Potential to Emit (SSPE2) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site. The following table is based on the currently permitted emission units, emission profiles, and calculated post-project emissions. The facility does not have any ERC.

Post-Project Stationary Source Potential to Emit (SSPE2)					
	Pollutant (lb/year)				
Permit	NOx	SOx	PM10	CO	VOC
C-1333-1-4	1,648	301	830	31,276	496
C-1333-2-4	1,648	301	830	31,276	496
C-1333-3-1	6,200	1,500	440	1,400	500
C-1333-4-1	6,200	1,500	440	1,400	500
C-1333-5-0	333	0	0	0	27
C-1333-10-2	2,377	431	830	16,058	496
SSPE2	18,406	4,033	3,370	81,410	2,515

5. Major Source Determination

A Major Source Determination is necessary in order to:

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

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

Major Source Determination					
	NOx	SOx	PM10	CO	VOC
SSPE2	18,406	4,033	3,370	81,410	2,515
Major Source Threshold	20,000	140,000	140,000	200,000	20,000
Major Source	No	No	No	No	No

As shown in the above table, the SSPE2 does not exceed the Major Source thresholds so the project does not cause the source to become a new Major Source.

6. Baseline Emissions (BE)

The BE calculation (in lb/year) is performed on a pollutant-by-pollutant basis to determine the amount of offsets required, where necessary, when the SSPE1 is greater than the offset threshold.

Baseline Emissions Determination (lb/year)					
	NOx	SOx	PM10	CO	VOC
SSPE1	19,864	4,293	3,370	50,974	2,515
Offset Threshold	20,000	54,750	29,200	200,000	20,000
Major Source	No	No	No	No	No

The SSPE1 does not exceed any of the offset thresholds, therefore, BE calculations are not required.

7. SB 288 Major Modification

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

As discussed in Section VII.C.5 above, the facility is not a Major Source for NO_x, SO_x, PM₁₀ and VOC emissions; therefore, the project does not constitute a SB 288 Major Modification for NO_x, SO_x, PM₁₀ and VOC emissions.

8. Federal Major Modification

As discussed in Section VII.C.5 above, the facility is not a Major Source for NO_x, SO_x, PM₁₀ and VOC emissions; therefore, the project does not constitute a Federal Major Modification for NO_x, SO_x, PM₁₀ and VOC emissions.

9. Quarterly Net Emissions Change (QNEC)

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

QNEC (1333-1-4 and -2-4)			
Pollutant	PE2 (lb/yr)	PE1 (lb/yr)	QNEC (lb/qtr)
NO _x	1,648	2,377	-182
VOC	496	496	0
CO	31,276	16,058	3,805
PM ₁₀	830	830	0
SO _x	301	431	-33

For NSR purposes, Dormant Emission Units are considered to have the same emissions as their permitted levels. Before the unit is brought back into operation, it would be required to comply with applicable rules and its QNEC would be recalculated at that time.

QNEC (C-1333-10-2)			
Pollutant	PE2 (lb/yr)	PE1 (lb/yr)	QNEC (lb/qtr)
NO _x	2,377	2,377	0
VOC	496	496	0
CO	16,058	16,058	0
PM ₁₀	830	830	0
SO _x	431	431	0

VIII. COMPLIANCE

District Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

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

- a. Any new emissions unit with a potential to emit exceeding two pounds per day,
- b. The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
- c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
- d. Any new or modified emissions unit, in a stationary source project, which results in an SB288 Major Modification or a Federal Major Modification, as defined by the rule.

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

However, BACT shall not be required for the following:

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

Based on the earlier review,

- The applicant is not proposing increases to the facility design nor to the permitted rating or operating schedule; therefore compliance with 4.2.3.1 and 4.2.3.2 is expected.
- Because the increase in CO will trigger public notice (see section VIII.C.1.d, below), an Ambient Air Quality Analysis was performed and is attached as Appendix IV. That analysis shows that the increase in CO is not considered to be significant; therefore, compliance with 4.2.3.3 is expected.
- There will be no emission increase except for CO, which, as shown in the table below, will has the potential to increase by 30,436 lb/year (15.2 tons/year) so it is below the 50 ton/year CO threshold. Also, no potential to emit is above the BACT threshold level; therefore, compliance with 4.2.3.4 is expected.

Project Emission Increase Calculations					
	Pollutant (lb/year)				
	NOx	SOx	PM10	CO	VOC
SSPE1	19,864	4,293	3,370	50,974	2,515
SSPE2	18,406	4,033	3,370	81,410	2,515
SSPE2-SSPE1	-1,458	-260	0	30,436	0
BACT Thresholds	25 tons/yr	15 tons/yr	15 tons/yr	50 tons/yr	25 tons/yr
BACT triggered	No	No	No	No	No

- As indicated in Section VII.C.8 above, the project is not a Federal Major Modification; therefore, compliance with 4.2.3.5 is expected.

Since each of the above-listed criteria is met, BACT is not triggered for any pollutant.

2. BACT Guideline

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

3. Top-Down BACT Analysis

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

B. Offsets

1. Offset Applicability

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

Emission offsets shall not be required for the following:

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

As discussed in sections VIII.A.1, the above-listed criteria are met; therefore, offsets are not triggered for any pollutant.

2. Quantity of Offsets Required

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

C. Public Notification

1. Applicability

Public noticing is required for:

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

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

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

b. PE > 100 lb/day

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

c. Offset Threshold

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

There will be an increase in permitted CO emissions as a result of this project; however, the increase will not exceed the offset threshold. Therefore, a public notice will not be required for offset threshold purposes.

d. SSIPE > 20,000 lb/year

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

As shown in Section VIII.A.1 above, there is an increase in permitted CO emissions as a result of this project. Because the applicant requested a CO limit of 400 ppmv, the SSIPE for CO is 30,436 lb/year and public notice will be required for SSIPE purposes.

2. Public Notice Action

As demonstrated in Section VIII.C.1.d. above, this project will require public noticing. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB) and a public notice will be published in a local newspaper of general circulation prior to the issuance of the ATCs for this equipment.

D. Daily Emission Limits (DELs)

Daily Emissions Limitations (DELs) and other enforceable conditions are required by Section 3.15 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. Per Sections 3.15.1 and 3.15.2, the DEL must be contained in the latest ATC and contained in or enforced by

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

Since the final CO emission level is not known, the rule limit of 400 ppmv, as proposed by the applicant, will be used for worst-case calculation purposes. The final CO limit will be determined based on monitoring actual operational readings. Conditions for the CO determination will be included in the permit.

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

- {3200 modified} When fired on natural gas, emission rates from the unit shall not exceed any of the following limits: 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 400 ppmvd CO @ 3% O₂ or 0.296 lb-CO/MMBtu, or 0.0042 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320]
- {3200 modified} When fired on fuel oil #2, emission rates from the unit shall not exceed any of the following limits: 150 ppmvd NO_x @ 3% O₂ or 0.19 lb-NO_x/MMBtu, 0.0015 lb-SO_x/MMBtu, 0.0143 lb-PM₁₀/MMBtu, 200 ppmvd CO @ 3% O₂ or 0.16 lb-CO/MMBtu, or 0.022 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320]
- Carbon Monoxide (CO) emissions shall be limited to the CO emission rate achievable under normal operating conditions. The final CO emission rate shall be determined according to the conditions of this permit, to the satisfaction of the Air Pollution Control Officer, based on 12 months of operating history. [District Rule 2201]
- Within 12 months of the initial operation, the operator shall prepare and submit to the District a report proposing final CO limitations, in both ppmv and lb/MMBtu-hr, for inclusion in this permit. The report shall provide all relevant information and data. [District Rule 2201]
- The District shall establish final CO limitations and incorporate the limitations into the permit within 90 days of receipt of the operator's report. In no case shall the final CO limitations be higher than 400 ppmv (0.296 lb/MMBtu). [District Rule 2201]
- The unit shall only be fired on PUC-regulated natural gas as the primary fuel and fuel oil #2 as the backup fuel. [District Rules 2201 and 4320]
- {1407} All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]

E. Compliance Assurance

1. Source Testing

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

2. Monitoring

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

3. Recordkeeping

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

The following condition will be listed on permits as follows:

- {3246*} 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] *Modified to reference Rule 4320.

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

Since the modification to C-1333-10-1 is merely to designate it as a Dormant Emissions Unit, pursuant to District Policy SSP-1705, the application is administrative and not subject to Rule 2201. The modifications of C-1333-1-4 and C-1333-2-4 are expected to comply with the requirements of Rule 2201, as discussed above.

District Rule 2520 Federally Mandated Operating Permits

Facility name does not have a Title V permit at this time. Therefore, Rule 2520 requirements for modifications are not applicable.

District Rule 4001 New Source Performance Standards

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

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

No newly constructed or reconstructed units are proposed in this project, nor is the unit being modified (as defined above). Since the permittee is modifying the unit for compliance with District rules and regulations, the requirements of these sections are not triggered due to the proposed modification. While there is a potential increase in CO, the increase is the result of optimizing the burner to reduce NOx emissions. Since the District is in attainment for CO but not ozone, it is considered to be environmentally beneficial to allow the increased CO.

District Rule 4101 Visible Emissions

District Rule 4101, Section 5.0, indicates that no air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour, which is dark or darker than Ringlemann 1 or equivalent to 20% opacity.

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

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

Therefore, compliance with District Rule 4101 requirements is expected.

District Rule 4102 Nuisance

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

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

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

California Health & Safety Code 41700 (Health Risk Assessment)

District Policy APR 1905 - Risk Management Policy for Permitting New and Modified Sources specifies that for an increase in emissions associated with a proposed new source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite.

The assessment can be found in Appendix IV. The project does not trigger Toxic Best Available Control Technology (TBACT) requirements. However, to ensure that the human health risk will not exceed District allowable levels, the following condition will be included on each of the permits:

- {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102].

District Rule 4201 Particulate Matter Concentration

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

Natural gas combustion

F-Factor for NG: 8,578 dscf/MMBtu at 60 °F
 PM10 Emission Factor: 0.0076 lb-PM10/MMBtu
 Percentage of PM as PM10 in Exhaust: 100%
 Exhaust Oxygen (O₂) Concentration: 3%
 Excess Air Correction to F Factor = $\frac{20.9}{(20.9 - 3)} = 1.17$

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

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

Fuel Oil #2 Combustion:

F-Factor for Fuel Oil #2: 9,051 dscf/MMBtu at 60 °F
 PM₁₀ Emission Factor: 0.0143 lb-PM₁₀/MMBtu
 Percentage of PM as PM₁₀ in Exhaust: 100%
 Exhaust Oxygen (O₂) Concentration: 3%
 Excess Air Correction to F Factor = $\frac{20.9}{(20.9 - 3)} = 1.17$

$$GL = \left(\frac{0.0143 \text{ lb} - \text{PM}}{\text{MMBtu}} \times \frac{7,000 \text{ grain}}{\text{lb} - \text{PM}} \right) / \left(\frac{9,051 \text{ ft}^3}{\text{MMBtu}} \times 1.17 \right)$$

$$GL = 0.0095 \text{ grain/dscf} < 0.1 \text{ grain/dscf}$$

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

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

District Rule 4301 Fuel Burning Equipment

This rule specifies maximum emission rates in lb/hr for SO₂, NO₂, and combustion contaminants (defined as total PM in Rule 1020). This rule also limits combustion contaminants to ≤ 0.1 gr/scf. According to AP 42 (Table 1.4-2, footnote c), all PM emissions from natural gas combustion are less than 1 μm in diameter. The hourly emissions data shown in the following represents the daily PE2, calculated in section VII.C.2., divided by 24 hours/day.

District Rule 4301 Limits			
Pollutant	NO ₂	Total PM	SO ₂
ATC #C-1333-1-4 (lb/hr)	2.3	0.18	0.03
ATC #C-1333-2-4 (lb/hr)	2.3	0.18	0.03
ATC #C-1333-10-2 (lb/hr)	2.3	0.18	0.62
Rule Limit (lb/hr)	140	10	200

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

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

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

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

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

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

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

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

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

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

Section 4.2 Exemption for use of non-California PUC quality natural gas.

The emission limits of Section 5.2, discussed below, do not apply during curtailment of California PUC quality natural gas, provided the following conditions two conditions are met:

The emission limits of Section 5.2, discussed below, do not apply during curtailment of California PUC quality natural gas, provided the following two conditions are met:

- 4.2.1 Fuels other than California PUC quality natural gas are burned no more than 168 cumulative hours in a calendar year plus 48 hours per calendar year for equipment and test, as limited by Permit to Operate.
- 4.2.2 NO_x emission shall not exceed 150 ppmv or 0.215 lb/MMBtu. Demonstration of compliance with this limit shall be made by either source testing, continuous emissions monitoring system (CEMS), an APCO approved Alternate Monitoring System, or an APCO approved NO_x analyzer.

The following conditions will appear on the permits:

- {3200 modified} When firing on fuel oil #2, emissions from the unit shall not exceed any of the following limits: 150 ppmvd NO_x @ 3% O₂ or 0.19 lb-NO_x/MMBtu, 0.0015 lb-SO_x/MMBtu, 0.0143 lb-PM₁₀/MMBtu, 200 ppmvd CO @ 3% O₂ or 0.16 lb-CO/MMBtu, or 0.0022 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320]
- {3310 modified} The unit shall be fired on fuel oil #2 as backup fuel only during natural gas curtailment for no more than 168 cumulative hours in a calendar year plus 48 hours per calendar year for equipment testing. [District Rules 2201, 4305, 4306, 4320]
- {3311 modified} If the unit is fired on fuel oil #2 as backup fuel for a period exceeding 48 cumulative hours in a calendar year, the permittee shall monitor and record the stack concentration of NO_x at least once during that year using an APCO approved portable NO_x analyzer. Monitoring for backup fuel NO_x emissions shall not be required when the unit is operating on primary fuel, i.e. the unit need not be fired on backup fuel solely to perform monitoring. [District Rules 4305, 4306, and 4320]
- {3316 modified} Records of daily and annual backup fuel consumption consisting of the date the boiler operated on fuel oil #2 as backup fuel and the amount of time the boiler

was operated, in hours, on fuel oil #2 shall be maintained. [District Rules 2201, 4305, 4306, and 4320]

- {3312} Backup fuel NOx 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]
- {3313} The permittee shall maintain records of: (1) the date and time of backup fuel NOx measurements, (2) the measured backup fuel NOx concentration (in ppmv or lb/MMBtu) 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]

Therefore, compliance with Section 4.2 of District Rule 4320 is expected.

Section 5.2 NOx and CO Emission Limits

The units are subject to the following NOx limits in Table 2, as shown below. The applicant has proposed to meet the standard schedule NOx emission limit.

Rule 4320 Emissions Limits				
Category	Operated on gaseous fuel		Operated on liquid fuel	
	NO _x Limit	CO Limit	NO _x Limit	CO Limit
A. Units with a total rated heat input > 5.0 MMBtu/hr to < 20.0 MMBtu/hr, except for Categories C through G units	9 ppmv or 0.011 lb/MMBtu	400 ppmv	40 ppmv or 0.052 lb/MMBtu	400 ppmv

- The proposed NO_x emission factor is 9 ppmvd @ 3% O₂ (0.011 lb/MMBtu), and
- The proposed CO emission factor is not to exceed 400 ppmvd @ 3% O₂ (0.296 lb/MMBtu).

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

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

Section 5.4 Particulate Matter Control Requirements

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

The applicant will fire on PUC-quality natural gas which complies with the first control option in this section. It will also fire diesel fuel oil, containing no more than 15 ppm sulfur and complying with Sections 4.2 and 6.1.5, as allowed under Section 5.4.2. The following permit conditions will appear on the permits:

- {3303 modified} The unit shall only be fired on PUC-regulated natural gas as the primary fuel and fuel oil #2 as the backup fuel. [District Rules 2201 and 4320]
- (3304 modified) Sulfur content of fuel oil #2 shall not exceed 0.0015% by weight. [District Rules 2201 and 4320]

Therefore, compliance with Section 5.4 of District Rule 4320 is expected.

Section 5.6 Startup and Shutdown Provisions

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

Section 5.7 Monitoring Provisions

Section 5.7 requires either use of an APCO approved Continuous Emissions Monitoring System (CEMS) for NO_x, CO, and oxygen, or implementation of an APCO-approved Alternate Monitoring System.

In order to satisfy the requirements of District Rule 4320, the applicant has proposed to use pre-approved alternate monitoring scheme A (pursuant to District Policy SSP-1105), which requires that monitoring of NO_x, CO, and O₂ exhaust concentrations shall be conducted at least once per month (in which a source test is not performed) using a portable analyzer. The following conditions will be incorporated into the permit in order to ensure compliance with the requirements of the proposed alternate monitoring plan:

- {4315} 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 analyzer that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320]
- {4316} 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, 4306, and 4320]
- {4317} 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]
- {4318} The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent by volume and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320]

5.7.6 Monitoring SO_x Emissions

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

Section 5.8 Compliance Determination

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

Section 6.1 Recordkeeping

No proposed changes to recordkeeping requirements are proposed. The following condition will be listed on the permits:

- {3246*} 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] **Modified to include a reference to R4320*

Section 6.2 Test Methods

No proposed changes to test methods are proposed. The following conditions will be listed on the permits:

- {4346} 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]
- {4347} CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320]
- {4348} Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320]
- {4349} Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320]

Section 6.3 Compliance Testing

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

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

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

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

The following conditions will be listed on the permits:

- {4344} Source testing to measure NOx 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]
- {4345} Source testing to measure NOx 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]
- {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]
- {4350} The source plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]
- {4351} 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]
- {4352} 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]
- {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

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

Conclusion

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

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

This rule applies to boilers, steam generators, and process heaters at NO_x Major Sources that are not located west of Interstate 5 in Fresno, Kings, or Kern counties. As discussed in Section VII.C.5 above, the facility is not a Major Source for NO_x, so 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.

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

District Policy SSP 1705 Additional Permit Conditions for Dormant Emissions Units

Since C-1333-10-2 will be designated a Dormant Emission Unit and not operated after the Compliance Deadline, it is exempt from compliance with otherwise applicable rule requirements. To ensure compliance with applicable rules during actual operation, the following conditions will be included as conditions on the permits:

- {3200 modified} Until July 1, 2012, when fired on natural gas, emission rates from the unit shall not exceed any of the following limits: 15 ppmvd NO_x @ 3% O₂ or 0.018 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.0076 lb-PM10/MMBtu, 200 ppmvd CO @ 3% O₂ or 0.15 lb-CO/MMBtu, or 0.0042 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320]
- {3200 modified} Until July 1, 2012, when fired on fuel oil #2, emission rates from the unit shall not exceed any of the following limits: 150 ppmvd NO_x @ 3% O₂ or 0.19 lb-NO_x/MMBtu, 0.0507 lb-SO_x/MMBtu, 0.0143 lb-PM10/MMBtu, 200 ppmvd CO @ 3% O₂ or 0.16 lb-CO/MMBtu, or 0.022 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320]
- {4558} After July 1, 2012, operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010]

- { 4561} While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080]
- { 4562} Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080]
- { 4560} While dormant, normal source testing shall not be required. [District Rule 2080]
- {4563} Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080]
- {4564} Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080]
- {4565} Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070]

California Environmental Quality Act (CEQA)

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

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

Greenhouse Gas (GHG) Significance Determination

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

The project does not entail an increase in fuel usage from the current levels. Since the GHG emissions are based on the fuel combustion levels, no increase in GHG emissions will result from this project. The District therefore concludes that the project would have a less than cumulatively significant impact on global climate change.

District CEQA Findings

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

IX. RECOMMENDATION

Compliance with all applicable rules and regulations is expected. Issue Authority to Construct C-1333-1-4, C-1333-2-4 and C-1333-10-2 subject to the permit conditions on the attached draft Authority to Construct in Appendix II.

See *Appendix II: Draft Authorities to Construct C-1333-1-4, C-1333-2-4 and C-1333-10-2.*

X. BILLING INFORMATION

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
C-1333-1-4	3020-02 5.0 MMBtu/hr or greater but less than 15.0 MMBtu/hr	12.2 MMBtu/hr	\$ 815.00
C-1333-2-4	3020-02 5.0 MMBtu/hr or greater but less than 15.0 MMBtu/hr	12.2 MMBtu/hr	\$ 815.00
C-1333-10-2	3020-02 5.0 MMBtu/hr or greater but less than 15.0 MMBtu/hr	12.2 MMBtu/hr	\$ 815.00

APPENDICES

- Appendix I: Current Permits to Operate C-1333-1-4, C-1333-2-4 and C-1333-10-2.*
- Appendix II: Draft Authorities to Construct C-1333-1-4, C-1333-2-4 and C-1333-10-2.*
- Appendix III: Emissions Profiles C-1333-1-4, C-1333-2-4 and C-1333-10-2.*
- Appendix IV: Ambient Air Quality Analysis and Risk Management Review*

APPENDIX I

Current Permits to Operate

C-1333-1-4, C-1333-2-4 and C-1333-10-2

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-1333-1-3

EXPIRATION DATE: 05/31/2015

EQUIPMENT DESCRIPTION:

12.2 MMBTU/HR CLEAVER BROOKS MODEL CB 200-300-150 NATURAL GAS-FIRED BOILER WITH A CLEAVER BROOKS MODEL LE(15) 200-300 LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) SYSTEM AND FUEL OIL #2 AS BACKUP FUEL

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
5. The unit shall only be fired on PUC-regulated natural gas as the primary fuel and fuel oil #2 as the back-up fuel. [District Rule 2201]
6. Sulfur content of fuel oil #2 shall not exceed 0.05%. [District Rule 2201]
7. The unit shall be fired on fuel oil #2 only during natural gas curtailment for no more than 168 cumulative hours in a calendar year plus 48 hours per calendar year for equipment testing. [District Rule 4306]
8. When fired using fuel oil # 2, during periods of natural gas curtailment, the permittee shall show compliance with the NOX emission concentration limit by either source testing, continuous emission monitoring system (CEMS), an APCO approved Alternate Monitoring System, or an APCO approved portable NOx analyzer. [District Rule 4306]
9. When fired on natural gas, emissions rates from the unit shall not exceed any of the following limits: 15 ppmv NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 200 ppmv CO @ 3% O2 or 0.15 lb-CO/MMBtu, or 0.0042 lb-VOC/MMBtu. [District Rules 2201, 4305, and 4306]
10. When fired on fuel oil #2, emissions rates from the unit shall not exceed any of the following limits: 150 ppmv NOx @ 3% O2 or 0.19 lb-NOx/MMBtu, 0.0507 lb-SOx/MMBtu, 0.0143 lb-PM10/MMBtu, 200 ppmv CO @ 3% O2 or 0.16 lb-CO/MMBtu, or 0.022 lb-VOC/MMBtu. [District Rules 2201, 4305, and 4306]
11. The permittee shall monitor and record the stack concentration of NOx, 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]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

12. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306]
13. 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]
14. 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]
15. 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]
16. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306]
17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306]
18. 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]
19. 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]
20. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306]
21. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306]
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]
23. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
24. The permittee shall monitor and record the cumulative annual hours of operation when fired on fuel oil #2 during curtailment and testing. [District Rules 2201, 4305, and 4306]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

25. The permittee shall record the NO_x emission concentration (in ppmv or lb/MMBtu) for the unit that is operated during periods of natural gas curtailment. [District Rule 4306]
26. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306]

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-1333-2-3

EXPIRATION DATE: 05/31/2015

EQUIPMENT DESCRIPTION:

12.2 MMBTU/HR CLEAVER BROOKS MODEL CB 200-300-150 NATURAL GAS-FIRED BOILER WITH A CLEAVER BROOKS MODEL LE(15) 200-300 LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) SYSTEM AND FUEL OIL #2 AS BACKUP FUEL

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
5. The unit shall only be fired on PUC-regulated natural gas as the primary fuel and fuel oil #2 as the back-up fuel. [District Rule 2201]
6. Sulfur content of fuel oil #2 shall not exceed 0.05%. [District Rule 2201]
7. The unit shall be fired on fuel oil #2 only during natural gas curtailment for no more than 168 cumulative hours in a calendar year plus 48 hours per calendar year for equipment testing. [District Rule 4306]
8. When fired using fuel oil # 2, during periods of natural gas curtailment, the permittee shall show compliance with the NOX emission concentration limit by either source testing, continuous emission monitoring system (CEMS), an APCO approved Alternate Monitoring System, or an APCO approved portable NOx analyzer. [District Rule 4306]
9. When fired on natural gas, emissions rates from the unit shall not exceed any of the following limits: 15 ppmv NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 200 ppmv CO @ 3% O2 or 0.15 lb-CO/MMBtu, or 0.0042 lb-VOC/MMBtu. [District Rules 2201, 4305, and 4306]
10. When fired on fuel oil #2, emissions rates from the unit shall not exceed any of the following limits: 150 ppmv NOx @ 3% O2 or 0.19 lb-NOx/MMBtu, 0.0507 lb-SOx/MMBtu, 0.0143 lb-PM10/MMBtu, 200 ppmv CO @ 3% O2 or 0.16 lb-CO/MMBtu, or 0.022 lb-VOC/MMBtu. [District Rules 2201, 4305, and 4306]
11. The permittee shall monitor and record the stack concentration of NOx, 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]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

12. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306]
13. 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]
14. 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]
15. 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]
16. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306]
17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306]
18. 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]
19. 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]
20. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306]
21. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306]
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]
23. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
24. The permittee shall monitor and record the cumulative annual hours of operation when fired on fuel oil #2 during curtailment and testing. [District Rules 2201, 4305, and 4306]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

25. The permittee shall record the NOx emission concentration (in ppmv or lb/MMBtu) for the unit that is operated during periods of natural gas curtailment. [District Rule 4306]
26. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306]

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-1333-10-1

EXPIRATION DATE: 05/31/2015

EQUIPMENT DESCRIPTION:

12.2 MMBTU/HR CLEAVER BROOKS MODEL CB 200-300-150 NATURAL GAS-FIRED BOILER WITH A CLEAVER BROOKS MODEL LE(15) 200-300 LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) SYSTEM AND FUEL OIL #2 AS BACKUP FUEL

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]
2. No air contaminant shall be 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]
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
4. The unit shall only be fired on PUC-regulated natural gas as the primary fuel and fuel oil #2 as the back-up fuel. [District Rule 2201]
5. Sulfur content of fuel oil #2 shall not exceed 0.05%. [District Rule 2201]
6. The unit shall be fired on fuel oil #2 only during natural gas curtailment for no more than 168 cumulative hours in a calendar year plus 48 hours per calendar year for equipment testing. [District Rule 4306]
7. When fired using fuel oil # 2, during periods of natural gas curtailment, the permittee shall show compliance with the NOX emission concentration limit by either source testing, continuous emission monitoring system (CEMS), an APCO approved Alternate Monitoring System, or an APCO approved portable NOx analyzer. [District Rule 4306]
8. When fired on natural gas, emissions rates from the unit shall not exceed any of the following limits: 15 ppmv NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 200 ppmv CO @ 3% O2 or 0.15 lb-CO/MMBtu, or 0.0042 lb-VOC/MMBtu. [District Rules 2201, 4305, and 4306]
9. When fired on fuel oil #2, emissions rates from the unit shall not exceed any of the following limits: 150 ppmv NOx @ 3% O2 or 0.19 lb-NOx/MMBtu, 0.0507 lb-SOx/MMBtu, 0.0143 lb-PM10/MMBtu, 200 ppmv CO @ 3% O2 or 0.16 lb-CO/MMBtu, or 0.022 lb-VOC/MMBtu. [District Rules 2201, 4305, and 4306]
10. The permittee shall monitor and record the stack concentration of NOx, 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]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

Facility Name: COUNTY OF FRESNO FACILITY SERVICES

Location: 445 S CEDAR AVE, FRESNO, CA 93702

C-1333-10-1: Jul 14 2011 4:17PM - HEINENG

11. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306]
12. 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]
13. 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]
14. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306]
15. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306]
16. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306]
17. 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]
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 and 4306]
19. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306]
20. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306]
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 and 4306]
22. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
23. The permittee shall monitor and record the cumulative annual hours of operation when fired on fuel oil #2 during curtailment and testing. [District Rules 2201, 4305, and 4306]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

24. The permittee shall record the NO_x emission concentration (in ppmv or lb/MMBtu) for the unit that is operated during periods of natural gas curtailment. [District Rule 4306]
25. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306]

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

APPENDIX II

Draft ATCs

C-1333-1-4, C-1333-2-4 and C-1333-10-2

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: C-1333-1-4

LEGAL OWNER OR OPERATOR: COUNTY OF FRESNO FACILITY SERVICES
MAILING ADDRESS: 4590 E KINGS CANYON RD
FRESNO, CA 93702

LOCATION: 445 S CEDAR AVE
FRESNO, CA 93702

EQUIPMENT DESCRIPTION:
MODIFICATION OF 12.2 MMBTU/HR CLEAVER BROOKS MODEL CB 200-300-150 NATURAL GAS-FIRED BOILER WITH A CLEAVER BROOKS MODEL LE(15) 200-300 LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) SYSTEM AND FUEL OIL #2 AS BACKUP FUEL: MODIFY BURNER TO COMPLY WITH RULE 4320 EMISSION LIMITS.

CONDITIONS

1. {1407} All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]
2. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. {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]
4. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
5. When firing on natural gas, emissions from the unit shall not exceed any of the following limits: 9 ppmvd NOx @ 3% O2 or 0.011 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 400 ppmvd CO @ 3% O2 or 0.296 lb-CO/MMBtu, or 0.0042 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320]
6. When firing on fuel oil #2, emissions from the unit shall not exceed any of the following limits: 150 ppmvd NOx @ 3% O2 or 0.19 lb-NOx/MMBtu, 0.0015 lb-SOx/MMBtu, 0.0143 lb-PM10/MMBtu, 200 ppmvd CO @ 3% O2 or 0.16 lb-CO/MMBtu, or 0.0022 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320]
7. Carbon Monoxide (CO) emissions shall be limited to the CO emission rate achievable under normal operating conditions. The final CO emission rate shall be determined according to the conditions of this permit, to the satisfaction of the Air Pollution Control Officer, based on 12 months of operating history. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

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DAVID WARNER, Director of Permit Services
C-1333-1-4 : Sep 1 2011 2:18PM - HEINENG : Joint Inspection NOT Required

8. Within 12 months of the initial operation, the operator shall prepare and submit to the District a report proposing the final CO limitations, in both ppmv and lb/MMBtu/hr, for inclusion in this permit. The report shall provide all relevant information and data. [District Rule 2201]
9. The District shall establish the final CO emission rate and incorporate the limitations into the permit within 90 days of receipt of the operator's report. In no case shall the final CO limitation be greater than 400 ppmv, at 3% oxygen. [District Rule 2201]
10. The unit shall only be fired on PUC-regulated natural gas as the primary fuel and fuel oil #2 as the backup fuel. [District Rules 2201 and 4320]
11. Sulfur content of fuel oil #2 shall not exceed 0.0015% by weight. [District Rules 2201 and 4320]
12. The unit shall be fired on fuel oil #2 as backup fuel only during natural gas curtailment for no more than 168 cumulative hours in a calendar year plus 48 hours per calendar year for equipment testing. [District Rules 2201, 4305, 4306, 4320]
13. If the unit is fired on fuel oil #2 as backup fuel for a period exceeding 48 cumulative hours in a calendar year, the permittee shall monitor and record the stack concentration of NO_x at least once during that year using an APCO approved portable NO_x analyzer. Monitoring for backup fuel NO_x emissions shall not be required when the unit is operating on primary fuel, i.e. the unit need not be fired on backup fuel solely to perform monitoring. [District Rules 4305, 4306, and 4320]
14. Records of daily and annual backup fuel consumption consisting of the date the boiler operated on fuel oil #2 as backup fuel and the amount of time the boiler was operated, in hours, on fuel oil #2 shall be maintained. [District Rules 2201, 4305, 4306, and 4320]
15. {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
16. {3312} Backup fuel NO_x 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]
17. {3313} The permittee shall maintain records of: (1) the date and time of backup fuel NO_x measurements, (2) the measured backup fuel NO_x concentration (in ppmv or lb/MMBtu) 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]
18. {4315} 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]
19. {4316} 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]

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CONDITIONS CONTINUE ON NEXT PAGE

20. {4317} 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]
21. {4318} 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]
22. {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]
23. {4344} 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]
24. {4345} 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]
25. {4346} 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]
26. {4347} CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320]
27. {4348} Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320]
28. {4349} Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320]
29. {4350} The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320]
30. {4351} 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]
31. {4352} 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]
32. {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
33. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070 4305, 4306, and 4320]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: C-1333-2-4

LEGAL OWNER OR OPERATOR: COUNTY OF FRESNO FACILITY SERVICES
MAILING ADDRESS: 4590 E KINGS CANYON RD
FRESNO, CA 93702

LOCATION: 445 S CEDAR AVE
FRESNO, CA 93702

EQUIPMENT DESCRIPTION:

MODIFICATION OF 12.2 MMBTU/HR CLEAVER BROOKS MODEL CB 200-300-150 NATURAL GAS-FIRED BOILER WITH A CLEAVER BROOKS MODEL LE(15) 200-300 LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) SYSTEM AND FUEL OIL #2 AS BACKUP FUEL:MODIFY BURNER TO COMPLY WITH RULE 4320 EMISSION LIMITS.

CONDITIONS

1. {1407} All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]
2. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. {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]
4. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
5. When firing on natural gas, emissions from the unit shall not exceed any of the following limits: 9 ppmvd NOx @ 3% O2 or 0.011 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 400 ppmvd CO @ 3% O2 or 0.296 lb-CO/MMBtu, or 0.0042 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320]
6. When firing on fuel oil #2, emissions from the unit shall not exceed any of the following limits: 150 ppmvd NOx @ 3% O2 or 0.19 lb-NOx/MMBtu, 0.0015 lb-SOx/MMBtu, 0.0143 lb-PM10/MMBtu, 200 ppmvd CO @ 3% O2 or 0.16 lb-CO/MMBtu, or 0.0022 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320]
7. Carbon Monoxide (CO) emissions shall be limited to the CO emission rate achievable under normal operating conditions. The final CO emission rate shall be determined according to the conditions of this permit, to the satisfaction of the Air Pollution Control Officer, based on 12 months of operating history. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST** NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

DAVID WARNER, Director of Permit Services
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8. Within 12 months of the initial operation, the operator shall prepare and submit to the District a report proposing the final CO limitations, in both ppmv and lb/MMBtu/hr, for inclusion in this permit. The report shall provide all relevant information and data. [District Rule 2201]
9. The District shall establish the final CO emission rate and incorporate the limitations into the permit within 90 days of receipt of the operator's report. In no case shall the final CO limitation be greater than 400 ppmv, at 3% oxygen. [District Rule 2201]
10. The unit shall only be fired on PUC-regulated natural gas as the primary fuel and fuel oil #2 as the backup fuel. [District Rules 2201 and 4320]
11. Sulfur content of fuel oil #2 shall not exceed 0.0015% by weight. [District Rules 2201 and 4320]
12. The unit shall be fired on fuel oil #2 as backup fuel only during natural gas curtailment for no more than 168 cumulative hours in a calendar year plus 48 hours per calendar year for equipment testing. [District Rules 2201, 4305, 4306, 4320]
13. If the unit is fired on fuel oil #2 as backup fuel for a period exceeding 48 cumulative hours in a calendar year, the permittee shall monitor and record the stack concentration of NO_x at least once during that year using an APCO approved portable NO_x analyzer. Monitoring for backup fuel NO_x emissions shall not be required when the unit is operating on primary fuel, i.e. the unit need not be fired on backup fuel solely to perform monitoring. [District Rules 4305, 4306, and 4320]
14. Records of daily and annual backup fuel consumption consisting of the date the boiler operated on fuel oil #2 as backup fuel and the amount of time the boiler was operated, in hours, on fuel oil #2 shall be maintained. [District Rules 2201, 4305, 4306, and 4320]
15. {3312} Backup fuel NO_x emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period [District Rules 4305 and 4306]
16. {3313} The permittee shall maintain records of: (1) the date and time of backup fuel NO_x measurements, (2) the measured backup fuel NO_x concentration (in ppmv or lb/MMBtu) corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306]
17. {4315} 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]
18. {4316} 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]

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CONDITIONS CONTINUE ON NEXT PAGE

19. {4317} 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]
20. {4318} 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]
21. {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]
22. {4344} 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]
23. {4345} 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]
24. {4346} 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]
25. {4347} CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320]
26. {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
27. {4348} Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320]
28. {4349} Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320]
29. {4350} The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320]
30. {4351} 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]
31. {4352} 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]
32. {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
33. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070 4305, 4306, and 4320]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: C-1333-10-2

LEGAL OWNER OR OPERATOR: COUNTY OF FRESNO FACILITY SERVICES
MAILING ADDRESS: 4590 E KINGS CANYON RD
FRESNO, CA 93702

LOCATION: 445 S CEDAR AVE
FRESNO, CA 93702

EQUIPMENT DESCRIPTION:

MODIFICATION OF 12.2 MMBTU/HR CLEAVER BROOKS MODEL CB 200-300-150 NATURAL GAS-FIRED BOILER WITH A CLEAVER BROOKS MODEL LE(15) 200-300 LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) SYSTEM AND FUEL OIL #2 AS BACKUP FUEL: CONVERT TO DORMANT STATUS.

CONDITIONS

1. {1407} All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]
2. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. {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]
4. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
5. Until July 1, 2012, when firing on natural gas, emissions from the unit shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 200 ppmvd CO @ 3% O2 or 0.15 lb-CO/MMBtu, or 0.0042 lb-VOC/MMBtu. [District Rules 2201, 4305, and 4306]
6. Until July 1, 2012, when firing on fuel oil #2, emissions from the unit shall not exceed any of the following limits: 150 ppmvd NOx @ 3% O2 or 0.19 lb-NOx/MMBtu, 0.0507 lb-SOx/MMBtu, 0.0143 lb-PM10/MMBtu, 200 ppmvd CO @ 3% O2 or 0.16 lb-CO/MMBtu, or 0.022 lb-VOC/MMBtu. [District Rules 2201, 4305 and 4306]
7. After July 1, 2012, operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services
C-1333-10-2 - Sep 1 2011 2:19PM - HEINENG : Joint Inspection NOT Required

8. {4561} While dormant, the fuel line shall be physically disconnected from the unit. (Adjust as necessary) [District Rule 2080]
9. {4562} Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080]
10. {4560} While dormant, normal source testing shall not be required. [District Rule 2080]
11. {4563} Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080]
12. {4564} Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080]
13. {4565} Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070]
14. The unit shall only be fired on PUC-regulated natural gas as the primary fuel and fuel oil #2 as the backup fuel. [District Rule 2201]
15. Sulfur content of fuel oil #2 shall not exceed 0.05% by weight. [District Rules 2201]
16. The unit shall be fired on fuel oil #2 as backup fuel only during natural gas curtailment for no more than 168 cumulative hours in a calendar year plus 48 hours per calendar year for equipment testing. [District Rules 2201, 4305 and 4306]
17. If the unit is fired on fuel oil #2 as backup fuel for a period exceeding 48 cumulative hours in a calendar year, the permittee shall monitor and record the stack concentration of NO_x at least once during that year using an APCO approved portable NO_x analyzer. Monitoring for backup fuel NO_x emissions shall not be required when the unit is operating on primary fuel, i.e. the unit need not be fired on backup fuel solely to perform monitoring. [District Rules 4305 and 4306]
18. Records of daily and annual backup fuel consumption consisting of the date the boiler operated on fuel oil #2 as backup fuel and the amount of time the boiler was operated, in hours, on fuel oil #2 shall be maintained. [District Rules 2201, 4305 and 4306]
19. {3312} Backup fuel NO_x 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]
20. {3313} The permittee shall maintain records of: (1) the date and time of backup fuel NO_x measurements, (2) the measured backup fuel NO_x concentration (in ppmv or lb/MMBtu) 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]
21. 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]

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CONDITIONS CONTINUE ON NEXT PAGE

22. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306]
23. 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]
24. 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]
25. {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]
26. 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 and 4306]
27. Source testing to measure NO_x and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306]
28. 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]
29. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306]
30. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306]
31. {4349} Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320]
32. {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
33. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306]
34. 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]
35. 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]

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CONDITIONS CONTINUE ON NEXT PAGE

36. {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
37. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 4305 and 4306]

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APPENDIX III

Emissions Profiles

C-1333-1-4, C-1333-2-4 and C-1333-10-2

Permit #: C-1333-1-4	Last Updated
Facility: COUNTY OF FRESNO FACILITY	07/19/2011 HEINENG

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	1648.0	301.0	830.0	31276.0	496.0
Daily Emis. Limit (lb/Day)	55.6	0.8	4.2	89.7	6.4
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	-182.0	0.0	3805.0	0.0	-33.0
Q2:	-182.0	0.0	3805.0	0.0	-33.0
Q3:	-182.0	0.0	3805.0	0.0	-33.0
Q4:	-182.0	0.0	3805.0	0.0	-33.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: C-1333-2-4	Last Updated
Facility: COUNTY OF FRESNO FACILITY	07/19/2011 HEINENG

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	1648.0	301.0	830.0	31276.0	496.0
Daily Emis. Limit (lb/Day)	55.6	0.8	4.2	89.7	6.4
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	-182.0	0.0	3805.0	0.0	-33.0
Q2:	-182.0	0.0	3805.0	0.0	-33.0
Q3:	-182.0	0.0	3805.0	0.0	-33.0
Q4:	-182.0	0.0	3805.0	0.0	-33.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: C-1333-10-2	Last Updated
Facility: COUNTY OF FRESNO FACILITY	07/19/2011 HEINENG

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	2377.0	431.0	830.0	16058.0	496.0
Daily Emis. Limit (lb/Day)	55.6	14.8	4.2	46.8	6.4
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	0.0
Q2:	0.0	0.0	0.0	0.0	0.0
Q3:	0.0	0.0	0.0	0.0	0.0
Q4:	0.0	0.0	0.0	0.0	0.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

APPENDIX IV

Ambient Air Quality Analysis and Risk Management Review

San Joaquin Valley Air Pollution Control District Risk Management Review

To: George Heinen, SAQE – Permit Services
 From: Trevor Joy, AQS – Technical Services
 Date: August 25, 2011
 Facility Name: County of Fresno, Facility Services
 Location: 445 S Cedar Ave in Fresno
 Application #(s): C-1333-1-4, -2-4, -10-2
 Project #: 1112232

A. RMR SUMMARY

Categories	Units 1-4, 2-4, and -10-2	Project Totals	Facility Totals
Prioritization Score	0.2	0.2	0.2
Acute Hazard Index	N/A ¹	N/A ¹	N/A ¹
Chronic Hazard Index	N/A ¹	N/A ¹	N/A ¹
Maximum Individual Cancer Risk (10⁻⁶)	N/A ¹	N/A ¹	N/A ¹
T-BACT Required?	No		
Special Permit Conditions?	Yes		

¹ Prioritization score is less than 1. No further analysis is required.

Proposed Permit Conditions

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

Units # 1-4, -2-4, and 10-2

{1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102] N

B. RMR REPORT

I. Project Description

Technical Services received a request on August 10, 2011 to perform an Ambient Air Quality Analysis and a Risk Management Review for the proposed modification: retrofit two NG (with fuel oil as a backup fuel) boilers for R4320 compliance and make the 3rd boiler a dormant unit. Even though there isn't an increase in emissions, an RMR was performed since no evaluation had previously been conducted.

II. Analysis

Toxic emissions for the proposed units (unit 1 and 2) were calculated using 'Fuel Oil #6 External Combustion' and 'NG 10-100 MMBTU/Hr External Combustion' emission factors. Since unit 10 will become a dormant unit, no further evaluation was performed. In accordance with the District's *Risk Management Policy for Permitting New and Modified Sources* (APR 1905, March 2, 2001), risks from the proposed unit's toxic emissions were prioritized using the procedure in the 1990 CAPCOA Facility Prioritization Guidelines and incorporated in the District's HEARTs database. The prioritization score for the proposed units was less than 1 (see RMR Summary Table). Therefore, no further analysis was necessary.

The following parameters were used for the review:

Analysis Parameter Unit 1-4, and 2-4 [each unit]			
Closest Receptor - Business (m)	15	Closest Receptor - Resident (m)	152
Hours NG Usage	8544	Hours Backup Fuel Usage	216
NG Fuel Usage (MMScf/hr)	12.2	Backup Fuel Usage (1000 gallons/hr)	0.089
NG Fuel Usage (MMScf/yr)	104.2	Backup Fuel Usage (1000 gallons/yr)	19.2
Stack Height (m)	11	Stack Inside Diameter (m)	0.9
Temp (K)	478	Gas Exit Velocity (ft/sec)	9.4

Modeling was performed for the criteria pollutant CO, the only criteria pollutant that will have an increase in emissions due to the modification. CO emissions: 1.73 lbs/hr.

AERMOD was used, with the parameters outlined below and meteorological data for Fresno 2005 to 2009, to determine the maximum dispersion factor at the property boundary. The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results* Values are in $\mu\text{g}/\text{m}^3$

Diesel ICE units 11-0 through 14-0	1 Hour	3 Hours	8 Hours.	24 Hours	Annual
CO	Pass	X	Pass	X	X

*Results were taken from the attached PSD spreadsheet.

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

III. Conclusion

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

For the RMR: The prioritization score is less than 1.0. **In accordance with the District's Risk Management Policy, the project is approved without Toxic Best Available Control Technology (T-BACT).**

The permit conditions listed on page 1 of this report must be included for this proposed unit.

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

Attachments:

- A. RMR request from the project engineer
- B. Prioritization score with toxic emissions summary
- C. AAQA