



JUN 03 2010

Mr. John Gruber
Chevron U.S.A., Inc.
P.O. Box 1392
Bakersfield, CA 93302

**Re: Notice of Preliminary Decision - ATC / Certificate of Conformity
Facility # S-1129
Project # S-1093663**

Dear Mr. Gruber:

Enclosed for your review and comment is the District's analysis of an application for Authorities to Construct for Chevron U.S.A., Inc. located within the North Midway Oilfield, CA. Chevron proposes to either retrofit four fuel-fired units or make them dormant for compliance with Rule 4320.

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. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

DW: KR/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



San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT



HEALTHY AIR LIVING™

JUN 03 2010

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 # S-1129
Project # S-1093663**

Dear Mr. Rios:

Enclosed for your review is the District's engineering evaluation of an application for Authorities to Construct for Chevron U.S.A., Inc. located within the North Midway Oilfield, CA, which has been issued a Title V permit. Chevron U.S.A., Inc. is requesting that Certificates of Conformity, with the procedural requirements of 40 CFR Part 70, be issued with this project. Chevron proposes to either retrofit four fuel-fired units or make them dormant for compliance with Rule 4320.

Enclosed is the engineering evaluation of this application, along with the current Title V permit, and proposed Authorities to Construct # S-1129-24-20, '-24-21, '-24-22, '-112-7, '-112-8, '-112-9, '-114-8, '-114-9, '-114-10, '-115-7, '-115-8, and '-115-9 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. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

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JUN 03 2010

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 # S-1129
Project # S-1093663

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of an application for Authorities to Construct for Chevron U.S.A., Inc. located within the North Midway Oilfield, CA. Chevron proposes to either retrofit four fuel-fired units or make them dormant for compliance with Rule 4320.

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. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Thank you for your cooperation in this matter.

Sincerely,



David Warner
Director of Permit Services

DW: KR/cm

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Bakersfield Californian

**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 Chevron U.S.A., Inc. for its crude oil and natural gas production operations located within the North Midway Oilfield, California. Chevron proposes to either retrofit four fuel-fired units or make them dormant for compliance with Rule 4320.

The analysis of the regulatory basis for these proposed actions, Project #S-1093663, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. Written comments on 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, 34946 FLYOVER COURT, BAKERSFIELD, CA 93308.**

San Joaquin Valley Air Pollution Control District Authority to Construct

Modify Steam Generator and Heater Treaters for Rule 4320 Compliance

Facility Name: Chevron USA, Inc. Date: May 13, 2010
Mailing Address: PO BOX 1392 Engineer: Kris Rickards
Bakersfield, CA 93302 Lead Engineer: Rich Karrs
Contact Person: John Gruber RWK S-25-10
Telephone: 661-654-7038
Application #(s): S-1129-24-20, '-24-21, '-24-22, '-112-7, '-112-8, '-112-9, '-114-8, '-114-9,
'-114-10, '-115-7, '-115-8, and '-115-9
Project #: S-1093663
Deemed Complete: August 21, 2009

I. PROPOSAL

Chevron USA, Inc. (hereafter referred to as CUSA) requests Authorities to Construct (ATCs) for the modification of one 25.2 MMBTU/hr natural-gas-fired steam generator (S-1129-24) and three heater treaters in it's Heavy Oil Western Stationary Source in Cymric Oilfield of Kern County. The applicant has requested ATCs for these units with the following compliance options to meet District Rule 4320 requirements:

- Install a low-NO_x burner, upgrade air/fuel train components as necessary, limit NO_x emissions to 9 ppmv @ 3% O₂, and limit fuel gas sulfur content to 5 gr-S/100 dscf
- Designate as non-compliant dormant
- Pay NO_x emissions fee and limit fuel gas sulfur content to 5 gr-S/100 dscf

There is a change to the method of operation for units installing equipment and these changes are modifications pursuant to District Rule 2201, *New and Modified Stationary Source Review Rule*. Designating the units dormant is not considered a modification pursuant to District Rule 2201. Limiting SO_x emissions on units is not considered a modification pursuant to District Rule 2201 (per FYI 111 category 5, revising emission limits).

Heater Treater unit S-1129-114 was designated non-compliant dormant for Rule 4306. In order to comply with District Rule 4306 requirements, CUSA proposes to limit the heater treaters' total annual heat input to less than 9 billion Btu per year.

There will not be an increase in potential emissions of any pollutant as a result of this project. Modification of the NO_x and SO_x emission limits, limiting the sulfur, replacing the burners, and replacing or modifying the air fuel train components are proposed solely to comply with District Rule 4320 requirements.

CUSA received their Title V Permit on June 30, 2002. This modification can be classified as a Title V minor modification pursuant to Rule 2520, Section 3.20, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. CUSA must apply to administratively amend their Title V Operating Permit to include the requirements of the ATC(s) issued with this project.

See Appendix A: Current Operating Permits

II. APPLICABLE RULES

- Rule 1081 Source Sampling (12/16/93)
- Rule 2201 New and Modified Stationary Source Review Rule (9/21/06)
- Rule 2520 Federally Enforceable Potential to Emit (6/21/01)
- Rule 2530 Federally Enforceable Potential to Emit (4/25/02)
- Rule 4001 New Source Performance Standards (NSPS) -- 40 CFR Part 60 Subpart Dc -- **exemption for natural gas fuel**
- Rule 4101 Visible Emissions (2/17/05)
- Rule 4102 Nuisance (12/17/92)
- Rule 4201 Particulate Matter Concentration (12/17/92)
- Rule 4301 Fuel Burning Equipment (12/17/92)
- Rule 4304 Equipment Tuning Procedures for Boilers, Steam Generators, and Process Heaters (8/19/95)
- Rule 4305 Boilers, Steam Generators, and Process Heaters -- Phase 2 (10/16/08)
- Rule 4306 Boilers, Steam Generators, and Process Heaters -- Phase 3 (3/17/05)
- Rule 4307 Boilers, Steam Generators, and Process Heaters -- 2.0 MMBTU/hr to 5.0 MMBTU/hr (10/16/08)
- Rule 4320 Advanced Emission Reduction Options for Boilers, Steam Generators, and Process heaters Greater than 5.0 MMBTU/hr (10/16/08)
- Rule 4351 Boilers, Steam Generators, and Process Heaters -- Phase 1 (8/21/03)
- Rule 4401 Steam Enhanced Crude Oil Production Wells (12/14/06)
- Rule 4405 Oxides of Nitrogen Emissions from Existing Steam Generators Used in Thermally Enhanced Oil Recovery -- Central and Western Kern County Fields (12/17/92)
- Rule 4406 Sulfur Compounds from Oil-Field Steam Generators -- Kern County (12/17/92)
- Rule 4801 Sulfur Compounds (12/17/92)
- CH&SC Section 41700 Health Risk Assessment
- CH&SC Section 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 units are located throughout the North Midway Oil Field of their Heavy Oil Western Stationary Source as shown in the following table. The facility is not located within 1,000 feet of the outer boundary of any K-12 school. Therefore, pursuant to CH&SC 42301.6, California Health and Safety Code (School Notice), public notification is not required for school proximity.

Unit	Site Location	Primary Location		
		¼ Section	Township	Range
S-1129-24	N. Midway	NE34	30S	22E
S-1129-112	N. Midway Station 1	NW02	31S	22E
S-1129-114	N. Midway Station 1	NW02	31S	22E
S-1129-115	N. Midway Station 1	NW02	31S	22E

IV. PROCESS DESCRIPTION

Chevron USA operates equipment for the production of crude oil and natural gas. In thermally enhanced oil recovery (TEOR), natural gas is combusted in steam generators to produce steam for injection into heavy crude oil bearing strata via injection wells to reduce the viscosity of the crude oil, thereby facilitating thermally enhanced oil production. Natural gas-fired heater treaters receive the produced fluids and thermally separate the fluids into vapors, oil, and water components. The liquids are sent to storage tanks for further separation and processing.

The steam generator is used to steam TEOR wells and is permitted to burn TEOR gas as part of a vapor recovery system. The current permitted limit is 30 ppmv NO_x @ 3% O₂. The steam generator will be modified by replacing the burners with North American Ultra Low NO_x burners with Flue Gas Recirculation (FGR). In addition, some piping modifications to the radiant and/or convection sections may be performed to increase efficiency. Documentation on similar North American Ultra Low NO_x burners permitted in other projects show it meets less than 7 ppmv NO_x, particularly when combined with FGR. The heater treaters will install low-NO_x burners previously approved for steam generators at facility S-1128 through project S-1045020 (North American, John Zink, Variflame, or other equivalent burner). Additionally, these units may be made non-compliant dormant instead of completing modifications to comply with Rule District 4320.

The applicant proposes to comply with the NO_x limit of 9 ppmv @ 3% O₂ in Table 1 and the Particulate Matter Control requirement of Section 5.4 by applying a 5 gr/100 scf sulfur fuel content limit. In addition, the applicant proposes using monthly Alternate Monitoring Scheme A (District Policy SSP 1105) with a portable analyzer for the steam generator and heater treaters. Therefore, these units meet the requirements of Rule 4320.

Chevron USA applied for multiple options on meeting compliance with District Rule 4320, one of which is to elect to pay annual fees for units which do not meet the NO_x emission limits pursuant to Section 5.3. However, these units must meet one of the SO_x emission control technologies in Section 5.4 of Rule 4320. For these units, the fuel sulfur content will be limited to 5 gr/100 scf or better.

The maximum operating schedule used for Potential to Emit calculation is 24 hr/day and 365 days per year; except for the heater treaters permitted on S-1129-112 and S-1129-115, which have an annual heat input limit of 9 MMBTU/yr.

V. EQUIPMENT LISTING

Pre-Project Equipment Description (see PTOs & ATCs in Appendix A):

ATC #	Implemented ATC Equipment Description
S-1129-114-5	MODIFICATION OF 9.0 MMBTU/HR GAS-FIRED HEATER TREATER WITH TWO BURNERS EACH RATED AT 4.5 MMBTU/HR - NORTH MIDWAY: DESIGNATE AS DORMANT EMISSIONS UNIT
PTO #	PTO Equipment Description
(ATC) S-1129-24-18	25.2 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED C.E. NATCO STEAM GENERATOR (HSG #60; DIS# 20754-66) WITH O2 ANALYZER/CONTROLLER, NORTH AMERICAN BURNER, AND FLUE GAS RECIRCULATION - DERBY ACRES LEASE
S-1129-112-4	5.4 MMBTU/HR GAS-FIRED HEATER TREATER WITH THREE BURNERS EACH RATED AT 1.8 MMBTU/HR - NORTH MIDWAY
S-1129-114-7	NON-COMPLIANT DORMANT 9.0 MMBTU/HR GAS-FIRED HEATER TREATER WITH TWO BURNERS EACH RATED AT 4.5 MMBTU/HR - NORTH MIDWAY
S-1129-115-4	7.4 MMBTU/HR GAS-FIRED HEATER TREATER WITH THREE BURNERS EACH RATED AT 1.8 MMBTU/HR AND ONE BURNER RATED AT 2.0 MMBTU/HR - NORTH MIDWAY

Proposed Modification Equipment Description (see draft ATCs in Appendix D):

ATC #	Standard Schedule ATC Equipment Description
S-1129-24-20	MODIFICATION OF 25.2 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED C.E. NATCO STEAM GENERATOR (HSG #60; DIS# 20754-66) WITH O2 ANALYZER/CONTROLLER, NORTH AMERICAN BURNER, AND FLUE GAS RECIRCULATION - DERBY ACRES LEASE: INSTALL LOW NOX BURNER, UPGRADE FGR, BLOWER, FUEL TRAIN, AND AIR INTAKE FOR COMPLIANCE WITH NOX STANDARD SCHEDULE (9 PPM) AND 5 GR/100SCF SOX LIMITS FOR RULE 4320 COMPLIANCE
S-1129-112-7	MODIFICATION OF 5.4 MMBTU/HR GAS-FIRED HEATER TREATER WITH THREE BURNERS EACH RATED AT 1.8 MMBTU/HR - NORTH MIDWAY: INSTALL LOW NOX BURNERS AND APPLY NOX STANDARD SCHEDULE (9 PPM) AND 5 GR/100SCF SOX LIMITS FOR RULE 4320 COMPLIANCE
S-1129-114-8	MODIFICATION OF NON-COMPLIANT DORMANT 9.0 MMBTU/HR GAS-FIRED HEATER TREATER WITH TWO BURNERS EACH RATED AT 4.5 MMBTU/HR - NORTH MIDWAY: INSTALL LOW NOX BURNERS AND APPLY NOX STANDARD SCHEDULE (9 PPM) AND 5 GR/100SCF SOX LIMITS FOR RULE 4320 COMPLIANCE
S-1129-115-7	MODIFICATION OF 7.4 MMBTU/HR GAS-FIRED HEATER TREATER WITH THREE BURNERS EACH RATED AT 1.8 MMBTU/HR AND ONE BURNER RATED AT 2.0 MMBTU/HR - NORTH MIDWAY: INSTALL LOW NOX BURNERS AND APPLY NOX STANDARD SCHEDULE (9 PPM) AND 5 GR/100SCF SOX LIMITS FOR RULE 4320 COMPLIANCE

ATC #	DORMANT ATC Equipment Description
S-1129-24-21	MODIFICATION OF 25.2 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED C.E. NATCO STEAM GENERATOR (HSG #60; DIS# 20754-66) WITH O2 ANALYZER/CONTROLLER, NORTH AMERICAN BURNER, AND FLUE GAS RECIRCULATION - DERBY ACRES LEASE: MAKE NON-COMPLIANT DORMANT EMISSIONS UNIT FOR RULE 4320
S-1129-112-8	MODIFICATION OF 5.4 MMBTU/HR GAS-FIRED HEATER TREATER WITH THREE BURNERS EACH RATED AT 1.8 MMBTU/HR - NORTH MIDWAY: MAKE NON-COMPLIANT DORMANT EMISSIONS UNIT FOR RULE 4320
S-1129-114-9	MODIFICATION OF NON-COMPLIANT DORMANT 9.0 MMBTU/HR GAS-FIRED HEATER TREATER WITH TWO BURNERS EACH RATED AT 4.5 MMBTU/HR - NORTH MIDWAY: LIMIT ANNUAL HEAT INPUT TO 9 BILLION BTU FOR RULE 4306 COMPLIANCE AND MAKE NON-COMPLIANT DORMANT EMISSIONS UNIT FOR RULE 4320
S-1129-115-8	MODIFICATION OF 7.4 MMBTU/HR GAS-FIRED HEATER TREATER WITH THREE BURNERS EACH RATED AT 1.8 MMBTU/HR AND ONE BURNER RATED AT 2.0 MMBTU/HR - NORTH MIDWAY: MAKE NON-COMPLIANT DORMANT EMISSIONS UNIT FOR RULE 4320
ATC #	SOx Control Only ATC Equipment Description
S-1129-24-22	MODIFICATION OF 25.2 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED C.E. NATCO STEAM GENERATOR (HSG #60; DIS# 20754-66) WITH O2 ANALYZER/CONTROLLER, NORTH AMERICAN BURNER, AND FLUE GAS RECIRCULATION - DERBY ACRES LEASE: APPLY 5 GR/100 SCF SOX LIMIT FOR RULE 4320 COMPLIANCE
S-1129-112-9	MODIFICATION OF 5.4 MMBTU/HR GAS-FIRED HEATER TREATER WITH THREE BURNERS EACH RATED AT 1.8 MMBTU/HR - NORTH MIDWAY: MAKE NON-COMPLIANT DORMANT EMISSIONS UNIT FOR RULE 4320: APPLY 5 GR/100 SCF SOX LIMIT FOR RULE 4320 COMPLIANCE
S-1129-114-10	MODIFICATION OF NON-COMPLIANT DORMANT 9.0 MMBTU/HR GAS-FIRED HEATER TREATER WITH TWO BURNERS EACH RATED AT 4.5 MMBTU/HR - NORTH MIDWAY: LIMIT ANNUAL HEAT INPUT TO 9 BILLION BTU FOR RULE 4306 COMPLIANCE AND APPLY 5 GR/100 SCF SOX LIMIT FOR RULE 4320 COMPLIANCE
S-1129-115-9	MODIFICATION OF 7.4 MMBTU/HR GAS-FIRED HEATER TREATER WITH THREE BURNERS EACH RATED AT 1.8 MMBTU/HR AND ONE BURNER RATED AT 2.0 MMBTU/HR - NORTH MIDWAY: APPLY 5 GR/100 SCF SOX LIMIT FOR RULE 4320 COMPLIANCE

Post-Project Equipment Description:

PTO #	PTO Equipment Description
S-1129-24-20	25.2 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED C.E. NATCO STEAM GENERATOR (HSG #60; DIS# 20754-66) WITH NORTH AMERICAN MAGNA FLAME GLE ULTRA LOW NOX BURNER, O2 ANALYZER/CONTROLLER AND FLUE GAS RECIRCULATION - DERBY ACRES LEASE
S-1129-112-7	5.4 MMBTU/HR GAS-FIRED HEATER TREATER WITH THREE LOW NOX BURNERS EACH RATED AT 1.8 MMBTU/HR - NORTH MIDWAY
S-1129-114-8	NON-COMPLIANT DORMANT 9.0 MMBTU/HR GAS-FIRED HEATER TREATER WITH TWO LOW NOX BURNERS EACH RATED AT 4.5 MMBTU/HR - NORTH MIDWAY
S-1129-115-7	7.4 MMBTU/HR GAS-FIRED HEATER TREATER WITH THREE LOW NOX BURNERS EACH RATED AT 1.8 MMBTU/HR AND ONE BURNER RATED AT 2.0 MMBTU/HR - NORTH MIDWAY

VI. EMISSION CONTROL TECHNOLOGY EVALUATION

Emissions from natural gas-fired steam generators and heater treaters include NO_x, CO, VOC, PM₁₀, and SO_x. Per the applicant, the units will install an Ultra low-NO_x burner (and optional FGR) that is capable of complying with the performance requirements in District Rule 4320. Documentation on North American Magna-Flame Ultra Low NO_x burners and other equivalent models approved in project S-1045020 for facility S-1128 show it can meet less than 7 ppmv NO_x, particularly when combined with FGR.

Therefore, the units will be compliant with District Rule 4320.

See Appendix B: Manufacturer Guarantee

VII. GENERAL CALCULATIONS

A. Assumptions

- The maximum operating schedule is 24 hours per day
- The unit is fired on TEOR/natural gas
- Natural Gas Heating Value: 1,000 Btu/scf (District Practice)
- F-Factor for Natural Gas: 8,578 dscf/MMBtu corrected to 60°F (40 CFR 60, Appendix B)
- There will be no change in PM₁₀, CO, or VOC emissions as a result of this project
- There will be no change in NO_x emissions for units complying with the NO_x fee pay option of Rule 4320
- Daily NO_x emission limits will not change as a result of this project to account for startup and shutdown of these units

B. Emission Factors

Pre-Project Emission Factors

Permit Units	Pollutant	Pre-Project Emission Factors		Source
S-1129-112, 114, 115	NO _x	0.100 lb-NO _x /MMBtu	82 ppmvd NO _x (@ 3%O ₂)	AP-42 Table 1.4
S-1129-24	NO _x	0.0365 lb-NO _x /MMBtu	30 ppmvd NO _x (@ 3%O ₂)	Current Permit
S-1129-112, 114, 115	SO _x	3.187 lb-SO _x /MMBtu	2000 ppmv (@ 10 %O ₂)	Rule 4801
S-1129-24	SO _x	1.768 lb-SO _x /MMBtu		Current Permit
S-1129-112, 114, 115	PM ₁₀	0.0076 lb-PM ₁₀ /MMBtu		AP-42 Table 1.4-2
S-1129-24	PM ₁₀	0.0100 lb-PM ₁₀ /MMBtu		Current Permit
S-1129-112, 114, 115	CO	0.0840 lb-CO/MMBtu	115 ppmvd CO (@ 3%O ₂)	AP-42 Table 1.4
S-1129-24	CO	0.0355 lb-CO/MMBtu	48 ppmvd CO (@ 3%O ₂)	Current Permit
S-1129-24	VOC	0.0030 lb-VOC/MMBtu	7 ppmvd VOC (@ 3%O ₂)	Current Permit
S-1129-112, 114, 115	VOC	0.0055 lb-VOC/MMBtu		AP-42 Table 1.4-2

Post-Project Emission Factors

Permit Units	Pollutant	Post Project Emission Factors		Source
S-1129-24-20, 112-7, 114-8, 115-7	NO _x	0.011 lb-NO _x /MMBtu	9 ppmvd NO _x (@ 3%O ₂)	Rule 4320 Standard Schedule A.a., C.3 & E.
S-1129-24-20, 24-22, 112-7, 112-9, 114-8, 114-10, 115-7, 115-9	SO _x	0.0143 lb-SO _x /MMBtu	5 gr S/100 scf	Rule 4320 Limit 5.4.1.2

All other post project emissions are equal to pre-project values listed previously.

C. Calculations

1. Pre-Project Potential to Emit (PE1)

S-1129-24:

PE (lb/day) = Heat input (MMBtu/hr) x EF (lb /MMBtu) x Operating Sched. (hr/day)
 PE (lb/yr) = 30 billion Btu/yr x EF (lb /MMBtu)

S-1129-112 and -115:

PE (lb/day) = Heat input (MMBtu/hr) x EF (lb /MMBtu) x Operating Sched. (hr/day)
 PE (lb/yr) = 9 billion Btu/yr x EF (lb /MMBtu)

S-1129-114:

PE (lb/day) = Heat input (MMBtu/hr) x EF (lb /MMBtu) x Operating Sched. (hr/day)
 PE (lb/yr) = Heat input (MMBtu/hr) x EF (lb /MMBtu) x Operating Sched. (hr/yr)

Pre Project Potential to Emit (PE1)										
Permit Unit	Daily PE (lb/day)					Annual PE (lb/yr)				
	NO _x	SO _x	PM ₁₀	CO	VOC	NO _x	SO _x	PM ₁₀	CO	VOC
S-1129-24-18	22.1	1069.3	6.0	21.5	1.8	1,095	53,040	300	1,065	90
S-1129-112-4	13.0	413.0	1.0	10.9	0.7	900	28,683	68	756	50
S-1129-114-7	21.6	688.4	1.6	18.1	1.2	7,884	251,263	599	6,623	434
S-1129-115-4	17.8	566.0	1.3	14.9	1.0	900	28,683	68	756	50

2. Post-Project Potential to Emit (PE2)

S-1129-24:

PE (lb/day) = Heat input (MMBtu/hr) x EF (lb /MMBtu) x Operating Sched. (hr/day)
 PE (lb/yr) = 30 billion Btu/yr x EF (lb /MMBtu)

S-1129-112, 114, and '-115:

PE (lb/day) = Heat input (MMBtu/hr) x EF (lb /MMBtu) x Operating Sched. (hr/day)
PE (lb/yr) = 9 billion Btu/yr x EF (lb /MMBtu)

Rule 4320 Standard Schedule Post Project Potential to Emit (PE2)										
Daily PE (lb/day)						Annual PE (lb/yr)				
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC	NO _x	SO _x	PM ₁₀	CO	VOC
S-1129-24-20	22.1 ¹	8.6	6.0	21.5	1.8	330	429	300	1,065	90
S-1129-112-7	13.0 ¹	1.9	1.0	10.9	0.7	99	129	68	756	50
S-1129-114-8	21.6 ¹	3.1	1.6	18.1	1.2	99	129	68	756	50
S-1129-115-7	17.8 ¹	2.5	1.3	14.9	1.0	99	129	68	756	50

Rule 4320 Dormant Emissions Unit Potential to Emit (PE2) ²										
Daily PE (lb/day)						Annual PE (lb/yr)				
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC	NO _x	SO _x	PM ₁₀	CO	VOC
S-1129-24-21	22.1	1069.3	6.0	21.5	1.8	1,095	53,040	300	1,065	90
S-1129-112-8	13.0	413.0	1.0	10.9	0.7	900	28,683	68	756	50
S-1129-114-9	21.6	688.4	1.6	18.1	1.2	900	28,683	68	756	50
S-1129-115-8	17.8	566.0	1.3	14.9	1.0	900	28,683	68	756	50

Rule 4320 SO _x Control Only Post Project Potential to Emit (PE2)										
Daily PE (lb/day)						Annual PE (lb/yr)				
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC	NO _x	SO _x	PM ₁₀	CO	VOC
S-1129-24-22	22.1	8.6	6.0	21.5	1.8	1,095	429	300	1,065	90
S-1129-112-9	13.0	1.9	1.0	10.9	0.7	900	129	68	756	50
S-1129-114-10	21.6	3.1	1.6	18.1	1.2	900	129	68	756	50
S-1129-115-9	17.8	2.5	1.3	14.9	1.0	900	129	68	756	50

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

SSPE1 calculations are necessary to aid the following determinations:

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

¹ Equal to PE1 to account for startup and shutdown emissions

² For units S-1129-24, '-112, and '-115 PE1 = PE2. Unit '-114 is taking a 9 billion Btu/yr limit to comply with Rule 4306 (daily emissions remain unchanged)

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

Facility emissions are already above the Offset and Major Source Thresholds for all pollutants. There is no increase in potential emissions for any of the units, for any pollutant in this project; therefore, SSPE1 calculations are not necessary.

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

SSPE2 calculations are necessary to aid the following determinations:

- If the facility is becoming a new Major Source,
- An offset threshold will be surpassed, or
- An SSIPE public notice is triggered

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.

Facility emissions are already above the Offset and Major Source Thresholds for all pollutants. There is no increase in potential emissions for any of the units, for any pollutant in this project. The potential to emit NO_x and SO_x will decrease in accordance with District Rules 4306 and 4320. Therefore, SSPE2 calculations are not necessary.

5. Major Source Determination

Pursuant to Section 3.24 of District Rule 2201, a Major Source is a stationary source with post-project emissions or a Post Project Stationary Source Potential to Emit (SSPE2), equal to or exceeding one or more of the following threshold values. However, Section 3.24.2 states, "for the purposes of determining major source status, the SSPE2 shall not include 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."

This source is an existing Major Source for all pollutants and will remain so. No change in Major Source status is proposed or expected as a result of this project.

6. Baseline Emissions (BE)

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

Pursuant to Section 3.7 of District Rule 2201, BE = Pre-project Potential to Emit for:

- Any unit located at a non-Major Source,
- Any Highly-Utilized Emissions Unit, located at a Major Source,
- Any Fully-Offset Emissions Unit, located at a Major Source, or
- Any Clean Emissions Unit, located at a Major Source.

otherwise,

BE = Historic Actual Emissions (HAE), calculated pursuant to Section 3.22 of District Rule 2201.

This project is exempt from offsets pursuant to Rule 2201, Section 4.6.8. Therefore, BE calculations are not required.

7. Major Modification

This facility is an existing major source for all air contaminants.

District Rule 2201 references the definition of major modification provided in 40 CFR 51.165 (v)(A) in effect on December 19, 2002, where major modification means any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act.

Significant is defined under Part 51.165(x) as a net emissions increase in the potential of a source to emit any affected pollutant equal to or exceeding any applicable thresholds. For existing major sources in the San Joaquin Valley Air Basin, which is non-attainment for Ozone and PM10, a major modification occurs if the Net Emissions Increases (NEI) is equal to or greater than one or more of the following threshold values when calculated on actual to PE basis:

Major Modification Thresholds (Existing Major Source)			
Pollutant	NEI (lb/year)	Threshold (lb/year)	Major Modification?
NO _x	>50,000	50,000	Yes ³
SO _x	>80,000	80,000	Yes ³
PM ₁₀	>30,000	30,000	Yes ³
VOC	>50,000	50,000	Yes ³

Therefore, this project is a major modification and public notice is required.

8. Federal Major Modification

Pursuant to Rule 2201 Section 3.17 to determine if a project is a Federal major modification, the calculation procedure in 40 CFR 51.165(a)(2)(ii) shall be used.

This calculation procedure states that if the sum of the differences between the projected actual emissions and the baseline actual emissions (for existing emission units) or the sum of the potentials to emit (for new emission units) is significant, i.e. greater than the values listed in Rule 2201 Table 3-1, the project is a Federal major modification.

For existing emission units where there is no increase in design capacity the projected actual emissions (PAE) are equal to the emission rate at which the unit is projected to emit in any one year selected by the operator within 5 years after the unit resumes normal operation (10 years for existing units with an increase in design capacity). This projection is made by the operator and must be based on all relevant information, e.g. expected business activity.

For emission units (other than electric utility steam generating units) the baseline actual emissions (BAE) are calculated based on any 24 month period selected by the operator within the previous 10 year period. These emissions must not include any non-compliant operation

In calculating the emission increase (PAE – BAE), the portion of the emissions after the project that the unit could have actually emitted (during the same period used to determine BAE) that are unrelated to the particular project and emissions due to increased product demand are excluded.

For rule compliance projects, the difference between the PAE and the BAE (excluding emissions that the unit could have emitted during the baseline period) for pollutants targeted by the subject rule will be a negative value.

³ Due to the large number of affected units proposed by CUSA for Rule 4320 compliance, this project (considering that steam generators typically have actual emissions below their permitted emission levels) is presumed to cross one or more major modification thresholds.

Additionally, it can reasonably be concluded that the difference between the PAE and the BAE (excluding emissions that the unit could have emitted during the baseline period) for non-targeted pollutants will be zero as any increase in actual emissions (after the project) would be due to increases in business activity and not due to the modification itself. Such emission increases are excluded when calculating the emission increase.

For the reasons stated above, this rule compliance project will not result in a significant emission increase and therefore is not a Federal major-modification.

VIII. COMPLIANCE

Rule 1081 Source Testing

Any source operation that may emit air contaminants must ensure that adequate and safe facilities are provided for use in sampling to determine compliance. This rule also specifies methods and procedures for source testing, sample collection, and compliance determination. Additional source test requirements may be imposed by other District Rules.

The following conditions will remain on the ATCs to ensure compliance with this rule:

- Source testing shall be conducted using the methods and procedures approved by the District. Source testing for compliance demonstration shall be witnessed or authorized by District personnel. 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]
- {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

Rule 2201 New and Modified Stationary Source Review Rule

S-1129-24-21, '-24-22, '-112-8, '-112-9, '-114-9, '-114-10, '-115-8, and '-115-9:

These specified modifications to designate the units as non-compliant dormant and to modify the SO_x emissions limit to comply with Rule 4320 do not meet the following criteria for a Modification, as defined in Section 3.26, and are therefore not subject to this rule.

- Any change in hours of operation, production rate, or method of operation of an existing emissions unit, which would necessitate a change in permit conditions.
- Any structural change or addition to an existing emissions unit which would necessitate a change in permit conditions. Routine replacement shall not be considered to be a structural change.
- An increase in emissions from an emissions unit caused by a modification of the Stationary Source when the emissions unit is not subject to a daily emissions limitation.

- Addition of any new emissions unit which is subject to District permitting requirements.
- A change in a permit term or condition proposed by an applicant to obtain an exemption from an applicable requirement to which the source would otherwise be subject.

Compliance with this rule is expected for these modifications.

S-1129-24-20, '-112-7, '-114-8, and '-115-7 modifications are all subject to this rule as follows:

A. Best Available Control Technology (BACT)

1. BACT Applicability

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

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

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

BACT shall not be required for the following:

4.2.3 For existing facilities, the installation or modification of an emission control technique performed solely for the purpose of compliance with the requirements of District, State or Federal air pollution control laws, regulations, or orders, as approved by the APCO, shall be exempt from Best Available Control Technology for all air pollutants, provided all of the following conditions are met:

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

The proposed modifications are solely for compliance with District Rule 4320 requirements. The modification does not result in an increase in the physical or operational design or permitted rating of the units. There is also no increase in permitted emissions for any affected pollutant. Therefore, the project is exempt from BACT requirements.

B. Offsets

1. Offset Applicability

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

Emission offsets shall not be required for the following:

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

The proposed modifications are solely for compliance with District Rule 4320; and do not result in an increase in the physical or operational design of the existing facility nor an increase in permitted emissions or potential to emit exceeding the thresholds listed above. Therefore, offsets for this project are not required.

C. Public Notification

1. Applicability

Public noticing is required for:

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

a. New Major Source

This facility is an existing facility and is not a new facility. Therefore public noticing is not required for New Major Source purposes.

b. Major Modification

As demonstrated in VII.C.7, this project does constitute a Major Modification; therefore, public noticing for Major Modification purposes is required.

c. PE > 100 lb/day

Applications which include a new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements. This project does not include any new emissions units, therefore, public noticing for a new unit with a PE >100 lb/day is not necessary.

d. Offset Threshold

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

There is no increase in permitted emissions as a result of this project. Therefore, the SSPE is not increasing with this project and an offset threshold cannot be surpassed as a result of this project. A public notice will not be required for offset threshold purposes.

e. SSIPE > 20,000 lb/year

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

There is no increase in permitted emissions as a result of this project. As a result, SSPE is not increasing with this project. Therefore, the SSIPE is zero for all pollutants and public notice will not be required for SSIPE purposes.

2. Public Notice Action

As discussed above, public noticing is required for this project as a major modification. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB) and a public notice will be published in a local newspaper of general circulation prior to the issuance of the ATC for this equipment.

D. Daily Emission Limits (DELs)

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

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

S-1129-24-20, '-112-7, '-114-8, and '-115-7:

- Except during start-up, shutdown, or the initial shakedown period, emissions shall not exceed any of the following limits: 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 48 ppmvd CO @ 3% O₂ or 0.0355 lb-CO/MMBtu. [District Rules 2201 and 4320]
- Including startup and shutdown periods, maximum emissions from the steam generator shall not exceed any of the following limits: 0.1 lb-NO_x/MMBtu, XXX lb-NO_x/day, XXX lb-NO_x/year, XX lb-CO/MMBtu, XXX lb-CO/day, and XXX lb-CO/year. [District Rule 2201]

E. Compliance Assurance

1. Source Testing

These units are subject to District Rule 4320, *Advanced Emission Reduction Options for Boilers, Steam Generators, and Process heaters Greater than 5.0 MMBTU/hr*. Source testing requirements, in accordance with District Rule 4320 will be discussed in Section VIII of this evaluation.

2. Monitoring

As required by District Rule 4320, *Advanced Emission Reduction Options for Boilers, Steam Generators, and Process heaters Greater than 5.0 MMBTU/hr*, these units are subject to monitoring requirements. Monitoring requirements, in accordance with District Rule 4320 will be discussed in Section VIII of this evaluation.

3. Recordkeeping

These units are subject to recordkeeping requirements as required by District Rule 4320, *Advanced Emission Reduction Options for Boilers, Steam Generators, and Process heaters Greater than 5.0 MMBTU/hr Recordkeeping*, in accordance with District Rule 4320 will be discussed in Section VIII of this evaluation.

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

Rule 2520 Federally Mandated Operating Permits

Chevron USA currently received their Title V operating permit on 11/30/01. The proposed modification is a Minor Modification to the Title V Permit pursuant to Section 3.20 of this rule. As discussed previously in the proposal section, the facility has applied for a Certificate of Conformity (COC). Therefore, the facility must apply to administratively amend their Title V Operating Permit to include the requirements of the ATCs issued with this project. The following conditions will be listed on the ATC to ensure compliance:

- {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520, 5.3.4]
- {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]

In addition, the applicant proposed to have several compliance options depending on the scenario chosen for the particular steam generator or heater treater. However, emission limits for the standard schedule units is stricter than other compliance options. Therefore, the ATCs will include a condition to cancel and replace the other compliance versions in order to negate future complications upon implementation. For example, the ATCs will have conditions as follows:

Standard Schedule ATCs (S-1129-24-20)

- Authority to Construct permits S-1129-24-21 and S-1129-22 shall be cancelled upon implementation of this ATC. [District Rule 2201]

Rule 4001 New Source Performance Standards (NSPS)

40 CFR Part 60 Subpart Dc is applicable to each steam-generating unit that is greater than 10 MMBtu/hr, but less than 100 MMBtu/hr for which construction, modification, or reconstruction has commenced after June 9, 1989. The applicant is granted a permit shield from the requirements of this subpart because the steam generator was constructed prior to June 19,

1989 and have not been modified or reconstructed as defined in 40 CFR 60.14-.15. In addition, these units qualify for the exemption under 40CFR 60.42 (j) for firing on fuels other than oil or coal.

40 CFR Part 72 is applicable to each steam-generating unit used to produce electricity, commenced commercial operation after November 15, 1990, or serves a generator greater than 25 MW. The steam generator is not used to produce electricity; therefore this regulation does not apply to the units in this project.

Rule 4101 Visible Emissions

District Rule 4101, Section 5.0, indicates that no air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour, which is dark or darker than Ringlemann 1 or equivalent to 20% opacity. Compliance with this rule is expected provided the equipment is well maintained. In addition, this rule applies to the facility-wide permit.

Rule 4102 Nuisance

Section 4.0 prohibits discharge of air contaminants, which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result of these operations provided the equipment is well maintained. In addition, this rule applies to the facility-wide permit.

California Health & Safety Code 41700 (Health Risk Assessment)

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

As demonstrated above, there are no increases in emissions associated with this project, therefore a health risk assessment is not necessary and no further risk analysis is required.

California Health & Safety Code 42301.6 (School Notice)

This facility is not located within 1,000 feet of a school. Regardless, there is no increase in emissions of any hazardous air pollutants with this project; therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

Rule 4201 Particulate Matter Concentration

Section 3.1 prohibits discharge of dust, fumes, or total particulate matter into the atmosphere from any single source operation in excess of 0.1 grain per dry standard cubic foot. The worst case emissions unit will be used for this calculation (C-311-21 @ 0.08 lb-PM₁₀/MMBtu).

F-Factor for NG: 8,578 dscf/MMBtu at 60 °F
 PM10 Emission Factor: 0.0490 lb-PM10/MMBtu
 Percentage of PM as PM10 in Exhaust: 100%
 Exhaust Oxygen (O₂) Concentration: 3%
 Excess Air Correction to F Factor = $\frac{20.9}{(20.9 - 3)} = 1.17$

$$GL = \left(\frac{0.08 \text{ lb - PM}}{\text{MMBtu}} \times \frac{7,000 \text{ grain}}{\text{lb - PM}} \right) / \left(\frac{8,578 \text{ ft}^3}{\text{MMBtu}} \times 1.17 \right)$$

$GL = 0.06 \text{ grain/dscf} < 0.1 \text{ grain/dscf}$

Therefore, compliance with District Rule 4201 requirements is expected and the following condition will be listed on the permit:

- Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3]

Rule 4301 Fuel Burning Equipment

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

District Rule 4301 Limits (lb/hr)			
Pollutant	NO ₂	Total PM	SO ₂
Worst case pollutants (lb/hr)	0.9 @ 0.10 lb/MMBtu	0.25 @ 0.01 lb/MMBtu	28.7 @ 3.187 lb/MMBtu
Rule Limit (lb/hr)	140	10	200

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

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

This rule provides equipment tuning procedures for boilers, steam generators and process heaters to control visible emissions and emissions of both nitrogen oxides (NO_x) and carbon monoxide (CO). There are two tuning procedures outlined in the rule, but other procedures may be used if approved by the District. A combustion analysis must be performed during tuning using one of the following methods: flue gas analysis methods for CO, CO₂, O₂, H₂O, etc., ASTM D2156 or Bacharach smoke-spot method (for liquid fuels), or other approved method. The heater treaters were required to conduct equipment tuning pursuant to Rule 4306; however, Rule 4320 requires monthly monitoring in place of equipment tuning.

Therefore, the following conditions previously listed on the permits will remain on the non-compliant dormant and SO_x only units and removed on the NO_x and SO_x compliant units. These conditions will be added to unit S-1129-114-9 and '-10 as this unit will be required to tune in conjunction with a 9 billion Btu/yr fuel limit for compliance with Rule 4306:

- 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]
- 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]

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

This rule limits the NO_x and CO emissions from boiler, steam generator, or process heater with a total heat input greater than 5.0 MMBtu/hr. Section 5.1 limits the NO_x emissions to 30 ppmv @ 3% O₂ or 0.036 lb/MMBtu and CO emissions to 400 ppmv @ 3% O₂ for gaseous fuel-fired units.

In addition, these units are also subject to District Rule 4306, *Boilers, Steam Generators and Process Heaters – Phase 3*.

Since the emissions 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 the requirements of District Rule 4305.

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

This rule limits the NO_x and CO emissions from boiler, steam generator, or process heater with a total heat input greater than 5.0 MMBtu/hr. Section 5.1 limits the NO_x emissions to 15 ppmv @ 3% O₂ or 0.018 lb/MMBtu and CO emissions to 400 ppmv @ 3% O₂ for gaseous fuel-fired units used in the oilfield.

The units are natural gas-fired with a total maximum heat input greater than 5 MMBtu/hr per unit. Pursuant to Section 2.0 of District Rule 4306, the unit is subject to District Rule 4306.

In addition, units proposing to comply with the NO_x/SO_x and NO_x fee option with SO_x control are also subject to District Rule 4320, *Advanced Emission Reduction Options for Boilers, Steam Generators, and Process heaters Greater than 5.0 MMBTU/hr*. Since emissions limits of District Rule 4320 and all other requirements are equivalent or more stringent than District Rule 4306 requirements, compliance with District Rule 4320 requirements will satisfy requirements of District Rule 4306.

Units S-1129-112 and -115 were limited to 9 billion Btu/yr and are currently in compliance with Rule 4306. Therefore, continued compliance with this rule is expected.

Unit S-1129-114 is currently non-compliant dormant for Rule 4306. CUSA has proposed to limit this units annual fuel input to 9 billion Btu/yr to comply with Rule 4306. This heater treater will be evaluated for compliance with this rule as follows:

Section 5.1, NO_x and CO Requirements

Since the maximum heat input of the unit will be limited to less than 9 billion Btu/year, the units are subject to Section 5.2 of District Rule 4306, and will not be subject to the requirements of Section 5.1.

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

- {2966} Maximum annual heat input of the unit shall not exceed 9 billion Btu per calendar year. [District Rules 2201, 4305, and 4306]

Section 5.2, Low Use

For a unit that is limited to less than 9 billion Btu heat input per calendar year pursuant to a Permit to Operate, the operator shall comply with the requirement of Section 7.4 and one of the following:

- tune the unit at least twice per calendar year, (from four to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304 (Equipment Tuning Procedure for Boilers, Steam Generators, and Process Heaters). 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; or
- operate the unit in a manner that maintains exhaust oxygen concentrations at less than or equal to 3.00 percent by volume on a dry basis; or
- operate the unit in compliance with the applicable emission limits of Sections 5.1.1 or 5.1.2.

Since the applicant has chosen the tune-up option listed above, the following permit conditions will be listed on the permit as follows:

- {2969} 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]

- {2970} 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]

Section 5.3, Start-up and Shut Down

Since the unit is not subject to Sections 5.1, 5.2.2 or 5.2.3, the requirements of this section does not apply to the unit.

Section 5.4, Monitoring Provisions

Pursuant to Section 5.4.1 and 5.4.2, since the unit is not subject to Sections 5.1, it is not subject to the requirements of these sections.

Pursuant to Section 5.4.3, since the applicant has chosen the tune-up option, monthly monitoring of the operational characteristics is required. A permit condition will be listed on the permit as follows:

- The permittee shall monitor, at least on a monthly basis, fluid temperature and fluid interface level or other operational characteristics recommended by the unit manufacturer. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306]

Pursuant to Section 5.4.4, the operator of any unit subject to Section 5.2.1 or 5.2.2 shall install and maintain an operational non-resettable, totalizing mass or volumetric flow meter in each fuel line to each unit. Volumetric flow measurements shall be periodically compensated for temperature and pressure. A master meter, which measures fuel to all units in a group of similar units, may satisfy these requirements if approved by the APCO in writing. The cumulative annual fuel usage may be verified from utility service meters, purchase or tank fill records, or other acceptable methods, as approved by the APCO.

Therefore, a permit condition will be listed as follows:

- {2965} A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of natural gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201, 4305, and 4306]

Section 5.5, Compliance Determination

The applicant proposed to limit the total heat input to the unit to less than 9 billion Btu/yr. As discussed above, the unit is not subject to the requirements of Sections 5.1, and therefore is not subject to the requirements of this section.

Section 6.1, Recordkeeping

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.

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

- {2983} All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306]

Section 6.1.2 requires that the operator of a unit subject to Section 5.2 shall record the amount of fuel use at least on a monthly basis.

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

- {2981} Records of monthly and annual heat input of the unit shall be maintained. [District Rules 2201, 4305, and 4306]

Section 6.1.3 requires that the operator of a unit subject to Section 5.2.1 or 3.3.1 shall maintain records to verify that the required tune-up and the required monitoring of the operational characteristics have been performed.

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

- {2982} Records of tune-up and monitoring of the operational characteristics of the unit shall be maintained. [District Rules 4305 and 4306]

Section 6.3, Compliance Testing

Since the unit is not subject to the requirements of Sections 5.1 or 5.2.3, it is not subject to the requirements of this section.

Section 6.3, Emission Control Plan (ECP)

Section 6.4.1 requires that the operator of any unit shall submit to the APCO for approval an Emissions Control Plan according to the compliance schedule in Section 7.0 of District Rule 4306.

CUSA has already submitted an ECP for this unit.

Section 7.4, Compliance Schedule, Modification of Operation

Section 7.4 requires that any unit that becomes subject to the emission limits of this rule as a result of exceeding the applicable annual heat input limit specified in either Section 5.1.1 Table 1 Category H or Section 5.2, shall be in compliance with the applicable requirements for Category A and B units in Section 5.1.1 on and after the date the annual heat input limit is exceeded.

Rule 4307 Boilers, Steam Generators and Process Heaters – 2.0 MMBTU/hr to 5.0 MMBTU/hr

This rule limits the NO_x and CO emissions from boiler, steam generator, or process heater with a total heat input rated between 2.0 MMBTU/hr to 5.0 MMBtu/hr. Section 5.1 limits the NO_x emissions to 30 ppmv @ 3% O₂ or 0.036 lb/MMBtu and CO emissions to 400 ppmv @ 3% O₂ for gaseous fuel-fired units. The steam generator and heater treaters are larger than 5 MMBTU/hr; therefore this rule does not apply to the emissions units in this project.

Rule 4320 Advanced Emission Reduction Options for Boilers, Steam Generators, and Process heaters Greater than 5.0 MMBTU/hr

The purpose of this rule is to limit emissions of oxides of nitrogen (NO_x), carbon monoxide (CO), oxides of sulfur (SO₂), and particulate matter 10 microns or less (PM10) from boilers, steam generators, and process heaters rated greater than 5.0 MMBTU/hr heat input using gas or liquid fuel. In addition, Rule 4320 lists monitoring, operation, maintenance, testing and administrative requirements.

Section 5.2 Table 1 lists compliance deadlines for NO_x and CO emission limits. CO emissions are limited to 400 ppmv @ 3% O₂ beginning October 1, 2008. For units rated greater than 5.0 MMBTU/hr and less than 20 MMBTU/hr and using the Standard Schedule, an Authority to Construct (ATC) application must be submitted to modify the unit to achieve a NO_x emission limit of 9 ppmv @ 3% O₂ (or 0.011 lb/MMBtu) by July 1, 2011; whereas, the compliance deadline is July 1, 2012. Alternatively, oilfield steam generators which fire on less the 50% PUC-quality gas have a Staged Enhanced Schedule of 12 ppmv NO_x @ 3% O₂ (or 0.014 lb/MMBtu) by July 1, 2011 with a final limit of 9 ppmv @ 3% O₂ (or 0.0011lb/MMBtu) by January 1, 2014. Units that were previously limited to an annual heat input less than 30 MMBTU/yr must achieve a NO_x emission limit of 9 ppmv @ 3% O₂ (or 0.011 lb/MMBtu) by July 1, 2014.

CUSA is proposing to meet the staged enhanced schedule for the steam generator (Table 1, Category C.2.b) and standard schedule for the heater treaters (Table 1, Category E). The following condition will be listed on the ATCs to ensure compliance:

S-1129-24-20, 112-7, 114-8, 115-7:

- Except during start-up, shutdown, or the initial shakedown period, emissions shall not exceed any of the following limits: 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 48 ppmvd CO @ 3% O₂ or 0.0355 lb-CO/MMBtu. [District Rules 2201 and 4320]

One compliance scenario entails making the units dormant emissions units. Therefore, the following conditions will be incorporated into the permit to enforce the dormant emission unit status pursuant to District Policy SSP 1705. The conditions below will be placed ahead of the existing permit conditions:

S-1129-24-21, 112-8, 114-9, 115-8:

- No modification to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in the following conditions. [District Rule 2201]
- This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306, 4320 and all other applicable District regulations. [District Rules 4306 and 4320]
- The permittee shall notify the District at least seven calendar days prior to the designation of this permit unit as a dormant emissions unit or an active emissions unit. [District Rule 1070]
- When designated as a dormant emissions unit the fuel supply line shall be physically disconnected from the emissions unit. [District Rule 2080]
- When designated as a dormant emissions unit, the permittee shall not be required to perform source testing, fuel sulfur content certification, and monitoring requirements. [District Rules 2201 and 4320]

Section 5.4 imposes particulate matter control beginning on July 1, 2013 by limiting the sulfur content in fuel to 5 grains per 100 scf or PUC-quality gas or by installing a SO₂ emission control system capable of 95% reduction or 9 ppmv SO₂ @ 3% O₂ in the exhaust. In addition Section 5.5.3 requires monitoring to demonstrate compliance with the sulfur limit. The steam generator meets the particulate matter control requirements by firing the steam generator on PUC-quality natural gas or accepting a 5 gr S/100 scf fuel gas limit. The following conditions will be listed on the ATCs to demonstrate compliance:

S-1129-24-20 and '-24-22:

- The operator shall fire the unit only on PUC-quality natural gas and gas from the following permit units: PTO S-1129-386. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5.0 gr S/100 scf. [District Rules 2201, 4406, and 4320; and CH&SC 41700]

S-1129-112-7, '-112-9, '-114-8, '-114-10, '-115-7, and '-115-9:

- The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5.0 gr-S/100 scf. [District Rules 2201,4406, and 4320]

Sections 5.5 and 5.6 details requirements for operation and maintenance of the steam generator and heater treaters. Shutdown and start-up periods should not be more than two hours per occurrence. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. The following conditions will be listed on the ATCs to demonstrate compliance:

S-1129-24-20, '-24-22, '-112-7, '-112-9, '-114-8, '-114-10, '-115-7, and '-115-9:

- Duration of startup or shutdown shall not exceed two hours each per occurrence. The emissions control system shall be in operation and emissions shall be minimized insofar as technologically possible during startup and shutdown. [District Rules 4305, 5.5.6 and 4320, 5.3]
- Permittee shall maintain records of duration of each start-up and shutdown that exceeds two hours. Startup is defined as the period of time to reach operating temperature and pressure once fuel is supplied, including the time required by the emission control system to reach full operation. Shutdown is defined as the period of time taken from operating temperature and pressure until the fuel supply is completely turned off. [District Rules 2201 and 4320]

Monitoring:

Pursuant to Section 5.7, the applicant is required to monitor the operational characteristics recommended by the manufacturer using a method approved by the APCO. In lieu of installing and maintaining a Continuous Emissions Monitoring System (CEMS), NO_x and CO emissions can be monitored using a portable analyzer and adjusting the equipment to operate in compliance. For low-use units less than 1.8 MMBTU/yr heat input, tuning the unit is required at least twice per calendar year in accordance with Rule 4304. However, monthly monitoring is required for these units as they are permitted to operate more often. The facility proposed monitoring that meets this requirement; therefore, the following conditions will be listed on the ATCs.

S-1129-24-20, '-24-22, '-112-7, '-112-9, '-114-8, '-114-10, '-115-7, and '-115-9:

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

operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. [District Rule 4320]

- All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4320]
- All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 5.8 of District Rule 4320. [District Rule 4320]

Since the units are meeting the sulfur emissions requirement of Section 5.4 by firing on only PUC-quality natural gas or limiting the fuel sulfur to 5 gr S/100 scf, compliance with this condition is demonstrated through a fuel analysis. The PUC regularly certifies the sulfur content of the natural gas; therefore, the applicant can meet this requirement for PUC purchased gas by maintaining purchase or certification records instead of source testing. Therefore the following condition is added to the ATCs:

S-1129-24-20, '-24-22, '-112-7, '-112-9, '-114-8, '-114-10, '-115-7, and '-115-9:

- Each fuel source shall be tested quarterly for sulfur content (as H₂S) and higher heating value. If a fuel content test fails to show compliance, weekly testing is required until compliance is demonstrated for 8 consecutive weeks, after which quarterly testing may resume. [District Rule 2520, 9.3.2 and Rule 4320, 5.7.6]
- If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 2520, 9.3.2]
- If the unit is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. Fuel samples shall be taken or calculated while operating at less than 50% by volume PUC-quality gas. The sulfur content of the fuel shall be

determined using the test methods referenced in this permit. [District Rule 2520, 9.3.2 and Rule 4320, 5.7.6]

- If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 4320]

Record Keeping:

Section 6.1 pertains to records verifying that all the required monitoring, maintenance and operation be maintained for a period of 5 years and made available to District personnel upon request.

S-1129-24-20, '-24-22, '-112-7, '-112-9, '-114-8, '-114-10, '-115-7, and '-115-9:

- The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4320]
- 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, 4320 and 4351]
- Permittee shall maintain daily records of total combined volume of fuel gas and vapor recovery gas burned, the sulfur content as determined by analytical testing or fuel supplier invoices/certifications, and permit number(s) of systems providing gas for incineration. [District Rules 2201, 2520, and 4320]

Source Testing:

Pursuant to Sections 6.3, initial source testing for NO_x and CO will be required for units S-1129-24-20, '-112-7, '-114-8, and '-115-7 to demonstrate compliance with the applicable emissions limits. Therefore, the following conditions will be listed on the ATCs:

- Source testing to measure 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 2201 and 4320, 6.3.1]
- The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4320]

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

The purpose of this rule is to limit emissions of oxides of nitrogen (NO_x) from boilers, steam generators, and process heaters to levels consistent with reasonably available control technology (RACT). This rule applies to any boiler, steam generator or process heater, with a rated heat input greater than 5 million Btu per hour that is fired with gaseous and/or liquid fuels, and is included in a major NO_x source. This rule does not apply to any unit located west of Interstate Highway 5 located in Fresno, Kern, or Kings County. The Heavy Oil Western Stationary Source Field is west of I-5 therefore, this rule does not apply.

Rule 4401 Steam Enhanced Crude Oil Production Wells

This rule limits VOC emissions from oil production wells using steam to enhance oil recovery. Emissions from vapor collection and control system components are also regulated under this rule, but this rule does not apply to all steam generators or other crude oil production equipment. The requirements for authorized TEOR steam generators are a VOC reduction of at least 99% and minimization of leaks.

All the heater treaters are permitted to burn PUC-quality gas and are not part of the vapor control system. Steam generator S-1129-24 is part of the vapor control system and is authorized to incinerate TEOR gas from the wells listed on permit S-1129-386. A source test of the VOC collection and control system is required annually; however, these conditions are already listed on the permit for the TEOR system. Therefore, compliance with this rule is expected.

Rule 4405 Oxides of Nitrogen Emissions from Existing Steam Generators Used in Thermally Enhanced Oil Recovery – Central and Western Kern County Fields

This rule limits NO_x emissions to 0.14 lb/MMBTU for existing steam generators located in Kern County. An existing steam generator is defined as one installed and operated in thermal enhanced oil recovery (TEOR) prior to August 22, 1986. The steam generator S-1129-24 may be considered an existing steam generator and would be subject to this rule and a limit of 0.14 lb-NO_x/MMBTU.

However, the units in this project are also subject to District Rule 4320, *Advanced Emission Reduction Options for Boilers, Steam Generators, and Process heaters Greater than 5.0 MMBTU/hr*. Since emissions limits of District Rule 4320 and all other requirements are equivalent or more stringent than District Rule 4405 requirements, compliance with District Rule 4320 requirements will satisfy requirements of District Rule 4405.

Rule 4406 Sulfur Compounds from Oil-Field Steam Generators – Kern County

This rule limits sulfur compound emissions to 0.11 lb/MMBtu for existing steam generators located in Kern County. An existing steam generator is defined as one that had an ATC or PTO prior to September 12, 1979. The steam generator S-1129-24 may be considered an existing steam generator and would be subject to this rule.

In addition, the units in this project are also subject to District Rules 4306 and 4320. Since emissions limits of District Rules 4306 and 4320 and all other requirements are equivalent or more stringent than District Rule 4406 requirements, compliance with District Rules 4306 and 4320 requirements will satisfy requirements of District Rule 4406. Therefore, compliance with this rule is expected.

Rule 4801 Sulfur Compounds

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

In addition, the units in this project are also subject to District Rules 4306 and 4320. Since emissions limits of District Rules 4306 and 4320 and all other requirements are equivalent or more stringent than District Rule 4801 requirements, compliance with District Rules 4306 and 4320 requirements will satisfy requirements of District Rule 4801. Therefore, compliance with this rule is expected.

California Environmental Quality Act (CEQA)

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

IX. RECOMMENDATION

Compliance with all applicable rules and regulations is expected. Pending a successful EPA review and NSR Public Noticing period, issue Authorities to Construct S-1129-24-20, '-24-21, '-24-22, '-112-7, '-112-8, '-112-9, '-114-8, '-114-9, '-114-10, '-115-7, '-115-8, and '-115-9 subject to the permit conditions on the attached draft Authorities to Construct in Appendix D.

X. BILLING INFORMATION

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-1129-24	3020-02-H	25.2 MMBTU/hr Steam Generator	\$ 1,030
S-1129-112	3020-02-G	5.4 MMBTU/hr Heater Treater	\$ 815
S-1129-114	3020-02-G	9.0 MMBTU/hr Heater Treater	\$ 815
S-1129-115	3020-02-G	7.4 MMBTU/hr Heater Treater	\$ 815

Appendices

- A: Current Operating Permits**
- B: Manufacturer Guarantee**
- C: TVFORM-009**
- D: Draft ATCs**

Appendix A

Current Operating Permits

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: 02/09/2007

PERMIT NO: S-1129-24-18

LEGAL OWNER OR OPERATOR: CHEVRON U S A INC
MAILING ADDRESS: PO BOX 1392
BAKERSFIELD, CA 93302

LOCATION: HEAVY OIL WESTERN
CA

SECTION: NE34 TOWNSHIP: 30S RANGE: 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 25.2 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED C.E. NATCO STEAM GENERATOR (HSG #60; DIS# 20754-66) WITH O2 ANALYZER/CONTROLLER, NORTH AMERICAN BURNER, AND FLUE GAS RECIRCULATION: LIMIT ANNUAL HEAT INPUT TO 30 BILLION BTU/YR FOR RULE 4306 COMPLIANCE.

CONDITIONS

1. {1829} The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
2. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
4. {521} Particulate matter emissions shall not exceed 0.1 grain/dscf, calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
5. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rule 2520, 9.3.2 and Kern County Rule 407] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

6-1129-24-18 : Apr 1 2010 9:52AM - RICKARDK : Joint Inspection NOT Required

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585

6. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 one-hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424; District Rules 2520, 9.3.2 and 4406] Federally Enforceable Through Title V Permit
7. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO₂. [District Rules 4301, 5.2.2, 5.3, and 5.5 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
8. {584} Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
9. {468} The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
10. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of fuel gas and vapor recovery gas combusted in the steam generator shall be installed, utilized and maintained. [District Rules 2201, 4305, and 4306]
11. {2967} Maximum annual heat input of the unit shall not exceed 30 billion Btu per calendar year. [District Rules 2201, 4305 and 4306]
12. {2981} Records of monthly and annual heat input of the unit shall be maintained. [District Rules 2201, 4305, and 4306]
13. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at locations(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 1070]
14. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8 or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2]
15. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2]
16. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2 and 4305, 6.2.1]
17. Emission rates, except during startup and shutdown, shall not exceed any of the following: PM₁₀: 0.010 lb/MMBtu, SO_x (as SO₂): 1.768 lb/MMBtu nor 200 lb/hr, NO_x (as NO₂): 0.0365 lb/MMBtu or 30 ppmv @ 3% O₂, VOC: 0.003 lb/MMBtu, or CO: 0.0355 lb/MMBtu or 48 ppmv @ 3% O₂. [District Rules 4301, 4305, 4406 and NSR] Federally Enforceable Through Title V Permit
18. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rule 4305, 5.5.6 and 4306, 5.3]

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CONDITIONS CONTINUE ON NEXT PAGE

19. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22]
20. Source testing shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081]
21. {109} Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
22. {2976} The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306]
23. {2972} All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306]
24. 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 2201, 4305, 6.3.1, and 4306, 6.3.1]
25. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the on-going NO_x and CO testing requirement. [District Rules 4305, 4306 and 2520]
26. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NO_x emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 2520, 9.4.2, 4305 and 4306]
27. The following conditions must be met for representative units to be used to test for NO_x and CO emissions for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of permitted value and vary 25% or less from the average of all runs, 2) all units in the group are similar in terms of heat input, make and series, operational conditions, fuel used, and control method, 3) the group is owned by a single owner and located at a single stationary source, and 4) the selection of the representative units is approved by the District prior to testing. [District Rules 2520, 9.4.2, 4305 and 4306] Federally Enforceable Through Title V Permit
28. All units in a group for which representative units are source for NO_x emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.4.2, 4305 and 4306]
29. All units in a group for which representative units are source tested for NO_x emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.4.2, 4305 and 4306]
30. The number of representative units source tested for NO_x and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated such that in three years, all units in the entire group will have been tested at least once. [District Rules 2520, 9.4.2, 4305 and 4306] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

31. Should any of the representative units exceed the required emission limits of this permit, each of the unit in the group shall conduct emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rule 2520, 9.4.2, 4305 and 4306] Federally Enforceable Through Title V Permit
32. {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
33. {2977} NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305 and 4306]
34. {2978} CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306]
35. {2979} Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306]
36. Stack gas velocities for source test purposes shall be determined using EPA Method 2. [District Rule 1081] Federally Enforceable Through Title V Permit
37. {2980} 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]
38. An operating log shall be maintained for each unit of the group. The log shall include, on a monthly basis, the total hours of operation, type and quantity of fuel used, and preventative and corrective maintenance and modifications performed. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
39. If the steam generator is fired on PUC-regulated natural gas, then the permittee shall maintain on file copies of all natural gas bills or fuel throughput records for a period of five years. [District Rule 2520, 9.3.2]
40. If the steam generator is not fired on PUC-regulated natural gas, then the sulfur content of the fuel gas being fired in the steam generator shall be determined using ASTM D 1072, D 3031, D 4084, D 3246, double GC for H₂S and mercaptans, or grab sample analysis by double GC performed in the laboratory. [District Rule 2520, 9.3.2]
41. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4305, 5.4 and 4306, 5.4]
42. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 4305, 5.4 and 4306, 5.4]
43. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4305, 5.4 and 4306, 5.4]
44. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4305, 6.1 and 4306, 6.1]

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CONDITIONS CONTINUE ON NEXT PAGE

- 45. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any non-certified fuel. [District Rule 2520, 9.3.2]
- 46. 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, 6.1, and 4306, 6.1]

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11/11/2010 10:00:00 AM

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1129-112-4

EXPIRATION DATE: 02/28/2007

SECTION: NW02 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

5.4 MMBTU/HR GAS-FIRED HEATER TREATER WITH THREE BURNERS EACH RATED AT 1.8 MMBTU/HR - NORTH MIDWAY

PERMIT UNIT REQUIREMENTS

1. Maximum annual heat input of the unit shall be less than 9 billion Btu per calendar year. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit
2. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of natural gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit
3. 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
4. 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
5. The permittee shall monitor, at least on a monthly basis, fluid temperature and fluid interface level or other operational characteristics recommended by the unit manufacturer. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
6. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit
7. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel sources, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
8. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. Firing on PUC or FERC quality natural gas shall demonstrate compliance with this requirement. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

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

10. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
11. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume until compliance with the sulfur limits can be demonstrated for 8 consecutive weeks for a fuel source. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6, 6A, 6B, 6C, Method 8 or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
13. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
14. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
15. Excess combustion air shall be maintained at no less than 10% unless continuous operation oxygen analyzer/controller is utilized. [District Rule 2080] Federally Enforceable Through Title V Permit
16. Heater treater shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil. [District Rules 2080 and 4301, 5.2.2] Federally Enforceable Through Title V Permit
17. Records of monthly and annual heat input of the unit shall be maintained. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit
18. Records of tune-up and monitoring of the operational characteristics of the unit shall be maintained. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
19. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] 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: S-1129-114-7

EXPIRATION DATE: 02/28/2007

SECTION: NW02 TOWNSHIP: 31S RANGE: 22E

EQUIPMENT DESCRIPTION:

NON-COMPLIANT DORMANT 9.0 MMBTU/HR GAS-FIRED HEATER TREATER WITH TWO BURNERS EACH RATED AT 4.5 MMBTU/HR - NORTH MIDWAY

PERMIT UNIT REQUIREMENTS

1. No modification(s) to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit
2. The fuel supply line shall be physically disconnected from this unit. [District Rule 4306] Federally Enforceable Through Title V Permit
3. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rules 2010 and 4306] Federally Enforceable Through Title V Permit
4. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit
5. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel sources, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
6. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
7. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. Firing on PUC or FERC quality natural gas shall demonstrate compliance with this requirement. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
8. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
9. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume until compliance with the sulfur limits can be demonstrated for 8 consecutive weeks for a fuel source. [District Rule 2520, 9.3.2] 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.

10. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6, 6A, 6B, 6C, Method 8 or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
11. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
13. Excess combustion air shall be maintained at no less than 10% unless continuous operation oxygen analyzer/controller is utilized. [District Rule 2080] Federally Enforceable Through Title V Permit
14. Heater treater shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil. [District Rules 2080 and 4301, 5.2.2] Federally Enforceable Through Title V Permit
15. Permittee shall maintain records of fuel hhv, monthly fuel use, and cumulative annual fuel use for a period of five years and shall make such records readily available for District inspection upon request. [District Rules 2520, 9.3.2 and 4305] 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: S-1129-115-4

EXPIRATION DATE: 02/28/2007

SECTION: NW02 TOWNSHIP: 31S RANGE: 22E

EQUIPMENT DESCRIPTION:

7.4 MMBTU/HR GAS-FIRED HEATER TREATER WITH THREE BURNERS EACH RATED AT 1.8 MMBTU/HR AND ONE BURNER RATED AT 2.0 MMBTU/HR - NORTH MIDWAY

PERMIT UNIT REQUIREMENTS

1. Maximum annual heat input of the unit shall be less than 9 billion Btu per calendar year. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit
2. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of natural gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit
3. 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
4. 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
5. The permittee shall monitor, at least on a monthly basis, fluid temperature and fluid interface level or other operational characteristics recommended by the unit manufacturer. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
6. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit
7. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel sources, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
8. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. Firing on PUC or FERC quality natural gas shall demonstrate compliance with this requirement. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

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

10. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
11. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume until compliance with the sulfur limits can be demonstrated for 8 consecutive weeks for a fuel source. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6, 6A, 6B, 6C, Method 8 or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
13. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
14. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
15. Excess combustion air shall be maintained at no less than 10% unless continuous operation oxygen analyzer/controller is utilized. [District Rule 2080] Federally Enforceable Through Title V Permit
16. Heater treater shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil. [District Rules 2080 and 4301, 5.2.2] Federally Enforceable Through Title V Permit
17. Records of monthly and annual heat input of the unit shall be maintained. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit
18. Records of tune-up and monitoring of the operational characteristics of the unit shall be maintained. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
19. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

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

Appendix B

Manufacturer Guarantee

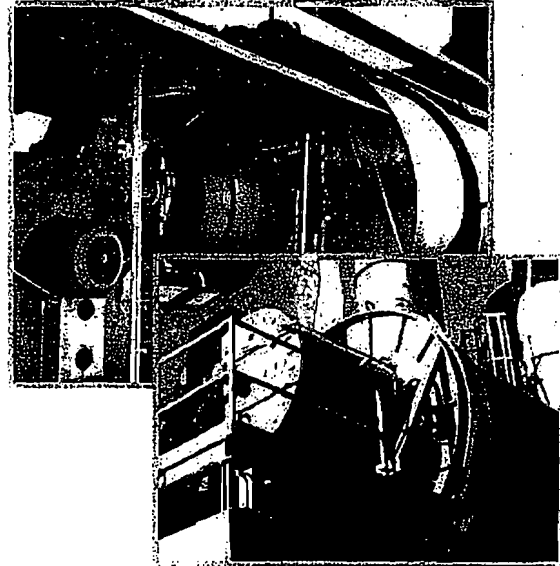
© 2010-2011, All rights reserved. This document is the property of the manufacturer and is not to be distributed, copied, or reproduced in any form without the written permission of the manufacturer.



- **Ultra low NOx and CO without FGR**
- **Dual-fuel capability**
- **High intensity flame allows significant reductions in firing chamber size**
- **5 to 400 million Btu/hr**
- **Single UV monitoring**

Applications:

- **air heaters**
- **process heaters**
- **dryers & calciners**
- **Incinerators**
- **aggregate dryers**
- **soil remediation**



Magna-Flame LEx systems greatly reduce the typical pollutants (NOx, CO) from gas combustion. Utilizing lean pre-mix technology the patented burner produces NOx emissions of less than 10 ppm in many applications. The companion burner reaction chamber completes over 80 percent of the combustion producing very compact flame geometry. This compact flame allows significant reductions in furnace size and overall installed cost.

Operation

The burner incorporates internal mixing elements that pre-mix the fuel and air prior to combustion in the reaction chamber. By completing over 80 percent of the combustion in the burner reaction chamber, the low NOx characteristics of the burner are protected from process influences.

The burner is designed to operate at 10"wc main air pressure and 8 psig gas pressure. The burner and control system are designed to hold to a preset ratio over a 4:1 turndown. Thermal turndowns of 10:1 or greater are also possible in most applications.

Control

A characterizable mass flow ratio control device is recommended. This gives the operator the tools to tailor the burner ratio through the turndown for optimum emissions performance.

Pilot and Flame Supervision

The 4020-HP nozzle mix pilot is recommended for use on the burner. Refer to Bulletin 4020 for specific information on the operation of this pilot.

For flame supervision the pilot must be the interrupted type. A single UV scanner monitors both the main flame and the pilot.

Burner Construction

The burner is of rugged construction suitable for industrial applications. The front face of the burner is constructed of high temperature refractory. The anti-flashback mixers are made of high grade alloy components.

Other Fuels

The LEx burner can fire many gaseous fuels with similar low emission performance. The LEx reaction chamber makes it extremely effective for low Btu gases. Light fuel oils may be used as a back up fuel. Consult your North American Sales and Application Engineer for your specific needs.

NOx and CO Emissions Comparison*

Example at 1200 F Temp.

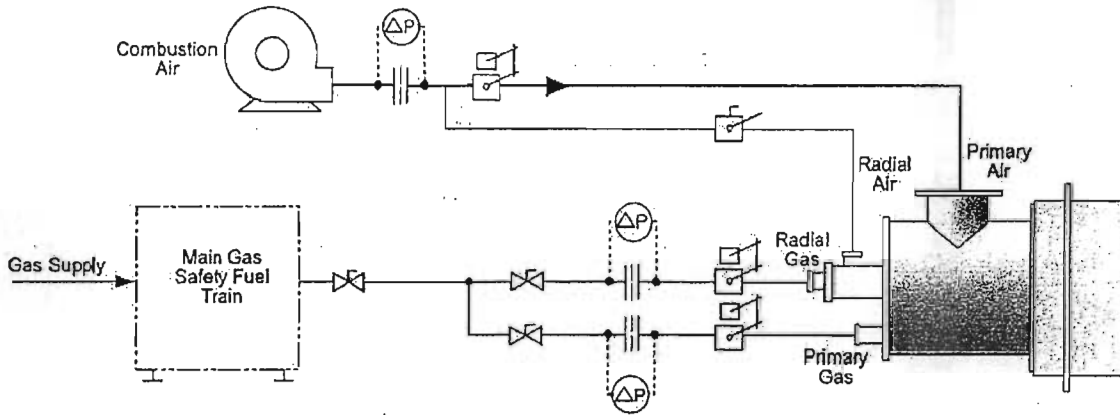
	Typical Cold Air Burner	Magna-Flame LEx System
NOx	82	9
CO	20	5

Emissions ppm_v at 3% O₂

*Application dependent

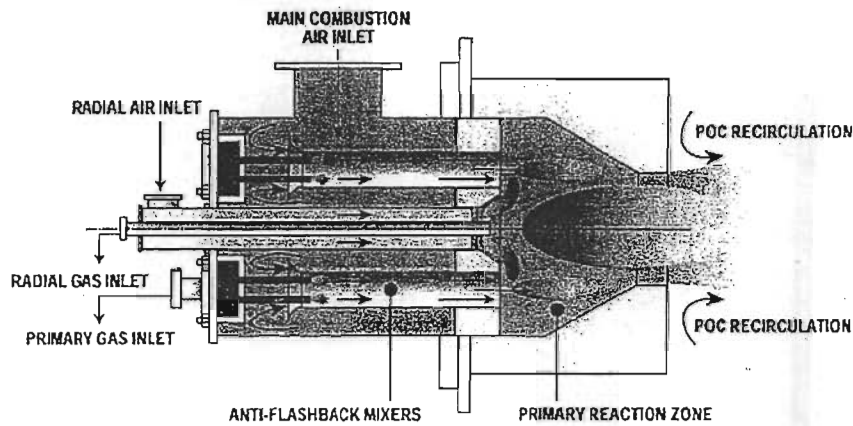
Flow Control Concept

Figure 1. Typical Control Concept for Single Burner MAGNA-FLAME™ LEx Combustion System. A characterizable mass flow ratio control device is recommended for tailoring burner ratio through turndown.



Simplified Burner Design — No Moving Parts — No FGR

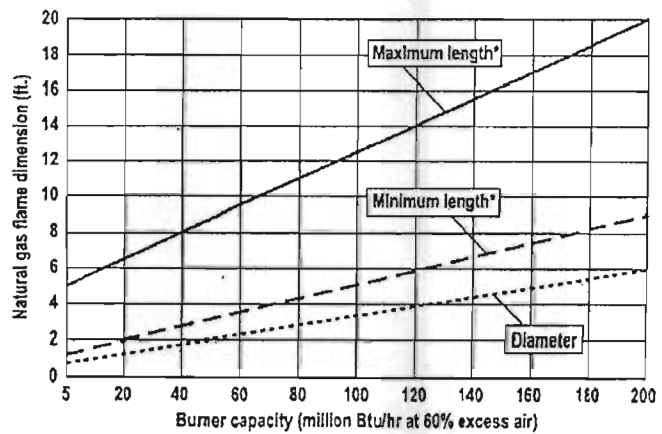
Figure 2. The Magna-Flame LEx uses patented premix technology to establish a lean premix and then combusts the mixture in a controlled reaction zone without the use of FGR, complex staging devices or moving parts. The fuel and air are introduced separately into the burner where they are intimately mixed within anti-flashback mixers. This mixture is then directed into the reaction region where lean combustion takes place.



Gas Burner Flames

Figure 3. Gas Flame Dimensions vs. Burner Capacity (Btu/hr)

The LEx flame exits the reaction chamber 80 percent combusted resulting in shorter, more compact flame geometry. In most applications the firing chamber size can be significantly reduced.



* Application dependent

WARNING: Situations dangerous to personnel and property can develop from incorrect operation of combustion equipment. North American urges compliance with National Safety Standards and Insurance Underwriters recommendations, and care in operation.

North American Mfg. Co., 4455 East 71st Street, Cleveland, OH 44105-5600 USA, Tel: +1.216.271.6000, Fax: +1.216.641.7852
email: sales@namfg.com • www.namfg.com



North American

Manufacturing Company, Ltd.

4455 East 71st Street Cleveland, OH 44105-5600 USA
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Reply to:
North American Mfg. Co.
1820 West Oranewood Ave., Suite 101
Orange, CA 92868-2043
Phone (714) 634-4891
Fax (714) 634-4595



September 4, 2008

To: Mr. John Gruber
Air Specialist/Engineer
Chevron North America Exploration
9525 Camino Media (C1033)
Bakersfield, CA 93311

Subject: **Ultra Low NOx Magna Flame Model 4231-62.5-GLE Combustion System for mounting on Std.60 Tube 50,000 Lb/hr Steam Generator Firing PUC gas**

Ph: 661-654-7144
Fax: 661-654-7606
Em: John.gruber@chevron.com

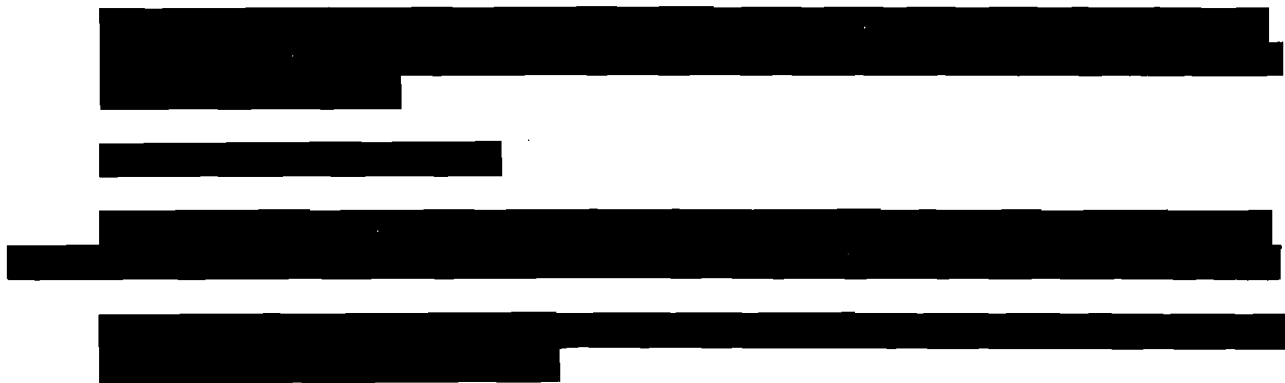
From: John Quiel
Ph; 805-681-7323
Fax: 805-681-7324

Dear John,

We are pleased to offer you this quotation for a 62.5 MM Btu/hr Ultra Low NOx Magna Flame GLE Combustion System which includes a Model 4231-62.5-GLE/X4468 gas burner, proprietary 8379 embedded CMS programming, an 8379 BMS board with two Ametek adjustable sensitivity scanners, Model 1-4029-1 combustion air venturi flow meter, and optional ancillary hi-efficiency 75 HP combustion air blower.

PRICE & DELIVERY

The price to Chevron for this Ultra Low NOx Magna Flame GLE Combustion System as quoted is:



[REDACTED]

[REDACTED]

MAGNA FLAME MODEL 4231-62.5-GLE COMBUSTION SYSTEM CONTENT

The Magna Flame Model 4231 GLE-62.5-GLE Combustion System as quoted includes components shown in the table below:

Seq.	Qty.	Item	Description	Unit Price	Net Price
10	1	4231-62.5-GLE/X4468	Ultra Low NOx burner, rated @ 62.5 MMBH, c/w reaction chamber, secondary injectors, (3) pressure switches, 4020-6-LP/5 pilot, 4065-6N4-6A ignition transformer, 4085-10-W cable, junction box, and dual left hand UV locations	[REDACTED]	[REDACTED]
20	2	R130-BC30-ASY	Scanner assembly consists of BC30 scanner and adapter	Incl.	
30	2	4-44047-1	U.V. scanner cooling can and air piping kit	Incl.	
40	1	8379-CMS-EMBEDDED_SW	8379 Embedded	Incl.	
50	1	8379-BMS-KIT	8379-BMS board with mounting hardware and cover	Incl.	
60	1	8631-24/X3875	24" venturi meter assembly complete with rain cap, dp transmitter, j type thermocouple, junction box, epoxy paint, fully piped and wired	Incl.	
70	1	2313B-17000-W75D	Direct drive blower with discharge position #3, 24" SW inlet, flanged discharge, drain, and to include 75 hp, 1800 rpm, 365 T frame, ODP Reliance motor, part includes 1-4071-1 outer transition to 24" diameter	[REDACTED]	[REDACTED]
80	1	2947-24	24" sleeve with clamp	Incl.	
Total:					[REDACTED]

SPECIFIC COMBUSTION SYSTEM FEATURES AND BENEFITS

The Model 4231 GLE Combustion System is a state of the art, Ultra Low NOx system designed to provide optimum low NOx performance with maximum efficiency and minimal intervention. On steam generator applications, it offers the following unique features and benefits:

- Capable of sub-12 ppm NOx emission levels without FGR, while generating less than 5 ppm of CO emissions
- Capable of sub-7 ppm NOx emission levels with the use of FGR, while generating less than 5 ppm of CO
- True mass flow control capability with combustion air temperature compensation, and fuel gas pressure compensation
- Control features include continuous critical parameter tracking, with alarms when preset deviation limits are exceeded, and communications link capability

- Able to control two different fuel gas streams firing simultaneously while maintaining required emissions over a 3:1 turndown range
- NFPA and Factory Mutual (FM) code compliant
- In-line blower to burner orientation corresponds to existing footprint, allowing for easy replacement of existing 4131-G burner without relocating the existing blower, reducing down time and cost of retrofit
- Long, well defined flame envelope of approximately 6 foot diameter by 18 to 20 foot long assures good radiant heat transfer in the furnace section
- Easy Installation

SERVICES / DOCUMENTATION PROVIDED: (T&M denotes Time & Materials Per M-9-P-US-NA Rate Sheet, all other items included in system price)

- Site evaluation by North American to analyze existing system needs and identify optional equipment requirements to meet the goals for each steam generator
- Generic mechanical and electrical installation drawings
- Pre-installation Check List to ensure smooth efficient installation by contractors
- Site inspection with selected installer (if desired)
- Complete operating and maintenance manual for system
- Training for operators and maintenance personnel (T&M)
- Combustion system Start up and NOx verification (required for guarantee, T&M)
- Pre-installation Electrical Engineering Support (T&M)
- Attendance at compliance test (T&M)

MAGNA FLAME GLE BURNER, EMBEDDED CMS & VENTURI METER

The Magna Flame Model 4231 GLE Ultra Low NOx burner uses lean, partial premix combustion to achieve unparalleled low NOx emission performance. Approximately 65% of the fuel enters the burner as Primary Gas and is intimately mixed with the air prior to combustion. The Model 8379 GLE Controller maintains approximately 70% excess air in this primary combustion zone, producing an extremely uniform flame with inherently low NOx emissions. The balance of the fuel enters the burner through the Secondary Gas manifold and is injected into the steam generator through (4) lances built into the wall of the burner tile. This reduces the overall oxygen level down to the desired 1-2% O₂, maintaining good combustion efficiency while generating less than 15 ppm of NOx. The burner also has a Center Gas connection, which provides approximately 1% of the total gas flow for enhanced stabilization and ignition. Please see the attached 4231GLE burner assembly drawing 7-6092-0 showing the general dimensions of the burner and reaction chamber/tile.

The Embedded 8379 CMS control logic and the 8379 BMS board are integral to the proper performance of the Model 4231 GLE Burner and are therefore sold as part of it. They provide burner and combustion process management ensuring consistent ignition sequencing, flame monitoring, and optimal control of O₂, as well as air and fuel flows. The CMS allows the burner to operate with minimal emissions, maximum fuel efficiency, and is self monitoring, reducing the demand for periodic tune-ups and maintenance. Included as part of this BMS board are two (2) UV scanners required to monitor the two combustion zones of the Model 4231GLE burner. The

CMS logic accepts a 4-20 ma signal from up to two existing O2 analyzers, one stack mounted for O2 trim, and one combustion air mounted for FGR flow control. These O2 analyzers are not included in this quotation, but are available to be quoted upon request.

The 24" diameter Model 1-4029-1 Combustion Air Venturi Flow Meter is designed to replace the 24" diameter vertical combustion air inlet duct riser extending above the roof on the typical steam generator. The meter assembly is approximately 10 feet in length and comes complete with a DP Transmitter, a T/C for temperature compensation, and a rain cap. It will have a discharge flange welded on the end opposite the rain cap and a mating flange to be field welded to the fan inlet ducting after the existing riser has been removed.

HI-EFFICIENCY COMBUSTION AIR BLOWER

To further enhance the above subject 4231 GLE Burner System and guarantee full capacity of 62.5 MM Btu/hr heat release while running future FGR we have included our Model 2313B-17000-W75D high efficiency combustion air blower. This blower is powered by a 75 HP ODP Motor and supplies 17,000 scfm of 70 F air at approximately 70 HP, which is enough air to produce 62.5 MM Btu/hr heat release rate from the burner with 10% excess air and 25% FGR at 120 F ambient temperature, 1000 Ft elevation and 260 F FGR. This excess capacity insures that there is enough combustion air to run at the full heat release rate of the burner (62.5 MM Btu/hr) even when the combustion air temperature rises to 120 F and still operate at the low NOx emission rate of less than 9 ppm with 20 to 25% FGR. If the system is not initially required to perform at the less than 9ppm NOx level, then it can operate at less than 15 ppm NOx without the activation of the FGR flow control valve.

EMISSION GUARANTEE

The North American Model 4231-62.5-GLE/X4468 Burner will provide excellent combustion performance with and without the use of FGR. Our NOx and CO emission rate guarantees are based on testing of this burner in several field installations on actual 50,000 lb/hr steam generators manufactured by various OEM's.

Burner Generated NOx is guaranteed not to exceed:

- <9 ppmvd NOx (3% O2 basis) when fired over a turndown range of 3:1 with a maximum capacity of 62.5 MM Btu/hr on PUC quality natural gas with a HHV of 1000 Btu/cft with FGR.
- The above emissions are based on firing the Model 4231-GLE burner controlled by North American Mfg. Co. 8379-GLE Embedded Software into a 60-tube standard sized steam generator, with interior dimensions of 9'-5" dia. X 35' long, with a stack O2 maintained with a continuous oxygen analysis of stack gases and an oxygen trim control loop, as well as a combustion air O2 control loop to maintain desired FGR flow rate..

Burner Generated CO is guaranteed not to exceed:

- 25 ppmvd CO (3% O2 basis) when fired over a turndown range of 3:1 with a maximum capacity of 62.5 MM Btu/hr on PUC quality natural gas with a HHV of 1000 Btu/cft **with or without** the use of FGR.

- The above emissions are based on firing the Model 4231-GLE burner controlled by North American Mfg. Co. 8379-GLE Embedded Software into a 60-tube standard sized steam generator, with interior dimensions of 9'-5" dia. X 35' long, with a stack O2 maintained with a continuous oxygen analysis of stack gases and an oxygen trim control loop, as well as a combustion air O2 control loop to maintain desired FGR flow rate.

We can meet this emission guarantee contingent upon proper installation in a 50,000 lb/hr steam generator in good condition and properly operated, when Startup and Verification Services are provided by North American Manufacturing on a time and materials basis (per M-9-P-S).

The above guarantee is issued in conformance with our standard terms spelled out in "CONDITIONS AND LIMITS OF NORTH AMERICAN MANUFACTURING COMPANY ("NAMFG") EMISSIONS LEVELS GUARANTEE" (July 2005) attached.

STARTUP SERVICES

Startup and installation services are not included in this quotation and are offered at our standard rate per M-9-P-S sheet attached. The Model 4231 GLE Combustion System Startup and Verification services must be provided by North American Manufacturing in order for the above mentioned emission guarantees to be valid. Training sessions are also available per our M-9-P-S rate sheet.

After reviewing this proposal, please feel free to contact me with any questions.

Regards,

John M. Quiel

John M. Quiel
Manager, Oil Field Sales
North American Manufacturing Co.
P.O. Box 6037
Santa Barbara, CA 93160
Ph: 805-681-7323
Fax: 805-681-7324
E-mail: johnquiel@namfg.com

Enclosures: 4231GLE Burner Dwg. 7-6092-0, Blower Curve 2313B-17000-W75D, Conditions and Limits of North American Manufacturing Company Emissions Levels Guarantee (July 2005), NA Std. Terms and Conditions (Nov 2006), NA Std. US Service Charges Rate Sheet M-9-P-S

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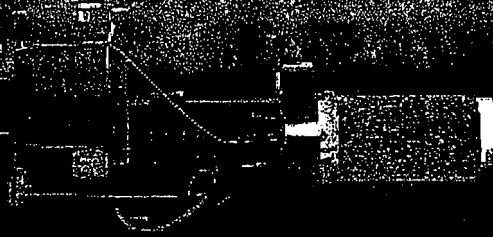
In the interest of safety, The North American Mfg. Co., Ltd. joins the NFPA and insurance underwriters in recommending that you maintain and, if necessary, upgrade, your combustion systems to be in compliance with the current applicable NFPA Codes and Standards. The decision to do so rests solely with the User, the

NOVA PLUS
ULTRA LOW NOx
COMBUSTION
SYSTEMS

GAS

2,000,000-
14,700,000
BTU

Power Flame Nova Plus



The Power Flame NOVA Plus Combustion System employs a patented, fully premixed, surface stabilized combustion technology to provide proven ultra-low NOx solutions - Sub 9 to 12 PPM - for commercial, industrial, and process applications. Premixing fuel and air assures complete combustion with minimal levels of CO and unburned hydrocarbons. The all metallic firing head guarantees reliable and consistent performance at the operating conditions necessary to provide single digit NOx emissions. The NOVA Plus is a simple, cost effective, field proven system designed to meet today's most stringent emissions requirements.

Power Flame provides a U.L.

listed, factory tested package tailored to your job specific requirements. The NOVA Plus is suitable for use on firetube and watertube boiler applications, as well as process heaters. It will operate with uniform heat flux and excellent flame stability over a broad range of operating conditions.

The modular concept that is the basis for all Power Flame burners keeps the initial investment low and maintenance costs at a minimum across the life of the burner. The NOVA Plus is fitted with a state of the art control system and integral panel. The self-compensating combustion control safety operates the burner and minimizes the start-up time.

Power Flame's Premixed, Surface Stabilized Combustion Burner

Micron Air Filter
Ensures ease of maintenance

Metallic Firing Head*

The patented metallic porous mesh provides surface-stabilized combustion for excellent flame stability at ultra-low NOx operating conditions

Total Access Panel

Swing out, removable top and front panels allow easy access to compact DIN rail mounted components

*Patented

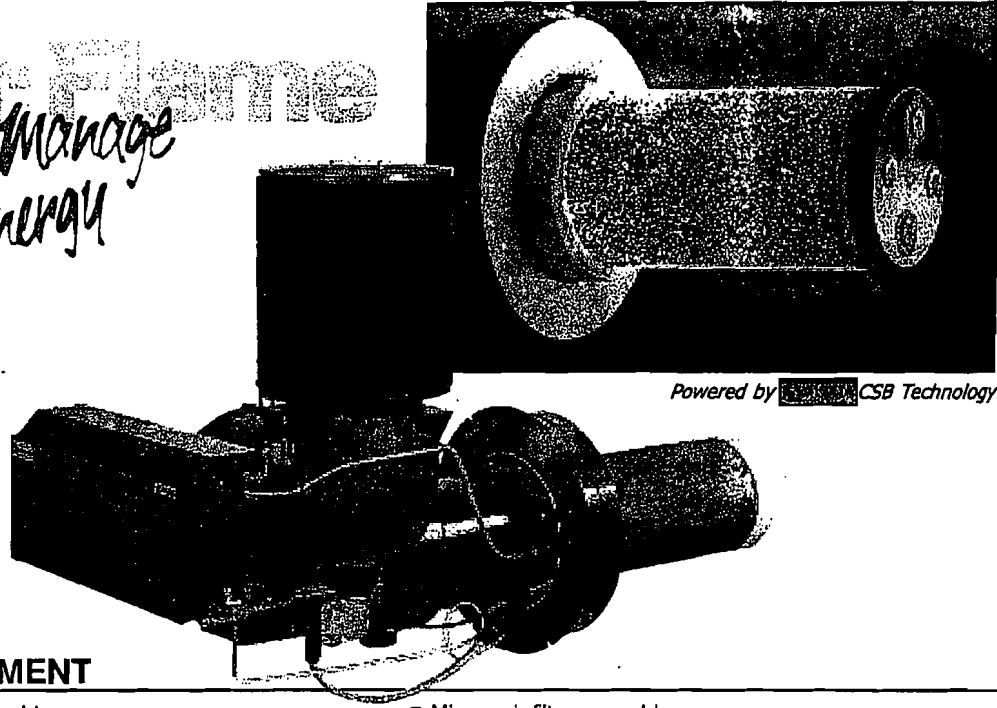


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Power Flame

The Power to Manage Energy

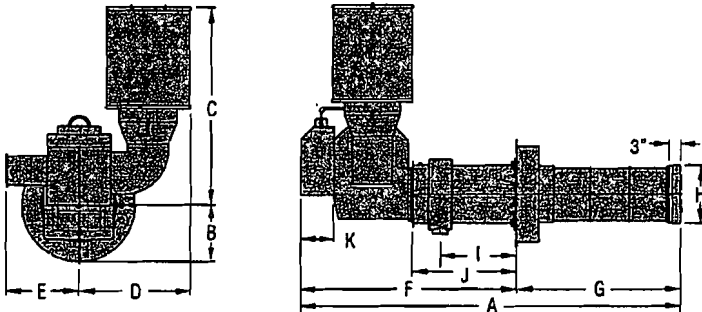


Powered by CSB Technology

STANDARD EQUIPMENT

- 3450 RPM motor, squirrel cage blower
- Panel with 6 Indicating lights (power, main gas, flame failure alarm, manual override, system demand & air safety alarm) manual potentiometer and control switch
- Modulating motor
- Combustion control with UV scanner
- Burner and air filter pressure switches
- Micron air filter assembly
- Gas electric pilot and gas ignition transformer
- High and low gas pressure switches
- Dual gas safety valves
- Air/Gas ratio control regulating actuator and valve
- Leakage test cock, pilot cock and main gas cock
- Pilot and main gas regulators

MODEL NVCR



DIMENSIONS (Inches) Standard Models.

RATINGS & SPECIFICATIONS

Burner Model	A	B	C	D	E	F	G	H	J	K	CAPACITY ¹		Blower Motor HP (3450 RPM)	Standard Gas Train Size (in.)	Gas Pressure Required (in. W.C.)
											Nat. Gas MBH Max.	Nominal BHP			
NVCR-G-20B	62 1/2	6	32	20	14	35 1/4	27	7 1/4	12	10 1/2	2,000	48	1	1 1/2	18.0
NVCR3-G-20	70	7	33	21	16	38 1/2	32	7 1/4	12	10 1/2	2,500	60	1 1/2	2	18.0
NVCR3-G-25B	80	7	33	21	16	38 1/2	40	7 1/4	12	10 1/2	3,500	85	3	2	18.0
NVCR4-G-30	80	7 1/2	44	27	18 1/2	48 1/2	32	14 1/2	20	12 1/2	5,000	120	5	2 1/2	21.0
NVCR5-G-30	90	7 1/2	44	27	18 1/2	48 1/2	41	14 1/2	20	12 1/2	7,000	165	7 1/2	2 1/2	21.0
NVCR6-G-30	100	7 1/2	46 1/2	27	20	48 1/2	51	14 1/2	20	12 1/2	10,500	250	10	3	28.0
NVCR7-G-30	118	10	55 1/2	28	20	66 1/2	51	14 1/2	20	9 1/2	12,500	300	15	3	28.0
NVCR8-G-30	118	10	56 1/2	28	20	66 1/2	61	14 1/2	20	9 1/2	14,700	350	15	3	28.0

1. Capacities listed are based on +3.0" W.C. positive pressure. Derate capacities approximately 5% for each +0.50" W.C. combustion chamber pressure.
2. At inlet to main manual shutoff cock to obtain P/F certified ratings with standard U.L. gas train. Optional gas trains available for lower pressures.



Power Flame Incorporated

2001 South 21st Street Phone 620-421-0480
 Parsons, KS 67357 Fax 620-421-0948
 Web Site: <http://www.powerflame.com>
 E-Mail: csd@powerflame.com



ULTRA-LOW NO_x BURNERS

ALZETA CSB™

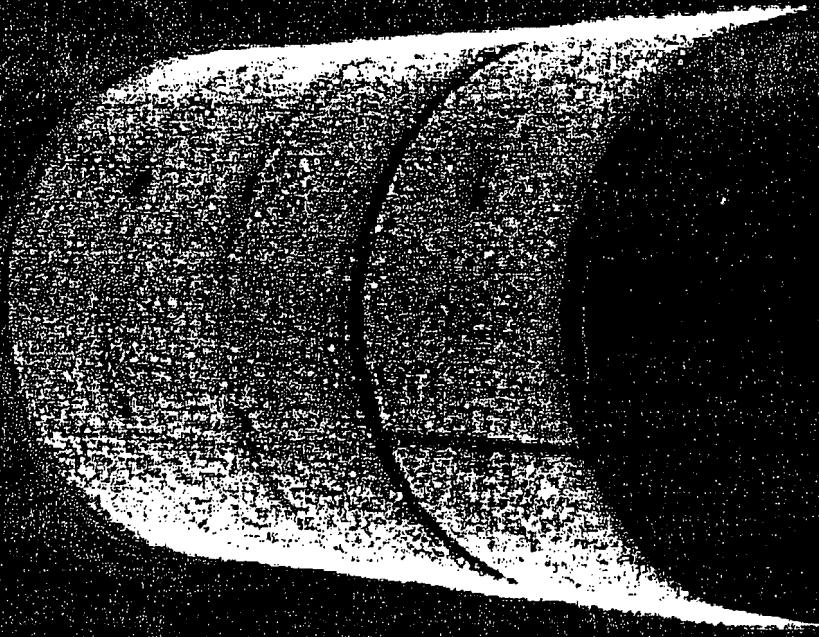
ULTRA-LOW NO_x

GAS BURNERS FOR

COMMERCIAL AND

INDUSTRIAL BOILERS

AND PROCESS HEATERS



ALZETA
CORPORATION

Advanced Combustion Clean Air Solutions for Industry and Our Environment

ALZETA CSB™

ULTRA-LOW NO_x BURNERS FOR COMMERCIAL & INDUSTRIAL BOILERS AND PROCESS HEATERS



PREMIXED SURFACE-STABILIZED COMBUSTION

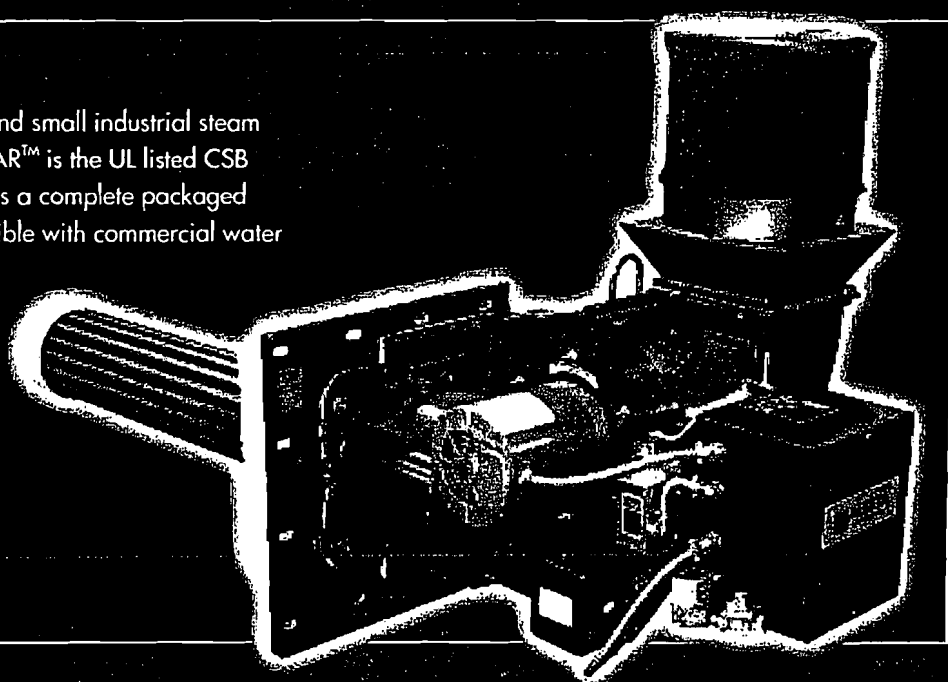
ALZETA CSB™ burners use patented fully-premixed surface-stabilized combustion technology to provide our customers with the simplest ultra-low NO_x solution in the industry. Premixing fuel and air assures complete combustion, with minimal generation of CO and unburned hydrocarbons. Surface stabilization guarantees reliable operation at the ultra-lean and high FGR conditions required to meet today's most stringent NO_x emissions levels. The rugged all metal construction of the CSB is ideal for use in firetube boilers, water tube boilers, and industrial process heaters.

CSB COMMERCIAL BURNER

CSB microSTAR™

For commercial heating and small industrial steam applications the CSB microSTAR™ is the UL listed CSB solution. The CSB microSTAR is a complete packaged burner solution that is compatible with commercial water tube boilers as well as small firetube boilers, oil heaters and hot-air systems.

Burners span the capacity range of 2 MMBtu/hr to 14.7 MMBtu/hr firing natural gas or propane.



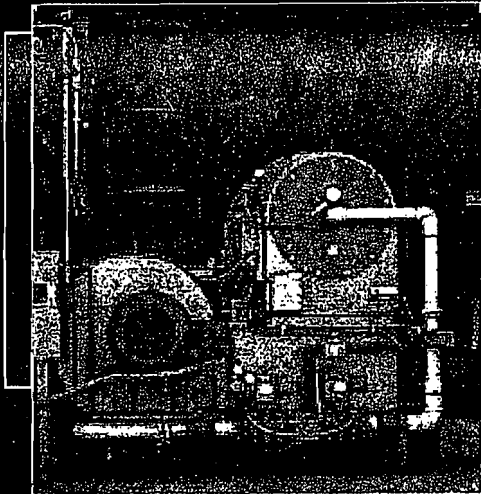
The ALZETA CSB provides:

- ☑ **Proven Performance** — Whether your application is a 2 MMBtu/hr hot water boiler, a 65 MMBtu/hr firetube boiler, or a 125 MMBtu/hr package watertube boiler, ALZETA provides a solution that has been proven in the field to provide reliable performance in a broad range of boiler and heater designs.
- ☑ **Guaranteed Emissions Compliance** — For ultra-low NO_x requirements of 12 ppm, 9 ppm or lower, ALZETA has a track record of successful compliance tests. CO and VOC emissions are also comfortably below regulatory limits. We guarantee a successful source test.
- ☑ **Superior Support and Service** — With a 20-year history of leading edge burner development, a staff of experienced engineers, and well trained service organizations covering areas of major sales activity, we provide around the clock support and service to our customers.



CSB INDUSTRIAL BURNER

For applications with capacities of 16.8 MMBtu/hr to 130 MMBtu/hr, the CSB industrial product provides single-digit NO_x emissions, simultaneously with ultra-low CO and unburned hydrocarbon emissions, in a broad range of industries including food processing, textiles, and chemicals. Regardless of application, the ALZETA CSB provides the end user with simple and reliable performance, cost effectively meeting all BACT emissions requirements. The CSB industrial burner has been successfully applied to:

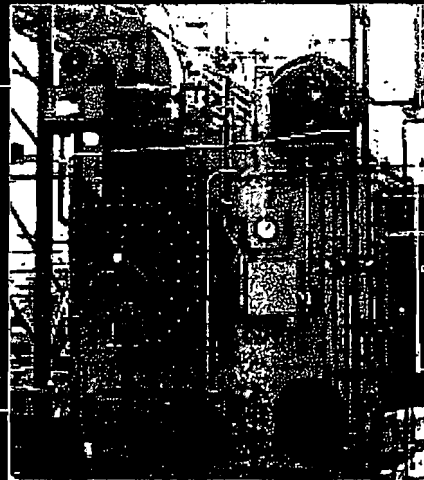


FIRETUBE BOILERS

The tight burner configuration and high volumetric heat release rate typical of firetube boilers is an ideal configuration for compact and distributed flame envelope of the ALZETA CSB. The CSB operates at single-digit emissions levels in firetube boilers from a number of major firetube boiler manufacturers, with boiler capacities ranging from 400 hp to over 1500 hp. Burner fired duty ranges from 16.8 MMBtu/hr to 70 MMBtu/hr.

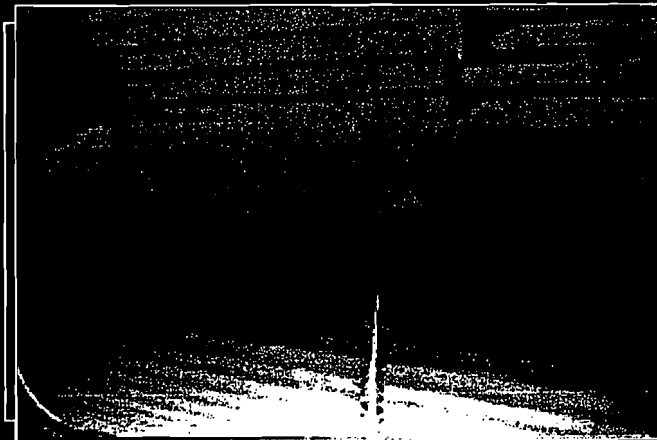
PACKAGE WATERTUBE BOILERS

The CSB is a proven performer in package watertube boilers spanning the size range of 35,000 lb/hr to 150,000 lb/hr of steam, with burner fired duty ranging from 45 MMBtu/hr to 180 MMBtu/hr. The burner works well in all common package boiler configurations, reaching single-digit NO_x emissions levels in all sizes.



PROCESS HEATERS

Process applications including oil and process air heating benefit from the uniform flux and excellent flame stability of the CSB. Uniform flux is critical in sensitive-fluid heating applications, and the CSB is a proven performer in this application. Process air applications benefit from the stable operation of the CSB over a broad range of load conditions and process air temperatures.





CSB™ / CSB MICROSTAR™

ULTRA-LOW NO_x BURNERS

PERFORMANCE BENEFITS

- Ultra-low NO_x over complete product range
- Ultra-low CO and unburned hydrocarbon emissions
- Emissions levels meet all BACT requirements
- Simple design minimizes capital and startup costs
- Modular design minimizes maintenance costs

BASIC DESIGN FEATURES

- Fully premixed design
- Surface stabilization with porous burner surface
- Rugged all metal construction
- Industry standard flame safeguard and combustion controls
- Systems designed to meet UL, IRI, FM and/or NFPA.

TYPICAL APPLICATIONS

- Commercial hot water and low pressure steam boilers
- Commercial firetube and watertube boiler configurations
- Industrial steam in firetube boilers to 70 MMBtu/hr
- Industrial steam in package watertube boilers to 130 MMBtu/hr
- Temperature sensitive fluid heating
- Process air heating

OPTIONAL FEATURES

- High performance characterizable gas valves
- Custom windbox and fan layouts
- Parallel positioning and fully metered fuel-air ratio control
- Oxygen trim feedback control
- Flue gas recirculation

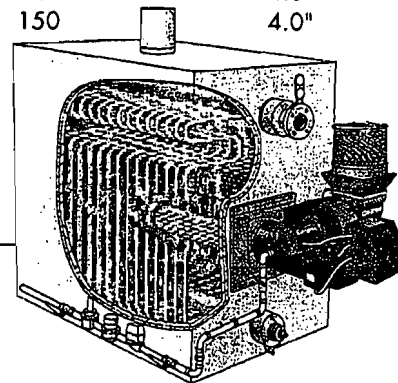
CAPACITY RANGES AND DIMENSIONS

MODEL NUMBER	CAPACITY (MMBTU/HR)	CAPACITY (BHP)	BLOWER MOTOR (HP)	GAS TRAIN SIZE
CSB microSTAR (commercial):				
CSB20 - CSB35	2.0 - 3.5	48 - 83	1 - 3	2.0"
CSB50 - CSB105	5.0 - 10.5	120 - 250	5 - 10	3.0"
CSB126 - CSB147	12.6 - 14.7	300 - 350	15	3.0"
CSB (industrial):				
CSB168	16.8	400	20	3.0"
CSB210	21.0	500	25	4.0"
CSB336	33.6	800	40	4.0"
CSB440	44.0	1050	50	4.0"
CSB680	68.0	1600	75	4.0"
CSB1000	100.0	2350	120	4.0"
CSB1300	130.0	3100	150	4.0"

UL listing to 10.5 MMBtu/hr (CSB microSTAR models CSB20 through CSB105)
 Capacities listed are based on +3" w.c. furnace pressure and 1,000' altitude.
 Other capacities available, contact ALZETA for more information.

INSTALLATION AND UTILITY GUIDELINES

- Natural gas: 1-2 psig commercial, 5-10 psig industrial.
- Alternate fuels: Vaporized and air-blended propane, for other gases consult factory.
- Electrical: 460V / 3ph / 60Hz typical



2343 Calle del Mundo ☒ Santa Clara, CA 95054 ☒ 800.676.8281 ☒ 408.727.8282 ☒ 408.727.9740 FAX
 www.alzeta.com ☒ alzeta@alzeta.com EMAIL

Appendix C

TVFORM-009

RECEIVED
JUN 22 2009
SJVAPCD
Southern Region

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: Chevron U.S.A. Inc. (CUSA)	FACILITY ID: S-1129
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: Chevron U.S.A. Inc. (CUSA)	
3. Agent to the Owner: N/A	

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

- 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).
- 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.
- Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.
- Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

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

William Fall
Signature of Responsible Official

June 18, 2009
Date

William Fall
Name of Responsible Official (please print)

Assistant Secretary
Title of Responsible Official (please print)

Appendix D

Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1129-24-20

LEGAL OWNER OR OPERATOR: CHEVRON U S A INC
MAILING ADDRESS: PO BOX 1392
BAKERSFIELD, CA 93302

LOCATION: HEAVY OIL WESTERN
CA

SECTION: NE34 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 25.2 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED C.E. NATCO STEAM GENERATOR (HSG #60; DIS# 20754-66) WITH O2 ANALYZER/CONTROLLER, NORTH AMERICAN BURNER, AND FLUE GAS RECIRCULATION - DERBY ACRES LEASE: INSTALL LOW NOX BURNER, UPGRADE FGR, BLOWER, FUEL TRAIN, AND AIR INTAKE FOR COMPLIANCE WITH NOX STANDARD SCHEDULE (9 PPM) AND 5 GR-S/100SCF SOX LIMITS FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. The operator shall fire the unit only on natural gas and vapor recovery gas from the following permit unit: PTO S-1129-386. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5.0 gr S/100 scf. [District Rules 2201, 4406, and 4320] Federally Enforceable Through Title V Permit
4. Steam generator shall be equipped with an operational gas volume flowmeter that measures the combined fuel gas and vapor recovery gas volume sent to the steam generator. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

S-1129-24-20 : May 28 2010 8:27AM - RICKARDK : Joint Inspection NOT Required

5. Maximum annual heat input of the unit shall not exceed 30 billion Btu per calendar year. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
6. Emission rates shall not exceed any of the following limits: 0.010 lb-PM10/MMBtu or 0.003 lb-VOC/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
7. Except during start-up, shutdown, or the initial shakedown period, emissions shall not exceed any of the following limits: 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 48 ppmvd CO @ 3% O₂ or 0.0355 lb-CO/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
8. Including startup and shutdown periods, maximum emissions from the steam generator shall not exceed any of the following limits: 0.1 lb-NO_x/MMBtu, 22.1 lb-NO_x/day, 330 lb-NO_x/year, 0.084 lb-CO/MMBtu, 21.5 lb-CO/day, and 1,065 lb-CO/year. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Duration of startup or shutdown shall not exceed two hours each per occurrence. The emissions control system shall be in operation and emissions shall be minimized insofar as technologically possible during startup and shutdown. [District Rule 4320, 5.3]
10. Permittee shall maintain records of duration of each start-up and shutdown that exceeds two hours. Startup is defined as the period of time to reach operating temperature and pressure once fuel is supplied, including the time required by the emission control system to reach full operation. Shutdown is defined as the period of time taken from operating temperature and pressure until the fuel supply is completely turned off. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
11. During an initial "shakedown" period not to exceed 60 calendar days from initial operation of the equipment authorized by this ATC, NO_x emissions shall not exceed any of the following limits: 30 ppmvd @ 3% O₂ (or 0.036 lb/MMBtu). The shakedown period shall be concluded upon completion of the initial start-up compliance source test and will not exceed 60 days. Permittee shall maintain a record of the date of initial operation and shall make such records readily available for District inspection upon request. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. Each fuel source shall be tested quarterly for sulfur content and higher heating value. If a fuel content test fails to show compliance, weekly testing is required until compliance is demonstrated for 8 consecutive weeks, after which quarterly testing may resume. [District Rule 4320, 5.7.6]
13. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320, 5.7.6]
14. If the unit is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320, 5.7.6]
15. Fuel H₂S or total sulfur content shall be determined semi-annually using the following test methods H₂S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, ASTM D6228, or grab sample analysis by double GC for H₂S and mercaptans. [District Rule 4320]
16. Permittee shall submit an analysis to the District demonstrating compliance with the fuel sulfur content within 60 days of startup and annually thereafter. The sulfur content of the fuel shall be determined using the test methods referenced in this permit or certified by a third party fuel supplier. [District Rule 2520, 9.3.2 and 4320 6.2.1] Federally Enforceable Through Title V Permit
17. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

18. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
19. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4320] Federally Enforceable Through Title V Permit
20. Exhaust gas stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 2201 and 1081] Federally Enforceable Through Title V Permit
21. A source test to demonstrate compliance with NO_x and CO emission limits shall be performed within 60 days of startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
22. Source testing shall be conducted using the methods and procedures approved by the District. Source testing for compliance demonstration shall be witnessed or authorized by District personnel. The District and EPA 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 results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
24. Source testing to measure 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 2201 and 4320, 6.3.1] Federally Enforceable Through Title V Permit
25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
26. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture - EPA Method 4, PM₁₀ - EPA Method 5, SO_x (lb/MMBtu) - EPA Method 6C or 8 or ARB Method 100, or fuel gas sulfur content analysis (as H₂S) - EPA Method 11 or 15 or ASTM D6228 and (as total sulfur) - ASTM D1072, D3246, or D6228, or grab sample analysis by double GC for H₂S and mercaptans, performed in the laboratory, fuel hhv (MMBtu) - ASTM D 1826 or D 1945 (as methane) in conjunction with ASTM D 3588. [District Rules 1081, 2201 and 4320] Federally Enforceable Through Title V Permit
27. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4320]
28. 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 1081, 2201, 2520 and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

29. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4320, 6.3.2] Federally Enforceable Through Title V Permit
30. Permittee shall maintain daily records of total combined volume of fuel gas and vapor recovery gas burned, monthly and annual heat input of the unit, the sulfur content as determined by periodic analytical testing or fuel supplier invoices/certifications, and permit number(s) of systems providing gas for incineration. [District Rules 2201, 2520, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. Records of monthly and annual heat input of the unit shall be maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. 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 and 4320] Federally Enforceable Through Title V Permit
33. {584} Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
34. {468} The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1129-24-21

LEGAL OWNER OR OPERATOR: CHEVRON U S A INC
MAILING ADDRESS: PO BOX 1392
BAKERSFIELD, CA 93302

LOCATION: HEAVY OIL WESTERN
CA

SECTION: NE34 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 25.2 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED C.E. NATCO STEAM GENERATOR (HSG #60; DIS# 20754-66) WITH O2 ANALYZER/CONTROLLER, NORTH AMERICAN BURNER, AND FLUE GAS RECIRCULATION - DERBY ACRES LEASE: MAKE NON-COMPLIANT DORMANT EMISSIONS UNIT FOR RULE 4320

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. The fuel supply line shall be physically disconnected from this unit. [District Rule 4320]
4. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary permit changes and/or modifications required to comply with the applicable requirements of District Rule 4320 and all other applicable District regulations. [District Rule 4320]
5. When designated as a dormant emissions unit, the permittee shall not be required to perform fuel sulfur content certification, tuning, and monitoring requirements. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

S-1129-24-21 : May 28 2010 8:27AM - RICKARDX : Joint Inspection NOT Required

6. When designated as a dormant emissions unit, the permittee shall not be required to perform source testing, fuel sulfur content certification, tuning, and monitoring requirements. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
7. Steam generator shall be equipped with a non-resettable, operational gas volume flowmeter that measures the combined fuel gas and vapor recovery gas volume sent to the steam generator. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
8. The operator shall fire the unit only on natural gas and vapor recovery gas from the following permit unit: PTO S-1129-386. [District Rules 2201, 4406, and 4320; and CH&SC 41700] Federally Enforceable Through Title V Permit
9. Maximum annual heat input of the unit shall not exceed 30 billion Btu per calendar year. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit
10. Upon recommencing operation, permittee shall not exceed the following: PM10: 0.010 lb/MMBtu, SOx: 1.768 lb/MMBtu, VOC: 0.003 lb/MMBtu, [District Rule 2201] Federally Enforceable Through Title V Permit
11. Upon recommencing operation, permittee shall not exceed the following: NOx (as NO2): 0.0365 lb/MMBtu or 30 ppmv @ 3% O2 or CO: 0.0355 lb/MMBtu or 48 ppmv @ 3% O2, except during start-up or shutdown. [District Rules 2201] Federally Enforceable Through Title V Permit
12. Including startup and shutdown periods, maximum emissions from the steam generator shall not exceed any of the following limits: 0.1 lb-NOx/MMBtu, 22.1 lb-NOx/day, 1,095 lb-NOx/year, 0.084 lb-CO/MMBtu, 21.5 lb-CO/day, and 1,065 lb-CO/year. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Duration of startup or shutdown shall not exceed two hours each per occurrence. The emissions control system shall be in operation and emissions shall be minimized insofar as technologically possible during startup and shutdown. [District Rule 4306] Federally Enforceable Through Title V Permit
14. Permittee shall maintain records of duration of each start-up and shutdown that exceeds two hours. Startup is defined as the period of time to reach operating temperature and pressure once fuel is supplied, including the time required by the emission control system to reach full operation. Shutdown is defined as the period of time taken from operating temperature and pressure until the fuel supply is completely turned off. [District Rules 4306] Federally Enforceable Through Title V Permit
15. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume until compliance with the sulfur limits can be demonstrated for 8 consecutive weeks for a fuel source. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
16. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 1070]
17. If the steam generator is fired on PUC-regulated natural gas, then the permittee shall maintain on file copies of all natural gas bills or fuel throughput records for a period of five years. [District Rule 2520, 9.3.2]
18. Upon recommencing operation, permittee shall submit an analysis to the District demonstrating compliance with the fuel sulfur content and higher heating value within 60 days of startup and at least once every 12 months. The sulfur content and higher heating value of the fuel shall be determined using the test methods referenced in this permit or certified by a third party fuel supplier. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
19. Upon recommencing operation, a source test to demonstrate compliance with NOx and CO emission limits shall be performed within 60 days of startup of this unit. [District Rules 2201]

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CONDITIONS CONTINUE ON NEXT PAGE

20. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2520, 9.3.2 and 4305] Federally Enforceable Through Title V Permit
21. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 4305, 5.4 and 4306, 5.4]
22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2520, 9.3.2 and 4305] Federally Enforceable Through Title V Permit
23. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. 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. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
24. Source testing to measure 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 2201, and 4306] Federally Enforceable Through Title V Permit
25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 2201 and 4306] Federally Enforceable Through Title V Permit
26. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture - EPA Method 4, PM₁₀ - EPA Method 5, SO_x (lb/MMBtu) - EPA Method 6C or 8 or ARB Method 100, or fuel gas sulfur content analysis (as H₂S) - EPA Method 11 or 15 or ASTM D6228 and (as total sulfur) - ASTM D1072, D3246, or D6228, or grab sample analysis by double GC for H₂S and mercaptans, performed in the laboratory, fuel hhw (MMBtu) - ASTM D 1826 or D 1945 (as methane) in conjunction with ASTM D 3588. [District Rules 1081, 2201, and 4306]
27. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4306 and 4320]
28. 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 1081, 2201, 2520, and 4306] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

29. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 2520, 9.3.2 and 4306] Federally Enforceable Through Title V Permit
30. Records of monthly and annual heat input of the unit shall be maintained. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit
31. An operating log shall be maintained for each unit of the group. The log shall include, on a monthly basis, the total hours of operation, type and quantity of fuel used, and preventative and corrective maintenance and modifications performed. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
32. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel sources, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
33. 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 and 4306] Federally Enforceable Through Title V Permit
34. {584} Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
35. {468} The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1129-24-22

LEGAL OWNER OR OPERATOR: CHEVRON U S A INC
MAILING ADDRESS: PO BOX 1392
BAKERSFIELD, CA 93302

LOCATION: HEAVY OIL WESTERN
CA

SECTION: NE34 TOWNSHIP: 30S RANGE: 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 25.2 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED C.E. NATCO STEAM GENERATOR (HSG #60; DIS# 20754-66) WITH O2 ANALYZER/CONTROLLER, NORTH AMERICAN BURNER, AND FLUE GAS RECIRCULATION - DERBY ACRES LEASE: APPLY 5 GR-S/100 SCF SOX LIMIT FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. The operator shall fire the unit only on natural gas and vapor recovery gas from the following permit unit: PTO S-1129-386. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5.0 gr S/100 scf. [District Rules 2201, 4406, and 4320] Federally Enforceable Through Title V Permit
4. Steam generator shall be equipped with a non-resettable, operational gas volume flowmeter that measures the combined fuel gas and vapor recovery gas volume sent to the steam generator. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
5. Maximum annual heat input of the unit shall not exceed 30 billion Btu per calendar year. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

S-1129-24-22 : May 28 2010 8:27AM - RICKARDK : Joint Inspection NOT Required

6. Emission rates shall not exceed any of the following limits: 0.010 lb-PM10/MMBtu; or 0.003 lb-VOC/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
7. Except during start-up or shutdown, emissions shall not exceed any of the following limits: 30 ppmvd NOx @ 3% O2 or 0.0365 lb-NOx/MMBtu and 48 ppmvd CO @ 3% O2 or 0.0355 lb-CO/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
8. Including startup and shutdown periods, maximum emissions from the steam generator shall not exceed any of the following limits: 0.1 lb-NOx/MMBtu, 22.1 lb-NOx/day, 1,095 lb-NOx/year, 0.084 lb-CO/MMBtu, 21.5 lb-CO/day, and 1,065 lb-CO/year. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Duration of startup or shutdown shall not exceed two hours each per occurrence. The emissions control system shall be in operation and emissions shall be minimized insofar as technologically possible during startup and shutdown. [District Rule 4320, 5.3] Federally Enforceable Through Title V Permit
10. Permittee shall maintain records of duration of each start-up and shutdown that exceeds two hours. Startup is defined as the period of time to reach operating temperature and pressure once fuel is supplied, including the time required by the emission control system to reach full operation. Shutdown is defined as the period of time taken from operating temperature and pressure until the fuel supply is completely turned off. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
11. Each fuel source shall be tested quarterly for sulfur content and higher heating value. If a fuel content test fails to show compliance, weekly testing is required until compliance is demonstrated for 8 consecutive weeks, after which quarterly testing may resume. [District Rule 4320, 5.7.6]
12. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320, 5.7.6]
13. If the unit is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320, 5.7.6]
14. Fuel H2S or total sulfur content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, ASTM D6228, or grab sample analysis by double GC for H2S and mercaptans. [District Rule 4320]
15. Permittee shall submit an analysis to the District demonstrating compliance with the fuel sulfur content within 60 days of startup and annually thereafter. The sulfur content of the fuel shall be determined using the test methods referenced in this permit or certified by a third party fuel supplier. [District Rule 2520, 9.3.2 and 4320 6.2.1] Federally Enforceable Through Title V Permit
16. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
17. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

18. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4320]
19. Exhaust gas stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rules 2201 and 1081] Federally Enforceable Through Title V Permit
20. Source testing shall be conducted using the methods and procedures approved by the District. Source testing for compliance demonstration shall be witnessed or authorized by District personnel. The District and EPA 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
21. 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
22. Source testing to measure 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 2201 and 4320, 6.3.1] Federally Enforceable Through Title V Permit
23. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
24. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture - EPA Method 4, PM₁₀ - EPA Method 5, SO_x (lb/MMBtu) - EPA Method 6C or 8 or ARB Method 100, or fuel gas sulfur content analysis (as H₂S) - EPA Method 11 or 15 or ASTM D6228 and (as total sulfur) - ASTM D1072, D3246, or D6228, or grab sample analysis by double GC for H₂S and mercaptans, performed in the laboratory, fuel h_hv (MMBtu) - ASTM D 1826 or D 1945 (as methane) in conjunction with ASTM D 3588. [District Rules 1081, 2201, and 4320] Federally Enforceable Through Title V Permit
25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4320]
26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 1081, 2201, 2520 and 4320] Federally Enforceable Through Title V Permit
27. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4320, 6.3.2]
28. Permittee shall maintain daily records of total combined volume of fuel gas and vapor recovery gas burned, monthly and annual heat input of the unit, the sulfur content as determined by periodic analytical testing or fuel supplier invoices/certifications, and permit number(s) of systems providing gas for incineration. [District Rules 2201, 2520, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. Records of monthly and annual heat input of the unit shall be maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. 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 and 4320]

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CONDITIONS CONTINUE ON NEXT PAGE

31. {584} Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
32. {468} The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
33. {4194} Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in Rule 4320. [District Rule 4320]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
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PERMIT NO: S-1129-112-7

LEGAL OWNER OR OPERATOR: CHEVRON U S A INC
MAILING ADDRESS: PO BOX 1392
BAKERSFIELD, CA 93302

LOCATION: HEAVY OIL WESTERN
CA

SECTION: NW02 TOWNSHIP: 31S RANGE: 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 5.4 MMBTU/HR GAS-FIRED HEATER TREATER WITH THREE BURNERS EACH RATED AT 1.8 MMBTU/HR - NORTH MIDWAY: INSTALL LOW NOX BURNERS AND APPLY NOX STANDARD SCHEDULE (9 PPM) AND 5 GR-S/100SCF SULFUR LIMITS FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Maximum annual heat input of the unit shall be less than 9 billion Btu per calendar year. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
4. The operator shall fire the unit only on natural gas and LPG. The combined sulfur content of all fuels supplied to this heater treater shall not exceed 5.0 gr S/100 scf. [District Rules 2201, 4406, and 4320] Federally Enforceable Through Title V Permit
5. Heater treater shall be equipped with an operational, non-resettable, totalizing mass or volumetric fuel flow meter gas volume flowmeter that measures the combined fuel gas and LPG volume sent to the heater treater. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

S-1129-112-7 : May 28 2010 8:27AM - RICKARDK : Joint Inspection NOT Required

6. Emission rates shall not exceed any of the following limits: 0.0076 lb-PM10/MMBtu or 0.0055 lb-VOC/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
7. Except during start-up, shutdown or initial shakedown, emissions shall not exceed any of the following limits: 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 115 ppmvd CO @ 3% O₂ or 0.084 lb-CO/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
8. Including startup and shutdown periods, maximum emissions from the steam generator shall not exceed any of the following limits: 0.1 lb-NO_x/MMBtu, 13.0 lb-NO_x/day, 99 lb-NO_x/year, 0.084 lb-CO/MMBtu, 10.9 lb-CO/day, and 756 lb-CO/year. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Duration of startup or shutdown shall not exceed two hours each per occurrence. The emissions control system shall be in operation and emissions shall be minimized insofar as technologically possible during startup and shutdown. [District Rule 4320, 5.3]
10. Permittee shall maintain records of duration of each start-up and shutdown that exceeds two hours. Startup is defined as the period of time to reach operating temperature and pressure once fuel is supplied, including the time required by the emission control system to reach full operation. Shutdown is defined as the period of time taken from operating temperature and pressure until the fuel supply is completely turned off. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
11. The shakedown period shall be concluded upon completion of the initial start-up compliance source test and will not exceed 60 days. Permittee shall maintain a record of the date of initial operation and shall make such records readily available for District inspection upon request. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. Each fuel source shall be tested semi-annually for sulfur content and higher heating value. If a fuel content test fails to show compliance, weekly testing is required until compliance is demonstrated for 8 consecutive weeks, after which semi-annual testing may resume. [District Rule 4320, 5.7.6]
13. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320, 5.7.6]
14. If the unit is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320, 5.7.6]
15. Fuel H₂S or total sulfur content shall be determined semi-annually using the following test methods H₂S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, ASTM D6228, or grab sample analysis by double GC for H₂S and mercaptans. [District Rule 4320]
16. Permittee shall submit an analysis to the District demonstrating compliance with the fuel sulfur content within 60 days of startup and annually thereafter. The sulfur content of the fuel shall be determined using the test methods referenced in this permit or certified by a third party fuel supplier. [District Rule 2520, 9.3.2 and 4320 6.2.1] Federally Enforceable Through Title V Permit
17. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

18. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
19. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4320] Federally Enforceable Through Title V Permit
20. Exhaust gas stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 2201 and 1081] Federally Enforceable Through Title V Permit
21. A source test to demonstrate compliance with NO_x and CO emission limits shall be performed within 60 days of startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
22. Source testing shall be conducted using the methods and procedures approved by the District. Source testing for compliance demonstration shall be witnessed or authorized by District personnel. The District and EPA 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 results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
24. Source testing to measure 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 2201 and 4320, 6.3.1] Federally Enforceable Through Title V Permit
25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
26. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture - EPA Method 4, PM₁₀ - EPA Method 5, SO_x (lb/MMBtu) - EPA Method 6C or 8 or ARB Method 100, or fuel gas sulfur content analysis (as H₂S) - EPA Method 11 or 15 or ASTM D6228 and (as total sulfur) - ASTM D1072, D3246, or D6228, or grab sample analysis by double GC for H₂S and mercaptans, performed in the laboratory, fuel hhv (MMBtu) - ASTM D 1826 or D 1945 (as methane) in conjunction with ASTM D 3588. [District Rules 1081, 2201, and 4320] Federally Enforceable Through Title V Permit
27. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4320]
28. 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 1081, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

29. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4320, 6.3.2] Federally Enforceable Through Title V Permit
30. Permittee shall maintain daily records of total combined volume of fuel gas and LPG burned, monthly and annual heat input of the unit, the sulfur content as determined by periodic analytical testing or fuel supplier invoices/certifications, and permit number(s) of systems providing gas for incineration. [District Rules 2201, 2520, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. Records of monthly and annual heat input of the unit shall be maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. 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 and 4320]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
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PERMIT NO: S-1129-112-8

LEGAL OWNER OR OPERATOR: CHEVRON U S A INC
MAILING ADDRESS: PO BOX 1392
BAKERSFIELD, CA 93302

LOCATION: HEAVY OIL WESTERN
CA

SECTION: NW02 TOWNSHIP: 31S RANGE: 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 5.4 MMBTU/HR GAS-FIRED HEATER TREATER WITH THREE BURNERS EACH RATED AT 1.8 MMBTU/HR - NORTH MIDWAY: MAKE NON-COMPLIANT DORMANT EMISSIONS UNIT FOR RULE 4320

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. The fuel supply line shall be physically disconnected from this unit. [District Rule 4320]
4. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary permit changes and/or modifications required to comply with the applicable requirements of District Rule 4320 and all other applicable District regulations. [District Rule 4320] Federally Enforceable Through Title V Permit
5. When designated as a dormant emissions unit, the permittee shall not be required to perform fuel sulfur content certification, tuning, and monitoring requirements. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
6. Maximum annual heat input of the unit shall be less than 9 billion Btu per calendar year. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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
S-1129-112-8 : May 28 2010 8:28AM - RICKARDK : Joint Inspection NOT Required

7. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. Firing on PUC or FERC quality natural gas shall demonstrate compliance with this requirement. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
8. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
9. Heater treater shall be equipped with an operational, non-resettable, totalizing mass or volumetric fuel flow meter gas volume flowmeter that measures the combined fuel gas and LPG volume sent to the heater treater. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. Excess combustion air shall be maintained at no less than 10% unless continuous operation oxygen analyzer/controller is utilized. [District Rule 2080] Federally Enforceable Through Title V Permit
11. Heater treater shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil. [District Rules 2080 and 4301, 5.2.2] Federally Enforceable Through Title V Permit
12. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume until compliance with the sulfur limits can be demonstrated for 8 consecutive weeks for a fuel source. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
13. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6, 6A, 6B, 6C, Method 8 or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
14. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
15. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 4306, 6.2.1] Federally Enforceable Through Title V Permit
16. 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
17. 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
18. The permittee shall monitor, at least on a monthly basis, fluid temperature and fluid interface level or other operational characteristics recommended by the unit manufacturer. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

19. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit
20. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel sources, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
21. Records of monthly and annual heat input of the unit shall be maintained. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit
22. Records of tune-up and monitoring of the operational characteristics of the unit shall be maintained. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
23. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
24. 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 and 4306] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1129-112-9

LEGAL OWNER OR OPERATOR: CHEVRON U S A INC
MAILING ADDRESS: PO BOX 1392
BAKERSFIELD, CA 93302

LOCATION: HEAVY OIL WESTERN
CA

SECTION: NW02 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 5.4 MMBTU/HR GAS-FIRED HEATER TREATER WITH THREE BURNERS EACH RATED AT 1.8 MMBTU/HR - NORTH MIDWAY: APPLY 5 GR-S/100 SCF SOX LIMIT FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Maximum annual heat input of the unit shall be less than 9 billion Btu per calendar year. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
4. The operator shall fire the unit only on natural gas and LPG. The combined sulfur content of all fuels supplied to this heater treater shall not exceed 5.0 gr S/100 scf. [District Rules 2201, 4406, and 4320] Federally Enforceable Through Title V Permit
5. Heater treater shall be equipped with an operational, non-resettable, totalizing mass or volumetric fuel flow meter gas volume flowmeter that measures the combined fuel gas and LPG volume sent to the heater treater. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST** NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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
S-1129-112-9 : May 28 2010 8:28AM - RICKARDK : Joint Inspection NOT Required

6. Each fuel source shall be tested semi-annually for sulfur content and higher heating value. If a fuel content test fails to show compliance, weekly testing is required until compliance is demonstrated for 8 consecutive weeks, after which semi-annual testing may resume. [District Rule 4320, 5.7.6]
7. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320, 5.7.6]
8. If the unit is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320, 5.7.6]
9. Fuel H₂S or total sulfur content shall be determined semi-annually using the following test methods H₂S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, ASTM D6228, or grab sample analysis by double GC for H₂S and mercaptans. [District Rule 4320]
10. Permittee shall submit an analysis to the District demonstrating compliance with the fuel sulfur content within 60 days of startup and annually thereafter. The sulfur content of the fuel shall be determined using the test methods referenced in this permit or certified by a third party fuel supplier. [District Rule 2520, 9.3.2 and 4320 6.2.1] Federally Enforceable Through Title V Permit
11. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. Firing on PUC or FERC quality natural gas shall demonstrate compliance with this requirement. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
12. 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
13. 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
14. The permittee shall monitor, at least on a monthly basis, fluid temperature and fluid interface level or other operational characteristics recommended by the unit manufacturer. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
15. Excess combustion air shall be maintained at no less than 10% unless continuous operation oxygen analyzer/controller is utilized. [District Rule 2080] Federally Enforceable Through Title V Permit
16. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture - EPA Method 4, PM₁₀ - EPA Method 5, SO_x (lb/MMBtu) - EPA Method 6C or 8 or ARB Method 100, or fuel gas sulfur content analysis (as H₂S) - EPA Method 11 or 15 or ASTM D6228 and (as total sulfur) - ASTM D1072, D3246, or D6228, or grab sample analysis by double GC for H₂S and mercaptans, performed in the laboratory, fuel hhv (MMBtu) - ASTM D 1826 or D 1945 (as methane) in conjunction with ASTM D 3588. [District Rules 1081, 2201 and 4320] Federally Enforceable Through Title V Permit
17. Records of tune-up and monitoring of the operational characteristics of the unit shall be maintained. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

18. Permittee shall maintain daily records of total combined volume of fuel gas and LPG burned, monthly and annual heat input of the unit, the sulfur content as determined by analytical testing or fuel supplier invoices/certifications, and permit number(s) of systems providing gas for incineration. [District Rules 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
19. Records of monthly and annual heat input of the unit shall be maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. 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 and 4320]
21. {4194} Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1129-114-8

LEGAL OWNER OR OPERATOR: CHEVRON U S A INC
MAILING ADDRESS: PO BOX 1392
BAKERSFIELD, CA 93302

LOCATION: HEAVY OIL WESTERN
CA

SECTION: NW02 TOWNSHIP: 31S RANGE: 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF NON-COMPLIANT DORMANT 9.0 MMBTU/HR GAS-FIRED HEATER TREATER WITH TWO BURNERS EACH RATED AT 4.5 MMBTU/HR - NORTH MIDWAY: INSTALL LOW NOX BURNERS AND APPLY NOX STANDARD SCHEDULE(9 PPM) AND 5 GR-S/100SCF SOX LIMITS FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Maximum annual heat input of the unit shall be less than 9 billion Btu per calendar year. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
4. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5.0 gr S/100 scf. [District Rules 2201,4406, and 4320] Federally Enforceable Through Title V Permit
5. Heater treater shall be equipped with an operational, non-resettable, totalizing mass or volumetric fuel flow meter gas volume flowmeter that measures the combined fuel gas and LPG volume sent to the heater treater. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
6. Emission rates shall not exceed any of the following limits: 0.0076 lb-PM10/MMBtu or 0.0055 lb-VOC/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST** NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

S-1129-114-8 : May 28 2010 8:28AM - RICKARDX : Joint Inspection NOT Required

7. Except during startup, shutdown, or the initial shakedown, emissions shall not exceed any of the following limits: 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 115 ppmvd CO @ 3% O₂ or 0.084 lb-CO/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
8. Including startup and shutdown periods, maximum emissions from the steam generator shall not exceed any of the following limits: 0.1 lb-NO_x/MMBtu, 21.6 lb-NO_x/day, 99 lb-NO_x/year, 0.084 lb-CO/MMBtu, 18.1 lb-CO/day, and 756 lb-CO/year. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Duration of startup or shutdown shall not exceed two hours each per occurrence. The emissions control system shall be in operation and emissions shall be minimized insofar as technologically possible during startup and shutdown. [District Rule 4320, 5.3]
10. Permittee shall maintain records of duration of each start-up and shutdown that exceeds two hours. Startup is defined as the period of time to reach operating temperature and pressure once fuel is supplied, including the time required by the emission control system to reach full operation. Shutdown is defined as the period of time taken from operating temperature and pressure until the fuel supply is completely turned off. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
11. The shakedown period shall be concluded upon completion of the initial start-up compliance source test and will not exceed 60 days. Permittee shall maintain a record of the date of initial operation and shall make such records readily available for District inspection upon request. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. Each fuel source shall be tested semi-annually for sulfur content and higher heating value. If a fuel content test fails to show compliance, weekly testing is required until compliance is demonstrated for 8 consecutive weeks, after which semi-annual testing may resume. [District Rule 4320, 5.7.6]
13. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320, 5.7.6]
14. If the unit is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320, 5.7.6]
15. Fuel H₂S or total sulfur content shall be determined semi-annually using the following test methods H₂S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, ASTM D6228, or grab sample analysis by double GC for H₂S and mercaptans. [District Rule 4320]
16. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 4320, 6.2.1]
17. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
18. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4320]
19. A source test to demonstrate compliance with NO_x and CO emission limits shall be performed within 60 days of startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

20. Source testing shall be conducted using the methods and procedures approved by the District. Source testing for compliance demonstration shall be witnessed or authorized by District personnel. The District and EPA 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
21. 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
22. Permittee shall annually submit an analysis showing the fuel sulfur content (as H₂S) by either EPA Method 11, 15, or ASTM D6228; total fuel sulfur content by either ASTM D1072, D3246, D6228 or double GC with mercaptans; or conduct a source test for SO_x. [District Rule 4320, 5.7.6]
23. Source testing to measure 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 2201 and 4320, 6.3.1] Federally Enforceable Through Title V Permit
24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
25. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture - EPA Method 4, PM₁₀ - EPA Method 5, SO_x (lb/MMBtu) - EPA Method 6C or 8 or ARB Method 100, or fuel gas sulfur content analysis (as H₂S) - EPA Method 11 or 15 or ASTM D6228 and (as total sulfur) - ASTM D1072, D3246, or D6228, or grab sample analysis by double GC for H₂S and mercaptans, performed in the laboratory, fuel hhv (MMBtu) - ASTM D 1826 or D 1945 (as methane) in conjunction with ASTM D 3588. [District Rules 1081, 2201 and 4320] Federally Enforceable Through Title V Permit
26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4320]
27. 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 1081, 2201, 2520 and 4320] Federally Enforceable Through Title V Permit
28. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4320, 6.3.2]
29. Permittee shall maintain daily records of total combined volume of fuel gas and LPG burned, the sulfur content as determined by analytical testing or fuel supplier invoices/certifications, and permit number(s) of systems providing gas for incineration. [District Rules 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
30. Records of monthly and annual heat input of the unit shall be maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. 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 and 4320]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1129-114-9

LEGAL OWNER OR OPERATOR: CHEVRON U S A INC
MAILING ADDRESS: PO BOX 1392
BAKERSFIELD, CA 93302

LOCATION: HEAVY OIL WESTERN
CA

SECTION: NW02 TOWNSHIP: 31S RANGE: 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF NON-COMPLIANT DORMANT 9.0 MMBTU/HR GAS-FIRED HEATER TREATER WITH TWO BURNERS EACH RATED AT 4.5 MMBTU/HR - NORTH MIDWAY: LIMIT ANNUAL HEAT INPUT TO 9 BILLION BTU FOR RULE 4306 COMPLIANCE AND MAKE NON-COMPLIANT DORMANT EMISSIONS UNIT FOR RULE 4320

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. The fuel supply line shall be physically disconnected from this unit. [District Rule 4320]
4. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary permit changes and/or modifications required to comply with the applicable requirements of District Rule 4320 and all other applicable District regulations. [District Rule 4320] Federally Enforceable Through Title V Permit
5. When designated as a dormant emissions unit, the permittee shall not be required to perform fuel sulfur content certification. [District Rules 2201 and 4320]
6. Maximum annual heat input of the unit shall be less than 9 billion Btu per calendar year. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST** NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

S-1129-114-9 : May 28 2010 8:26AM -- RICKARDK : Joint Inspection NOT Required

7. Heater treater shall be equipped with an operational, non-resettable, totalizing mass or volumetric fuel flow meter gas volume flowmeter that measures the combined fuel gas and LPG volume sent to the heater treater. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
8. Excess combustion air shall be maintained at no less than 10% unless continuous operation oxygen analyzer/controller is utilized. [District Rule 2080] Federally Enforceable Through Title V Permit
9. Heater treater shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil. [District Rules 2080 and 4301, 5.2.2] Federally Enforceable Through Title V Permit
10. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. Firing on PUC or FERC quality natural gas shall demonstrate compliance with this requirement. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
11. 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
12. 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
13. The permittee shall monitor, at least on a monthly basis, fluid temperature and fluid interface level or other operational characteristics recommended by the unit manufacturer. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
14. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
15. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit
16. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume until compliance with the sulfur limits can be demonstrated for 8 consecutive weeks for a fuel source. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
17. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6, 6A, 6B, 6C, Method 8 or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
18. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

19. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
20. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel sources, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
21. Records of monthly and annual heat input of the unit shall be maintained. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit
22. Records of tune-up and monitoring of the operational characteristics of the unit shall be maintained. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
23. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-1129-114-10

LEGAL OWNER OR OPERATOR: CHEVRON U S A INC
MAILING ADDRESS: PO BOX 1392
BAKERSFIELD, CA 93302

LOCATION: HEAVY OIL WESTERN
CA

SECTION: NW02 TOWNSHIP: 31S RANGE: 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF NON-COMPLIANT DORMANT 9.0 MMBTU/HR GAS-FIRED HEATER TREATER WITH TWO BURNERS EACH RATED AT 4.5 MMBTU/HR - NORTH MIDWAY: LIMIT ANNUAL HEAT INPUT TO 9 BILLION BTU FOR RULE 4306 COMPLIANCE AND APPLY 5 GR-S/100 SCF SOX LIMIT FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Maximum annual heat input of the unit shall be less than 9 billion Btu per calendar year. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
4. Heater treater shall be equipped with an operational, non-resettable, totalizing mass or volumetric fuel flow meter gas volume flowmeter that measures the combined fuel gas and LPG volume sent to the heater treater. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
5. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5.0 gr S/100 scf. [District Rules 2201, 4406, and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

S-1129-114-10 : May 28 2010 8:28AM - RICKARDK : Joint Inspection NOT Required

6. 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
7. 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
8. The permittee shall monitor, at least on a monthly basis, fluid temperature and fluid interface level or other operational characteristics recommended by the unit manufacturer. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
9. Each fuel source shall be tested semi-annually for sulfur content and higher heating value. If a fuel content test fails to show compliance, weekly testing is required until compliance is demonstrated for 8 consecutive weeks, after which semi-annual testing may resume. [District Rule 4320, 5.7.6]
10. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contacts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320, 5.7.6]
11. If the unit is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320, 5.7.6]
12. Fuel H₂S or total sulfur content shall be determined semi-annually using the following test methods H₂S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, ASTM D6228, or grab sample analysis by double GC for H₂S and mercaptans. [District Rule 4320]
13. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 4320, 6.2.1]
14. Permittee shall annually submit an analysis showing the fuel sulfur content (as H₂S) by either EPA Method 11, 15, or ASTM D6228; total fuel sulfur content by either ASTM D1072, D3246, D6228 or double GC with mercaptans; or conduct a source test for SO_x. [District Rule 4320, 5.7.6]
15. Permittee shall maintain daily records of total combined volume of fuel gas and LPG burned, the sulfur content as determined by analytical testing or fuel supplier invoices/certifications, and permit number(s) of systems providing gas for incineration. [District Rules 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
16. Records of monthly and annual heat input of the unit shall be maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. Records of tune-up and monitoring of the operational characteristics of the unit shall be maintained. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
18. 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 and 4320]
19. {4194} Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in Rule 4320. [District Rule 4320]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1129-115-7

LEGAL OWNER OR OPERATOR: CHEVRON U S A INC
MAILING ADDRESS: PO BOX 1392
BAKERSFIELD, CA 93302

LOCATION: HEAVY OIL WESTERN
CA

SECTION: NW02 TOWNSHIP: 31S RANGE: 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 7.4 MMBTU/HR GAS-FIRED HEATER TREATER WITH THREE BURNERS EACH RATED AT 1.8 MMBTU/HR AND ONE BURNER RATED AT 2.0 MMBTU/HR - NORTH MIDWAY: INSTALL LOW NOX BURNERS AND APPLY NOX STANDARD SCHEDULE(9 PPM) AND 5 GR-S/100SCF SOX LIMITS FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Maximum annual heat input of the unit shall be less than 9 billion Btu per calendar year. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
4. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5.0 gr S/100 scf. [District Rules 2201, 4406, and 4320] Federally Enforceable Through Title V Permit
5. Heater treater shall be equipped with an operational, non-resettable, totalizing mass or volumetric fuel flow meter gas volume flowmeter that measures the combined fuel gas and LPG volume sent to the heater treater. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
6. Emission rates shall not exceed any of the following limits: 0.0076 lb-PM10/MMBtu or 0.0055 lb-VOC/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

S-1129-115-7 : May 28 2010 8:28AM - RICKARDX : Joint Inspection NOT Required

7. Except during startup, shutdown, or the initial shakedown, emissions shall not exceed any of the following limits: 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu and 115 ppmvd CO @ 3% O₂ or 0.084 lb-CO/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
8. Including startup and shutdown periods, maximum emissions from the steam generator shall not exceed any of the following limits: 0.1 lb-NO_x/MMBtu, 17.8 lb-NO_x/day, 99 lb-NO_x/year, 0.084 lb-CO/MMBtu, 14.9 lb-CO/day, and 756 lb-CO/year. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Duration of startup or shutdown shall not exceed two hours each per occurrence. The emissions control system shall be in operation and emissions shall be minimized insofar as technologically possible during startup and shutdown. [District Rule 4320, 5.3]
10. Permittee shall maintain records of duration of each start-up and shutdown that exceeds two hours. Startup is defined as the period of time to reach operating temperature and pressure once fuel is supplied, including the time required by the emission control system to reach full operation. Shutdown is defined as the period of time taken from operating temperature and pressure until the fuel supply is completely turned off. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
11. The shakedown period shall be concluded upon completion of the initial start-up compliance source test and will not exceed 60 days. Permittee shall maintain a record of the date of initial operation and shall make such records readily available for District inspection upon request. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. Each fuel source shall be tested semi-annually for sulfur content and higher heating value. If a fuel content test fails to show compliance, weekly testing is required until compliance is demonstrated for 8 consecutive weeks, after which semi-annual testing may resume. [District Rule 4320, 5.7.6]
13. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320, 5.7.6]
14. If the unit is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320, 5.7.6]
15. Fuel H₂S or total sulfur content shall be determined semi-annually using the following test methods H₂S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, ASTM D6228, or grab sample analysis by double GC for H₂S and mercaptans. [District Rule 4320]
16. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 4320, 6.2.1]
17. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
18. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4320]
19. A source test to demonstrate compliance with NO_x and CO emission limits shall be performed within 60 days of startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

20. Source testing shall be conducted using the methods and procedures approved by the District. Source testing for compliance demonstration shall be witnessed or authorized by District personnel. The District and EPA 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
21. 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
22. Permittee shall annually submit an analysis showing the fuel sulfur content (as H₂S) by either EPA Method 11, 15, or ASTM D6228; total fuel sulfur content by either ASTM D1072, D3246, D6228 or double GC with mercaptans; or conduct a source test for SO_x. [District Rule 4320, 5.7.6]
23. Source testing to measure 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 2201 and 4320, 6.3.1] Federally Enforceable Through Title V Permit
24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
25. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture - EPA Method 4, PM₁₀ - EPA Method 5, SO_x (lb/MMBtu) - EPA Method 6C or 8 or ARB Method 100, or fuel gas sulfur content analysis (as H₂S) - EPA Method 11 or 15 or ASTM D6228 and (as total sulfur) - ASTM D1072, D3246, or D6228, or grab sample analysis by double GC for H₂S and mercaptans, performed in the laboratory, fuel h_hv (MMBtu) - ASTM D 1826 or D 1945 (as methane) in conjunction with ASTM D 3588. [District Rules 1081, 2201, and 4320] Federally Enforceable Through Title V Permit
26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4320]
27. 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 1081, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
28. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4320, 6.3.2] Federally Enforceable Through Title V Permit
29. Permittee shall maintain daily records of total combined volume of fuel gas and LPG burned, the sulfur content as determined by analytical testing or fuel supplier invoices/certifications, and permit number(s) of systems providing gas for incineration. [District Rules 2201, 2520, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. Records of monthly and annual heat input of the unit shall be maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. 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 and 4320]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1129-115-8

LEGAL OWNER OR OPERATOR: CHEVRON U S A INC
MAILING ADDRESS: PO BOX 1392
BAKERSFIELD, CA 93302

LOCATION: HEAVY OIL WESTERN
CA

SECTION: NW02 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 7.4 MMBTU/HR GAS-FIRED HEATER TREATER WITH THREE BURNERS EACH RATED AT 1.8 MMBTU/HR AND ONE BURNER RATED AT 2.0 MMBTU/HR - NORTH MIDWAY: MAKE NON-COMPLIANT DORMANT EMISSIONS UNIT FOR RULE 4320

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. The fuel supply line shall be physically disconnected from this unit. [District Rule 4320]
4. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary permit changes and/or modifications required to comply with the applicable requirements of District Rule 4320 and all other applicable District regulations. [District Rule 4320] Federally Enforceable Through Title V Permit
5. When designated as a dormant emissions unit, the permittee shall not be required to perform fuel sulfur content certification, tuning, and monitoring requirements. [District Rules 2201 and 4320]
6. Maximum annual heat input of the unit shall be less than 9 billion Btu per calendar year. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services

S-1129-115-8: May 28 2010 8:28AM - RICKARDK : Joint Inspection NOT Required

7. Heater treater shall be equipped with an operational, non-resettable, totalizing mass or volumetric fuel flow meter gas volume flowmeter that measures the combined fuel gas and LPG volume sent to the heater treater. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
8. Excess combustion air shall be maintained at no less than 10% unless continuous operation oxygen analyzer/controller is utilized. [District Rule 2080] Federally Enforceable Through Title V Permit
9. Heater treater shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil. [District Rules 2080 and 4301, 5.2.2] Federally Enforceable Through Title V Permit
10. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. Firing on PUC or FERC quality natural gas shall demonstrate compliance with this requirement. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
11. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
12. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume until compliance with the sulfur limits can be demonstrated for 8 consecutive weeks for a fuel source. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
13. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6, 6A, 6B, 6C, Method 8 or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
14. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
15. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 4320, 6.2.1]
16. 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
17. 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
18. The permittee shall monitor, at least on a monthly basis, fluid temperature and fluid interface level or other operational characteristics recommended by the unit manufacturer. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

19. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit
20. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel sources, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
21. Records of monthly and annual heat input of the unit shall be maintained. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit
22. Records of tune-up and monitoring of the operational characteristics of the unit shall be maintained. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
23. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
24. 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 and 4320]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-1129-115-9

LEGAL OWNER OR OPERATOR: CHEVRON U S A INC
MAILING ADDRESS: PO BOX 1392
BAKERSFIELD, CA 93302

LOCATION: HEAVY OIL WESTERN
CA

SECTION: NW02 TOWNSHIP: 31S RANGE: 22E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 7.4 MMBTU/HR GAS-FIRED HEATER TREATER WITH THREE BURNERS EACH RATED AT 1.8 MMBTU/HR AND ONE BURNER RATED AT 2.0 MMBTU/HR - NORTH MIDWAY: APPLY 5 GR-S/100 SCF SOX LIMIT FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Maximum annual heat input of the unit shall be less than 9 billion Btu per calendar year. [District Rules 2201,4305, 4306, and 4320] Federally Enforceable Through Title V Permit
4. Heater treater shall be equipped with an operational, non-resettable, totalizing mass or volumetric fuel flow meter gas volume flowmeter that measures the combined fuel gas and LPG volume sent to the heater treater. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
5. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5.0 gr S/100 scf. [District Rules 2201,4406, and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST** NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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.

Sayed Sadredin, Executive Director APCO

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DAVID WARNER, Director of Permit Services

S-1129-115-9 : May 28 2010 8:28AM - RICKARDK : Joint Inspection NOT Required

6. 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
7. 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
8. The permittee shall monitor, at least on a monthly basis, fluid temperature and fluid interface level or other operational characteristics recommended by the unit manufacturer. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
9. Each fuel source shall be tested semi-annually for sulfur content and higher heating value. If a fuel content test fails to show compliance, weekly testing is required until compliance is demonstrated for 8 consecutive weeks, after which semi-annual testing may resume. [District Rule 4320, 5.7.6]
10. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320, 5.7.6]
11. If the unit is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. Fuel samples shall be taken or calculated while operating at less than 50% by volume PUC-quality gas. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320, 5.7.6]
12. Fuel H₂S or total sulfur content shall be determined semi-annually using the following test methods H₂S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, ASTM D6228, or grab sample analysis by double GC for H₂S and mercaptans. [District Rule 4320]
13. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rule 4320, 6.2.1]
14. Permittee shall annually submit an analysis showing the fuel sulfur content (as H₂S) by either EPA Method 11, 15, or ASTM D6228; total fuel sulfur content by either ASTM D1072, D3246, D6228 or double GC with mercaptans; or conduct a source test for SO_x. [District Rule 4320, 5.7.6]
15. Permittee shall maintain daily records of total combined volume of fuel gas and LPG burned, the sulfur content as determined by analytical testing or fuel supplier invoices/certifications, and permit number(s) of systems providing gas for incineration. [District Rules 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
16. Records of monthly and annual heat input of the unit shall be maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. Records of tune-up and monitoring of the operational characteristics of the unit shall be maintained. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
18. 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 and 4320]
19. {4194} Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in Rule 4320. [District Rule 4320]

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