



San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT

NOV - 5 2009

Mr. Glenn Sizemore
Air Products Manufacturing Corporation
1010 Zephyr St
Stockton, CA 95206



**Re: Notice of Preliminary Decision - ATC / Certificate of Conformity
Facility # N-802-1-17, N-802-9-11
Project # N-1092178**

Dear Mr. Sizemore:

Enclosed for your review and comment is the District's analysis of an application for Authorities to Construct for Air Products Manufacturing Corporation at 1010 Zephyr Street, Stockton, California, CA. The applicant has proposed to include a condition that limits simultaneous operation of permit units N-802-1 (CFB boiler) and N-802-9 (auxiliary boiler) to 250 hours per year for the required source test and startup of the the CFB boiler, allow auxiliary boiler to operate without restriction on hourly or annual heat input rate when CFB boiler is not operating, lower the permitted NOx emissions and remove fuel oil burning capability for the auxiliary boiler.

After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the Authorities to Construct will be issued to the facility with Certificates of Conformity. Prior to operating with modifications authorized by the Authorities to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

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

If you have any questions, please contact Mr. Rupl Gill, Permit Services Manager, at (209) 557-6400.

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

DW: JK/cm

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
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

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



NOV - 5 2009

Mike Tollstrup, Chief
Project Assessment Branch
Air Resources Board
P O Box 2815
Sacramento, CA 95812-2815

Re: **Notice of Preliminary Decision - ATC / Certificate of Conformity**
Facility # N-802-1-17, N-802-9-11
Project # N-1092178

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of an application for Authorities to Construct for Air Products Manufacturing Corporation at 1010 Zephyr Street, Stockton, California, CA. The applicant has proposed to include a condition that limits simultaneous operation of permit units N-802-1 (CFB boiler) and N-802-9 (auxiliary boiler) to 250 hours per year for the required source test and startup of the the CFB boiler, allow auxiliary boiler to operate without restriction on hourly or annual heat input rate when CFB boiler is not operating, lower the permitted NOx emissions and remove fuel oil burning capability for the auxiliary boiler.

The public notice will be published approximately three days from the date of this letter. Please submit your written comments 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, please contact Mr. Rupi Gill, Permit Services Manager, at (209) 557-6400.

Thank you for your cooperation in this matter.

Sincerely,



David Warner
Director of Permit Services

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San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT

NOV - 5 2009

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



**Re: Notice of Preliminary Decision - ATC / Certificate of Conformity
Facility # N-802-1-17, N-802-9-11
Project # N-1092178**

Dear Mr. Rios:

Enclosed for your review is the District's engineering evaluation of an application for Authorities to Construct for Air Products Manufacturing Corporation at 1010 Zephyr Street, Stockton, California, CA, which has been issued a Title V permit. Air Products Manufacturing Corporation is requesting that Certificates of Conformity, with the procedural requirements of 40 CFR Part 70, be issued with this project. The applicant has proposed to include a condition that limits simultaneous operation of permit units N-802-1 (CFB boiler) and N-802-9 (auxiliary boiler) to 250 hours per year for the required source test and startup of the the CFB boiler, allow auxiliary boiler to operate without restriction on hourly or annual heat input rate when CFB boiler is not operating, lower the permitted NOx emissions and remove fuel oil burning capability for the auxiliary boiler.

Enclosed is the engineering evaluation of this application, along with the current Title V permit, and proposed Authorities to Construct # N-802-1-17, '9-11 with Certificates of Conformity. After demonstrating compliance with the Authority to Construct, the conditions will be incorporated into the facility's Title V permit through an administrative amendment.

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

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

DW: JK/cm

Enclosures

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

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Air Pollution Control District solicits public comment on the proposed issuance of Authority To Construct to Air Products Manufacturing Corporation for its cogeneration plant, at 1010 Zephyr Street, Stockton, California, California. The applicant has proposed to include a condition that limits simultaneous operation of permit units N-802-1 (CFB boiler) and N-802-9 (auxiliary boiler) to 250 hours per year for the required source test and startup of the the CFB boiler, allow auxiliary boiler to operate without restriction on hourly or annual heat input rate when CFB boiler is not operating, lower the permitted NOx emissions and remove fuel oil burning capability for the auxiliary boiler.

The analysis of the regulatory basis for these proposed actions, Project # N-1092178, is available for public inspection at the District office at the address below. Written comments on the proposed initial permit must be submitted within 30 days of the publication date of this notice to **DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 4800 ENTERPRISE WAY, MODESTO, CA 95356-8718.**

**San Joaquin Valley Air Pollution Control District
Authority to Construct
Application Review**

Facility Name:	Air Products Manufacturing Corporation	Date:	November 2, 2009
Mailing Address:	1010 Zephyr St Stockton, CA 95206	Engineer:	Jagmeet Kahlon
Contact Person:	Glenn Sizemore	Lead Engineer:	Nick Peirce
Telephone:	(209) 983-0391		
Application #(s):	N-802-1-17, '9-11		
Project #:	N-1092178		
Deemed Complete:	May 27, 2009		

I. PROPOSAL

Air Products Manufacturing Corporation (APMC) operates a 49 MW electric power generation plant using a coal-fired circulating fluidized bed (CFB) boiler (N-802-1) to produce steam, which powers a steam turbine/electrical generator. Some of the unused steam generated by the CFB boiler is sold to an adjacent corn milling plant (Corn Products International, FID: N-238).

This facility also operates a 178 MMBtu/hr natural gas-fired auxiliary boiler (N-802-9), which is used whenever steam from the CFB boiler is not enough to meet the steam obligation to an adjacent corn milling plant. This auxiliary boiler is limited to operate at a heat input rate of 36.6 MMBtu/hr when CFB boiler is operating with an exception from this heat input rate limit during startup/shutdown of the CFB boiler and during its periodic source test. Also, the auxiliary boiler is limited to a heat input rate of 155,928 MMBtu/year with one-time-only exemption when heat input rate may exceed this limit. The heat input rate of 155,928 MMBtu/yr is equivalent to 10% annual capacity factor, which is originally established to avoid the applicable requirements of 40 CFR Part 60 Subpart Db.

Due to recent substantial decreases in the price of natural gas, it is not economical for Stockton CoGen to operate the CFB boiler for electric power generation, which nonetheless still must satisfy its steam obligation to an adjacent corn milling plant. The company may have to temporarily halt the operation of the CFB boiler in the near future and use the auxiliary boiler to satisfy its steam obligation for an indeterminate period of time.

Since the facility is proposing changes to its existing operational scenario, both the CFB boiler and the auxiliary boiler, will be evaluated as part of this project. The proposed modifications to these units are as follows:

N-802-9-11: Auxiliary Boiler

- Remove the established heat input rate of 36.6 MMBtu/hr and 155,928 MMBtu/year. This request resulted in removing permit conditions 14 and 42 of the PTO N-802-9-9.
- Remove fuel oil #2 burning capability. This request resulted in modifying condition #11 of the PTO N-802-9-9, and eliminating several other fuel testing conditions.
- Lower NOx emissions from 9.0 ppmvd @ 3% O₂ to 7.0 ppmvd @ 3% O₂.
- Allow simultaneous operation of the auxiliary boiler and the CFB boiler (N-802-1) for a period of up to 250 hr/yr for the required annual source testing or for startup of the CFB boiler.

Refer to Appendix II for PTO N-802-9-9.

N-802-1-17: CFB Boiler

CFB boiler permit will be modified to include a permit condition that will allow simultaneous operation of the auxiliary boiler and the CFB boiler for a period of 250 hr/yr for the required annual source testing or for the startup of the CFB boiler.

APMC possesses a Title V permit. The proposed modification to the auxiliary boiler is considered "significant" because the facility has proposed to remove the established heat input rate (10% capacity factor) and the auxiliary boiler is now becoming subject to the monitoring requirements of 40 CFR Part 60 Subpart Db. This determination is consistent with 40 CFR Part 70.7(e)(2)(4) and District Rule 2520, Section 3.20.4.

The company has requested that the ATCs be issued with Certificates of Conformity (COC), which is EPA's 45-day review of the project prior to the issuance of the final ATCs. Since part of the project is a significant modification to the Title V permit, the project will be sent to the Air Resource Board (ARB) and will be noticed in the local newspaper, Stockton Record, for public review and comment. The public comment period will last 30-days from the date of publication. EPA, ARB and the public notice via newspaper will run concurrently.

II. APPLICABLE RULES

Rule 2201	New and Modified Stationary Source Review Rule (9/21/06)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4001	New Source Performance Standards (4/14/99)
Rule 4101	Visible Emissions (02/17/05)
Rule 4102	Nuisance (12/17/92)
Rule 4201	Particulate Matter Concentration (12/17/92)
Rule 4301	Fuel Burning Equipment (12/17/92)
Rule 4304	Equipment Tuning Procedures for Boilers, Steam Generators and Process Heaters (10/19/95)
Rule 4305	Boilers, Steam Generators and Process Heaters – Phase 2 (08/21/03)

Rule 4306 Boilers, Steam Generators and Process Heaters – Phase 3 (09/18/03)
Rule 4320 Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr (10/16/08)
Rule 4351 Boilers, Steam Generators and Process Heaters – Phase 1 (08/21/03)
Rule 4352 Solid Fuel Fired Boilers, Steam Generators and Process Heaters (5/18/06)
Rule 4801 Sulfur Compounds (12/17/92)
California Health & Safety Code 41700 (Public Nuisance)
California Health & Safety Code 42301.6 (School Notice)
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

III. PROJECT LOCATION

The facility is located at 1010 Zephyr Street in Stockton, California. The site is not located within 1,000 feet of any K – 12 school. Therefore, the public notification requirements of the California Health & Safety Code 42301.6 do not apply.

IV. PROCESS DESCRIPTION

This facility operates a 49 MW electric power generation plant using a coal-fired circulating fluidized bed (CFB) boiler (N-802-1) to produce steam, which powers a steam turbine/electrical generator. Some of the unused steam generated by the CFB boiler is sold to an adjacent corn milling plant (Corn Products International, FID: N-238). The facility also operates an auxiliary 178 MMBtu/hr natural gas-fired boiler (N-802-9), which is used to provide process steam to the adjacent corn milling plant whenever steam from the CFB boiler is not enough to meet the steam obligation to an adjacent corn milling plant.

IV. EQUIPMENT LISTING

- N-802-1: COAL FIRED CIRCULATING FLUIDIZED BED BOILER (CAPACITY 550,000 LBS/HR STEAM) UTILIZING LIMESTONE INJECTION FOR SOX CONTROL, A THERMAL DENOX SYSTEM FOR NOX CONTROL, AND TWO CYCLONES VENTED TO A BAGHOUSE FOR PARTICULATE CONTROL
- N-802-9: 178 MMBTU/HR ZURN MODEL 22M KEYSTONE AUXILIARY BOILER WITH A TODD MODEL RMB ULTRA LOW NOX BURNER

VI. EMISSION CONTROL TECHNOLOGY EVALUATION

N-802-1-17: CFB Boiler

Currently, the facility uses thermal de-NO_x system (selective non-catalytic reduction) to reduce NO_x emissions, limestone injection to reduce SO_x, and two cyclones with a baghouse to control particulate matter emissions from the CFB boiler. They are not

proposing any additional emission control equipment for this unit. Therefore, emission control technology evaluation is not necessary.

N-802-9-11: Auxiliary Boiler

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

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

The facility is not proposing any add-on type emissions control device (such as an SCR system) to reduce NO_x emissions from this unit.

VII. CALCULATIONS

A. Assumptions

1. All calculations and physical constants used are corrected to Standard Conditions as defined in District Rule 1020, Section 3.47 (60 °F and 1 atm).
2. Oxygen based F-factor for natural gas fuel is 8,578 dscf/MMBtu.
3. CO₂ based F-factor for natural gas combustion is assumed to be 1,024.2 dscf/MMBtu.
4. Higher heating value (HHV) of the fuel oil #2 is 137,000 Btu/gal.
5. Density of the fuel oil #2 is 7.1 lb/gal.
6. Other assumptions will be stated, as they are made.

B. Emission Factors (EFs)

1. Pre-Project Emission Factors (EF1):

N-802-1-15: CFB Boiler

Pollutant	EF1 (lb/hr)	Source
NO _x	41.75	Project N-1083224
SO _x	59.17	PTO N-802-1-15
PM ₁₀	9.82	
CO	38.00	
VOC	1.86	

N-802-9-9: Auxiliary Boiler

Natural Gas Combustion:

Pollutant	EF _{NG}	Source
NO _x	9 ppmvd @ 3% O ₂ (0.011 lb/MMBtu)	PTO N-802-9-9
SO _x	0.0029 lb/MMBtu	
PM ₁₀	0.0076 lb/MMBtu	
CO	50 ppmvd @ 3% O ₂ (0.037 lb/MMBtu)	
VOC	3.0 ppmvd @ 3% O ₂ (0.001 lb/MMBtu)	

Fuel Oil Combustion:

Fuel oil #2 is allowed to be used during natural gas curtailment period.

PTO N-802-9-9 does not contain fuel oil emission factors in lb/MMBtu; therefore, EPA's AP-42 Tables 1.3-1, 1.3-2 and 1.3-3 (9/98) are referenced to determine the emissions factors for NO_x, PM₁₀ (filterable + condensable), CO and VOC emissions. SO_x emission factor is determined using 0.2% sulfur in fuel oil, as allowed by the PTO N-802-9-9. HHV of fuel oil and the oil density is used in establishing these emission factors.

Pollutant	EF _{FO} (lb/MMBtu)	Source
NO _x	0.175	EPA's AP-42
SO _x	0.207	Mass balance method
PM ₁₀	0.024	EPA's AP-42
CO	0.036	
VOC	0.002	

Per PTO N-802-9-9, emission factors, lb/hr, for fuel oil combustion are given in the following table.

Pollutant	EF _{FO} (lb/hr)	Source
NO _x	28.5	PTO N-802-9-9
SO _x	36.9	
PM ₁₀	4.5	
CO	10.0	
VOC	8.1	

2. Post-Project Emission Factors (EF2):

N-802-1-17: CFB Boiler

Pollutant	EF2 (lb/hr)	Source
NO _x	41.75	Project N-1083224
SO _x	59.17	PTO N-802-1-15
PM ₁₀	9.82	
CO	38.00	
VOC	1.86	

N-802-9-11: Auxiliary Boiler

Natural Gas Combustion:

Pollutant	EF2	Source
NO _x	7.0 ppmvd @ 3% O ₂ (0.008 lb/MMBtu)	Applicant's proposal
SO _x	0.0029 lb/MMBtu	PTO N-802-9-9
PM ₁₀	0.0076 lb/MMBtu	
CO	50 ppmvd @ 3% O ₂ (0.037 lb/MMBtu)	
VOC	3.0 ppmvd @ 3% O ₂ (0.001 lb/MMBtu)	

Fuel Oil Combustion:

APMC has proposed to remove fuel oil #2 burning capability in the auxiliary boiler.

C. Calculations

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

Scenario 1: CFB boiler operates full-time 8,760 hours/year and the auxiliary boiler operates at heat input rate of 36.6 MMBtu/hr and uses natural gas fuel only

$$PE1_{CFB} \text{ (lb/day)} = EF1 \text{ lb/hr} \times 24 \text{ hr/day}$$

$$PE1_{CFB} \text{ (lb/yr)} = EF1 \text{ lb/hr} \times 8,760 \text{ hr/yr}$$

CFB Boiler			
Pollutant	EF1 (lb/hr)	PE1 (lb/day)	PE1 (lb/yr)
NO _x	41.75	1,002.0	219,730 ¹
SO _x	59.17	1,420.1	518,329
PM ₁₀	9.82	235.7	86,023
CO	38.00	912.0	332,880
VOC	1.86	44.6	16,294

¹Units N-802-1 and '9 have a combined specific limiting condition for NO_x emissions.

$$PE1_{Aux} \text{ (lb/hr)} = EF1_{NG} \text{ lb/MMBtu} \times 36.6 \text{ MMBtu/hr}$$

$$PE1_{Aux} \text{ (lb/day)} = EF1_{NG} \text{ lb/MMBtu} \times 36.6 \text{ MMBtu/hr} \times 24 \text{ hr/day}$$

$$PE1_{Aux} \text{ (lb/year)} = EF1_{NG} \text{ lb/MMBtu} \times 155,928 \text{ MMBtu/yr}$$

Auxiliary Boiler			
Pollutant	PE1 (lb/hr)	PE1 (lb/day)	PE1 (lb/yr)
NO _x	0.40	9.6	1,715
SO _x	0.11	2.6	452
PM ₁₀	0.28	6.7	1,185
CO	1.35	32.4	5,769
VOC	0.04	1.0	156

Scenario 2: : CFB boiler operates full-time 8,760 hours/year and the auxiliary boiler operates at heat input rate of 36.6 MMBtu/hr and uses fuel oil for 216 hr/yr and natural gas fuel for 4,044 hr/yr

$$PE1_{CFB} \text{ (lb/day)} = EF1 \text{ lb/hr} \times 24 \text{ hr/day}$$

$$PE1_{CFB} \text{ (lb/yr)} = EF1 \text{ lb/hr} \times 8,760 \text{ hr/yr}$$

CFB Boiler			
Pollutant	EF1 (lb/hr)	PE1 (lb/day)	PE1 (lb/yr)
NO _x	41.75	1,002.0	219,730 ¹
SO _x	59.17	1,420.1	518,329
PM ₁₀	9.82	235.7	86,023
CO	38.00	912.0	332,880
VOC	1.86	44.6	16,294

¹Units N-802-1 and '9 have a combined specific limiting condition for NO_x emissions

$$PE1_{Aux} \text{ (lb/day)} = EF1_{FO} \text{ lb/hr} \times 24 \text{ hr/day}$$

$$PE1_{Aux} \text{ (lb/yr)} = (EF1_{FO} \text{ lb/hr} \times 216 \text{ hr/yr}) + (EF1_{NG} \text{ lb/hr} \times 4,044 \text{ hr/yr})$$

Auxiliary Boiler				
Pollutant	EF1		PE1 (lb/day)	PE1 (lb/yr)
	EF1_{FO} (lb/hr)	EF1_{NG} (lb/hr)		
NO _x	28.5	0.40	684.0	7,774
SO _x	36.9	0.11	885.6	8,415
PM ₁₀	4.5	0.28	108.0	2,104
CO	10.0	1.35	240.0	7,619
VOC	8.1	0.04	194.4	1,912

Summary:

The emissions would be highest when the CFB boiler operates full-time (8,760 hr/yr) and the auxiliary boiler is operated up to 155,928 MMBtu/yr using combination of fuel oil #2 and natural gas (Scenario 2 above). These emissions are summarized in the following table:

Pollutant	CFB boiler PE1 (lb/yr)	Auxiliary Boiler PE1 (lb/yr)	Total PE1 (lb/yr)
NO _x	219,730	7,774	219,730 ¹
SO _x	518,329	8,415	526,744
PM ₁₀	86,023	2,104	88,127
CO	332,880	7,619	340,499
VOC	16,294	1,912	18,206

¹Units N-802-1 and '9 have a combined specific limiting condition for NO_x emissions.

2. Post Project Potential to Emit (PE2):

Scenario 1: CFB boiler operates 250 hours/year and the auxiliary boiler operates full-time 8,760 hours/year

PE2_{CFB} (lb/day) = EF2 lb/hr × 24 hr/day

PE2_{CFB} (lb/yr) = EF2 lb/hr × 250 hr/yr

CFB Boiler			
Pollutant	EF2 (lb/hr)	PE2 (lb/day)	PE2 (lb/yr)
NO _x	41.75	1,002.0	10,438
SO _x	59.17	1,420.1	14,793
PM ₁₀	9.82	235.7	2,455
CO	38.00	912.0	9,500
VOC	1.86	44.6	465

PE2_{Aux} (lb/hr) = EF2 lb/MMBtu × 178 MMBtu/hr

PE2_{Aux} (lb/day) = EF2 lb/MMBtu × 178 MMBtu/hr × 24 hr/day

PE2_{Aux} (lb/year) = EF2 lb/MMBtu × 1,559,280 MMBtu/yr

Auxiliary Boiler				
Pollutant	EF2 (lb/MMBtu)	PE2 (lb/hr)	PE2 (lb/day)	PE2 (lb/yr)
NO _x	0.008	1.42	34.2	12,474
SO _x	0.0029	0.52	12.4	4,522
PM ₁₀	0.0076	1.35	32.5	11,851
CO	0.037	6.59	158.1	57,693
VOC	0.001	0.18	4.3	1,559

Scenario 2: CFB boiler operates full-time 8,760 hours/year and the auxiliary boiler operates 250 hours/year

$$\begin{aligned} \text{PE2}_{\text{CFB}} \text{ (lb/day)} &= \text{EF2 lb/hr} \times 24 \text{ hr/day} \\ \text{PE2}_{\text{CFB}} \text{ (lb/yr)} &= \text{EF2 lb/hr} \times 8,760 \text{ hr/yr} \end{aligned}$$

CFB Boiler			
Pollutant	EF2 (lb/hr)	PE2 (lb/day)	PE2 (lb/yr)
NO _x	41.75	1,002.0	219,730 ¹
SO _x	59.17	1,420.1	518,329
PM ₁₀	9.82	235.7	86,023
CO	38.00	912.0	332,880
VOC	1.86	44.6	16,294

¹Units N-802-1 and '9 have a combined specific limiting condition for NO_x emissions

$$\begin{aligned} \text{PE2}_{\text{Aux}} \text{ (lb/hr)} &= \text{EF2 lb/MMBtu} \times 178 \text{ MMBtu/hr} \\ \text{PE2}_{\text{Aux}} \text{ (lb/day)} &= \text{EF2 lb/MMBtu} \times 178 \text{ MMBtu/hr} \times 24 \text{ hr/day} \\ \text{PE2}_{\text{Aux}} \text{ (lb/year)} &= \text{EF2 lb/MMBtu} \times 178 \text{ MMBtu/hr} \times 250 \text{ hr/yr} \end{aligned}$$

Auxiliary Boiler				
Pollutant	EF2 (lb/MMBtu)	PE2 (lb/hr)	PE2 (lb/day)	PE2 (lb/yr)
NO _x	0.008	1.42	34.2	356
SO _x	0.0029	0.52	12.4	129
PM ₁₀	0.0076	1.35	32.5	338
CO	0.037	6.59	158.1	1,647
VOC	0.001	0.18	4.3	45

Summary:

The emissions would be highest when the CFB boiler operates full-time (8,760 hr/yr) and the auxiliary boiler is operated up to 250 hr/yr (Scenario 2 above). These emissions are summarized in the following table:

Pollutant	CFB boiler PE2 (lb/yr)	Auxiliary Boiler PE2 (lb/yr)	Total PE2 (lb/yr)
NO _x	219,730	356	219,730 ¹
SO _x	518,329	129	518,458
PM ₁₀	86,023	338	86,361
CO	332,880	1,647	334,527
VOC	16,294	45	16,339

¹Units N-802-1 and '9-11 have a combined specific limiting condition for NOx emissions

3. Quarterly Emissions Changes (QEC)

QEC are determined to complete the emissions profile in District's Permit Administration System (PAS) database. The difference between the combined post-project and combined pre-project emissions is less than or equal to zero for each pollutant. Therefore, there is no quarterly emissions increase from this project.

4. Adjusted increase in Permitted Emissions (AIPE) Calculations:

AIPE is used to determine if BACT is required for emission units that are being modified. AIPE is calculated using the equations mentioned in Section 4.3 and 4.4 of Rule 2201.

$$AIPE = PE2 - \left(\frac{EF2}{EF1} \right) (PE1)$$

N-802-1-17: CFB Boiler

APMC has proposed to establish a permit condition that would allow simultaneous operation of the CFB boiler and the auxiliary boiler up to 250 hours per year for the required source test and/or during startup of the CFB boiler. Adding this limitation does not affect the established emission factors, and/or potential emissions from this unit. Therefore, AIPE is equal to zero for each pollutant.

N-802-9-11: Auxiliary Boiler

The proposed operational scenario (primary steam generator) is viewed as a change in class and category of source. Therefore, this unit is evaluated as a new unit for BACT purposes.

D. Facility Emissions

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

Pursuant to Section 4.9 of District Rule 2201, SSPE1 is the Potential to Emit 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 (ERCs) which have been banked since September 19, 1991 for Actual Emissions Reductions (AERs) that

have occurred at the source, and which have not been used on-site. The potential emissions for each permit unit, with exceptions of permit unit N-802-1 and N-802-9 are taken from the application review conducted under project N1083224.

SSPE1 (lb/yr)					
Permit Number	NO _x	SO _x	PM ₁₀	CO	VOC
N-802-1	219,730	518,329	86,023	332,880	16,294
N-802-9		8,415	2,104	7,619	1,912
N-802-2	0	0	559	0	0
N-802-3	0	0	221	0	0
N-802-4	0	0	3,854	0	0
N-802-5	0	0	20	0	0
N-802-6	0	0	3,833	0	0
N-802-7	0	0	123	0	0
N-802-8	0	0	1,205	0	0
N-802-10	0	0	110	0	0
N-802-11	0	0	20	0	0
N-802-12	0	0	1,205	0	0
N-802-13	0	0	123	0	0
N-802-14	0	0	126	0	0
N-802-16	0	0	1,489	0	0
N-802-17	0	0	167	0	0
ERC	0	0	0	0	0
Total	219,730	526,744	101,182	340,499	18,206
Major Source Thresholds	50,000	140,000	140,000	200,000	50,000
Major Source?	Yes	Yes	No	Yes	No

2. 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.

Upon reviewing the calculations in Section VII, it is concluded that the facility's total potential emissions would be highest when CFB boiler is operated full time (8,760 hr/yr), and the auxiliary boiler is operated for 250 hr/yr. The following table reflects the potential emissions from this operational scenario.

SSPE2 (lb/yr)					
Permit Number	NO _x	SO _x	PM ₁₀	CO	VOC
N-802-1	219,730	518,329	86,023	332,880	16,294
N-802-9		129	338	1,647	45

SSPE2 (lb/yr) Continue...					
Permit Number	NO_x	SO_x	PM₁₀	CO	VOC
N-802-2	0	0	559	0	0
N-802-3	0	0	221	0	0
N-802-4	0	0	3,854	0	0
N-802-5	0	0	20	0	0
N-802-6	0	0	3,833	0	0
N-802-7	0	0	123	0	0
N-802-8	0	0	1,205	0	0
N-802-10	0	0	110	0	0
N-802-11	0	0	20	0	0
N-802-12	0	0	1,205	0	0
N-802-13	0	0	123	0	0
N-802-14	0	0	126	0	0
N-802-16	0	0	1,489	0	0
N-802-17	0	0	167	0	0
ERC	0	0	0	0	0
Total	219,730	518,458	99,416	334,527	16,339
Major Source Thresholds	50,000	140,000	140,000	200,000	50,000
Major Source?	Yes	Yes	No	Yes	No

3. Stationary Source Increase in Permitted Emissions (SSIPE)

It is a District Practice to define the SSIPE as the difference of SSPE2 and SSPE1. Negative SSIPE is equated to zero. For this project, SSIPE is zero since SSPE2 is less than or equal to SSPE1 for each pollutant.

4. District Major Modification

The purpose of Major Modification calculations is to determine the following:

- A. If Best Available Control Technology (BACT) is triggered for a new or modified emission unit that results in a Major Modification (District Rule 2201, §4.1.3); and
- B. If a public notification is triggered (District Rule 2201, §5.4.1).

Per section VII.D.2 of this document, APMC is a Major Source for NO_x, SO_x and CO emissions. To determine if a project triggers a Major Modification, Net Emissions Increase (NEI) is calculated for each pollutant, and is compared with the Major Modification threshold limit for each pollutant. Since the San Joaquin Valley is in attainment for CO, NEI calculations for CO are not necessary.

The District practice is to determine NEI by taking the sum of the difference of post-project potential emissions (PE2) and historical emissions (HE) for emissions units involved a project.

In this case, the facility operates CFB boiler to produce steam to operate a steam turbine system for electric power generation. The electric power is sold to Pacific Gas and Electric (PG&E).

Section (a)(1)(vi)(A) of 40 CFR 51.165 (12/19/02) defines NEI as the amount by which the sum of any increase in "actual emissions" from a particular physical change or change in method of operation at a stationary source exceeds zero. Further, Section (a)(1)(xii)(A)(E) of 40 CFR 51.165 (12/19/02) states for an electric utility steam generating units (other than a new unit or the replacement of an existing unit) "actual emissions" of the unit following the physical or operational change shall equal to the "representative actual annual emissions" of the unit, provided the source owner or operator maintains and submits to the reviewing authority, on an annual basis for a period of 5 years from the date the unit resume regular operation, information demonstrating that the physical or operational change did not result in an emissions increase.

On June 30, 2009, the District staff contacted EPA – Region 9 to clarify NEI calculation methodology for this project. Per EPA's guidance, for this project, NEI can be calculated by taking the difference between projected actual emissions (PAE) and the historical actual emissions (HAE).

APMC may use two consecutive years of actual emissions data out the previous five for determining the historical emissions for Major Modification calculation. However, the District practice is to use two consecutive years of actual emissions data prior to the submittal of a complete application, as long as these years represents normal source operation. Year 2007 and 2008 represents normal source operation. For this reason, HAE is based on these years. HAE is determined by taking the average of the emissions reported in 2007 and 2008 emissions inventory statements submitted to the District.

NOx

Permit Unit	PAE (lb/yr)	HAE (lb/yr)	NEI = PAE- HAE (lb/yr)
N-802-1-17	219,730	195,430	21,390
N-802-9-11		2,910	
Total (lb/yr):			21,390
Major Modification Threshold (lb/yr):			50,000
Major Modification Triggered?			No

SOx

APMC's consultant states that the CFB boiler will be modified to use biomass fuel in the near future. For this reason, the SOx emissions from this unit are expected to be significantly less than the average actual emissions during year 2007 and 2008. Based

on this information, the projected actual emissions (PAE) is set equal to the average actual emissions during year 2007 and 2008.

Permit Unit	PAE (lb/yr)	HAE (lb/yr)	NEI = PAE - HAE (lb/yr)
N-802-1-17	266,220	266,220	0
N-802-9-11	4,522	40	4,482
Total (lb/yr):			4,482
Major Modification Threshold (lb/yr):			80,000
Major Modification Triggered?			No

The following condition will be included on the permit for the CFB boiler to enforce this section:

- The permittee shall maintain records of the actual SOx emissions from this unit for each 12 consecutive-month rolling period for a period of 5 years beginning on the date the unit starts operation under this permit for the purposes of demonstrating that there has not been a "significant net emissions increase" above the historic actual SOx emissions level of 266,220 lb/year reported under project N1092178. The actual net emissions increase shall be calculated in accordance with 40 CFR 51.165. If a significant net emissions increase above the actual SOx emissions level (i.e., 266,220 lb/year) occurs during any 12 consecutive months in the 5 year recordkeeping period, the permittee shall submit a permit application to modify the permit to meet the Major Modification requirements that were avoided under project N1092178; that is, "Top-Down Best Available Control Technology Analysis" for SOx emissions. [District Rule 2201]

5. Federal Major Modification

The purpose of Federal Major Modification calculations is to determine the following:

- A. If a Rule-compliance project qualifies for District Rule 2201's Best Available Control Technology (BACT) and offset exemptions (District Rule 2201, §4.2.3.5); and
- B. If an Alternate Siting analysis must be performed (District Rule 2201, §4.15.1);
- C. If the applicant must provide certification that all California stationary sources owned, operated, or controlled by the applicant that are subject to emission limits are in compliance with those limits or are on a schedule for compliance with all applicable emission limits and standards; and
- D. If a public notification is triggered. (District Rule 2201, §5.4.1) Although the language in §5.4.1 states "Major Modifications", the District is taking a conservative approach

by assuming this applies to both District Rule 2201 Major Modifications and Federal Major Modifications.

Since the proposed project is not a District Major Modification, it cannot be Federal Major Modification.

VIII. COMPLIANCE:

Rule 2201 New and Modified Stationary Source Review Rule

1. Best Available Control Technology (BACT)

BACT requirements shall be triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis. Unless exempted pursuant to Section 4.2, BACT shall be required for the following actions:

- Any new emissions unit or relocation from one Stationary Source to another of an existing emissions unit with a Potential to Emit (PE2) exceeding 2.0 pounds in any one day;
- Modifications to an existing emissions unit with a valid Permit to Operate resulting in an Adjusted Increase in Permitted Emissions (AIPE) exceeding 2.0 pounds in any one day;
- Any new or modified emissions unit, in a stationary source project, which results in a Major Modification, as defined in this rule

N-802-1-17: CFB Boiler

Per section VII.C.3 of this document, AIPE is not greater than 2.0 lb/day for any pollutant. Thus, BACT is not triggered.

Per section VII.D.4 of this document, this unit is not a Major Modification for NO_x or SO_x. Therefore, BACT is not triggered for these pollutants.

N-802-9-11: Auxiliary Boiler

Per section VII.C.2 of this document, the potential emissions from the auxiliary boiler are greater than 2.0 lb/day for each pollutant. Thus, BACT is triggered for each pollutant.

Based on the 'Top-Down BACT Analysis', the facility is required to meet the following emission limits or control techniques: Refer to Appendix III for 'Top-Down BACT Analysis'.

NO_x: 7.0 ppmvd @ 3% O₂

SO_x, PM₁₀, VOC, CO: operate boiler on natural gas fuel

The facility has proposed to meet the above requirements. Thus, the BACT is satisfied.

2. Offsets

Offsets are examined on a pollutant-by-pollutant basis, and are triggered for any pollutant with a SSPE2 equal to or greater than the values in section 4.5.3.

Pollutant	Offset Thresholds (lb/yr)	SSPE2 (lb/yr)	Offsets Triggered?
NO _x	20,000	219,730	Yes
SO _x	54,750	518,459	Yes
PM ₁₀	29,200	99,416	Yes
CO	200,000	334,528	Yes
VOC	20,000	16,339	No

Emission Offset Quantity (EOQ):

Pursuant to section 4.7.1 of District Rule 2201, for pollutants with a pre-project stationary source potential to emit greater than the offset thresholds, the quantity of offsets required is the sum of the differences between the post-project potential to emit (PE2) and the baseline emissions (BE) of all new and modified emissions units.

NO_x:

The combined NO_x emissions from the CFB boiler and the auxiliary boiler are limited to 219,730 lb/year. Offsets have been provided for the entire stationary source's potential to emit in excess of the offset trigger level at the time of the original permitting action during the San Joaquin County in 1984. This means, BE can be set equal to PE1 in accordance with Section 3.7 of Rule 2201. Thus,

$$\begin{aligned}
 \text{EOQ} &= \text{PE2} - \text{PE1} \\
 &= 219,730 \text{ lb/yr} - 219,730 \text{ lb/yr} \\
 &= 0 \text{ lb/yr}
 \end{aligned}$$

SO_x:

Offsets have been provided for the entire stationary source's potential to emit in excess of the offset trigger level at the time of the original permitting action during the San Joaquin County in 1984. This means, BE can be set equal to PE1 in accordance with Section 3.7 of Rule 2201.

$$\text{EOQ} = \text{PE2} - \text{PE1}$$

From Section VII.C.1 and VII.C.2 of this document,

$$\text{PE1} = 526,744 \text{ lb/yr}$$

PE2 = 518,458 lb/yr

EOQ = 518,458 lb/yr – 526,744 lb/yr
= -8,286 lb/yr (0 lb/yr)

VOC:

Offsets are not triggered for this pollutant.

PM₁₀:

Offsets have been provided for the entire stationary source's potential to emit in excess of the offset trigger level at the time of the original permitting action during the San Joaquin County in 1984. This means, BE can be set equal to PE1 in accordance with Section 3.7 of Rule 2201.

EOQ = PE2 – PE1

From Section VII.C.1 and VII.C.2 of this document,

PE1 = 88,127 lb/yr

PE2 = 86,361 lb/yr

EOQ = 86,361 lb/yr – 88,127 lb/yr
= -1,766 lb/yr (0 lb/yr)

CO:

The CFB boiler is a Clean Emissions Unit since the unit meets the achieved-in-practice BACT during the five years immediately prior to the submission of the complete application. This determination is based on the achieved-in-practice control listed in the SJVAPCD BACT Guideline 1.3.1 (8/27/05) – Fluidized Bed Combustor, which closely represents the type of combustors installed in the coal-fired CFB boiler. Furthermore, the applicant states that CO BACT was determined in the engineering evaluation for permit AP 84-190 as “Automatic air/fuel ratio control for optimum combustion and staged combustion (CO LAER subordinate to NO_x LAER)¹. There is no new CO control technique has been developed for controlling CO from a coal-fired CFB boiler. CO is controlled by preheating the fluidized bed with natural gas combustion prior to feeding solid fuel, and by managing appropriate air/fuel ratio. Thus, BE can be set equal to PE1.

The auxiliary boiler qualifies as Clean Emission Unit since the unit meets the achieved-in-practice BACT during the five years immediately prior to submission of the complete application. This determination is based on the achieved-in-practice control listed in the SJVAPCD BACT Guideline 1.1.2 (3/14/02) – Boiler > 20.0 MMBtu/hr. Even though this BACT guideline is obsolete, CO achieved-in-practice control would still be “natural gas

¹ From CARB “Old “ BACT Clearinghouse, URL: <http://www.arb.ca.gov/bact/html/col116.htm>, accessed July 23, 2008

fuel with LPG backup". This means, BE can be set equal to PE1 in accordance with Section 3.7 of Rule 2201.

$$EOQ = PE2 - PE1$$

From Section VII.C.1 and VII.C.2 of this document,

$$PE1 = 340,499 \text{ lb/yr}$$

$$PE2 = 334,527 \text{ lb/yr}$$

$$\begin{aligned} EOQ &= 334,527 - 340,499 \text{ lb/yr} \\ &= -5,972 \text{ lb/yr (0 lb/yr)} \end{aligned}$$

Summary:

Offsets are not required for this project.

3. Public Notice

District Rule 2201, section 5.4, requires a public notification for the affected pollutants from the following types of projects:

- New Major Sources
- Major Modifications
- New emission units with a PE > 100 lb/day of any one pollutant
- Modifications with SSPE1 below an Offset threshold and SSPE2 above an Offset threshold on a pollutant-by-pollutant basis
- New stationary sources with SSPE2 exceeding Offset thresholds
- Any permitting action with a SSPE exceeding 20,000 lb/yr for any one pollutant

The proposed project is not in exceedance of the thresholds listed in the above items. Therefore, public notice, under Rule 2201, is not required for this project.

4. Daily Emission Limits (DELs)

Daily Emissions Limitations (DELs) and other enforceable conditions are required by Section 3.17 to restrict a unit's maximum daily emissions.

N-802-1-17: CFB Boiler

DELs established on PTO N-802-1-17 will be replicated on this permit. No new DELs are established for this permit unit.

N-802-9-11: Auxiliary Boiler

- NO_x emissions shall not exceed 7.0 ppmvd @ 3% O₂ referenced as NO₂. [District Rules 2201, 4301, 4305, 4306 and 4320]

- CO emissions shall not exceed 50 ppmvd @ 3% O₂. [District Rule 2201]
- VOC emissions shall not exceed 3 ppmvd @ 3% O₂ referenced as methane. [District Rule 2201]
- PM₁₀ emissions shall not exceed 0.0076 lb/MMBtu. [District Rule 2201]
- SO_x emissions shall not exceed 0.0029 lb/MMBtu. [District Rule 2201]

5. Compliance Assurance

Source Testing

N-802-1-17: CFB Boiler

Testing requirements from PTO N-802-1-15 will be replicated on this permit. No additional source testing is required due to this project.

N-802-9-11: Auxiliary Boiler

Based on the latest source test results conducted on November 15, 2007, the auxiliary boiler's NO_x and CO emissions are 6.3 ppmvd @ 3% O₂ and 2.3 ppmvd @ 3% O₂ respectively. Since the boiler has already demonstrated compliance with the NO_x and CO emission limits that are being established as part of this project, no initial source test is required. The next source test is required to be performed by November 15, 2010.

Monitoring

N-802-1-17: CFB Boiler

Monitoring requirements from PTO N-802-1-15 will be replicated on this permit. No additional monitoring is required due to this project.

N-802-9-11: Auxiliary Boiler

The permittee has proposed to conduct Flue gas recirculation (FGR) monitoring on hourly basis by measuring the stack oxygen percent by volume and windbox oxygen by volume. The determined FGR rate is compared with the minimum FGR established during the most recent source test to demonstrate on-going compliance with NO_x and CO emissions. The proposed monitoring scheme will also satisfy the requirements of 40 CFR Part 60 Subpart Db.

Recordkeeping

N-802-1-17: CFB Boiler

Recordkeeping requirements from PTO N-802-1-17 will be replicated on this permit.

N-802-9-11: Auxiliary Boiler

Recordkeeping requirements from PTO N-802-9-9 will be replicated on this permit. No additional recordkeeping is required due to this project.

Reporting

N-802-1-17: CFB Boiler

Reporting requirements from PTO N-802-1-17 will be replicated on this permit. No additional reporting is required.

N-802-9-11: Auxiliary Boiler

Reporting requirements from PTO N-802-9-9 will be replicated on this permit. No additional reporting is required.

6. Ambient Air Quality Analysis

Section 4.14.1 of this Rule requires that an ambient air quality analysis (AAQA) be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. The Technical Services Division of the SJVAPCD conducted the required analysis. Refer to Appendix IV of this document for the AAQA summary sheet.

The proposed location is in an attainment area for CO, NO_x, SO_x, and PM₁₀. As shown by the AAQA summary table below, the proposed equipment will not cause a violation of an air quality standard for NO_x, CO, NO_x, SO_x, and PM₁₀.

AAQA Results Summary					
Pollutant	1 Hour	3 Hours	8 Hours	24 Hours	Annual
CO	Pass	X	Pass	X	X
NO _x	Pass	X	X	X	Pass
SO _x	Pass	Pass	X	Pass	Pass
PM ₁₀	X	X	X	Pass ¹	Pass ¹

¹ Results were taken from the attached PSD spreadsheets.

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

The criteria modeling results indicate the emissions from the proposed project will not cause or significantly contribute to a violation of a State or National Ambient Air Quality Standard.

Compliance is expected with this Rule.

Rule 2520 Federally Mandated Operating Permits

APMC possesses a Title V permit. The proposed modification to the auxiliary boiler is considered "significant" because the facility has proposed to remove the established heat input rate (10% capacity factor) and the auxiliary boiler is now becoming subject to the monitoring requirements of 40 CFR Part 60 Subpart Db. This determination is consistent with 40 CFR Part 70.7(e)(2)(4) and District Rule 2520, Section 3.20.4. Therefore, the 45-day EPA notice will be conducted prior to the issuance of the ATCs. The following federally enforceable conditions will be placed on the Authorities to Construct:

- This Authority to Construct serves as a written Certificate of Conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520]
- Prior to operating with the modifications authorized by this Authority to Construct, the facility shall submit an application for an administrative amendment to its Title V permit, in accordance with District Rule 2520, Section 11.4.2. [District Rule 2520]

In accordance with Rule 2520, the application meets the procedural requirements of section 11.4 by including:

- A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs and
- The source's suggested draft permits (Appendix I of this document) and
- Certification by a responsible official that the proposed modification meets the criteria for use of major permit modification procedures and a request that such procedures be used (Appendix V of this document).

Section 5.3.4 of this rule requires the permittee shall file an application for administrative permit amendments prior to implementing the requested change except when allowed by the operational flexibility provisions of section 6.4 of this rule. APMC is expected to notify the District by filing TV Form -008 upon implementing the ATCs. After successful compliance demonstration, the District Compliance Division is expected to submit a change order to implement these ATCs into Permits to Operate.

Compliance is expected with this Rule.

Rule 4001 New Source Performance Standards

N-802-1-17: CFB Boiler

This rule incorporates by reference the new source performance standards (NSPS) promulgated by the US EPA in Part 60 Chapter 1 Title 40 Code of Federal Regulations. This unit is subject to Subpart Da, Standards of Performance for Electric Utility Steam

Generators for Which Construction is Commenced After September 18, 1978. The District most recently evaluated this unit with respect to these standards in 2006 as part of project N-1040427. The current PTO contains various conditions that ensure compliance with this rule, and the proposed modification involves no changes to those conditions. The NSPS, and the emission limits ensuring compliance, are summarized in the following table:

Pollutant	NSPS Standard	Permit Emission Limit ²
NO _x	0.5 lb/MMBtu	0.067 lb/MMBtu
PM ₁₀	0.03 lb/MMBtu	0.016 lb/MMBtu
SO _x	1.2 lb/MMBtu	0.095 lb/MMBtu

The NSPS also includes source testing, monitoring, record keeping, and reporting requirements for affected units. Various conditions on the existing PTO ensure compliance with these requirements, and those conditions will be retained on the ATC with no changes. Continue compliance is expected and no further discussion is required.

N-802-9-11 Auxiliary Boiler

The requirements of the Code of Federal Regulations, Chapter 40 (40 CFR), Part 60, Subpart Db apply to any steam generating unit with a heat input greater than 100 MMBtu/hr that has commenced construction, modification, or reconstruction after June 19, 1984. The auxiliary boiler is subject to the requirements of this Subpart.

§60.42b: Standard for sulfur dioxide (SO₂)

§60.43b: Standard for particulate matter (PM)

§60.44b: Standard for nitrogen oxides (NO_x)

The standard, and the emission limits ensuring compliance, are summarized in the following table:

Pollutant	NSPS Standard	Permit Emission Limit
NO _x	0.1 lb/MMBtu §60.44b(a), Item 1(i) in the table	0.008 lb/MMBtu
PM ₁₀	No standard exist for natal gas fired boilers	0.0076 lb/MMBtu
SO _x	0.2 lb/MMBtu §60.42b(k)(1)	0.0029 lb/MMBtu

Compliance is expected with these standards.

² Emission limits calculated by dividing hourly PE2 from Section VII.C.2 by the heat input rating of 620 MMBtu/hr

§60.45b: Compliance and performance test methods and procedure for sulfur dioxide

§60.45b(j) states:

“The owner or operator of an affected facility that only combusts very low sulfur oil, natural gas, or a mixture of these fuels with any other fuels not subject to an SO₂ standard is not subject to the compliance and performance testing requirements of this section if the owner or operator obtains fuel receipts as described in §60.49b(r).”

The following permit condition will ensure compliance with this section:

- The permittee shall either: a.) perform fuel analysis to determine the following parameters: methane content (%), heating value (Btu/dscf), and sulfur content (gr-S/100 dscf); or b.) obtain and maintain a copy of valid purchase contracts, supplier certifications, tariff sheets, or transportation contacts that contains methane content (%), heating value (Btu/dscf), and sulfur content (gr-S/100 dscf) to verify compliance with the SO_x emission limits in this permit. If the permittee decide to conduct fuel analysis, the fuel sample shall be collected within 60 days of startup under this permit and weekly thereafter. Upon successful compliance demonstration on eight consecutive weeks testing, the monitoring frequency shall be every quarter. If the result of any quarterly monitoring fails to demonstrate compliance with SO_x emissions, weekly monitoring shall resume until compliance is demonstrated for eight consecutive weeks. [District Rules 2201 and 4320, 40 CFR 60.45b]

§60.46b: Compliance and performance test methods and procedure for particulate matter and nitrogen oxides

There are no PM standards for natural gas-fired boilers. Therefore, compliance and performance test methods are not discussed.

§60.46b(c) states:

“Compliance with the NO_x emission standards under §60.44b shall be determined through performance testing under paragraph (e) or (f), or under paragraphs (g) and (h) of this section, as applicable.”

§60.46b(e) states:

“To determine compliance with the emission limits for NO_x required under §60.44b, the owner or operator of an affected facility shall conduct the performance test as required under §60.8 using the continuous system for monitoring NO_x under §60.48(b).”

§60.48b(g) states:

“The owner or operator of an affected facility that has a heat input capacity of 73 MW (250 MMBtu/hr) or less, and that has an annual capacity factor for . . . natural gas . . . greater than 10 percent (0.10) shall:

- (1) Comply with the provisions of paragraphs (b), (c), (d), (e)(2), (e)(3), and (f) of this section; or
- (2) Monitor steam generating unit operating conditions and predict NO_x emission rates as specified in a plan submitted pursuant to §60.49b(c).

§60.49b(c) states:

“The owner or operator of each affected facility subject to the NO_x standard of §60.44b who seeks to demonstrate compliance with those standards through the monitoring of steam generating unit operating conditions under the provisions of §60.48b(g)(2) shall submit to the Administrator for approval a plan that identifies the operating conditions to be monitored under §60.48b(g)(2) and the records to be maintained under §60.49b(j). This plan shall be submitted to the Administrator for approval within 360 days of the initial startup of the affected facility. If the plan is approved, the owner or operator shall maintain records of predicted nitrogen oxide emission rates and the monitored operating conditions, including steam generating unit load, identified in the plan. ”

The facility had submitted a monitoring plan (Refer to Appendix VI). This plan concludes that FGR rate will be determined on hourly basis using stack oxygen and windbox oxygen percentages, and will be compared with FGR rate established during the latest source test to demonstrate compliance with NO_x and CO emission limits. This plan is acceptable to the District, as it is consistent the requirements of 40 CFR Part 60 Subpart Db.

Compliance is expected with this Rule.

Rule 4101 Visible Emissions

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

- 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]

Compliance is expected with this Rule.

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 the proposed operations provided the equipment is well maintained. Therefore, compliance with this rule is expected. The following condition will be placed on each permit:

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

California Health & Safety Code 41700

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. Risk management review results are summarized in the following table:

Category	Two Boilers (Units 1-17 & 9-11)	Project Total	Facility Total
Prioritization Score	0.08*	0.08	0.08
Acute Hazard Index	N/A	N/A	N/A
Chronic Hazard Index	N/A	N/A	N/A
Maximum Individual Cancer Risk	N/A	N/A	N/A
T-BACT Required?	No		
Special Conditions Required?	No		

*Project passed on prioritization with a score less than 1; therefore, no further analysis was required for the RMR.

The prioritization score for this project is not above 1.0. In accordance with the District's Risk Management Policy, the project is approved without Toxic Best Available Control Technology (T-BACT).

Compliance is expected with this Rule.

Rule 4201 Particulate Matter Concentration

Section 3.0 prohibits discharge of dust, fumes, or total particulate matter into the atmosphere from any single source operation in excess of 0.1 grain per dry standard cubic foot.

N-802-1-17: CFB Boiler

Based on the source test data (11/18/2008), PM emissions from this boiler was 0.0022 gr/dscf. Thus, the boiler was operating in compliance with this Rule.

The facility is not proposing any changes to the fuel being used in this unit, or emission factors that would affect PM emissions. Therefore, continued compliance is expected with this Rule.

N-802-9-11: Auxiliary Boiler

This boiler is being fired on PUC regulated natural gas. The following calculates indicate that the boiler will operate in compliance with 0.1 gr/dscf limit.

F-Factor for NG: 8,578 dscf/MMBtu at 60 °F
 PM₁₀ Emission Factor: 0.0076 lb-PM₁₀/MMBtu (From Section VII.B)
 Percentage of PM as PM₁₀ in Exhaust: 100%

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

$$\text{GL} = 0.0062 \text{ grain/dscf} < 0.1 \text{ grain/dscf}$$

Compliance is expected with this Rule.

Rule 4301 Fuel Burning Equipment

The requirements of section 5.0 are as follows:

- Combustion contaminates (TSP) - Not to exceed 0.1 gr/dscf @ 12% CO₂ and 10 lb/hr.
- SO_x emissions - Not to exceed 200 lb/hr
- NO_x emissions - Not to exceed 140 lb/hr

N-802-1-17: CFB Boiler

Based on the source test data (11/18/2008), PM emissions from this boiler was 0.0018 gr/dscf @ 12% CO₂ and 2.88 lb/hr. This means, the boiler was operating in compliance with this Rule. The applicant is not proposing any changes to the PM emission factor. Thus, continued compliance is expected.

Per PTO N-802-9-9 (condition #23), the combined NO_x emissions from the boilers N-802-1 and N-802-9 shall not exceed 42 lb/hr on three-hour rolling average. Thus, this unit is expected to be operated in compliance with this limit.

Per PTO N-802-9-9 (condition #21), SO_x emissions are limited to 59.17 lb/hour. Thus, this unit is expected to be operated in compliance with this limit.

N-802-9-11: Auxiliary Boiler

$$\begin{aligned} \text{PM} \left(\frac{\text{gr}}{\text{dscf}} \right) &= \frac{\text{PM Emissions} \left(\frac{\text{lb-PM}}{\text{MMBtu}} \right) \times 7,000 \frac{\text{gr-PM}}{\text{lb-PM}}}{F_{\text{factor CO}_2} \left(\frac{\text{dscf}}{\text{MMBtu}} \right) \times \left(\frac{100\%}{12\%} \right)} \\ &= \frac{\left(0.0076 \frac{\text{lb-PM}}{\text{MMBtu}} \right) \left(7,000 \frac{\text{gr-PM}}{\text{lb-PM}} \right)}{\left(1,024.2 \frac{\text{dscf}}{\text{MMBtu}} \right) \left(\frac{100\%}{12\%} \right)} \\ &= 0.0062 \frac{\text{gr-PM}}{\text{dscf}} \end{aligned}$$

PM (gr/dscf)	PM (lb/hr)	SO _x (lb/hr)	NO _x (lb/hr)
0.0062	1.35	0.52	1.42

The proposed emissions, in the above table, are below the limits of this Rule; therefore, compliance is expected.

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

N-802-1-17: CFB Boiler

The tuning procedure in this Rule applies to any boiler, steam generator, or process heater that requires tuning pursuant to District regulations or permit conditions.

This boiler is subject to District Rule 4352. The rule requires monitoring of NO_x emissions using CEMS. APMC is using CEMS to measure NO_x emissions. There are no tuning requirements listed in this Rule 4352 or in PTO N-802-1-15.

N-802-9-11: Auxiliary Boiler

Pursuant to Rule 4306 and 4320, source test is required to be conducted on annual basis to measure NO_x and CO concentrations. Successful demonstration of compliance on two consecutive tests may defer the following source test for up to 36 months. During this 36-month period, boiler tuning is required at least twice each calendar year, in accordance with the tuning procedure described in Rule 4304. The following condition will be included in the permit:

- During the 36 month source testing interval, the owner/operator shall have the auxiliary boiler unit tuned at least twice each calendar year from four to eight months apart, in any year during which it operates, by a technician that is qualified, to the satisfaction of the APCO, in accordance with the procedure described in Rule 4304 (Equipment Tuning Procedure for Boilers, Steam Generators, and Process Heaters). [District Rules 4306 and 4320]

Therefore, compliance is expected with this Rule.

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

N-802-1-17: CFB Boiler

This is a solid fuel fired boiler and therefore, it is exempt from the requirements of this Rule.

N-802-9-11: Auxiliary Boiler

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

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

N-802-1-17: CFB Boiler

This is a solid fuel fired boiler and therefore, it is exempt from the requirements of this Rule.

N-802-9-11: Auxiliary Boiler

Section 5.1.1 requires the permittee to meet 9 ppmvd NO_x @ 3% O₂ and 400 ppmvd CO @ 3% O₂ concentrations.

The applicant has proposed to meet 7.0 ppmvd NO_x @ 3% O₂ and 50 ppmvd CO @ 3% O₂. Therefore, compliance is expected with this section.

Section 5.4.2 lists various monitoring schemes, such as CEMS, portable analyzer, flue gas recirculation rate etc., can be used to ensure on-going compliance with NO_x and CO emission limits. APMC has proposed to monitor flue gas recirculation rate on hourly basis. The following conditions will be listed on the permit:

- The flue gas recirculation rate shall be determined at least on an hourly basis by measuring the stack O₂% by volume (O_s), and windbox O₂% by volume (O_w) using the following equation: $FGR \text{ rate} = \frac{\{O_w - 20.9\}}{\{O_s - 20.9\}} \times 100\%$. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rules 4305, 4306 and 4320]
- The minimum flue gas recirculation rate shall be established by source testing this unit or other representative units per Rule 4305 and as approved by the District. The normal range/level shall be no lower than the minimum flue gas recirculation rate with which compliance with applicable NO_x and CO emission limits has been demonstrated through source testing at a similar firing rate. [District Rules 4305, 4306 and 4320]
- If the flue gas recirculation rate is less than the normal range/level, the permittee shall return the flue gas recirculation rate to the normal range/level as soon as possible, but no longer than 1 hour of operation after detection. If the flue gas recirculation rate is not returned to the normal range/level within 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a source test within 60 days of the first exceedance, to demonstrate compliance with the applicable emission limits at the new flue gas recirculation rate. A District-approved portable analyzer may be used in lieu of a source test to demonstrate compliance. 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]

- The permittee shall maintain records of the date and time of oxygen concentration measurements, the measured oxygen concentrations, the calculated flue gas recirculation rate, and the firing rate at the time of the oxygen concentration measurements. The records shall also include a description of any corrective action taken to maintain the flue gas recirculation rate within the acceptable range. [District Rules 4305, 4306 and 4320]

Section 6.1 requires that the records required by Sections 6.1.1 through 6.1.3 shall be maintained for five calendar years and shall be made available to the APCO upon request. Failure to maintain records or information contained in the records that demonstrate noncompliance with the applicable requirements of this rule shall constitute a violation of this rule. The following condition will be listed on the permit:

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

Section 6.2 lists various test methods to measure NO_x, CO, O₂ concentrations. The following conditions will be listed on the permit to satisfy compliance with this section.

- Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
- NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis. [District Rules 4305, 4306 and 4320]
- CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320]
- Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320]

Section 6.3.1 requires the permittee to perform source test at least once every 12 months to verify compliance with applicable rule limits. The following condition will be placed to ensure compliance with this section:

- 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, 4306 and 4320]

Compliance is expected with this Rule.

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

N-802-1-17: CFB Boiler

This is a solid fuel fired boiler and therefore, it is exempt from the requirements of this Rule.

N-802-9-11: Auxiliary Boiler

Section 5.1 states that an operator of a unit(s) subject to this rule shall comply with all applicable requirements of the rule and one of the following, on a unit-by-unit basis:

- Operate the unit to comply with the emission limits specified in Sections 5.2 and 5.4; or
- Pay an annual emissions fee to the District as specified in Section 5.3 and comply with the control requirements specified in Section 5.4; or
- Comply with the applicable Low-use Unit requirements of Section 5.5.

The facility has chosen to comply with the emission limits specified in Section 5.2 and 5.4. These limits are summarized below:

NO_x: 7 ppmvd @ 3% O₂

CO: 400 ppmvd @ 3% O₂

Particulate Matter: Use PUC-quality natural gas, commercial propane, butane, or LPG, or combination of such gases with fuel sulfur content of 5 grains/100 scf or less.

The facility has proposed the following emission limits:

NO_x: 7.0 ppmvd @ 3% O₂

CO: 50 ppmvd @ 3% O₂

Particulate Matter: Use PUC-regulated natural gas with fuel sulfur content of 1.0 grains/100 scf or less.

Thus, compliance is expected with this section.

Section 5.7.6 requires the operator to provide annual fuel sulfur content analysis. A condition listed under Rule 4001 discussion will cover the requirements of this section.

The emission monitoring, recordkeeping, compliance determination, and compliance testing requirements of this rule are similar to that of the Rule 4306. Currently, this boiler

is in compliance with Rule 4306. Thus, continued compliance is expected with both Rules 4306 and 4320.

Compliance is expected with this Rule.

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

This rule applies to boilers, steam generators, and process heaters fired on gaseous or liquid fuels at NO_x Major Sources that are not located west of Interstate 5 in Fresno, Kings, or Kern counties.

N-802-1-17: CFB Boiler

This is a solid fuel fired boiler and therefore, it is exempt from the requirements of this Rule.

N-802-9-11: Auxiliary Boiler

Since the emission limits of District Rule 4306 and all other requirements are equivalent or more stringent than the requirements of Rule 4351, compliance with District Rule 4306 requirements will satisfy requirements of Rule 4351. No further discussion is required.

Rule 4352 Solid Fuel Fired Boilers, Steam Generators and Process Heaters

N-802-1-17: CFB Boiler

The applicant is not proposing any changes to the emissions limits of the CFB boiler. PTO N-802-1-15 contains sufficient conditions enforcing the requirements of this Rule. Therefore, continued compliance is expected.

N-802-9-11: Auxiliary Boiler

This is a gaseous fuel fired boiler and therefore, it is exempt from the requirements of this Rule.

Rule 4801 Sulfur Compounds

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

N-802-1-17: CFB Boiler

PTO N-802-1-15 (condition #37) enforces the requirements of this Rule. Furthermore, the most recent source test results (11/18/2008) show 29 ppmvd sulfur dioxide. Therefore, continued compliance is expected.

N-802-9-11: Auxiliary Boiler

For the proposed natural gas fuel combustion at a reference state of 60 °F, the Rule 4801 limit of 2,000 ppmvd is equivalent to:

$$\frac{(2000 \text{ ppmvd}) \left(8,578 \frac{\text{dscf}}{\text{MMBtu}} \right) \left(64 \frac{\text{lb-SO}_x}{\text{lb-mol}} \right)}{\left(379.5 \frac{\text{dscf}}{\text{lb-mol}} \right) (10^6)} \cong 2.9 \frac{\text{lb-SO}_x}{\text{MMBtu}}$$

SO_x emission rate is 0.0029 lb/MMBtu. Since this emission rate is less than 2.9 lb-SO_x/MMBtu, compliance is expected with this Rule.

California Environmental Quality Act (CEQA)

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

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

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

40 CFR Part 51 Appendix S Requirements for PM_{2.5}

40 CFR 51 Appendix S requirements are applicable to new major PM_{2.5} sources and federal major modifications for PM_{2.5}. The significance thresholds are as follows:

PM _{2.5} major source threshold	100 ton/year
PM _{2.5} federal major modification threshold	10 ton/year

As discussed in Section VII.D.2 of this document, this facility is not a Major Source for PM₁₀ emissions. As PM_{2.5} is a subset of PM₁₀, and the PM_{2.5} Major Source threshold is greater than the PM₁₀ Major Source threshold, this facility is not a Major Source for PM_{2.5} emissions. Therefore, Appendix S requirements for PM_{2.5} are not applicable and no further discussion is required.

IX. RECOMMENDATION

Issue the ATCs after addressing comments from the public, EPA, ARB, and the applicant.

X. BILLING INFORMATION

Permit #	Fee Schedule	Fee Description	Previous Fee Schedule
N-802-1-17	3020-08A G	49,000 kW	3020-08A G
N-802-9-11	3020-02 H	178 MMBtu/hr	3020-02 H

APPENDICES

- Appendix I: Draft Authority to Construct Permits
- Appendix II: Permits to Operate
- Appendix III: Top-Down BACT Analysis
- Appendix IV: RMR and AAQA
- Appendix V: TV-Form 009
- Appendix VI: Monitoring Plan

Appendix I
Draft Authority to Construct Permits

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: N-802-1-17

LEGAL OWNER OR OPERATOR: AIR PRODUCTS MANUFACTURING CORPORATION
MAILING ADDRESS: 1010 ZEPHYR ST
STOCKTON, CA 95206

LOCATION: 1010 ZEPHYR ST
STOCKTON, CA 95206

EQUIPMENT DESCRIPTION:

MODIFICATION OF: COAL FIRED CIRCULATING FLUIDIZED BED (CFB) BOILER (CAPACITY 550,000 LBS/HR STEAM) UTILIZING LIMESTONE INJECTION FOR SOX CONTROL, A THERMAL DENOX SYSTEM FOR NOX CONTROL, AND TWO CYCLONES VENTED TO A BAGHOUSE FOR PARTICULATE CONTROL: INCLUDE A CONDITION LIMITING SIMULTANEOUS OPERATION OF PERMIT UNITS N-802-1 AND N-802-9 TO 250 HOURS/YEAR

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. No air contaminant shall be discharged into the atmosphere that exhibit greater than 20% opacity (6 minute average), except for one 6 minute period per hour of not more than 27% opacity. [40 CFR 60.42Da(b)] Federally Enforceable Through Title V Permit
4. The flue gas from the combustor shall be vented through a baghouse at all times (including soot blowing periods). [District NSR Rule] Federally Enforceable Through Title V Permit
5. The baghouse filtering media shall be fiberglass with a teflon B coating, or any other material that provides as good or better collection efficiency. [District NSR Rule] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director, APCO

DAVID WARNER, Director of Permit Services

N-802-1-17: Nov 2 2009 9:19AM - KAH-LONJ : Joint Inspection NOT Required

6. The baghouse shall be equipped with a pressure differential gauge to indicate the pressure drop across the bags. The gauge shall be maintained in good working condition at all times and shall be located in an easily accessible location. [District NSR Rule] Federally Enforceable Through Title V Permit
7. Replacement bags numbering at least 10% of the total number of bags in the largest baghouse using each type of bag shall be maintained on the premises. [District NSR Rule] Federally Enforceable Through Title V Permit
8. Material removed from dust collector(s) shall be disposed of in a manner preventing entrainment into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
9. The boiler may be fired on Utah Equivalent coal, Canadian coal, fluid coke, tire derived fuel, delayed coke, or agriculturally derived biomass. [District NSR Rule] Federally Enforceable Through Title V Permit
10. The amount of tire derived fuel used in the boiler shall not exceed 11% by weight of the total fuel used during any 48 hour period and not exceed 20% by weight of the total fuel used during any one day. [District NSR Rule] Federally Enforceable Through Title V Permit
11. The annual heat input to the boiler from agriculturally derived biomass shall not exceed 50% of the boiler's heat input rating. [District Rule 2201] Federally Enforceable Through Title V Permit
12. An ultimate analysis for each stock of fuel, except for tire derived fuel, received shall be maintained on the premises at all times and shall be made available for District inspection upon request. The analysis shall include the heating value, and the Sulfur and Nitrogen content. Stock of fuel shall be defined as follows: rail delivered fuels - fuel delivered in one unit train; truck delivered fuels - fuel delivered during one week. [District NSR Rule] Federally Enforceable Through Title V Permit
13. Natural gas fired burners shall be used during start-up to reach solid fuel ignition temperature throughout the combustor before feeding any solid fuel. [District NSR Rule] Federally Enforceable Through Title V Permit
14. The VOC emissions shall not exceed 1.86 pounds per hour. [District NSR Rule] Federally Enforceable Through Title V Permit
15. The PM10 emissions shall not exceed 9.82 pounds per hour. [District NSR Rule] Federally Enforceable Through Title V Permit
16. The NOx emissions shall not exceed 39 ppmv(wet) @ 13.6% CO2 (49.4 ppmv(dry) @ 3% O2) using a three hour averaging time. [District NSR Rule] Federally Enforceable Through Title V Permit
17. The NOx concentration limitation of 39 ppmv(wet) @ 13.6% CO2 (49.4 ppmv(dry) @ 3% O2) shall not apply during start-up days. [District NSR Rule] Federally Enforceable Through Title V Permit
18. The NOx emissions shall not exceed 54,180 pounds during the first calendar quarter, 54,782 pounds during the second calendar quarter, 55,384 pounds during the third calendar quarter, and 55,384 pounds during the fourth calendar quarter. [District NSR Rule] Federally Enforceable Through Title V Permit
19. The cumulative NOx emissions shall not exceed 219,730 pounds during any one year from both the fluidized bed boiler and the 178 MMBtu/hr boiler (N-802-9). [District NSR Rule] Federally Enforceable Through Title V Permit
20. A record of the daily NOx emissions from the fluidized bed boiler shall be maintained on the premises at all times. [District NSR Rule] Federally Enforceable Through Title V Permit
21. A record of the cumulative NOx emissions for the calendar year from both the fluidized bed boiler and the 178 MMBtu/hr boiler (N-802-9) shall be updated daily and kept on the premises at all times. [District NSR Rule] Federally Enforceable Through Title V Permit
22. The CO emissions shall not exceed 38.00 pounds per hour. [District NSR Rule] Federally Enforceable Through Title V Permit
23. The SOx emissions shall be the more restrictive of 59.17 pounds per hour as determined by an eight hour rolling average or a SOx removal efficiency of no less than 70% by weight using a three hour averaging time. [District NSR Rule] Federally Enforceable Through Title V Permit
24. The bottom ash from the bed and the fly ash from the economizer and baghouse shall be transferred to the ash silo via a totally air tight pneumatic transfer system. [District NSR Rule] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

25. This boiler shall be in compliance with 40 CFR 60, Subparts A and Da: Standards of Performance for Electric Utility Steam Generating Units for Which Construction Is Commenced After September 18, 1978. [PSD 85-04, District Rule 4001, and District Rule 1080, 6.7] Federally Enforceable Through Title V Permit
26. Source testing for NO_x, CO, VOC, SO_x, and PM₁₀ emissions shall be conducted on an annual basis. [District Rule 4352, 6.3] Federally Enforceable Through Title V Permit
27. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
28. Hourly emission rates for NO_x, CO, VOC, SO_x, and PM₁₀ while source testing shall be calculated using the arithmetic mean of the test runs as outlined in District Rule 1081-"Source Sampling" section 6.0 (as amended 12/16/93). [District Rule 1081] Federally Enforceable Through Title V Permit
29. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
30. Source testing to measure concentrations of oxides of nitrogen (as NO₂) shall be conducted using EPA method 7E or CARB method 100. [District Rule 4352, 6.4.1] Federally Enforceable Through Title V Permit
31. Source testing to measure concentrations of carbon monoxide (CO) shall be conducted using EPA method 10 or CARB method 100. [District Rule 4352, 6.4.1] Federally Enforceable Through Title V Permit
32. Source testing to measure the stack gas oxygen (O₂) shall be conducted using EPA methods 3 or 3A, or CARB method 100. [District Rule 4352, 6.4.1] Federally Enforceable Through Title V Permit
33. Source testing to measure concentrations of volatile organic compounds (VOC) shall be conducted using EPA method 25, CARB method 100, SCAQMD method 25.3, or EPA method 18. [District Rule 2520, 9.3.1] Federally Enforceable Through Title V Permit
34. Source testing to measure concentrations of oxides of sulfur (SO_x) as SO₂ shall be conducted using EPA methods 6, 8, CARB method 100, or SCAQMD 6.1. [40 CFR 60.46, (b)] Federally Enforceable Through Title V Permit
35. Source testing to measure concentrations of PM₁₀ shall be conducted using EPA method 201 and 202, EPA method 201a and 202, or CARB method 501 and 5, or SCAQMD Method 5.3 and 6.1. [40 CFR Subpart 51, Appendix M] Federally Enforceable Through Title V Permit
36. Source testing to measure stack gas velocity and volumetric flow rate shall be conducted using EPA method 2 or CARB method 2. [District Rule 4352, 6.4.1] Federally Enforceable Through Title V Permit
37. Source testing to measure the stack gas moisture content shall be conducted using EPA method 4 or CARB method 4. [District Rule 4352, 6.4.1] Federally Enforceable Through Title V Permit
38. Results of continuous emissions monitoring must be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080, 7.2] Federally Enforceable Through Title V Permit
39. Sulfur compound emission shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis over 15 consecutive minutes. [District Rule 4801] Federally Enforceable Through Title V Permit
40. Particulate Matter emission shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
41. NO_x emissions shall not exceed 0.20 lb/MMBtu of heat input. [District Rule 4352, 5.1] Federally Enforceable Through Title V Permit
42. CO emissions at dry stack gas conditions shall not exceed 400 ppmv @ 3% O₂. [District Rule 4352, 5.1] Federally Enforceable Through Title V Permit
43. The following pollutant emission levels shall not be exceeded: 200 pounds per hour of sulfur compounds, calculated as sulfur dioxide (SO₂); 140 pounds per hour of nitrogen oxides, calculated as nitrogen dioxide (NO₂); and ten (10) pounds per hour of PM. [District Rule 4301, 5.2] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

44. The exhaust stack shall be equipped with continuous monitors/recorders for opacity, SO₂, NO_x, O₂, & stack gas flow rate. The continuous emissions monitors shall meet the performance specifications in 40 CFR 60.13; 40 CFR 52, Appendix E; 40 CFR Part 51, Appendix P; 40 CFR Part 60, Appendix B; Relative Accuracy Audit of Appendix F or equivalent specification established by mutual agreement of the District, the ARB and the EPA. The sampling, analyzing and recording cycle shall be completed every successive 15 minute period. [District Rule 1080; 40 CFR 60.49Da; 40 CFR 64; and PSD 85-04] Federally Enforceable Through Title V Permit
45. Records shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown, performance testing, evaluations, calibrations, checks, adjustments, any periods during which a continuous monitoring system or monitoring device is inoperative, maintenance of any CEM's that have been installed pursuant to District Rule 1080, and emission measurements. [District Rule 1080, 7.3; 40 CFR 60.7 (b)] Federally Enforceable Through Title V Permit
46. Operators of CEM's installed at the direction of the APCO shall submit a written report for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include: A. time intervals, data and magnitude of excess emissions, nature and cause of excess (if known), corrective actions taken and preventive measures adopted; B. averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; C. applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; D. a negative declaration when no excess emissions occurred. [District Rule 1080, 8.0] Federally Enforceable Through Title V Permit
47. A violation of NO_x emission standards indicated by the NO_x CEM shall be reported by the operator to the APCO within 96 hours. [District Rule 1080, 9.0] Federally Enforceable Through Title V Permit
48. Operator shall notify the APCO no later than eight hours after the detection of a breakdown of the CEM. Operator shall inform the APCO of the intent to shut down the CEM at least 24 hours prior to the event. [District Rule 1080, 10.0] Federally Enforceable Through Title V Permit
49. Records of dust collector maintenance, inspections, and repairs shall be maintained. The records shall include identification of the equipment, date of inspection, corrective action taken, and identification of the individual performing the inspection. [District Rule 2520, 9.4.1] Federally Enforceable Through Title V Permit
50. The owner/operator shall maintain an operating log that includes the type and quantity of fuel used and the hhv of each fuel as determined by District Rule 4352, section 6.4 (as amended 05/18/06), or as certified by a third party fuel supplier. [District Rule 4352, 6.2] Federally Enforceable Through Title V Permit
51. Particulate matter emissions shall not exceed the hourly rate as calculated in District Rule 4202 (as amended 12/17/92) using the equation $E=3.59 \times P^{0.62}$ if P is less than or equal to 30 tons per hour, or $E=17.31 \times P^{0.16}$ if P is greater than 30 tons per hour. [District Rule 4202] Federally Enforceable Through Title V Permit
52. As-fired fuel monitoring under 60.49Da(b)(3) may use the following definitions of fuel lot size: for rail delivered fuels- the quantity of each type of fuel delivered in one unit train; for truck delivered fuels - the quantity of each type of fuel delivered during one week. As-fired fuel samples for unit train deliveries may be taken as the unit train is loaded by the fuel supplier. [40 CFR 60.49Da(b)(3)] Federally Enforceable Through Title V Permit
53. The owner/operator shall continuously operate and maintain limestone injection for control of SO₂ emission and low bed temperature, staged combustion, and selective non-catalytic reduction for control of NO_x emissions. [PSD 85-04] Federally Enforceable Through Title V Permit
54. A minimum SO₂ removal efficiency of 70% (3-hour average) shall be maintained at all times. [PSD 85-04] Federally Enforceable Through Title V Permit
55. There shall be no discharge of SO₂ in excess of 59 lbs/hr (8-hour average) or 100 lbs/hr (3-hour average) from the stack venting from the combustion unit. [PSD 85-04] Federally Enforceable Through Title V Permit
56. There shall be no discharge of NO₂ in excess of 42 lbs/hr or 50 ppm at 3% O₂ (3-hour average) from the stack venting from the fluidized bed combustion unit. [PSD 85-04] Federally Enforceable Through Title V Permit
57. Total NO_x emitted in any 90 day period shall not exceed 64,980 lbs (rolling 90-day total). [PSD 85-04] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

58. Natural gas shall only be used as an auxiliary fuel source for the facility during startup to raise the temperature of the fluidized bed to the solid fuel ignition point before feeding any solid fuel. [PSD 85-04] Federally Enforceable Through Title V Permit
59. The owner/operator shall record and maintain records of the hours of operation and the amounts and types of fuel fired for each occurrence. [PSD 85-04] Federally Enforceable Through Title V Permit
60. The owner/operator shall maintain a file of all measurements, including continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 CFR 60 recorded in a permanent form suitable for inspection. [PSD 85-04] Federally Enforceable Through Title V Permit
61. The owner/operator shall submit a written report of all excess emissions to EPA for every calendar quarter. The report shall include the following: a) the magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factors used, and the date and time of commencement and completion of each time period of excess emissions; b) specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the fluidized bed combustion unit. The nature and cause of any malfunction (if known) and the corrective action taken or preventive measures adopted shall also be reported; c) the date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments; d) when no excess emissions have occurred or the continuous monitoring system has not been inoperative, repaired, or adjusted, such information shall be stated in the report; e) excess emissions shall be defined as any three-hour, or 90 day period during which the average emissions of NO_x and/or SO₂, as measured by the continuous monitoring system, exceeds the NO_x and/or SO₂ maximum emission limits set for each of the pollutants; f) excess emissions indicated by the CEM system shall be considered violations of the applicable emission limits for the purposes of the permit except for the NO_x emission limit during normal facility startup; g) during a normal facility startup, excess NO_x emissions shall not be considered a PSD permit violation provided the 90-day NO_x emissions total (90-day rolling total) remains below 64,980 lbs. [PSD 85-04] Federally Enforceable Through Title V Permit
62. The 90 day total NO_x emissions shall be calculated as a running hourly total of all NO_x emissions. NO_x emissions during periods when the NO_x continuous emission monitor is inoperative shall be assumed to be 42 lbs/hr. [PSD 85-04] Federally Enforceable Through Title V Permit
63. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD 85-04] Federally Enforceable Through Title V Permit
64. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in this permit. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD 85-04] Federally Enforceable Through Title V Permit
65. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions of this permit, and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause. [PSD 85-04] Federally Enforceable Through Title V Permit
66. The owner and operator of the proposed project shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable Federal, State and local air quality regulations. [PSD 85-04] Federally Enforceable Through Title V Permit
67. All correspondence as required by this permit shall be forwarded to: a) Director, Air Division (Attn: AIR-3), EPA Region 9, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95812; c) Air Pollution Control Officer, San Joaquin Valley Air Pollution Control District, 1990 East Gettysburg Avenue, Fresno, CA, 93726-0244. [PSD 85-04] Federally Enforceable Through Title V Permit

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68. Baghouse visible emissions shall be monitored in the boiler stack using the opacity monitor installed to comply with the opacity monitoring requirements of 40 CFR 60 Subpart Da while the unit is operating. [40 CFR Part 64] Federally Enforceable Through Title V Permit
69. The baghouse visible emissions as monitored by the boiler stack opacity monitor shall not exceed 2% opacity on a 3-hour rolling average while the boiler is operating. Upon determining an excursion from this requirement, the permittee shall investigate the excursion and take corrective action to minimize emissions and prevent recurrence as expeditiously as practicable. [40 CFR Part 64] Federally Enforceable Through Title V Permit
70. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
71. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit
72. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
73. Dust collection system shall be completely inspected annually while in operation for evidence of particulate matter leaks and repaired as needed. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
74. Dust collector filters shall be thoroughly inspected annually for tears, scuffs, abrasions, holes, or any evidence of particulate matter leaks and shall be replaced as needed. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
75. Records of dust collector maintenance, inspections, and repair shall be maintained. The records shall include identification of the equipment, date of inspection, corrective action taken, and identification of the individual performing the inspection. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
76. The permittee shall maintain records of the actual SOx emissions from this unit for each 12 consecutive-month rolling period for a period of 5 years beginning on the date the unit starts operation under this permit for the purposes of demonstrating that there has not been a "significant net emissions increase" above the historic actual SOx emissions level of 266,220 lb/year reported under project N1092178. The actual net emissions increase shall be calculated in accordance with 40 CFR 51.165. If a significant net emissions increase above the actual SOx emissions level (i.e., 266,220 lb/year) occurs during any 12 consecutive months in the 5 year recordkeeping period, the permittee shall submit a permit application to modify the permit to meet the Major Modification requirements that were avoided under project N1092178; that is, "Top-Down Best Available Control Technology Analysis" for SOx emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
77. The auxiliary boiler (N-802-9) can be operated simultaneously with the CFB boiler (N-802-1) for up to 250 hours per year including periods of CFB boiler startup, shutdown, and emissions testing of the auxiliary boiler required by the EPA, CARB or the District. The permittee shall keep sufficient records to demonstrate compliance with the requirements of this condition. [District Rule 2201] Federally Enforceable Through Title V Permit
78. The auxiliary boiler may operate any time that the CFB boiler is not operating. [District Rule 2201] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
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PERMIT NO: N-802-9-11

LEGAL OWNER OR OPERATOR: AIR PRODUCTS MANUFACTURING CORPORATION
MAILING ADDRESS: 1010 ZEPHYR ST
STOCKTON, CA 95206

LOCATION: 1010 ZEPHYR ST
STOCKTON, CA 95206

EQUIPMENT DESCRIPTION:

MODIFICATION OF: 178 MMBTU/HR ZURN MODEL 22M KEYSTONE AUXILIARY BOILER WITH A TODD MODEL RMB ULTRA LOW NOX BURNER; ALLOW AUXILIARY BOILER TO OPERATE WITHOUT RESTRICTION ON HOURLY OR ANNUAL HEAT INPUT RATE WHEN BOILER (N-802-1) IS NOT OPERATION; ALLOW SIMULTANEOUS OPERATION OF THE AUXILIARY BOILER AND THE BOILER (N-802-1) FOR A PERIOD OF 250 HOURS/YEAR WITHOUT RESTRICTION ON HOURLY HEAT INPUT RATE FOR THE AUXILIARY BOILER; LOWER THE PERMITTED NOX EMISSIONS LEVEL; REMOVE FUEL OIL #2 BURNING CAPABILITY

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, or 0.1 grain/dscf calculated to 12% CO2 or 10 lb/hr. [District Rules 4201 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
5. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director, APCO

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DAVID WARNER, Director of Permit Services

N-802-9-11 : Nov 2 2009 9:18AM - KAH,LOMJ : Joint Inspection NOT Required

6. A fuel flow meter dedicated to this boiler shall be utilized to monitor the quantity of natural gas fuel burned by the boiler on an hourly basis whenever the boiler is operating. Monitoring shall not be required if the unit is not in operation. [District Rule 2201] Federally Enforceable Through Title V Permit
7. This boiler shall be fired exclusively on PUC-regulated natural gas fuel. [District Rule 2201] Federally Enforceable Through Title V Permit
8. NOx emissions shall not exceed 7.0 ppmvd @ 3% O2 referenced as NO2. [District Rules 2201, 4301, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
9. CO emissions shall not exceed 50 ppmvd @ 3% O2. [District Rule 2201] Federally Enforceable Through Title V Permit
10. VOC emissions shall not exceed 3 ppmvd @ 3% O2 referenced as methane. [District Rule 2201] Federally Enforceable Through Title V Permit
11. PM10 emissions shall not exceed 0.0076 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
12. SOx emissions shall not exceed 0.0029 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
13. All emission measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Compliance determinations shall be conducted with the unit operating at conditions representative of normal operations. [District Rules 4305, 4306, 4320 and 4351] Federally Enforceable Through Title V Permit
14. The combined NOx emissions from this boiler and the fluidized bed boiler (N-802-1) shall not exceed 42 lb/hr (3-hour rolling average). [PSD] Federally Enforceable Through Title V Permit
15. The combined NOx emissions from this boiler and the fluidized bed boiler (N-802-1) in any 90-day period shall not exceed 64,980 lb (running 90-day total). [PSD] Federally Enforceable Through Title V Permit
16. The cumulative NOx emissions shall not exceed 219,730 pounds during any one year from both the fluidized bed boiler (N-802-1) and this boiler. [District NSR Rule] Federally Enforceable Through Title V Permit
17. Operator shall ensure that all required source testing conforms with the compliance testing procedures described in District Rule 1081. [District Rule 1081] Federally Enforceable Through Title V Permit
18. Source testing for NOx and CO emissions shall be conducted as required by Rule 4306 - "Boilers, Steam Generators, and Process Heaters - Phase 3". [District Rules 4306 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
19. Source tests shall be performed not less than once every 12 months. Upon demonstrating compliance on two consecutive compliance source tests, the following source test may be deferred for up to 36 months. If a test shows noncompliance, the source shall return to annual source testing until compliance is again shown for two consecutive years. [District Rules 4305, 4306, 4320 and 4351] Federally Enforceable Through Title V Permit
20. During the 36-month source testing interval, the owner or operator shall have this unit tuned at least twice each calendar year, from four to eight months apart, in which it operates, by a technician that is qualified, to the satisfaction of the APCO, in accordance with the procedure described in Rule 4304 (Equipment Tuning Procedure for Boilers, Steam Generators, and Process Heaters). [District Rules 4306 and 4320] Federally Enforceable Through Title V Permit
21. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for that calendar year. No tune-up is required for any unit that is not operated during that calendar year. This unit may be test fired to verify availability of the unit for its intended use, but once the test firing is completed the unit shall be shutdown. [District Rules 4306 and 4320] Federally Enforceable Through Title V Permit
22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
23. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

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24. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
25. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
26. Source testing to measure concentrations of oxides of nitrogen (as NO₂) shall be conducted using EPA method 7E or CARB method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
27. Source testing to measure concentrations of carbon monoxide (as CO) shall be conducted using EPA method 10 or CARB method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
28. Source testing to measure the stack gas oxygen shall be conducted using EPA methods 3 or 3A, or CARB method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
29. The permittee shall either: a.) perform fuel analysis to determine the following parameters: methane content (%), heating value (Btu/dscf), and sulfur content (gr-S/100 dscf); or b.) obtain and maintain a copy of valid purchase contracts, supplier certifications, tariff sheets, or transportation contacts that contains methane content (%), heating value (Btu/dscf), and sulfur content (gr-S/100 dscf) to verify compliance with the SO_x emission limits in this permit. If the permittee decide to conduct fuel analysis, the fuel sample shall be collected within 60 days of startup under this permit and weekly thereafter. Upon successful compliance demonstration on eight consecutive weeks testing, the monitoring frequency shall be every quarter. If the result of any quarterly monitoring fails to demonstrate compliance with SO_x emissions, weekly monitoring shall resume until compliance is demonstrated for eight consecutive weeks. [District Rules 2201 and 4320, 40 CFR 60.45b] Federally Enforceable Through Title V Permit
30. The flue gas recirculation rate shall be determined at least on an hourly basis by measuring the stack O₂% by volume (O_s), and windbox O₂% by volume (O_w) using the following equation: $FGR\ rate = \{O_w - 20.9\} / \{O_s - 20.9\} \times 100\%$. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
31. The minimum flue gas recirculation rate shall be established by source testing this unit or other representative units per Rule 4305 and as approved by the District. The normal range/level shall be no lower than the minimum flue gas recirculation rate with which compliance with applicable NO_x and CO emission limits has been demonstrated through source testing at a similar firing rate. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
32. If the flue gas recirculation rate is less than the normal range/level, the permittee shall return the flue gas recirculation rate to the normal range/level as soon as possible, but no longer than 1 hour of operation after detection. If the flue gas recirculation rate is not returned to the normal range/level within 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a source test within 60 days of the first exceedance, to demonstrate compliance with the applicable emission limits at the new flue gas recirculation rate. A District-approved portable analyzer may be used in lieu of a source test to demonstrate compliance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
33. The permittee shall maintain records of the date and time of oxygen concentration measurements, the measured oxygen concentrations, the calculated flue gas recirculation rate, and the firing rate at the time of the oxygen concentration measurements. The records shall also include a description of any corrective action taken to maintain the flue gas recirculation rate within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
34. The auxiliary boiler (N-802-9) can be operated simultaneously with the CFB boiler (N-802-1) for up to 250 hours per year including periods of CFB boiler startup, shutdown, and emissions testing of the auxiliary boiler required by the EPA, CARB or the District. The permittee shall keep sufficient records to demonstrate compliance with the requirements of this condition. [District Rule 2201] Federally Enforceable Through Title V Permit

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35. The auxiliary boiler may operate any time that the CFB boiler is not operating. [District Rule 2201] Federally Enforceable Through Title V Permit
36. When in simultaneous operation with the CFB boiler (N-802-1), the auxiliary boiler's firing rate shall not exceed 36.6 MMBtu/hr except during: 1.) periods of CFB boiler startup or shutdown, or 2.) a period of less than 10 hours duration to conduct any emissions testing for the auxiliary boiler required by the EPA, the California Air Resources Board, or the District. For the purposes of this condition, CFB boiler startup and shutdown periods shall be defined as follows: A.) Following CFB boiler repairs that require curing of the refractory material, the startup period shall begin upon initiation of continuous fuel flow to the CFB boiler and shall end after 40 hours or when the generator output reaches 45 MW, whichever comes first. B.) For all startups other than those described in item A above, the startup period shall begin upon initiation of continuous fuel flow to the boiler and shall not last more than 16 hours. [PSD] Federally Enforceable Through Title V Permit
37. The owner or operator shall record and maintain records of the hours of operation and the amounts and types of fuel fired for each occurrence. [PSD] Federally Enforceable Through Title V Permit
38. Hourly NOx emissions shall be calculated as the product of the hourly heat input and the maximum allowable NOx emissions rate. [PSD] Federally Enforceable Through Title V Permit
39. The owner/operator shall maintain a file of all measurements, including continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 CFR 60 recorded in a permanent form suitable for inspection. [PSD] Federally Enforceable Through Title V Permit
40. A record of the daily NOx emissions shall be maintained on the premises at all times. [District NSR Rule] Federally Enforceable Through Title V Permit
41. A record of the cumulative NOx emissions for the calendar year from both the fluidized bed boiler (N-802-1) and this boiler shall be updated daily and kept on the premises at all times. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
42. Daily records of the natural gas usage shall be kept. [District Rules 4305, 6.0; 4306, 6.0; and 2520, 9.4.2] Federally Enforceable Through Title V Permit
43. All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rules 1070; 2520, 9.4.2; 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
44. This boiler shall be in compliance with Title 40, Code of Federal Regulations, Part 60, Subparts A and Db. The owner or operator shall comply with the terms of the plan submitted under the provisions of §60.48b(g)(2); specifically: i.) The owner or operator shall demonstrate compliance with the applicable standard for nitrogen oxides by hourly monitoring the flue gas recirculation rate as established by this unit's source test, and ii.) The owner or operator shall maintain records of the auxiliary boiler's fuel usage for at least five years and make these records available to EPA upon request. [40 CFR Part 60, Subpart Db and PSD] Federally Enforceable Through Title V Permit
45. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in this permit. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD] Federally Enforceable Through Title V Permit
46. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions of this permit, and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause. [PSD] Federally Enforceable Through Title V Permit
47. The owner and operator shall operate the stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable Federal, State and local air quality regulations. [PSD] Federally Enforceable Through Title V Permit

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48. All correspondence as required by this permit shall be forwarded to: a) Director, Enforcement Div (Attn: A-5), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726-0244. [PSD] Federally Enforceable Through Title V Permit

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Appendix II
Permits to Operate

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-802-1-15

EXPIRATION DATE: 10/31/2009

EQUIPMENT DESCRIPTION:

COAL FIRED CIRCULATING FLUIDIZED BED BOILER (CAPACITY 550,000 LBS/HR STEAM) UTILIZING LIMESTONE INJECTION FOR SOX CONTROL, A THERMAL DENOX SYSTEM FOR NOX CONTROL, AND TWO CYCLONES VENTED TO A BAGHOUSE FOR PARTICULATE CONTROL

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be discharged into the atmosphere that exhibit greater than 20% opacity (6 minute average), except for one 6 minute period per hour of not more than 27% opacity. [40 CFR 60.42Da(b)] Federally Enforceable Through Title V Permit
2. The flue gas from the combustor shall be vented through a baghouse at all times (including soot blowing periods). [District NSR Rule] Federally Enforceable Through Title V Permit
3. The baghouse filtering media shall be fiberglass with a teflon B coating, or any other material that provides as good or better collection efficiency. [District NSR Rule] Federally Enforceable Through Title V Permit
4. The baghouse shall be equipped with a pressure differential gauge to indicate the pressure drop across the bags. The gauge shall be maintained in good working condition at all times and shall be located in an easily accessible location. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Replacement bags numbering at least 10% of the total number of bags in the largest baghouse using each type of bag shall be maintained on the premises. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Material removed from dust collector(s) shall be disposed of in a manner preventing entrainment into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
7. The boiler may be fired on Utah Equivalent coal, Canadian coal, fluid coke, tire derived fuel, delayed coke, or agriculturally derived biomass. [District NSR Rule] Federally Enforceable Through Title V Permit
8. The amount of tire derived fuel used in the boiler shall not exceed 11% by weight of the total fuel used during any 48 hour period and not exceed 20% by weight of the total fuel used during any one day. [District NSR Rule] Federally Enforceable Through Title V Permit
9. The annual heat input to the boiler from agriculturally derived biomass shall not exceed 50% of the boiler's heat input rating. [District Rule 2201] Federally Enforceable Through Title V Permit
10. An ultimate analysis for each stock of fuel, except for tire derived fuel, received shall be maintained on the premises at all times and shall be made available for District inspection upon request. The analysis shall include the heating value, and the Sulfur and Nitrogen content. Stock of fuel shall be defined as follows: rail delivered fuels - fuel delivered in one unit train; truck delivered fuels - fuel delivered during one week. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Natural gas fired burners shall be used during start-up to reach solid fuel ignition temperature throughout the combustor before feeding any solid fuel. [District NSR Rule] Federally Enforceable Through Title V Permit
12. The VOC emissions shall not exceed 1.86 pounds per hour. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

13. The PM10 emissions shall not exceed 9.82 pounds per hour. [District NSR Rule] Federally Enforceable Through Title V Permit
14. The NOx emissions shall not exceed 39 ppmv(wet) @ 13.6% CO2 (49.4 ppmv(dry) @ 3% O2) using a three hour averaging time. [District NSR Rule] Federally Enforceable Through Title V Permit
15. The NOx concentration limitation of 39 ppmv(wet) @ 13.6% CO2 (49.4 ppmv(dry) @ 3% O2) shall not apply during start-up days. [District NSR Rule] Federally Enforceable Through Title V Permit
16. The NOx emissions shall not exceed 54,180 pounds during the first calendar quarter, 54,782 pounds during the second calendar quarter, 55,384 pounds during the third calendar quarter, and 55,384 pounds during the fourth calendar quarter. [District NSR Rule] Federally Enforceable Through Title V Permit
17. The cumulative NOx emissions shall not exceed 219,730 pounds during any one year from both the fluidized bed boiler and the 178 MMBtu/hr boiler (N-802-9). [District NSR Rule] Federally Enforceable Through Title V Permit
18. A record of the daily NOx emissions from the fluidized bed boiler shall be maintained on the premises at all times. [District NSR Rule] Federally Enforceable Through Title V Permit
19. A record of the cumulative NOx emissions for the calendar year from both the fluidized bed boiler and the 178 MMBtu/hr boiler (N-802-9) shall be updated daily and kept on the premises at all times. [District NSR Rule] Federally Enforceable Through Title V Permit
20. The CO emissions shall not exceed 38.00 pounds per hour. [District NSR Rule] Federally Enforceable Through Title V Permit
21. The SOx emissions shall be the more restrictive of 59.17 pounds per hour as determined by an eight hour rolling average or a SOx removal efficiency of no less than 70% by weight using a three hour averaging time. [District NSR Rule] Federally Enforceable Through Title V Permit
22. The bottom ash from the bed and the fly ash from the economizer and baghouse shall be transferred to the ash silo via a totally air tight pneumatic transfer system. [District NSR Rule] Federally Enforceable Through Title V Permit
23. This boiler shall be in compliance with 40 CFR 60, Subparts A and Da: Standards of Performance for Electric Utility Steam Generating Units for Which Construction Is Commenced After September 18, 1978. [PSD 85-04, District Rule 4001, and District Rule 1080, 6.7] Federally Enforceable Through Title V Permit
24. Source testing for NOx, CO, VOC, SOx, and PM10 emissions shall be conducted on an annual basis. [District Rule 4352, 6.3] Federally Enforceable Through Title V Permit
25. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
26. Hourly emission rates for NOx, CO, VOC, SOx, and PM10 while source testing shall be calculated using the arithmetic mean of the test runs as outlined in District Rule 1081-"Source Sampling" section 6.0 (as amended 12/16/93). [District Rule 1081] Federally Enforceable Through Title V Permit
27. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
28. Source testing to measure concentrations of oxides of nitrogen (as NO2) shall be conducted using EPA method 7E or CARB method 100. [District Rule 4352, 6.4.1] Federally Enforceable Through Title V Permit
29. Source testing to measure concentrations of carbon monoxide (CO) shall be conducted using EPA method 10 or CARB method 100. [District Rule 4352, 6.4.1] Federally Enforceable Through Title V Permit
30. Source testing to measure the stack gas oxygen (O2) shall be conducted using EPA methods 3 or 3A, or CARB method 100. [District Rule 4352, 6.4.1] Federally Enforceable Through Title V Permit
31. Source testing to measure concentrations of volatile organic compounds (VOC) shall be conducted using EPA method 25, CARB method 100, SCAQMD method 25.3, or EPA method 18. [District Rule 2520, 9.3.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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32. Source testing to measure concentrations of oxides of sulfur (SOx) as SO2 shall be conducted using EPA methods 6, 8, CARB method 100, or SCAQMD 6.1. [40 CFR 60.46, (b)] Federally Enforceable Through Title V Permit
33. Source testing to measure concentrations of PM10 shall be conducted using EPA method 201 and 202, EPA method 201a and 202, or CARB method 501 and 5, or SCAQMD Method 5.3 and 6.1. [40 CFR Subpart 51, Appendix M] Federally Enforceable Through Title V Permit
34. Source testing to measure stack gas velocity and volumetric flow rate shall be conducted using EPA method 2 or CARB method 2. [District Rule 4352, 6.4.1] Federally Enforceable Through Title V Permit
35. Source testing to measure the stack gas moisture content shall be conducted using EPA method 4 or CARB method 4. [District Rule 4352, 6.4.1] Federally Enforceable Through Title V Permit
36. Results of continuous emissions monitoring must be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080, 7.2] Federally Enforceable Through Title V Permit
37. Sulfur compound emission shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis over 15 consecutive minutes. [District Rule 4801] Federally Enforceable Through Title V Permit
38. Particulate Matter emission shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
39. NOx emissions shall not exceed 0.20 lb/MMBtu of heat input. [District Rule 4352, 5.1] Federally Enforceable Through Title V Permit
40. CO emissions at dry stack gas conditions shall not exceed 400 ppmv @ 3% O2. [District Rule 4352, 5.1] Federally Enforceable Through Title V Permit
41. The following pollutant emission levels shall not be exceeded: 200 pounds per hour of sulfur compounds, calculated as sulfur dioxide (SO2); 140 pounds per hour of nitrogen oxides, calculated as nitrogen dioxide (NO2); and ten (10) pounds per hour of PM. [District Rule 4301, 5.2] Federally Enforceable Through Title V Permit
42. The exhaust stack shall be equipped with continuous monitors/recorders for opacity, SO2, NOx, O2, & stack gas flow rate. The continuous emissions monitors shall meet the performance specifications in 40 CFR 60.13; 40 CFR 52, Appendix E; 40 CFR Part 51, Appendix P; 40 CFR Part 60, Appendix B; Relative Accuracy Audit of Appendix F or equivalent specification established by mutual agreement of the District, the ARB and the EPA. The sampling, analyzing and recording cycle shall be completed every successive 15 minute period. [District Rule 1080; 40 CFR 60.49Da; 40 CFR 64; and PSD 85-04] Federally Enforceable Through Title V Permit
43. Records shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown, performance testing, evaluations, calibrations, checks, adjustments, any periods during which a continuous monitoring system or monitoring device is inoperative, maintenance of any CEM's that have been installed pursuant to District Rule 1080, and emission measurements. [District Rule 1080, 7.3; 40 CFR 60.7 (b)] Federally Enforceable Through Title V Permit
44. Operators of CEM's installed at the direction of the APCO shall submit a written report for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include: A. time intervals, data and magnitude of excess emissions, nature and cause of excess (if known), corrective actions taken and preventive measures adopted; B. averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; C. applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; D. a negative declaration when no excess emissions occurred. [District Rule 1080, 8.0] Federally Enforceable Through Title V Permit
45. A violation of NOx emission standards indicated by the NOx CEM shall be reported by the operator to the APCO within 96 hours. [District Rule 1080, 9.0] Federally Enforceable Through Title V Permit
46. Operator shall notify the APCO no later than eight hours after the detection of a breakdown of the CEM. Operator shall inform the APCO of the intent to shut down the CEM at least 24 hours prior to the event. [District Rule 1080, 10.0] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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47. Records of dust collector maintenance, inspections, and repairs shall be maintained. The records shall include identification of the equipment, date of inspection, corrective action taken, and identification of the individual performing the inspection. [District Rule 2520, 9.4.1] Federally Enforceable Through Title V Permit
48. The owner/operator shall maintain an operating log that includes the type and quantity of fuel used and the hhv of each fuel as determined by District Rule 4352, section 6.4 (as amended 05/18/06), or as certified by a third party fuel supplier. [District Rule 4352, 6.2] Federally Enforceable Through Title V Permit
49. Particulate matter emissions shall not exceed the hourly rate as calculated in District Rule 4202 (as amended 12/17/92) using the equation $E=3.59 \times P^{0.62}$ if P is less than or equal to 30 tons per hour, or $E=17.31 \times P^{0.16}$ if P is greater than 30 tons per hour. [District Rule 4202] Federally Enforceable Through Title V Permit
50. As-fired fuel monitoring under 60.49Da(b)(3) may use the following definitions of fuel lot size: for rail delivered fuels- the quantity of each type of fuel delivered in one unit train; for truck delivered fuels - the quantity of each type of fuel delivered during one week. As-fired fuel samples for unit train deliveries may be taken as the unit train is loaded by the fuel supplier. [40 CFR 60.49Da(b)(3)] Federally Enforceable Through Title V Permit
51. The owner/operator shall continuously operate and maintain limestone injection for control of SO₂ emission and low bed temperature, staged combustion, and selective non-catalytic reduction for control of NO_x emissions. [PSD 85-04] Federally Enforceable Through Title V Permit
52. A minimum SO₂ removal efficiency of 70% (3-hour average) shall be maintained at all times. [PSD 85-04] Federally Enforceable Through Title V Permit
53. There shall be no discharge of SO₂ in excess of 59 lbs/hr (8-hour average) or 100 lbs/hr (3-hour average) from the stack venting from the combustion unit. [PSD 85-04] Federally Enforceable Through Title V Permit
54. There shall be no discharge of NO₂ in excess of 42 lbs/hr or 50 ppm at 3% O₂ (3-hour average) from the stack venting from the fluidized bed combustion unit. [PSD 85-04] Federally Enforceable Through Title V Permit
55. Total NO_x emitted in any 90 day period shall not exceed 64,980 lbs (rolling 90-day total). [PSD 85-04] Federally Enforceable Through Title V Permit
56. Natural gas shall only be used as an auxiliary fuel source for the facility during startup to raise the temperature of the fluidized bed to the solid fuel ignition point before feeding any solid fuel. [PSD 85-04] Federally Enforceable Through Title V Permit
57. The owner/operator shall record and maintain records of the hours of operation and the amounts and types of fuel fired for each occurrence. [PSD 85-04] Federally Enforceable Through Title V Permit
58. The owner/operator shall maintain a file of all measurements, including continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 CFR 60 recorded in a permanent form suitable for inspection. [PSD 85-04] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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59. The owner/operator shall submit a written report of all excess emissions to EPA for every calendar quarter. The report shall include the following: a) the magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factors used, and the date and time of commencement and completion of each time period of excess emissions; b) specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the fluidized bed combustion unit. The nature and cause of any malfunction (if known) and the corrective action taken or preventive measures adopted shall also be reported; c) the date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments; d) when no excess emissions have occurred or the continuous monitoring system has not been inoperative, repaired, or adjusted, such information shall be stated in the report; e) excess emissions shall be defined as any three-hour, or 90 day period during which the average emissions of NO_x and/or SO₂, as measured by the continuous monitoring system, exceeds the NO_x and/or SO₂ maximum emission limits set for each of the pollutants; f) excess emissions indicated by the CEM system shall be considered violations of the applicable emission limits for the purposes of the permit except for the NO_x emission limit during normal facility startup; g) during a normal facility startup, excess NO_x emissions shall not be considered a PSD permit violation provided the 90-day NO_x emissions total (90-day rolling total) remains below 64,980 lbs. [PSD 85-04] Federally Enforceable Through Title V Permit
60. The 90 day total NO_x emissions shall be calculated as a running hourly total of all NO_x emissions. NO_x emissions during periods when the NO_x continuous emission monitor is inoperative shall be assumed to be 42 lbs/hr. [PSD 85-04] Federally Enforceable Through Title V Permit
61. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD 85-04] Federally Enforceable Through Title V Permit
62. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in this permit. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD 85-04] Federally Enforceable Through Title V Permit
63. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions of this permit, and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause. [PSD 85-04] Federally Enforceable Through Title V Permit
64. The owner and operator of the proposed project shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable Federal, State and local air quality regulations. [PSD 85-04] Federally Enforceable Through Title V Permit
65. All correspondence as required by this permit shall be forwarded to: a) Director, Air Division (Attn: AIR-3), EPA Region 9, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95812; c) Air Pollution Control Officer, San Joaquin Valley Air Pollution Control District, 1990 East Gettysburg Avenue, Fresno, CA, 93726-0244. [PSD 85-04] Federally Enforceable Through Title V Permit
66. Baghouse visible emissions shall be monitored in the boiler stack using the opacity monitor installed to comply with the opacity monitoring requirements of 40 CFR 60 Subpart Da while the unit is operating. [40 CFR Part 64] Federally Enforceable Through Title V Permit
67. The baghouse visible emissions as monitored by the boiler stack opacity monitor shall not exceed 2% opacity on a 3-hour rolling average while the boiler is operating. Upon determining an excursion from this requirement, the permittee shall investigate the excursion and take corrective action to minimize emissions and prevent recurrence as expeditiously as practicable. [40 CFR Part 64] Federally Enforceable Through Title V Permit
68. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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69. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit
70. If the District or EPA determine that a Quality improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
71. Dust collection system shall be completely inspected annually while in operation for evidence of particulate matter leaks and repaired as needed. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
72. Dust collector filters shall be thoroughly inspected annually for tears, scuffs, abrasions, holes, or any evidence of particulate matter leaks and shall be replaced as needed. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
73. Records of dust collector maintenance, inspections, and repair shall be maintained. The records shall include identification of the equipment, date of inspection, corrective action taken, and identification of the individual performing the inspection. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-802-9-9

EXPIRATION DATE: 10/31/2009

EQUIPMENT DESCRIPTION:

178 MMBTU/HR ZURN MODEL 22M KEYSTONE AUXILIARY BOILER WITH A TODD MODEL RMB ULTRA LOW NOX BURNER

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, or 0.1 grain/dscf calculated to 12% CO₂ or 10 lb/hr. [District Rules 4201 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
3. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD] Federally Enforceable Through Title V Permit
4. Fuel flow meters dedicated to this boiler for each type of fuel used shall be utilized to monitor the quantity of fuel burned by the boiler. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Operator shall provide that fuel hhv be certified by third party fuel supplier or determined annually by: ASTM D 240-87 or D 2382-88 for liquid hydrocarbon fuels; ASTM D 1826-88 or D 1945-81 in conjunction with ASTM D 3588-89 for gaseous fuels. [District Rules 2520, 9.4.2; 4305, 6.2.1; 4306, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
6. The sulfur content of the fuel oil shall not exceed 0.2% by weight. [County Rule 407 (San Joaquin)] Federally Enforceable Through Title V Permit
7. If the unit is fired on noncertified diesel fuel, then the sulfur content of the fuel being fired in the unit shall be determined using ASTM method D 1072-80, D 3031-81, D 4084-82 or D 3246-81. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
8. If the unit is fired on noncertified diesel fuel, the sulfur content of each fuel source shall be tested weekly, except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. An up to date fuel oil analysis indicating the sulfur content by weight shall be maintained on the premise at all times. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
10. Operator of units simultaneously firing gaseous and liquid fuels shall install and maintain totalizing mass or volumetric flow rate meters in each fuel line to each unit. Volumetric flow rate meters shall be installed in conjunction with temperature and pressure measurement devices. [District Rules 4305, 5.4.1 and 4306, 5.4.1] Federally Enforceable Through Title V Permit
11. The boiler may only be fired on natural gas or fuel oil #2. [District NSR Rule] Federally Enforceable Through Title V Permit
12. Fuel oil #2 shall only be used when the fluidized bed boiler is not in operation. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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13. Fuel oil #2 shall only be used during a natural gas curtailment for a period not to exceed 168 cumulative hours during any one calendar year plus 48 cumulative hours during any one calendar year for equipment testing. [District Rule 4306] Federally Enforceable Through Title V Permit
14. Including periods of startup and shutdown, the total annual heat input to the auxiliary boiler shall not exceed 155,928 MMBtu (10% capacity), except for a one-time-only exemption period as follows: 1.) During the exemption period, the auxiliary boiler and the CFB boiler (N-802-1) shall not be in simultaneous operation. 2.) The exemption shall begin on the date specified by Stockton CoGen Company in its written notification and shall end upon startup of the CFB boiler. Under no circumstances shall the exemption period exceed 90 days. The notification shall be sent to the EPA Region 9 Air Permits Office and to the District in writing at least 10 days prior to the beginning of the exemption period. 3.) Within 30 days after the end of the exemption period, Stockton CoGen Company shall notify the EPA and the District in writing of the actual startup date of the CFB boiler. 4.) For the year in which the exemption period occurs, heat input (calculated as a 12-month rolling average starting the month the exemption period begins) to the auxiliary boiler shall not exceed the lesser of 501,960 MMBtu or the limit determined by the following formula: $H = (4,272 * E) + [427.2 * (365 - E)]$, where H = allowable heat input to the auxiliary boiler (MMBtu), and E = length of exemption period (days) as defined in item 2 above. [District NSR Rule and 40 CFR PART 60, Subpart Db] Federally Enforceable Through Title V Permit
15. Nitrogen oxide (NOx) emissions shall not exceed: A. 0.011 lb NOx/MMBtu or 9 ppmv @ 3% O2 when operated on natural gas. B. 0.215 lb NOx/MMBtu or 150 ppmv @ 3% O2 when operated on liquid fuel fired boilers and steam generators. C. The heat input weighted average of the applicable limits specified in District Rule 4306, 5.1.2 of the two fuels being fired simultaneously for dual fired units. [District Rules 4306, 5.1.1 and 5.1.2; and 4301] Federally Enforceable Through Title V Permit
16. NOx requirements of District Rule 4306, Sections 5.1.1 and 5.1.2, shall not apply during natural gas curtailments to units burning liquid fuel that are normally fired with gaseous fuel. This exemption is limited to 168 cumulative hours of operation per calendar year excluding equipment testing not to exceed 48 hours per calendar year. Any unit so exempted shall monitor and record for each unit the cumulative annual hours of operation on each liquid fuel during curtailment and during testing. [District Rule 4306 4.2 & 6.1.1] Federally Enforceable Through Title V Permit
17. The CO emissions shall not exceed 50 ppmvd @ 3% O2 when fired on natural gas. [District NSR Rule] Federally Enforceable Through Title V Permit
18. The VOC emissions shall not exceed 3 ppmvd as methane @ 3% O2 when fired on natural gas. [District NSR Rule] Federally Enforceable Through Title V Permit
19. The PM10 emissions shall not exceed 0.0076 lb/MMBtu when fired on natural gas. [District NSR Rule] Federally Enforceable Through Title V Permit
20. The SOx emissions shall not exceed 0.0029 lb/MMBtu when fired on natural gas. [District NSR Rule] Federally Enforceable Through Title V Permit
21. When firing on fuel oil #2, emissions shall not exceed the following limits: 28.5 lb-NOx/hr, 36.9 lb-SOx/hr, 10.0 lb-CO/hr, 8.1 lb-VOC/hr, 4.5 lb-PM10/hr. [District NSR Rule] Federally Enforceable Through Title V Permit
22. All emission measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Compliance determinations shall be conducted with the unit operating at conditions representative of normal operations. [District Rules 4305, 5.5.2; 4306, 5.5.2; and 4351, 5.7] Federally Enforceable Through Title V Permit
23. The combined NOx emissions from this boiler and the fluidized bed boiler (N-802-1) shall not exceed 42 lb/hr (3-hour rolling average). [PSD] Federally Enforceable Through Title V Permit
24. The combined NOx emissions from this boiler and the fluidized bed boiler (N-802-1) in any 90-day period shall not exceed 64,980 lb (running 90-day total). [PSD] Federally Enforceable Through Title V Permit
25. The cumulative NOx emissions shall not exceed 219,730 pounds during any one year from both the fluidized bed boiler (N-802-1) and this boiler. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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26. Operator shall ensure that all required source testing conforms with the compliance testing procedures described in District Rule 1081. [District Rule 1081] Federally Enforceable Through Title V Permit
27. Source testing for NOx and CO emissions when fired on natural gas shall be conducted as required by Rule 4306 - "Boilers, Steam Generators, and Process Heaters - Phase 3". [District Rules 4306 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
28. Source tests shall be performed not less than once every 12 months. Upon demonstrating compliance on two consecutive compliance source tests, the following source test may be deferred for up to 36 months. If a test shows noncompliance, the source shall return to annual source testing until compliance is again shown for two consecutive years. [District Rules 4305, 6.3.1; 4306, 6.3.1; and 4351, 6.3] Federally Enforceable Through Title V Permit
29. During the 36-month source testing interval, the owner/operator shall have unit tuned at least twice each calendar year, from four to eight months apart, in which it operates, by a technician that is qualified, to the satisfaction of the APCO, in accordance with the procedure described in Rule 4304 (Equipment Tuning Procedure for Boilers, Steam Generators, and Process Heaters). [District Rule 4306] Federally Enforceable Through Title V Permit
30. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for that calendar year. No tune-up is required for any unit that is not operated during that calendar year. This unit may be test fired to verify availability of the unit for its intended use, but once the test firing is completed the unit shall be shutdown. [District Rule 4306] Federally Enforceable Through Title V Permit
31. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
32. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
33. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
34. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
35. Source testing to measure concentrations of oxides of nitrogen (as NO₂) shall be conducted using EPA method 7E or CARB method 100. [District Rules 4305, 6.2.2 and 4306, 6.2.2] Federally Enforceable Through Title V Permit
36. Source testing to measure concentrations of carbon monoxide (as CO) shall be conducted using EPA method 10 or CARB method 100. [District Rules 4305, 6.2.3 and 4306, 6.2.3] Federally Enforceable Through Title V Permit
37. Source testing to measure the stack gas oxygen shall be conducted using EPA methods 3 or 3A, or CARB method 100. [District Rules 4305, 6.2.4 and 4306, 6.4.4] Federally Enforceable Through Title V Permit
38. The flue gas recirculation rate shall be determined at least on a weekly basis by measuring the stack O₂% by volume (O_s), and windbox O₂% by volume (O_w) using the following equation: $FGR \text{ rate} = \{O_w - 20.9\} / \{O_s - 20.9\} \times 100\%$. 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 week. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
39. The minimum flue gas recirculation rate shall be established by source testing this unit or other representative units per Rule 4305 and as approved by the District. The normal range/level shall be no lower than the minimum flue gas recirculation rate with which compliance with applicable NOx and CO emission limits has been demonstrated through source testing at a similar firing rate. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

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

40. If the flue gas recirculation rate is less than the normal range/level, the permittee shall return the flue gas recirculation rate to the normal range/level as soon as possible, but no longer than 1 hour of operation after detection. If the flue gas recirculation rate is not returned to the normal range/level within 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a source test within 60 days of the first exceedance, to demonstrate compliance with the applicable emission limits at the new flue gas recirculation rate. A District-approved portable analyzer may be used in lieu of a source test to demonstrate compliance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
41. The permittee shall maintain records of the date and time of oxygen concentration measurements, the measured oxygen concentrations, the calculated flue gas recirculation rate, and the firing rate at the time of the oxygen concentration measurements. The records shall also include a description of any corrective action taken to maintain the flue gas recirculation rate within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
42. When in simultaneous operation with the CFB boiler (N-802-1), the auxiliary boiler's firing rate shall not exceed 36.6 MMBtu/hr except during: 1.) periods of CFB boiler startup or shutdown, or 2.) a period of less than 10 hours duration to conduct any emissions testing for the auxiliary boiler required by the EPA, the California Air Resources Board, or the District. For the purposes of this condition, CFB boiler startup and shutdown periods shall be defined as follows: A.) Following CFB boiler repairs that require curing of the refractory material, the startup period shall begin upon initiation of continuous fuel flow to the CFB boiler and shall end after 40 hours or when the generator output reaches 45 MW, whichever comes first. B.) For all startups other than those described in item A above, the startup period shall begin upon initiation of continuous fuel flow to the boiler and shall not last more than 16 hours. [District NSR Rule and PSD] Federally Enforceable Through Title V Permit
43. The owner or operator shall record and maintain records of the hours of operation and the amounts and types of fuel fired for each occurrence. [PSD] Federally Enforceable Through Title V Permit
44. Hourly NOx emissions shall be calculated as the product of the hourly heat input and the maximum allowable NOx emissions rate. [PSD] Federally Enforceable Through Title V Permit
45. The owner/operator shall maintain a file of all measurements, including continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 CFR 60 recorded in a permanent form suitable for inspection. [PSD] Federally Enforceable Through Title V Permit
46. A record of the daily NOx emissions shall be maintained on the premises at all times. [District NSR Rule] Federally Enforceable Through Title V Permit
47. A record of the cumulative NOx emissions for the calendar year from both the fluidized bed boiler (N-802-1) and this boiler shall be updated daily and kept on the premises at all times. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
48. Daily records of the natural gas usage shall be kept. [District Rules 4305, 6.0; 4306, 6.0; and 2520, 9.4.2] Federally Enforceable Through Title V Permit
49. Daily records of the fuel oil #2 usage and cumulative hours of operation when using fuel oil #2 during any one calendar year shall be kept. [District Rules 4305; 4306; and 2520, 9.3.2] Federally Enforceable Through Title V Permit
50. All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rules 1070; 2520, 9.4.2; 4305, 6.1; and 4306, 6.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

51. This boiler shall be in compliance with Title 40, Code of Federal Regulations, Part 60, Subparts A and Db. When this boiler is operating under the exemption allowed in condition #14, Stockton CoGen shall comply with the terms of the plan submitted under the provisions of §60.48b(g)(2); specifically: i.) Stockton CoGen shall demonstrate compliance with the applicable standard for nitrogen oxides by monitoring the flue gas recirculation rate as established by this unit's source test, and ii.) Stockton CoGen shall maintain records of the auxiliary boiler's fuel usage for three years and make these records available to EPA upon request. [40 CFR PART 60, Subpart Db and PSD] Federally Enforceable Through Title V Permit
52. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in this permit. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD] Federally Enforceable Through Title V Permit
53. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions of this permit, and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause. [PSD] Federally Enforceable Through Title V Permit
54. The owner and operator shall operate the stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable Federal, State and local air quality regulations. [PSD] Federally Enforceable Through Title V Permit
55. All correspondence as required by this permit shall be forwarded to: a) Director, Enforcement Div (Attn: A-5), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726-0244. [PSD] Federally Enforceable Through Title V Permit

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

Appendix III
Top-Down BACT Analysis

NO_x Top-Down BACT Analysis

Step 1 - Identify All Possible Control Technologies

Recently, the BACT Guideline 1.1.2 is rescinded from the BACT clearinghouse since District Rule 4320 requires more stringent NO_x emission limit than the one listed in this guideline. The District considers the following NO_x emissions limits to conduct a BACT analysis for new projects:

Achieved-in-Practice:

7.0 ppmvd @ 3% O₂

Technologically Feasible:

5.0 ppmvd @ 3% O₂

Alternate Basic Equipment:

None

Step 2 - Eliminate Technologically Infeasible Options

All control options listed in step 1 are technologically feasible.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

1. 5.0 ppmvd @ 3% O₂
2. 7.0 ppmvd @ 3% O₂

Step 4 - Cost Effectiveness Analysis

5.0 ppmvd @ 3% O₂ with SCR

On June 5, 2009, facility's consultant supplied budgetary estimate of \$650,000 (U.S. Dollars) to purchase an SCR system for this unit. The annualized cost would be:

$$A = (P) \left[\frac{(i)(1+i)^n}{(1+i)^n - 1} \right] \text{ where:}$$

A: Equivalent annual capital cost of the control equipment

P: Present value of the control equipment

i: Interest rate (District policy is to use 10%)

n: Equipment life (District policy is to use 10 years)

$$A = (\$650,000) \left[\frac{(0.1)(1+0.1)^{10}}{(1+0.1)^{10} - 1} \right] = \frac{\$105,785}{\text{yr}}$$

In determining the cost of reduction, typically the District uses the emission reduction that can be achieved from the current "industry standard". Rule 4320 NOx limit of 7.0 ppmvd @ 3% O₂ is assumed to be the "industry standard". Therefore, the reduction from the "industry standard" would be:

$$= \frac{(7.0 - 5.0) \left(8,578 \frac{\text{dscf}}{\text{MMBtu}} \right) \left(46 \frac{\text{lb - NOx}}{\text{lb - mol}} \right) \left(1,559,280 \frac{\text{MMBtu}}{\text{year}} \right)}{\left(379.5 \frac{\text{dscf}}{\text{lb - mol}} \right) \left(\frac{20.95 - 3}{20.95} \right) (10^6)}$$

$$= 3,784 \frac{\text{lb - NOx}}{\text{year}}$$

Cost of Reduction (\$/ton):

$$\frac{\left(\frac{\$105,785}{\text{year}} \right) \left(2,000 \frac{\text{lb}}{\text{ton}} \right)}{\left(3,784 \frac{\text{lb - NOx}}{\text{year}} \right)} = \frac{\$55,912}{\text{ton}}$$

The cost of reduction of NOx emissions is greater than the threshold limit of \$24,500/ton; therefore, an SCR installation is **not cost effective** and will be removed from consideration at this time.

Step 5 - Select BACT

BACT to control NO_x emissions would be to achieve 7.0 ppmvd @ 3% O₂. The applicant has proposed to meet this limit. Therefore, BACT for NO_x emissions is satisfied.

CO Top-Down BACT Analysis

Step 1 - Identify All Possible Control Technologies

Achieved-in-Practice

Natural gas fuel with LPG backup

Technologically Feasible

None

Alternate Basic Equipment

None

Step 2 - Eliminate Technologically Infeasible Options

All of the listed controls are considered technologically feasible for this application.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

1. Natural gas fuel with LPG backup

Step 4 - Cost Effectiveness Analysis

A cost effectiveness analysis must be performed for all control options in the list from step 3 in the order of their rank to determine the cost effective option with the lowest emissions.

The applicant has proposed to use natural gas fuel. Therefore, in accordance with District policy APR 1305 (BACT), Section IX.D, a cost effective analysis is not necessary and no further discussion is required.

Step 5 - Select BACT

BACT for the emission unit is to use natural gas fuel. The facility is proposing to use natural gas fuel; therefore, BACT requirements are satisfied.

VOC Top-Down BACT Analysis

Step 1 - Identify All Possible Control Technologies

Achieved-in-Practice

Natural gas fuel with LPG backup

Technologically Feasible

None

Alternate Basic Equipment

None

Step 2 - Eliminate Technologically Infeasible Options

All of the listed controls are considered technologically feasible for this application.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

1. Natural gas fuel with LPG backup

Step 4 - Cost Effectiveness Analysis

A cost effectiveness analysis must be performed for all control options in the list from step 3 in the order of their rank to determine the cost effective option with the lowest emissions.

The applicant has proposed to use natural gas fuel. Therefore, in accordance with District policy APR 1305 (BACT), Section IX.D, a cost effective analysis is not necessary and no further discussion is required.

Step 5 - Select BACT

BACT for the emission unit is to use natural gas fuel. The facility is proposing to use natural gas fuel; therefore, BACT requirements are satisfied.

PM₁₀ Top-Down BACT Analysis

Step 1 - Identify All Possible Control Technologies

Achieved-in-Practice

Natural gas fuel with LPG backup

Technologically Feasible

None

Alternate Basic Equipment

None

Step 2 - Eliminate Technologically Infeasible Options

All of the listed controls are considered technologically feasible for this application.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

1. Natural gas fuel with LPG backup

Step 4 - Cost Effectiveness Analysis

A cost effectiveness analysis must be performed for all control options in the list from step 3 in the order of their rank to determine the cost effective option with the lowest emissions.

The applicant has proposed to use natural gas fuel. Therefore, in accordance with District policy APR 1305 (BACT), Section IX.D, a cost effective analysis is not necessary and no further discussion is required.

Step 5 - Select BACT

BACT for the emission unit is to use natural gas fuel. The facility is proposing to use natural gas fuel; therefore, BACT requirements are satisfied.

SOx Top-Down BACT Analysis

Step 1 - Identify All Possible Control Technologies

Achieved-in-Practice

Natural gas fuel with LPG backup

Technologically Feasible

None

Alternate Basic Equipment

None

Step 2 - Eliminate Technologically Infeasible Options

All of the listed controls are considered technologically feasible for this application.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

1. Natural gas fuel with LPG backup

Step 4 - Cost Effectiveness Analysis

A cost effectiveness analysis must be performed for all control options in the list from step 3 in the order of their rank to determine the cost effective option with the lowest emissions.

The applicant has proposed to use natural gas fuel. Therefore, in accordance with District policy APR 1305 (BACT), Section IX.D, a cost effective analysis is not necessary and no further discussion is required.

Step 5 - Select BACT

BACT for the emission unit is to use natural gas fuel. The facility is proposing to use natural gas fuel; therefore, BACT requirements are satisfied.

Appendix IV
RMR and AAQA

San Joaquin Valley Air Pollution Control District Risk Management Review

To: Jagmeet Kahlon, AQE – Permit Services
 From: Ester Davila, SAQS – Technical Services
 Date: September 18, 2009
 Facility Name: Stockton Cogen Company
 Location: 1010 Zephyr Street, Stockton CA
 Application #(s): N-802-1-17 & 9-11
 Project #: N-1092178

A. RMR SUMMARY

RMR Summary			
Categories	Two Boilers (Units 1-17 & 9-11)	Project Totals	Facility Totals
Prioritization Score	0.08*	0.08	0.08
Acute Hazard Index	N/A	N/A	N/A
Chronic Hazard Index	N/A	N/A	N/A
Maximum Individual Cancer Risk	N/A	N/A	N/A
T-BACT Required?	No		
Special Permit Conditions?	No		

*Project passed on prioritization with a score less than 1; therefore, no further analysis was required for the RMR.

Proposed Permit Conditions

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

Unit # 1-17

No special conditions are required.

Unit # 9-11

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

B. RMR REPORT

I. Project Description

Technical Services received a request on September 8, 2009, to perform a Risk Management Review and an Ambient Air Quality Analysis for the modification of a 178 MMBtu/hr natural gas fired boiler (unit 19-11) to remove the annual heat input restriction of 155,928 MMBtu/year. Unit 1-17 has no increase in emissions and therefore not considered in this analysis.

II. Analysis

Toxic emissions for the project were calculated using Ventura County emission factors for natural gas external combustion. In accordance with the District's *Risk Management Policy for Permitting New and Modified Sources* (APR 1905-1, March 2, 2001), risks from the proposed project were prioritized using the procedures in the 1990 CAPCOA Facility Prioritization Guidelines and incorporated in the District's HEART's database. The prioritization score for the proposed project was less than 1.0 (see RMR Summary Table). Therefore, no further analysis was necessary for the RMR.

For the AAQA, Technical Services used the AERMOD model with the parameters outlined below and the concatenated meteorological data for 2004-2008 from Stockton to determine the dispersion factors (i.e., the predicted concentration or X divided by the normalized source strength or Q) for a receptor grid.

The following parameters were used for the review:

Analysis Parameters Unit 9-11			
Source Type	Point	Location Type	Urban
Stack Diameter (m)	1.52	Closest Receptor (m)	11.6
Stack Height (m)	22.86	Stack Gas Velocity (m/sec)	13.25
Stack Gas Temperature (K)	425		

The emission rates used for criteria pollutant modeling were 6.59 lb/hr CO, 1.42 lb/hr NO_x, 0.52 lb/hr SO_x, and 1.35 lb/hr PM₁₀.

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*
Values are in µg/m³

Natural Gas RTO	1 Hour	3 Hours	8 Hours	24 Hours	Annual
CO	Pass	X	Pass	X	X
NO _x	Pass	X	X	X	Pass
SO _x	Pass	Pass	X	Pass	Pass
PM ₁₀	X	X	X	Pass	Pass

*Results were taken from the attached PSD spreadsheets.

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 proposed equipment will not cause or significantly contribute to a violation of a State or National AAQS.

The prioritization score for this project is not above 1.0. In accordance with the District's Risk Management Policy, the project is approved **without** Toxic Best Available Control Technology (T-BACT).

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

Appendix V
TV-Form 009

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

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

- SIGNIFICANT PERMIT MODIFICATION ADMINISTRATIVE
 MINOR PERMIT MODIFICATION AMENDMENT

COMPANY NAME: Stockton CoGen Company	FACILITY ID: N- 802
1. Type of Organization: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input type="checkbox"/> Partnership <input type="checkbox"/> Utility	
2. Owner's Name:	
3. Agent to the Owner:	

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

- GT* Based on information and belief formed after reasonable inquiry, the equipment identified in this application will continue to comply with the applicable federal requirement(s).
- GT* Based on information and belief formed after reasonable inquiry, the equipment identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.
- GT* Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.
- GT* Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

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

Glenn Sizemore
Signature of Responsible Official

4/27/09
Date

Glenn Sizemore

Name of Responsible Official (please print)

Plant Manager

Title of Responsible Official (please print)

**Appendix VI
Monitoring Plan**

Monitoring Plan for the Stockton CoGen Auxiliary Boiler Pursuant to 40 CFR 60.49b(c)

The following establishes the monitoring plan for the Stockton CoGen Company's Auxiliary Boiler (N-802-9) in accordance with the requirements of the EPA's Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units (40 CFR Part 60, Subpart Db). Stockton CoGen has requested the removal of a permit fuel use restriction that would allow for an annual capacity factor exceeding 10%. As summarized below, this change requires that Stockton CoGen monitor the Auxiliary Boiler operating conditions and predict NOx emission rates in accordance with a plan submitted pursuant to Section 60.49b(c).

NSPS Requirements

Section 60.44b(a) sets the NOx standard at no lower than 0.10 lb/MMBtu (equivalent to 86 ppm NOx at 3% O₂). This is over 10 times higher than the proposed NOx limit of 7 ppm at 3% O₂ for the Auxiliary Boiler.

Section 60.48b(g) sets out the requirement to prepare a monitoring plan as follows:

- 60.48b(g) The owner or operator of an affected facility that has a heat input capacity of 73 MW (250 MMBtu/hr) or less, and that has an annual capacity factor for . . . natural gas . . . greater than 10 percent (0.10) shall:*
- (1) Comply with the provisions of paragraphs (b), (c), (d), (e)(2), (e)(3), and (f) of this section; or*
 - (2) Monitor steam generating unit operating conditions and predict NOx emission rates as specified in a plan submitted pursuant to §60.49b(c).*

[Emphasis added.]

Section 60.49b(c) lists the specific monitoring plan requirements from the NSPS regulation. The following restates the requirements of 60.49b(c) and provides a list of operating conditions that meet these specific plan requirements.

- 60.49b(c) The owner or operator of each affected facility subject to the NOx standard of §60.44b who seeks to demonstrate compliance with those standards through the monitoring of steam generating unit operating conditions under the provisions of §60.48b(g)(2) shall submit to the Administrator for approval a plan that identifies the operating conditions to be monitored under §60.48b(g)(2) and the records to be maintained under §60.49b(j). This plan shall be submitted to the Administrator for approval within 360 days of the initial startup of the affected facility. If the plan is approved, the owner or operator shall maintain records of predicted nitrogen*

oxide emission rates and the monitored operating conditions, including steam generating unit load, identified in the plan.

Records of predicted NOx emission rates, monitored operating conditions, and steam generating unit load (fuel use rate) are maintained pursuant to Conditions 44, 49, 50, 51, and 54 as described in the Operating Conditions listed below in this plan.

The plan shall:

- (1) Identify the specific operating conditions to be monitored and the relationship between these operating conditions and NOx emission rates (i.e., ng/J or lbs/MMBtu heat input). Steam generating unit operating conditions include, but are not limited to, the degree of staged combustion (i.e., the ratio of primary air to secondary and/ or tertiary air) and the level of excess air (i.e., flue gas O₂ level);*

The specific operating conditions to be monitored are listed in Conditions 6 (fuel flow rate) and 41 (stack oxygen concentration and windbox oxygen concentration), and the specific relationship between these operating parameters and NOx emission rates is defined by Conditions 41 (oxygen measurements versus flue gas recirculation rate), 42 (FGR rate versus NOx emission concentration), and 47 (fuel flow rate and NOx emission rate).

- (2) Include the data and information that the owner or operator used to identify the relationship between NOx emission rates and these operating conditions; and*

Condition 41 defines the relationship between stack and windbox oxygen levels and the flue gas recirculation rate. Condition 42 requires emissions source testing to determine the relationship between flue gas recirculation rate and NOx emission concentrations. Conditions 34 and 35 require that a source test plan be submitted to the SJVAPCD prior to the source test, and Condition 37 requires that the source test results be submitted to the SJVAPCD.

- (3) Identify how these operating conditions, including steam generating unit load, will be monitored under §60.48b(g) on an hourly basis by the owner or operator during the period of operation of the affected facility; the quality assurance procedures or practices that will be employed to ensure that the data generated by monitoring these operating conditions will be representative and accurate; and the type and format of the records of these operating conditions, including steam generating unit load, that will be maintained by the owner or operator under §60.49b(j).*

Conditions 6, 24, and 41 define how fuel flow rate (steam generating unit load) and oxygen concentrations will be monitored on an hourly basis during boiler operation. Conditions 24, 42, and 48 establish quality assurance procedures and practices to ensure that monitoring data will be representative and accurate, and Conditions 28, 29, 34, 36,

and 38 ensure that the source tests will produce representative and accurate data. Conditions 32 and 33 establish boiler tuning criteria to ensure that data collected between source testing periods will be representative and accurate. Finally, Conditions 41, 44, 47, 48, 49, 50, 51, 53, and 54 establish the type and format of the records to be maintained in order to demonstrate compliance with 40 CFR 60.49b(c).

60.49b(c) Monitoring Plan Operating Conditions

The following lists the applicable current permit conditions in ATC N-802-9-9 for the Auxiliary Boiler that satisfy the requirements of 40 CFR 60.49b(c). Recommended changes are in **bold underline** and ~~double strikethrough~~.

Monitoring

6. ~~A fuel flow meters dedicated to this boiler for each type of fuel used shall be utilized to monitor the quantity of natural gas fuel burned by the boiler on an hourly basis whenever the boiler is operating. Monitoring shall not be required if the unit is not in operation.~~
A fuel flow meters dedicated to this boiler for each type of fuel used shall be utilized to monitor the quantity of natural gas fuel burned by the boiler on an hourly basis whenever the boiler is operating. Monitoring shall not be required if the unit is not in operation.
24. All emission measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Compliance determinations shall be conducted with the unit operating at conditions representative of normal operations.
41. The flue gas recirculation rate shall be determined at least on a ~~weekly~~ **hourly** basis by measuring the stack O₂% by volume (O_s), and windbox O₂% by volume (O_w) using the following equation:

$$\text{FGR rate} = \{(O_w \cdot 20.9)/(O_s \cdot 20.9)\} \times 100\%.$$

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 week.~~ Records must be maintained of the dates of non-operation to validate extended monitoring frequencies.

42. The minimum flue gas recirculation rate shall be established by source testing this unit or other representative units per Rule 4305 and as approved by the District. The normal range/level shall be no lower than the minimum flue gas recirculation rate with which compliance with applicable NO_x and CO emission limits has been demonstrated through source testing at a similar firing rate.
47. Hourly NO_x emissions shall be calculated as the product of the hourly heat input and the maximum allowable NO_x emission rate.
54. This boiler shall be in compliance with Title 40, Code of Federal Regulations, Part 60, Subparts A and Db. ~~When this boiler is operating under the exemption~~

~~allowed in condition # 16,~~ Stockton CoGen shall comply with the terms of the this plan submitted under the provisions of §60.48b(g)(2), specifically:

- i.) Stockton CoGen shall demonstrate compliance with the applicable standard for nitrogen oxides by hourly monitoring the flue gas recirculation rate as established by this unit's source test, and
- ii.) Stockton CoGen shall maintain records of the auxiliary boiler's hourly fuel usage for ~~three~~ five years and make these records available to EPA upon request.

Source Testing/Tuning

28. Operator shall ensure that all required source testing conforms with the compliance testing procedures described in District Rule 1081.
29. Source testing for NOx and CO emissions when fired on natural gas shall be conducted as required by Rule 4306 "Boilers, Steam Generators, and Process Heaters - Phase 3".
30. 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.
31. Source tests shall be performed not less than once every 12 months. Upon demonstrating compliance on two consecutive compliance source tests, the following source test may be deferred for up to 36 months. If a test shows noncompliance, the source shall return to annual source testing until compliance is again shown for two consecutive years.
32. During the 36 month source testing interval, the owner/operator shall have the auxiliary boiler unit tuned at least twice each calendar year from four to eight months apart, in any year during which it operates, by a technician that is qualified, to the satisfaction of the APCO, in accordance with the procedure described in Rule 4304 (Equipment Tuning Procedure for Boilers, Steam Generators, and Process Heaters).
33. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for that calendar year. No tune-up is required for any unit that is not operated during that calendar year. This unit may be test fired to verify availability of the unit for its intended use, but once the test firing is completed the unit shall be shutdown.
34. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing.
35. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance.

36. 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.
37. The results of each source test shall be submitted to the District within 60 days thereafter.
38. Source testing to measure concentrations of oxides of nitrogen (as NO₂) shall be conducted using EPA method 7E or CARB method 100.

Recordkeeping

44. The permittee shall maintain records of the date and time of oxygen concentration measurements, the measured oxygen concentrations, the calculated flue gas recirculation rate, and the firing rate at the time of the oxygen concentration measurements. The records shall also include a description of any corrective action taken to maintain the flue gas recirculation rate within the acceptable range.
48. The owner/operator shall maintain a file of all measurements, including continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 CFR 60 recorded in a permanent form suitable for inspection.
49. A record of the daily NO_x emissions shall be maintained on the premises at all times.
50. A record of the cumulative NO_x emissions for the calendar year from both the fluidized bed boiler (N-802-1) and this boiler shall be updated daily and kept on the premises at all times.
51. Daily records of the natural gas usage shall be kept.
53. All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request.

Notifications

43. If the flue gas recirculation rate is less than the normal range/level, the permittee shall return the flue gas recirculation rate to the normal range/level as soon as possible, but no longer than 1 hour of operation after detection.

If the flue gas recirculation rate is not returned to the normal range/level within 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a source test within 60 days of the first exceedance, to demonstrate compliance with the applicable emission limits at the new flue gas

recirculation rate. A District-approved portable analyzer may be used in lieu of a source test to demonstrate compliance.

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.

55. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in this permit. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure.
56. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions of this permit, and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause.