



DEC 08 2010

Mr. John Gruber
Chevron USA
PO Box 1392
Bakersfield, CA 93302

**Re: Notice of Preliminary Decision - ATC / Certificate of Conformity
Facility # S-1141
Project # S-1104209**

Dear Mr. Gruber:

Enclosed for your review and comment is the District's analysis of an application for Authorities to Construct for Chevron USA (Cymric Field) at Section 1, Township: 30S, Range: 21E (Sec 1Y) or Section 36, Township: 29S, Range: 21E (Sec 36W) in Kern County, CA. The project consists of adding a new scrubber serving three existing steam generators for Rule 4320 and other changes.

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: SD/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



DEC 08 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-1141
Project # S-1104209

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of an application for Authorities to Construct for Chevron USA (Cymric Field) at Section 1, Township: 30S, Range: 21E (Sec 1Y) or Section 36, Township: 29S, Range: 21E (Sec 36W) in Kern County, CA. The project consists of adding a new scrubber serving three existing steam generators for Rule 4320 and other changes.

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.

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DEC 08 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-1141
Project # S-1104209**

Dear Mr. Rios:

Enclosed for your review is the District's engineering evaluation of an application for Authorities to Construct for Chevron USA (Cymric Field) at Section 1, Township: 30S, Range: 21E (Sec 1Y) or Section 36, Township: 29S, Range: 21E (Sec 36W) in Kern County, CA, which has been issued a Title V permit. Chevron USA is requesting that Certificates of Conformity, with the procedural requirements of 40 CFR Part 70, be issued with this project. The project consists of adding a new scrubber serving three existing steam generators for Rule 4320 and other changes.

Enclosed is the engineering evaluation of this application, along with the current Title V permit, and proposed Authorities to Construct # S-1141-26-35, '-26-36, '-31-36, '-31-37, '-515-12, '-515-13, & '-597-0 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

DW: SD/cm

Enclosures

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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 USA for its heavy oil facility (Cymric Field) at Section 1, Township: 30S, Range: 21E (Sec 1Y) or Section 36, Township: 29S, Range: 21E (Sec 36W) in Kern County, California. The project consists of adding a new scrubber serving three existing steam generators for Rule 4320 and other changes.

The analysis of the regulatory basis for these proposed actions, Project #S-1104209, 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, 1990 E. GETTYSBURG AVE, FRESNO, CA 93726-0244.

San Joaquin Valley Air Pollution Control District Authority to Construct

Steam Generators for Rule 4320 Compliance

Facility Name: Chevron, USA
Mailing Address: P. O. Box 1392
Bakersfield, CA 93302
Contact Person: John Gruber
Telephone: 661-654-7144
Fax: 661-654-7606
Application #(s): S-1141-26-35/36, '-31-36/37, '-515-12/13, & '-597-0
Project #: S-1104209
Deemed Complete: September 2, 2010

Date: November 1, 2010
Engineer: Steve Davidson
Lead Engineer: Allan Phillips

I. PROPOSAL

Chevron, USA (CUSA) is requesting Authority to Construct (ATC) permits for the modification of three gas-fired steam generators and to create a "stand alone" permit for one previously approved H₂S scrubber at their Heavy Oil Western Stationary Source to comply with the applicable emission requirements of District Rule 4320, Advanced Emission Reductions Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr. CUSA is requesting ATCs for two options:

- Option 1: Designate steam generators S-1141-26, '-31, and '-515 as non-compliant dormant emissions units (DEU) for Rule 4320 compliance.
- Option 2: Transfer the location of units 1141-26, '-31, and '-515 and allow them to operate at the following additional locations: any quarter section of Section 1, Township: 30S, Range: 21E (Sec 1Y) or Section 36, Township: 29S, Range: 21E (Sec 36W).

Chevron proposes that steam generators 1141-26, '-31, and '-515 will be equipped with a SO_x scrubber and a Brink Mist Eliminator (or equivalent). The scrubber will treat the exhaust vapors combusted by steam generators S-1141-26, '-31, and '-515 reducing the SO_x emissions to 95% or to an outlet concentration not to exceed 9 ppmvd @ 3% O₂.

In order accommodate the scrubber, Chevron requests that the following upgrades may be performed on the steam generators:

- Upgrade or alter radiant and convection sections,
- Replace air/fuel mixer with "gatling gun" style air/fuel mixer,
- Replace/upgrade FGR piping and controls

- Install/replace air intake control valve and/or orifice plate restrictor
- Replace/upgrade fuel train components
- Replace blower motors with 200 hp motors

Chevron is also requesting to place specific limiting conditions (SLC) for PM₁₀ and SO_x on the steam generator permits S-1141-26-36, '-31-37, and '-515-13. The requested limits of 110,983 lb-PM₁₀/year and 937,243 lb-SO_x/year is not required for any District regulation. However, the limits will be placed on the permit per Chevron's request to meet Federal Prevention of Significant Deterioration (PSD) requirements.

The H₂S scrubber currently listed on permits on permit S-1141-26 will remain at the current location and treat the gas prior to combustion in permit units S-1141-549, -550, -551, -552, -553, -555, -556, -557 and -558. Chevron has requested that the H₂S scrubber be issued it's own Permit to Operate (S-1141-579).

The transfer of location within a stationary source is not a NSR modification per Rule 2201 Section 3.24.3; therefore, is District Rule 2201 does not apply to that portion of the proposal.

Issuing the existing H₂S scrubber a new permit is administrative and not a modification.

The installation of the scrubber and Brink Mist Eliminator is proposed solely to comply with District Rule 4320 emission requirements. Since there is a change to the method of operation of the steam generators, these changes are modifications pursuant to District Rule 2201.

CUSA received their Title V Permit on November 30, 2001. 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 ATCs issued with this project.

Disposition of Outstanding ATCs

S-1141-26-34 will be implemented prior to or concurrently with ATC S-1141-26-36.
S-1141-31-35 will be implemented prior to or concurrently with ATC S-1141-31-37.
S-1141-511-11 will be implemented prior to or concurrently with ATC S-1141-511-13.

Appendix A – Current Permit to Operate (PTO) and un-implemented ATCs

II. APPLICABLE RULES

District Rule 2201	New and Modified Stationary Source Review Rule (12/18/08)
District Rule 2520	Federally Mandated Operating Permits (6/21/01)
District Rule 4001	New Source Performance Standards (4/14/99)
District Rule 4101	Visible Emissions (2/17/05)
District Rule 4102	Nuisance (12/17/92)

District Rule 4201 Particulate Matter Concentration (12/17/92)
District Rule 4301 Fuel Burning Equipment (12/17/92)
District Rule 4305 Boilers, Steam Generators and Process Heaters – Phase 2 (8/21/03)
District Rule 4306 Boilers, Steam Generators and Process Heaters – Phase 3 (8/16/08)
District Rule 4320 Advanced Emission Reductions Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr (10/16/08)
District Rule 4351 Boilers, Steam Generators and Process Heaters – Phase 1 (8/21/03)
District Rule 4801 Sulfur Compounds (12/17/92)
CH&SC 41700 Health Risk Assessment
CH&SC 42301.6 School Notice
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

III. PROJECT LOCATION

The steam generators will be located within CUSA's Heavy Oil Western stationary source at the Cymric Field at Section 1, Township: 30S, Range: 21E (Sec 1Y), NW/4 Section: 17, Township: 32S, Range: 23E or Section 36, Township: 29S, Range: 21E (Sec 36W). The steam generators will not be located within 1,000 feet of the outer boundary of a K-12 school. There is also no increase in emissions; therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. PROCESS DESCRIPTION

CUSA operates permitted equipment at their Heavy Oil Central stationary source. In thermally enhanced oil recovery (TEOR), steam generators produce steam for injection into heavy crude oil bearing strata via injection wells to reduce the viscosity of the crude oil, thereby facilitating petroleum production.

Steam enhanced oil recovery requires control of air contaminants associated with produced gas (and steam). CUSA operates tank vapor and well casing gas collection and control systems for this purpose.

V. EQUIPMENT LISTING

Pre-Project Equipment Description (base for this project):

S-1141-26-34: 62.5 MMBTU/HR STRUTHERS THERMOFLOOD NATURAL GAS/TEOR GAS/TVC VAPORS-FIRED STEAM GENERATOR WITH A NORTH AMERICAN MODEL GLE 4231 ULTRA-LOW NOX BURNER, FGR, A THERMOX O2 CONTROLLER, VAPOR PIPING FROM TEOR SYSTEM, VAPOR PIPING FROM TVC SYSTEMS, AND A SULFA SCRUB HYDROGEN SULFIDE (H2S) SYSTEM (COMMON TO -31, -549, -550, -551, -552, -553, -555, -556, -557 AND -558) (#48, DIS #20660-81, NATIONAL BOARD #1041)

S-1141-31-35: 62.5 MMBTU/HR NATURAL GAS/TEOR/TVC GAS FIRED CE NATCO STEAM GENERATOR #59 (DIS# 20639-81, NATIONAL BOARD #1352),

WITH NORTH AMERICAN MAGNA-FLAME GLE ULTRA-LOW NOX
BURNER, O2 CONTROLLER AND FGR

S-1141-515-11: 62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED SMITH MOON
STEEL STEAM GENERATOR N.B. #826 WITH FGR AND O2
ANALYZER/CONTROLLER

Proposed Modification:

Option 1 (Designate as Dormant Emissions Unit)

S-1141-26-35, '-31-36 and '-515-12:

DESIGNATE AS DORMANT FOR RULE 4320 COMPLIANCE

Option 2 (Install SO₂ Scrubber)

S-1141-26-36, '-31-37 and '-515-13:

LIMIT FUEL GAS SULFUR CONTENT TO 5 GR-S/100 SCF OR REDUCE
SOX BY 95% VIA AN EXHAUST SO₂ SCRUBBER WITH A BRINK MIST
ELIMINATOR (OR EQUIVALENT) SHARED BY UNITS S-1141-26, S-1141-
31, AND S-1141-515, REPLACE/UPGRADE STEAM PIPING,
REPLACE/UPGRADE BLOWER, FGR, AND AIR INTAKE COMPONENTS
(IF NECESSARY), REPLACE/UPGRADE FUEL TRAIN COMPONENTS,
ADD ADDITIONAL VARIOUS SPECIFIED OPERATING LOCATIONS, AND
REMOVE REFERENCES AND CONDITIONS TO SULFA SCRUB H₂S
SYSTEM.

Post Project Equipment Description:

Option 1 (Designate as Dormant Emissions Unit)

S-1141-26-35: 62.5 MMBTU/HR STRUTHERS THERMOFLOOD NATURAL GAS/TEOR
GAS/TVC VAPORS-FIRED STEAM GENERATOR WITH A NORTH
AMERICAN MODEL GLE 4231 ULTRA-LOW NOX BURNER, FGR, A
THERMOX O2 CONTROLLER, VAPOR PIPING FROM TEOR SYSTEM,
VAPOR PIPING FROM TVC SYSTEMS, AND AN EXHAUST SO₂
SCRUBBER WITH A BRINK MIST ELIMINATOR (OR EQUIVALENT)
SHARED WITH UNITS S-1141-31, AND S-1141-515 (#48, DIS #20660-81,
NATIONAL BOARD #1041)

S-1141-31-36: 62.5 MMBTU/HR NATURAL GAS/TEOR/TVC GAS FIRED CE NATCO
STEAM GENERATOR #59 (DIS# 20639-81, NATIONAL BOARD #1352),
WITH NORTH AMERICAN MAGNA-FLAME GLE ULTRA-LOW NOX
BURNER, O2 CONTROLLER AND FGR

S-1141-515-12: 62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED SMITH MOON STEEL STEAM GENERATOR N.B. #826 WITH FGR, O₂ ANALYZER/CONTROLLER AND SHARED EXHAUST SO₂ SCRUBBER WITH A BRINK MIST ELIMINATOR (OR EQUIVALENT) LISTED ON PERMIT S-1141-26

Option 2 (Install SO₂ Scrubber)

S-1141-26-36: 62.5 MMBTU/HR STRUTHERS THERMOFLOOD NATURAL GAS/TEOR GAS/TVC VAPORS-FIRED STEAM GENERATOR (#48, DIS #20660-81, NATIONAL BOARD #1041) WITH A NORTH AMERICAN MODEL GLE 4231 ULTRA-LOW NOX BURNER, FGR, A THERMOX O₂ CONTROLLER, VAPOR PIPING FROM TEOR SYSTEM, AND VAPOR PIPING FROM TVC SYSTEMS, SERVED BY EXHAUST SO₂ SCRUBBER WITH A BRINK MIST ELIMINATOR (OR EQUIVALENT) SHARED WITH STEAM GENERATORS S-1141-32 AND '515

S-1141-31-37: 62.5 MMBTU/HR NATURAL GAS/TEOR/TVC GAS FIRED CE NATCO STEAM GENERATOR #59 (DIS# 20639-81, NATIONAL BOARD #1352), WITH NORTH AMERICAN MAGNA-FLAME GLE ULTRA-LOW NOX BURNER, AND O₂ CONTROLLER, FGR SERVED BY SCRUBBER LISTED ON S-1141-26

S-1141-515-13: 62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED SMITH MOON STEEL STEAM GENERATOR N.B. #826 WITH FGR, AND O₂ ANALYZER/CONTROLLER SERVED BY SCRUBBER LISTED ON S-1141-26

S-1141-597-0: SULFA SCRUB HYDROGEN SULFIDE (H₂S) SYSTEM SERVING STEAM GENERATORS S-1141-549, -550, -551, -552, -553, -555, -556, -557 AND -558

VI. EMISSION CONTROL TECHNOLOGY EVALUATION

The combustion equipment in this project is capable of generating NO_x, CO, VOC, PM₁₀ and SO_x emissions due to the combustion of natural gas/TEOR/TVC.

SO_x emissions are reduced by 95% or limited to 9 ppmv @ 3% O₂ with the use of a scrubber.

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

flame temperature so that the reaction between the excess oxygen with nitrogen is minimized.

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

An electronic O₂ controller in connection with a programmable logic controller (PLC) monitors and precisely adjusts the amount of excess combustion air and recirculated flue gas necessary for a stable combustion flame.

VII. GENERAL CALCULATIONS

Option 1 (Designate as Dormant Emissions Unit)

This project does not meet the criteria for a Rule 2201 Modification, as defined in Section 3.26, and is therefore not subject to the requirements of Rule 2201. Therefore, formal calculations for Rule 2201 are not required.

As Rule 4320 has various compliance options, the Rule 4320 compliant potential to emit for this unit is not know at this time, i.e. it will be established when modifications are made to achieve compliance with the emission limits in Rule 4320. As such, the emissions from PAS for the existing unit will be entered into PAS for these ATCs.

Option 2 (Install SO₂ Scrubber):

Permit Unit S-1141-597-0:

As the VOC content of the vapors, associated with the scrubber, is less than 10% by weight, there are no fugitive emissions from the components. Therefore, this the scrubber is not being modified as defined in Section 3.25 of Rule 2201 and no emissions changes are quantified.

Assumptions

Permit Unit S-1141-26-36, '31-37, and '-515-13:

- Steam generators operate 24 hours/day and 365 days/week.
- Steam generators are fired exclusively on gaseous fuels.
- There will be no change in current permitted emissions rates, daily and annual potential to emit for CO, VOC, or PM10.
- There will be no change in the NO_x permitted emissions rates from ATCs S-1141-26-34, '-31-35, and '-511-11 (9 ppmv @ 3% O₂).

- Fuel gas sulfur content limited to 5 gr/100 scf unless SO_x emissions are reduced by 95% or 9 ppmv @3% O₂ in the exhaust (from project 1094822: 1.644 lb/MMBtu to 1.94 lb/MMBtu)
- Annual emissions from S-1141-26-36, '-31-37, and '-515-13 will be limited to 110,983 lb-PM₁₀/year and 937,243 lb-SO_x/year.
- Higher start-up and shutdown emissions are allowed for NO_x and CO
- Natural Gas Heating Value: 1,000 Btu/scf (District Practice)
- F-Factor for Natural Gas: 8,578 dscf/MMBtu corrected to 60°F (40 CFR 60, Appendix B)

B. Emission Factors

Option 2 (install SO_x Scrubber)

Pre-Project Emission Factors (EF1) – from the base documents (existing ATCs)

	NOx	SOx	PM10	CO	VOC
S-1141-26-34	NOx = 15 ppmv @ 3% O ₂ (0.0182 lb/MMBtu) During start-up/shutdown: NOx = 0.1 lb/MMBtu	1.94 lb/MMBtu	0.096 lb/MMBtu	51 ppmv @ 3%O ₂ 0.0375 lb/MMBtu During start-up/shutdown: CO = 0.084 lb/MMBtu	0.005 lb/MMBtu
S-1141-31-35	NOx = 15 ppmv @ 3% O ₂ (0.0182 lb/MMBtu) During start-up/shutdown: NOx = 0.1 lb/MMBtu	1.94 lb/MMBtu	0.096 lb/MMBtu	37 ppmv @ 3%O ₂ 0.027 lb/MMBtu NOx = 15 ppmv @ 3% O ₂ (0.0182 lb/MMBtu) During start-up/shutdown: CO = 0.084 lb/MMBtu	0.006 lb/MMBtu
S-1141-515-11	NOx = 15 ppmv @ 3% O ₂ (0.0182 lb/MMBtu) During start-up/shutdown: NOx = 0.1 lb/MMBtu	1.644 lb/MMBtu	0.096 lb/MMBtu	51 ppmv @ 3%O ₂ 0.0375 lb/MMBtu During start-up/shutdown: CO = 0.084 lb/MMBtu	0.0056 lb/MMBtu

Post- Project Emission Factors (EF2)

	NOx	SOx	PM10	CO	VOC
S-1141-26-35	NOx = 15 ppmv @ 3% O2 (0.0182 lb/MMBtu) During start-up/shutdown: NOx = 0.1 lb/MMBtu	1.94 lb/MMBtu	0.096 lb/MMBtu	51 ppmv @ 3%O2 0.0375 lb/MMBtu During start-up/shutdown: CO = 0.084 lb/MMBtu	0.005 lb/MMBtu
S-1141-31-36	NOx = 15 ppmv @ 3% O2 (0.0182 lb/MMBtu) During start-up/shutdown: NOx = 0.1 lb/MMBtu	1.94 lb/MMBtu	0.096 lb/MMBtu	37 ppmv @ 3%O2 0.027 lb/MMBtu NOx = 15 ppmv @ 3% O2 (0.0182 lb/MMBtu) During start-up/shutdown: CO = 0.084 lb/MMBtu	0.006 lb/MMBtu
S-1141-515-12	NOx = 15 ppmv @ 3% O2 (0.0182 lb/MMBtu) During start-up/shutdown: NOx = 0.1 lb/MMBtu	1.644 lb/MMBtu	0.096 lb/MMBtu	51 ppmv @ 3%O2 0.0375 lb/MMBtu During start-up/shutdown: CO = 0.084 lb/MMBtu	0.0056 lb/MMBtu

C. Calculations

1. Pre-Project Potential to Emit (PE1)

The PE1 for each pollutant is calculated using the following equation. The results are summarized in the table below:

- PE1 = EF1 (lb/MMBtu) × Heat Input (MMBtu/hr) × Op. Sched (hr/day or hr/year)

Daily PE1 (lb/day):

	NOx ¹	SOx	PM10	CO	VOC
S-1141-26-34	54.0	2,910.0	144.0	56.3	7.5
S-1141-31-35	54.0	2,910.0	144.0	40.5	9.0
S-1141-515-11	32.7	2,466.0	144.0	41.0	8.4

¹Start-up and Shutdown Emissions (lb/day)

Chevron is allowed greater start-up/shutdown NOx emissions than normal operating emissions (limited by permit condition).

Annual PE1 (lb/yr):

	NOx	SOx	PM10	CO	VOC
S-1141-26-34	9965	1,062,150	52,560	20,531	2,738
S-1141-31-35	9965	1,062,150	52,560	9,966	3,285
S-1141-515-11	9965	900,090	52,560	20,531	3,066
Total	29,895	3,024,390	157,680	51,028	9,089

2. Post-Project Potential to Emit (PE2)

Chevron has opted to comply with the PM₁₀ of Rule 4320 by controlling the SO_x emissions by 95%. Because the SO_x emissions may vary the current SO_x emissions will remain on the ATC to ensure that there is not an increase in emission; therefore, PE2 = PE1 for all criteria pollutants

The start-up/shutdown emissions for NOx will be the same as the existing ATCs and will be retained in the new ATCs.

However, the applicant has requested the units will have a SLC of 110,983 lb-PM₁₀/year and 937,243 lb-SO_x/year to satisfy Federal PSD requirements.

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

SSPE1 calculations are necessary to aid the following determinations:

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

Pursuant to Section 4.9 of District Rule 2201, the Pre-Project Stationary Source Potential to Emit (SSPE1) is the Potential to Emit (PE) from all units with valid

Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

Facility emissions are already above the Offset and Major Source Thresholds for all the criteria 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 the criteria 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 will decrease in accordance with District Rule 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 a Post-Project Stationary Source Potential to Emit (SSPE2), equal to or exceeding one or more of the Major Source threshold values (excluding ERCs banked onsite that have not been used onsite).

This source is an existing Major Source for all the criteria 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. This project is exempt from offset requirements; therefore, for QNEC calculations, BE = PE1.

7. SB 288 Major Modification

An SB 288 Major Modification is a Major Modification as defined in 40 CFR Part 51.165 9in effect on 12-19-2002) as "*any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act.*"

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:

SB 288 Major Modification Thresholds (Existing Major Source)			
Pollutant	Project PE (lb/year)	Threshold (lb/year)	Major Modification?
NO _x	>50,000 ¹	50,000	Yes
SO _x	>80,000 ¹	80,000	Yes
PM ₁₀	>30,000 ¹	30,000	Yes
VOC	>50,000 ¹	50,000	Yes

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.

The steam generators associated with this District (project S-1104209) are part of a larger project resulting in Chevron's steam generators coming in compliance with Rule 4320.

This calculation procedure outline in Draft District Policy, Implementation of Rule 2201 (as amended on 12/18/08 and effective on 6/10/10) for SB288 Major Modifications and Federal Major Modifications, states "that an SB 288 Major Modification is not a Federal Major Modification if the emission increase for the project or the net emission increase for the facility (calculated pursuant to 40 CFR 51.165 (a)(2)(ii)(B) through (D) and (F)) does not result in a significant emission increase" per Rule 2201 Table 3-1.

The proposed modification in Chevron's steam generators for Rule 4320 compliance does not result in an increase in design capacity, an increase in potential to emit, and it does not impact the ability of the emission unit to operate at

¹ Due to the large number of affected units proposed by CUSA for facilities S-1127, S-1131 and S-1141 for Rule 4320 compliance, this project in conjunction with others (and considering that boilers and steam generators typically have actual emissions below their permitted emission levels) is presumed to cross one or more major modification thresholds.

a higher utilization rate. Therefore, the unused baseline capacity emissions can also be excluded from the emission increase (EI) and the emission increase is calculated as follows:

$$\text{Emission increase} = \text{PAE} - \text{BAE} - \text{unused baseline capacity emissions}$$

However, the proposed modifications do not result in an increase in design capacity or potential to emit, and they do not impact the ability of the emission unit to operate at a higher utilization rate (and there are no existing physical or legal limitations on the unit's ability to operate at a higher utilization rate); therefore, the emission increase is presumed to be 0 and no detailed calculations are required.

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.

9. Quarterly Net Emissions Change (QNEC)

The QNEC is used to complete the emission profile for the District's PAS database. The QNEC for each unit is calculated as the difference between the quarterly PE2 and the quarterly BE, which in this project is the PE1, as discussed in VII (C)(6) above.

$$\text{QNEC (lb/qtr)} = [\text{PE2 (lb/yr)} - \text{PE1(lb/yr)}]/4$$

There is no change in emissions for the criteria pollutants for both options; therefore, only the QNEC for NOx is calculated

SOx	PE2 (lb/yr)	PE1 (lb/yr)	QNEC (lb/qtr)
S-1141-26-36/37	1,062,150	1,062,150	0
S-1141-31-37/28	1,062,150	1,062,150	0
S-1141-515-12/13	900,090	900,090	0
S-1141-597-0	0	0	0

VIII. COMPLIANCE

District Rule 2201 New and Modified Stationary Source Review Rule

Option 1 (Designate as Dormant Emissions Unit)

Designating emissions units as dormant does not meet the following criteria for a Modification, as defined in Section 3.26, and is 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.

Option 2 (Install SO₂ Scrubber)

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.

However, BACT shall not be required for the following:

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

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

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

2. BACT Guideline and Top-Down Analysis

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

B. Offsets

1. Offset Applicability

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

Emission offsets shall not be required for the following:

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

Since the above-listed criteria are met, offsets are not required for any pollutant.

2. Quantity of Offsets Required

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

C. Public Notification

1. Applicability

Public noticing is required for:

- a. Any new Major Source, which is a new facility that is also a Major Source,
- b. Federal Major Modifications and SB 288 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

As demonstrated in section VII.C.5 above, the facility is not becoming a Major Source as a result of this project.

b. Federal Major Modifications and SB 288 Major Modifications

As demonstrated in VII.C.7, this project constitutes a SB 288 Major Modification; therefore, public noticing for Major Modification purposes is required.

As demonstrated in VII.C.8, this project does not constitute a Federal Major Modification; therefore, public noticing for Major Modification purposes is not required.

c. PE > 100 lb/day

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

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. 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 notice will be required for this project for Major Modification purposes.

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 steam generators (s-1141-26, '-31, and '-515) units are stated in the form of emission factors as shown:

- Emissions from the steam generator shall not exceed any of the following limits: X.XX lb-SO_x/MMBtu, 0.096 lb-PM₁₀/MMBtu, or X.XXX lb-VOC/MMBtu. [District Rules 2201 and 4320] Y
- Except during start-up and shutdown periods emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NO_x @ 3% O₂ or 0.0182 lb-NO_x/MMBtu or X ppmvd CO @ 3% O₂ or X.XXXX lb-CO/MMBtu. [District Rules 2201, 4301, 5.2, 4305, 5.1, 4306, 5.1 and 4320] Y
- During start-up and shutdown periods, emissions from the steam generator shall not exceed either of the following limits: 0.1 lb-NO_x/MMBtu or 0.084 lb-CO/MMBtu. [District Rule 2201] Y
- Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: XX.X lb-NO_x/day, 9,965 lb-NO_x/yr, XX.X lb-CO/day, and X,XXX lb-CO/yr. [District Rule 2201] Y
- Fuel gas sulfur content shall not exceed 5 gr S/100 dscf unless SO_x emissions are reduced by 95% or to 9 ppmv SO_x @ 3% O₂ in the exhaust with scrubber. [District Rule 4320] N

E. Compliance Assurance

1. Source Testing

The units are subject to District Rule 4305, *Boilers, Steam Generators and Process Heaters, Phase II*, and District Rule 4306, *Phase III* and District Rule 4320, *Advanced*

Emission Reduction Options for Boilers, Steam Generators, and Process Heaters greater than 5 MMBtu/hr. Source testing requirements, in accordance with District Rules 4305, 4306, and 4320 will be discussed in Section VIII, *District Rules 4305, 4306 and 4320* of this evaluation.

2. Monitoring

As required by District Rules 4305, 4306 and 4320, the units are subject to monitoring requirements. Monitoring requirements, in accordance with District Rules will be discussed in the compliance review section of this evaluation.

3. Recordkeeping

As required by District Rules 4305, 4306 and 4320, the units are subject to recordkeeping requirements. Recordkeeping requirements, in accordance with District Rules will be discussed in the compliance review of this evaluation.

The following permit condition will be listed on permit as follows:

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

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

District Rule 2520 Federally Mandated Operating Permits

CUSA has a Title V permit. The changes authorized by these ATCs constitute a minor modification of their Title V permit. The facility has requested that the ATCs be issued with a Certificate of Conformity (COC). Therefore, prior to issuance, the ATCs will undergo a 45 day EPA review. Prior to initial operation under these ATCs, the applicant must submit a Title V application for an administrative amendment, and permit conditions will be listed as follows:

- {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201]
- {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]

District Rule 4001 New Source Performance Standards

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

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

No newly constructed or reconstructed units are proposed in this project, nor is the unit being modified (as defined above); therefore, the requirements of this section do not apply to the subject units.

District Rule 4101 Visible Emissions

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

District Rule 4102 Nuisance

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

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.

An HRA is not required for a project with a total facility prioritization score of less than one. According to the Technical Services Memo for this project (Appendix F), the total facility prioritization score including this project was greater than one. Therefore, a health risk assessment was required to determine the short-term acute and long-term chronic exposure from this project.

The cancer risk for this project is shown below:

HRA Summary		
Unit	Cancer Risk	T-BACT Required
S-1141-26, '-31, '-515, '-597	0.03 per million	No

Discussion of T-BACT

BACT for toxic emission control (T-BACT) is required if the cancer risk exceeds one in one million. As demonstrated above, T-BACT is not required for this project because the HRA indicates that the risk is not above the District's thresholds for triggering T-BACT requirements; therefore, compliance with the District's Risk Management Policy is expected.

District policy APR 1905 also specifies that the increase in emissions associated with a proposed new source or modification not have acute or chronic indices, or a cancer risk greater than the District's significance levels (i.e. acute and/or chronic indices greater than 1 and a cancer risk greater than 10 in a million). As outlined by the HRA Summary in Appendix F of this report, the emissions increases for this project was determined to be less than significant.

District Rule 4201 Particulate Matter Concentration

Section 3.1 prohibits discharge of dust, fumes, or total particulate matter into the atmosphere from any single source operation in excess of 0.1 grain per dry standard cubic foot. As natural gas-fired combustion equipment emits negligible amounts of particulate matter, compliance with this rule is expected.

District Rule 4301 Fuel Burning Equipment

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

The maximum emission rates in lb/hr for each of the steam generator in this project are as follows:

District Rule 4301 Limits (lb/hr)			
Pollutant	NO ₂	Total PM	SO ₂
ATC S-1141-26	2.25	6.0	121.3
ATC S-1141-31	2.25	6.0	121.3
ATC S-1141-515	1.36	6.0	102.8
Rule Limit (lb/hr)	140	10	200

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

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

This rule limits NO_x and CO emissions from boilers, steam generators, and process heaters rated greater than 5 MMBtu/hr. The subject units are currently in compliance with the applicable provisions of this rule. Source testing, monitoring and recordkeeping requirements

of Rule 4320 are equal to or more stringent than the requirements of this rule; therefore, continued compliance is expected

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

This rule limits NOx and CO emissions from boilers, steam generators, and process heaters rated greater than 5 MMBtu/hr. The subject units are currently in compliance with the applicable provisions of this rule. Source testing, monitoring and recordkeeping requirements of Rule 4320 are equal to or more stringent than the requirements of this rule; therefore, continued compliance is expected

District Rule 4320 Advance Emission Reduction Options for Boilers, Steam Generators and Process Heaters Greater than 5 MMBtu/hr

This rule limits NOx, CO, SO2 and PM10 emissions from boilers, steam generators and process heaters rated greater than 5 MMBtu/hr. This rule also provides a compliance option of payment of fees in proportion to the actual amount of NOx emitted over the previous year.

The units in this project are all rated at greater than 5 MMBtu/hr heat input and are subject to this rule.

Option 2 (Designate as Dormant Emissions Unit)

The emission limits, monitoring provisions, and testing requirements of this rule will be satisfied when the facility applies for ATC(s) to operate in compliance with this rule. The following conditions will be incorporated into the permits S-1141-26-36, '-31-37 and '-515-13 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:

No modification 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]

The fuel supply line shall be physically disconnected from this unit. [District Rule 4320] or
The hour-meter shall not exceed a reading of XXX hours. [District Rule 4320] or
Other APCO approved method to ensure the unit is not operated. [District Rule 4320].

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 Rule 4320]

Option 1 (install Scrubber)

Section 5.1 NOx Emission Limits

NOx Emissions limits were addressed in the previous ATC; therefore, compliance is expected and no discussion is required.

Section 5.4 Particulate Matter Control Requirements

Section 5.4.1 states that to limit particulate matter emissions, an operator shall comply with one of the options listed in the rule.

Section 5.4.1.1 provides option for the operator to comply with the rule by firing the unit exclusively on PUC-quality gas, commercial propane, butane, or liquefied petroleum gas, or a combination of such gases;

Section 5.4.1.2 provides option for the operator to comply with the rule by limiting the fuel sulfur content to no more than five (5) grains of total sulfur per hundred (100) standard cubic feet.

Section 5.4.1.3 provides option for the operator to comply with the rule by installing and properly operating an emissions control system that reduces SO₂ emissions by at least 95% by weight; or limit exhaust SO₂ to less than or equal to 9 ppmv corrected to 3 % O₂.

The steam generators are approved to incinerate TEOR and TVR gas. For units S-1141-26, 31, and 5158, CUSA is proposing to apply a sulfur limit of 5 gr S/100 scf unless the SO_x is reduced by 95% or 9 ppmv @ 3% O₂ with a scrubber. The ATCs will have the following to ensure compliance with this section of the rule:

- Fuel gas sulfur content shall not exceed 5 gr S/100 dscf unless SO_x emissions are reduced by 95% or to 9 ppmv SO_x @ 3% O₂ in the exhaust with scrubber. [District Rule 4320] Y
- Upon the conclusion of an initial 60 day shakedown period, the SO_x scrubber's control efficiency shall not be less than 95% by weight sulfur compounds, or the SO₂ concentration at the stack gas outlet shall not exceed 9 ppmvd corrected to 3.0% O₂. [District Rule 2201 and 4320] Y

Section 5.7.6 requires monitoring SO_x emissions. CUSA has elected to comply with Sections 5.4.1.2 and 5.4.1.3 as discussed above.

Operators complying with Section 5.4.1.2 shall shall provide an annual fuel analysis to the District unless a more frequent sampling and reporting period is included in the Permit to Operate. Therefore the following conditions will be placed on the ATC:

- PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320]
- Fuel H₂S, total sulfur, and methane content shall be determined semi-annually using the following test methods H₂S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, double GC for H₂S and mercaptans or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] N

- 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 Rules 2520, 9.3.2 and 4320, 5.7.6] Y
- 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 Rules 2520, 9.3.2 and 4320] Y
- 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 Rules 2520, 9.3.2 and 4320, 5.7.6] Y
- 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 D1945 in conjunction with ASTM D

Operators complying with Section 5.4.1.3 shall perform an annual source test unless a more frequent sampling and reporting period is included in the Permit to Operate. Therefore the following conditions will be placed on the ATC:

- Source testing to demonstrate compliance with the SO_x control efficiency of this permit and the SO_x emissions limit (lb/MMBtu) of this permit shall be conducted 60 days after initial operation of the scrubber with the unit(s) firing or TEOR/TVC gas and at least once every 12 months thereafter. If the emission unit(s) are not firing on TEOR/TVC gas when the annual source test is due, the source test may be delayed until operation on TEOR/TVC gas recommences. Source testing to demonstrate compliance with the SO_x control efficiency requirements of this permit and the SO_x emissions limit (lb/MMBtu) of this permit shall be conducted within 60 days of recommencing firing on TEOR/TVC gas and at least every 12 months thereafter. [District Rule 2201 and 4320] Y
- 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. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Y

Section 5.8 Compliance Determination

Section 5.4.1.3 requires that the operator of any unit have the option by properly operating an emission control system that reduces SO₂ emissions by at least 95% by weight; or limiting the exhaust SO₂ to less than or equal to 9 ppmv corrected to 3.0% O₂. The emission limits selected to demonstrate compliance shall be specified in the source test proposal pursuant

to Rule 1081 (Source Sampling). Therefore, the following condition will be retained or listed on the ATCs as follows:

- {2976} The source plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320]

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

- {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. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306 and 4320]

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

- {2937} All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320]

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

- {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, 4306 and 4320]

Section 6.1 Recordkeeping

Section 6.1 requires that the records required by Sections 6.1.1 through 6.1.5 shall be maintained for five calendar years and shall be made available to the APCO and EPA upon request. Failure to maintain records or information contained in the records that demonstrate noncompliance with the applicable requirements of this rule shall constitute a violation of this rule.

The condition on start-up and shutdown record keeping conditions shall be retained in the ATCs to ensure CUSA's compliance with this section of the rule.

Section 6.2, Test Methods

Section 6.2 identifies test methods to be used when determining compliance with the rule. The following existing permit conditions will be retained on the ATCs:

- {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]
- 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 (O₂) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities – EPA Method 2; Stack gas moisture content – EPA Method 4; SO_x – EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H₂S content – EPA Method 11 or 15; and fuel hhv (MMBtu) –ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 4305, 4306 and 4320]

Section 6.3, Compliance Testing

Section 6.3.1 requires that each unit subject to the requirements in Section 5.2 shall be source tested at least once every 12 months, except if two consecutive annual source tests demonstrate compliance, source testing may be performed every 36 months. If such a source test demonstrates non-compliance, source testing shall revert to every 12 months. The following conditions will be included in the appropriate ATCs:

- A source test to demonstrate compliance with NO_x and CO emission limits shall be performed within 60 days of startup of this unit. The NO_x limit in effect at the time of the startup source testing will be determined based on the volume and type of fuel combusted (greater than or equal to 50% PUC quality or < 50% PUC quality gas) and shall be identified in the source test protocol. Whenever the fuel type is switched from the fuel type combusted during the initial startup of this unit, compliance source testing for NO_x and CO shall be conducted within 90 days of the date the fuel type is switched. [District Rules 2201 and 4320]
- Source testing is required at least once every twelve (12) months from the initial source test date of each fuel type (greater than or equal to 50% PUC quality gas or < 50% PUC

quality gas). After an initial compliance demonstration with the NOx and CO emission limits for each fuel type on two (2) consecutive source tests, the unit shall be tested not less than once every thirty-six (36) months from the last test date for that fuel type. Testing shall not be required for any fuel type not in use during the 36 month period until such time the fuel type is switched, after which testing shall be performed within 90 days of switching fuel types. [District Rules 2201 and 4320]

- Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320]
- Compliance with SOx emission limits shall be demonstrated within 60 days of initial operation under this ATC. [District Rules 2201 and 4320]
- {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

Section 6.3.1.1 specifies tune-up requirements. CUSA will use pre-approved Alternate Monitoring Scheme "A" using a portable analyzer. Therefore the tune-up requirements listed in Section 6.3.1.1 are not applicable. This section also requires, that during the 36-month source testing interval, the owner/operator shall monitor monthly the operational characteristics recommended by the unit manufacturer. Since the pre-approved alternate monitoring requires monthly monitoring of NOx, CO and O2 exhaust emission concentrations using a portable analyzer, the operational characteristics monitoring requirements is satisfied.

Section 6.4 Emission Control Plan (ECP)

Section 6.4 requires the operator of any unit to submit to APCO for approval an Emissions Control Plan no later than January 1, 2010. CUSA has submitted their ECP for these units; therefore, is in compliance with this requirement.

Section 7.0, Compliance Schedule

Section 7.0 identifies the dates by which the operator shall submit an application for an ATC and the date by which the owner shall demonstrate compliance with this rule. Compliance with this requirement of the rule is expected.

Conclusion

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

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

This rule applies to boilers, steam generators, and process heaters at NO_x Major Sources that are not located west of Interstate 5 in Fresno, Kings, or Kern counties. The steam generators are located within the Heavy Oil Western stationary source. The units in this project are located west of I-5; therefore, the provisions of this rule do not apply.

District Rule 4801 Sulfur Compounds

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

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

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

With:

N = moles SO₂

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

P (Standard Pressure) = 14.7 psi

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

$$\frac{1.94 \text{ lb} - \text{SO}_x}{\text{MMBtu}} \times \frac{\text{MMBtu}}{8,578 \text{ dscf}} \times \frac{1 \text{ lb} \cdot \text{mol}}{64 \text{ lb}} \times \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot ^\circ\text{R}} \times \frac{520^\circ\text{R}}{14.7 \text{ psi}} \times \frac{1,000,000 \cdot \text{parts}}{\text{million}} = 1,341 \frac{\text{parts}}{\text{million}}$$

$$\text{Sulfur Concentration} = 1,341 \frac{\text{parts}}{\text{million}} < 2,000 \text{ ppmv (or 0.2\%)}$$

Therefore, compliance with District Rule 4801 requirements is expected.

California Health & Safety Code 42301.6 (School Notice)

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

California Environmental Quality Act (CEQA)

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

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities.

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

Greenhouse Gas (GHG) Significance Determination

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

The District's engineering evaluation (this document) demonstrates that the project would not result in an increase in project specific greenhouse gas emissions. The District therefore concludes that the project would have a less than cumulatively significant impact on global climate change

District CEQA Findings

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

IX. RECOMMENDATION

Make the following non-NSR changes per Chevron request:

Permit S-1141-26-36

- Steam generator shall be equipped with the following operational instrumentation: fuel gas volume flowmeter, TEOR/TVC gas flowmeter, or a flowmeter that measures the combined volume of all fuels combusted, and ~~a flue gas oxygen monitor~~. [District Rule 2201] Y
- Combined SOx emissions from Permit units S-1141-26, S-1141-31, and S-1141-515 shall not exceed 937,243 lb/calendar year. [District Rule 2201] Y
- Combined PM10 emissions from Permit units S-1141-26, S-1141-31, and S-1141-515 shall not exceed 110,893 lb/calendar year. [District Rule 2201] Y

- Permittee shall maintain a record of the cumulative annual combined PM10 and SOx emissions for units S-1141-26, S-1141-31 and S-1141-515. [District Rule 2201] Y
- ATCs S-1141-26-36, '-31-37, and '515-13 shall be implemented concurrently. [District Rule 2201] Y

Compliance with all applicable rules and regulations is expected. Issue the ATCs listed below subject to the permit conditions on the attached draft Authorities to Construct in Appendix C.

X. BILLING INFORMATION

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-1141-26	3020-02-H	62.5 MMBtu/hr	\$1,030
S-1141-31	3020-02-H	62.5 MMBtu/hr	\$1,030
S-1141-515	3020-02-H	62.5 MMBtu/hr	\$1,030
S-1141-597	3020-06	Miscelaneous	\$105

APPENDICES

- Appendix A: Current ATCs (based documents)
- Appendix B: Draft Authority to Construct (ATCs): Option 1
- Appendix C: Draft Authority to Construct (ATCs): Option 2
- Appendix D: Emissions Profile(s)
- Appendix E: Title V Compliance Certification
- Appendix E: Health Risk Assessment

APPENDIX A

**Current PTOs
&
Current ATCs
(based documents)**

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1141-26-29

EXPIRATION DATE: 02/28/2006

SECTION: 17 **TOWNSHIP:** 32S **RANGE:** 23E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR STRUTHERS THERMOFLOOD NATURAL GAS/TEOR GAS/TVC VAPORS-FIRED STEAM GENERATOR WITH A NORTH AMERICAN MODEL GLE 4231 ULTRA-LOW NOX BURNER, FGR, A THERMOX O2 CONTROLLER, VAPOR PIPING FROM TEOR SYSTEM, VAPOR PIPING FROM TVC SYSTEMS, AND A SULFA SCRUB HYDROGEN SULFIDE (H2S) SYSTEM (COMMON TO -31, -549, -550, -551, -552, -553, -555, -556, -557 AND -558) (#48, DIS #20660-81, NATIONAL BOARD #1041)

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
4. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [County Rules 404 (Madera), 406 (Fresno), and 407 (Kings, Merced, San Joaquin, Tulare, Kern, and Stanislaus)] Federally Enforceable Through Title V Permit
5. Steam generator shall be equipped with the following operational instrumentation: fuel gas volume flowmeter, TEOR gas volume flowmeter, TVC gas flowmeter, and flue gas oxygen monitor. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The VOC content of the fluid stream handled by the Sulfa-Scrub system shall be less than ten (10) percent by weight, as determined by ASTM Methods E-260-73, E-168-67, or E-169-63. Test samples shall be taken from sampling ports immediately upstream and downstream of the Sulfa-Scrub system. VOC content shall be determined quarterly, and if compliance with the VOC content limit is demonstrated for eight consecutive quarters, the testing frequency may be changed to annual. Testing frequency shall revert to quarterly if an annual test is failed. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All piping, fittings, and valves shall be inspected annually in accordance with EPA Method 21, with an instrument calibrated with methane. Components located in unsafe areas shall be inspected and repaired at the next process turnaround (the shutdown of a unit for maintenance and repair work). [District Rule 2201] Federally Enforceable Through Title V Permit
8. Except for components that are part of a critical process unit as defined in this permit, leaking components (having a gas leak >10,000 ppmv measured as methane) shall be repaired to a leak-free condition within 15 days of discovery. [District Rule 2201] 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.

9. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Flue gas recirculation system may be designed such that ambient air may be drawn into flue gas recirculation piping. [District Rule 2201] Federally Enforceable Through Title V Permit
11. When combustion air orifice and flue gas recirculation orifice have been used to demonstrate compliance they shall not be changed without a District-witnessed compliance demonstration. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Total sulfur content of natural gas combusted shall not exceed 0.75 grain/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit
13. For each steam generator site downstream of H₂S scavenger vessel, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a weekly basis utilizing gas detection tubes calibrated for existing sulfur species or other District approved fuel sulfur detection method(s) or device(s). [District Rule 1070] Federally Enforceable Through Title V Permit
14. 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] 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. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
16. 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 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, 9.4.2] Federally Enforceable Through Title V Permit
17. 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 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2 and 4305, 6.2.1] Federally Enforceable Through Title V Permit
18. Sulfur 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 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
19. Emissions from the steam generator shall not exceed any of the following limits: 1.94 lb-SO_x/MMBtu, 0.096 lb-PM₁₀/MMBtu, or 0.005 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

20. Except during start-up and shutdown periods emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NO_x @ 3% O₂ or 0.0182 lb-NO_x/MMBtu or 51 ppmvd CO @ 3% O₂ or 0.0375 lb-CO/MMBtu. [District Rules 2201, 4301, 5.2, 4305, 5.1, and 4306, 5.1] Federally Enforceable Through Title V Permit
21. During start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 0.1 lb-NO_x/MMBtu or 0.084 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
22. 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 Rules 4305, 5.5.6 and 4306, 5.3] Federally Enforceable Through Title V Permit
23. 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] Federally Enforceable Through Title V Permit
24. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 54.0 lb-NO_x/day, 9,965 lb-NO_x/yr, 56.3 lb-CO/day, and 20,531 lb-CO/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
25. 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 4305, 6.3.1 and 4306, 6.3.1] Federally Enforceable Through Title V Permit
26. 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
27. 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] Federally Enforceable Through Title V Permit
28. 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 GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
29. If the steam generator is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
30. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] 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.

31. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
32. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
33. 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, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
34. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
35. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
36. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit
37. 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 County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit
38. 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, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit
39. 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, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit
40. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
41. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NO_x and CO 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 or CO emissions 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, 9.3.2, 4305, 6.3.2, and 4306, 6.3.2] 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.

42. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.3.2, 4305, 6.3.2, and 4306, 6.3.2] Federally Enforceable Through Title V Permit
43. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.3.2, 4305, 6.3.2, and 4306, 6.3.2] Federally Enforceable Through Title V Permit
44. All units in a group for which representative units are source tested to for NOx and CO 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 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, 9.3.2, 4305, 6.3.2, and 4306, 6.3.2] Federally Enforceable Through Title V Permit
45. The number of representative units source tested for NOx 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, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 2520, 9.3.2, 4305, 6.3.2, and 4306, 6.3.2] Federally Enforceable Through Title V Permit
46. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit
47. Permittee shall measure and record, at least monthly, the sulfur content and BTU content of the TEOR/TVC gas incinerated in this unit. [District NSR Rule and 4406] Federally Enforceable Through Title V Permit
48. Permittee shall measure and record the fuel gas sulfur content and BTU content at the time of NOx testing, except for natural gas purchased from a PUC regulated utility. [District NSR Rule and 4406] Federally Enforceable Through Title V Permit
49. Permittee shall maintain with the permit a current listing of all TEOR and TVC gas systems providing vapors to this steam generator and shall make such listing readily available for District inspection upon request [District NSR Rule] Federally Enforceable Through Title V Permit
50. Permittee shall maintain daily records of volume of fuel gas burned, TEOR and TVC gas incinerated, and permit number(s) of systems providing gas for incineration. [District NSR Rule] Federally Enforceable Through Title V Permit
51. 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] Federally Enforceable Through Title V Permit
52. 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] Federally Enforceable Through Title V Permit
53. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: 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
54. The requirements of SJVUAPCD Rule 4351 (Amended October 19, 1995) 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

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1141-31-33

EXPIRATION DATE: 02/28/2006

SECTION: NW17 TOWNSHIP: 32S RANGE: 23E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/TEOR/TVC GAS FIRED CE NATCO STEAM GENERATOR #59 (DIS# 20639-81, NATIONAL BOARD #1352), WITH NORTH AMERICAN MAGNA-FLAME GLE ULTRA-LOW NOX BURNER, O2 CONTROLLER AND FGR PERMITTED TO OPERATE WITH EITHER AN AIR-FUEL MIXING ROD OR A MULTI-PORT (AKA GATLING GUN) PRIMARY MIXER

PERMIT UNIT REQUIREMENTS

1. 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 County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit
2. Copies of all fuel invoices, 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 noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
3. The 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, 9.5.2] Federally Enforceable Through Title V Permit
4. 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. 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, 9.4.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
6. 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] Federally Enforceable Through Title V Permit
7. 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 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, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
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8. 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, 9.4.2] Federally Enforceable Through Title V Permit
9. 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 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2, 4305, 6.2.1 and 4306] Federally Enforceable Through Title V Permit
10. 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, 9.4.2 and County Rules 404 (Madera), 406 (Fresno), and 407 (Kern, Kings, Merced, San Joaquin, Stanislaus, and Tulare)] Federally Enforceable Through Title V Permit
11. Sulfur 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 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
12. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
13. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: 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
14. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source because this permit unit has not been modified per 40 CFR 60. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
15. The requirements of SJVUAPCD Rule 4351 (Amended October 19, 1995) do not apply to this source because this permit unit is located west of Interstate Highway 5. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
16. Steam generator shall be equipped with the following operational instrumentation: fuel gas volume flowmeter, TEOR/TVC gas volume flowmeter, and flue gas oxygen monitor. [District NSR Rule, 4305 and 4306] Federally Enforceable Through Title V Permit
17. Exhaust gas stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District NSR Rule and 1081] Federally Enforceable Through Title V Permit
18. Flue gas recirculation system may be designed such that ambient air may be drawn into flue gas recirculation piping. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4306] Federally Enforceable Through Title V Permit
20. Permittee shall maintain records of duration of each start-up and shutdown, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
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21. Emission rates shall not exceed: PM10: 144.0 lb/day or 52,560 lb/year, SOx: 2910 lb/day or 1,062,150 lb/year, NOx (as NO2): 54.0 lb/day or 9855 lb/year, VOC: 9.0 lb/day or 3285 lb/year, CO: 40.5 lb/day or 14,783 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Emission rates, except during startup and shutdown, shall not exceed any of the following: PM10: 0.096 lb/MMBtu, SOx (as SO2): 1.94 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, VOC: 0.006 lb/MMBtu or CO: 37 ppmv @ 3% O2. [District Rule 2201, 4305, 4306 and 4406] 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 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
24. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] 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 Rules 4305 and 4306] Federally Enforceable Through Title V Permit
26. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
27. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
28. 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
29. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (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, PM10 - EPA Method 5, and gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans. [District Rules 1081, 4305 and 4306] Federally Enforceable Through Title V Permit
30. Permittee shall measure and record, at least monthly, the sulfur content and BTU content of the TEOR gas and TVC gas incinerated in this unit. [District NSR Rule and 4406] Federally Enforceable Through Title V Permit
31. Permittee shall measure and record the natural gas sulfur content and BTU content at the time of NOx testing, except for natural gas purchased from a PUC regulated utility. [District NSR Rule and 4406] Federally Enforceable Through Title V Permit
32. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
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33. 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 4305 and 4306] Federally Enforceable Through Title V Permit
34. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
35. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
36. Permittee shall maintain with the permit a current listing of all TEOR and TVC gas systems providing vapors to this steam generator and shall make such listing readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
37. Permittee shall maintain daily records of volume of natural gas burned, TEOR and TVC gas incinerated, and permit number(s) of systems providing gas for incineration. [District NSR Rule] Federally Enforceable Through Title V Permit
38. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx 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 NOx 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, 6.3.2 and 4306] Federally Enforceable Through Title V Permit
39. The following conditions must be met for representative unit(s) to be used to test for NOx limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.4.2, 4305, 6.3.2 and 4306] Federally Enforceable Through Title V Permit
40. All units in a group for which representative units are source for NOx 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 Rule 2520, 9.4.2, 4305, 6.3.2 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
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41. All units in a group for which representative units are source tested for NOx 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, 6.3.2 and 4306] Federally Enforceable Through Title V Permit
42. The number of representative units source tested for NOx emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
43. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
44. All records shall be maintained 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

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1141-515-4

EXPIRATION DATE: 02/28/2006

SECTION: NW21 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED SMITH MOON STEEL STEAM GENERATOR WITH A NORTH AMERICAN MODEL #GLE MAGNA-FLAME WITH FGR AND O2 ANALYZER/CONTROLLER (N.B. #826)

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
4. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [County Rules 404 (Madera), 406 (Fresno), and 407 (Kings, Merced, San Joaquin, Tulare, Kern, and Stanislaus)] Federally Enforceable Through Title V Permit
5. 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]
6. 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] Federally Enforceable Through Title V Permit
7. 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 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, 9.4.2] Federally Enforceable Through Title V Permit
8. 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 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2 and 4305, 6.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
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9. Sulfur 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 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
10. Total sulfur content of natural gas combusted shall not exceed 0.75 grain/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Emissions from the steam generator shall not exceed any of the following limits: 1.644 lb-SO_x/MMBtu, 0.096 lb-PM₁₀/MMBtu, or 0.0056 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Except during start-up and shutdown periods emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NO_x @ 3% O₂ or 0.0182 lb-NO_x/MMBtu or 51 ppmvd CO @ 3% O₂ or 0.0375 lb-CO/MMBtu. [District Rules 2201, 4301, 5.2, 4305, 5.1, and 4306, 5.1] Federally Enforceable Through Title V Permit
13. During start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 0.1 lb-NO_x/MMBtu or 0.084 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
14. 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 Rules 4305, 5.5.6 and 4306, 5.3] Federally Enforceable Through Title V Permit
15. 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] Federally Enforceable Through Title V Permit
16. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 32.7 lb-NO_x/day, 9,965 lb-NO_x/yr, 41.0 lb-CO/day, and 20,531 lb-CO/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
17. 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 4305, 6.3.1, and 4306, 6.3.1] Federally Enforceable Through Title V Permit
18. 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
19. 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] Federally Enforceable Through Title V Permit
20. 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 GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
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21. If the steam generator is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
22. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
23. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
24. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
25. 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, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
26. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
27. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
28. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit
29. 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 County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit
30. 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, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit
31. 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, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
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32. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
33. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO 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 NOx or CO emissions 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, 9.3.2, 4305, 6.3.2, and 4306, 6.3.2] Federally Enforceable Through Title V Permit
34. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.3.2, 4305, 6.3.2, and 4306, 6.3.2] Federally Enforceable Through Title V Permit
35. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). Records shall be maintained for each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.3.2, 4305, 6.3.2, and 4306, 6.3.2] Federally Enforceable Through Title V Permit
36. All units in a group for which representative units are source tested to for NOx and CO 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 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, 9.3.2, 4305, 6.3.2, and 4306, 6.3.2] Federally Enforceable Through Title V Permit
37. The number of representative units source tested for NOx 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, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 2520, 9.3.2, 4305, 6.3.2, and 4306, 6.3.2] Federally Enforceable Through Title V Permit
38. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit
39. 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] Federally Enforceable Through Title V Permit
40. Permittee shall measure and record, at least monthly, the sulfur content of the TEOR gas introduced into this unit whenever TEOR gas is being combusted, and shall make records available for District inspection, upon request, for a period of five years. [District NSR Rule and 4406] Federally Enforceable Through Title V Permit
41. Permittee shall measure and record the fuel gas sulfur content and BTU content at the time of NOx testing, except for natural gas purchased from a PUC regulated utility. [District NSR Rule and 4406] Federally Enforceable Through Title V Permit
42. Permittee shall keep a record of the daily volumes of TEOR gas and fuel gas combusted in this unit, and shall make records available for District inspection, upon request, for a period of five years. [District NSR Rule and 4406] 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.

43. 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] Federally Enforceable Through Title V Permit

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



AUTHORITY TO CONSTRUCT

PERMIT NO: S-1141-26-34

ISSUANCE DATE: 07/21/2010

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

SECTION: NW17 TOWNSHIP: 32S RANGE: 23E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR STRUTHERS THERMOFLOOD NATURAL GAS/TEOR GAS/TVC VAPORS-FIRED STEAM GENERATOR WITH A NORTH AMERICAN MODEL GLE 4231 ULTRA-LOW NOX BURNER, FGR, A THERMOX O2 CONTROLLER, VAPOR PIPING FROM TEOR SYSTEM, VAPOR PIPING FROM TVC SYSTEMS, AND A SULFA SCRUB HYDROGEN SULFIDE (H2S) SYSTEM (COMMON TO -31, -549, -550, -551, -552, -553, -555, -556, -557 AND -558) (#48, DIS #20860-81, NATIONAL BOARD #1041): LIMIT FUEL GAS SULFUR CONTENT TO 5 GR-S/100 SCF OR REDUCE SOX BY 95% VIA SCRUBBING OR TO AN OUTLET CONCENTRATION NOT EXCEEDING 9 PPMVD @ 3% O2 FOR RULE 4320 COMPLIANCE

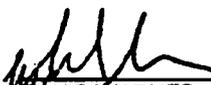
CONDITIONS

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 NSR Rule] Federally Enforceable Through Title V Permit
2. 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. This Authority to Construct shall be implemented according to the date proposed in the District-approved Rule 4320 Emission Control Plan. [District Rule 4320]
4. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

MUST 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-1141-26-34, Jul 21 2010 9:51AM - GOUCD : Joint Inspection NOT Required

5. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
7. Steam generator shall be equipped with the following operational instrumentation: fuel gas volume flowmeter, TEOR gas volume flowmeter, TVC gas flowmeter, and flue gas oxygen monitor. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The VOC content of the fluid stream handled by the Sulfa-Scrub system shall be less than ten (10) percent by weight, as determined by ASTM Methods E-260-73, E-168-67, or E-169-63. Test samples shall be taken from sampling ports immediately upstream and downstream of the Sulfa-Scrub system. VOC content shall be determined quarterly, and if compliance with the VOC content limit is demonstrated for eight consecutive quarters, the testing frequency may be changed to annual. Testing frequency shall revert to quarterly if an annual test is failed. [District Rule 2201] Federally Enforceable Through Title V Permit
9. All piping, fittings, and valves shall be inspected annually in accordance with EPA Method 21, with an instrument calibrated with methane. Components located in unsafe areas shall be inspected and repaired at the next process turnaround (the shutdown of a unit for maintenance and repair work). [District Rule 2201] Federally Enforceable Through Title V Permit
10. Except for components that are part of a critical process unit as defined in this permit, leaking components (having a gas leak >10,000 ppmv measured as methane) shall be repaired to a leak-free condition within 15 days of discovery. [District Rule 2201] Federally Enforceable Through Title V Permit
11. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Flue gas recirculation system may be designed such that ambient air may be drawn into flue gas recirculation piping. [District Rule 2201] Federally Enforceable Through Title V Permit
13. When combustion air orifice and flue gas recirculation orifice have been used to demonstrate compliance they shall not be changed without a District-witnessed compliance demonstration. [District Rule 2201] Federally Enforceable Through Title V Permit
14. For each steam generator site downstream of H₂S scavenger vessel, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a weekly basis utilizing gas detection tubes calibrated for existing sulfur species or other District approved fuel sulfur detection method(s) or device(s). [District Rule 1070] Federally Enforceable Through Title V Permit
15. Fuel H₂S, total sulfur, and methane content shall be determined semi-annually using the following test methods H₂S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, double GC for H₂S and mercaptans or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320]
16. 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 Rules 2520, 9.3.2 and 4320, 5.7.6] Federally Enforceable Through Title V Permit
17. 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 Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

18. 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 Rules 2520, 9.3.2 and 4320, 5.7.6] Federally Enforceable Through Title V Permit
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 D1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.4.2, 4305, 6.2.1 and 4320] Federally Enforceable Through Title V Permit
20. Emissions from the steam generator shall not exceed any of the following limits: 1.94 lb-SO_x/MMBtu, 0.096 lb-PM₁₀/MMBtu, or 0.005 lb-VOC/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
21. Except during start-up and shutdown periods emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NO_x @ 3% O₂ or 0.0182 lb-NO_x/MMBtu or 51 ppmvd CO @ 3% O₂ or 0.0375 lb-CO/MMBtu. [District Rules 2201, 4301, 5.2, 4305, 5.1, 4306, 5.1 and 4320] Federally Enforceable Through Title V Permit
22. During start-up and shutdown periods, emissions from the steam generator shall not exceed either of the following limits: 0.1 lb-NO_x/MMBtu or 0.084 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
23. 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 Rules 4305, 5.5.6, 4306, 5.3 and 4320] Federally Enforceable Through Title V Permit
24. 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] Federally Enforceable Through Title V Permit
25. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 54.0 lb-NO_x/day, 9,965 lb-NO_x/yr, 56.3 lb-CO/day, and 20,531 lb-CO/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
26. Fuel gas sulfur content shall not exceed 5 gr S/100 dscf unless SO_x emissions are reduced by 95% or to 9 ppmv SO_x @ 3% O₂ in the exhaust with scrubber. [District Rule 4320]
27. 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 4305, 6.3.1, 4306, 6.3.1 and 4320] Federally Enforceable Through Title V Permit
28. Compliance with SO_x emission limits shall be demonstrated within 60 days of initial operation under this ATC. [District Rules 2201 and 4320]
29. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
30. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4, 4306, 5.4 and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

31. 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 4305, 5.4, 4306, 5.4 and 4320] Federally Enforceable Through Title V Permit
32. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.4, 4306, 5.4 and 4320] Federally Enforceable Through Title V Permit
33. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; and Stack gas moisture content - EPA Method 4. [District Rules 1081, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
34. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1, 4306, 5.5.1 and 4320] Federally Enforceable Through Title V Permit
35. 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 County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit
36. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 5.5.2, 4306, 5.5.2 and 4320] Federally Enforceable Through Title V Permit
37. 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, 5.5.5, 4306, 5.5.5 and 4320] Federally Enforceable Through Title V Permit
38. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
39. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit
40. Permittee shall maintain with the permit a current listing of all TEOR and TVC gas systems providing vapors to this steam generator and shall make such listing readily available for District inspection upon request [District NSR Rule] Federally Enforceable Through Title V Permit
41. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: 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
42. The requirements of SJVUAPCD Rule 4351 (Amended October 19, 1995) 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

CONDITIONS CONTINUE ON NEXT PAGE

43. 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]
44. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320]
45. 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, 4306, 6.1 and 4320] Federally Enforceable Through Title V Permit



AUTHORITY TO CONSTRUCT

PERMIT NO: S-1141-31-35

ISSUANCE DATE: 07/21/2010

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

SECTION: NW17 **TOWNSHIP:** 32S **RANGE:** 23E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/TEOR/TVC GAS FIRED CE NATCO STEAM GENERATOR #59 (DIS# 20638-81, NATIONAL BOARD #1352), WITH NORTH AMERICAN MAGNA-FLAME GLE ULTRA-LOW NOX BURNER, O2 CONTROLLER AND FGR PERMITTED TO OPERATE WITH EITHER AN AIR-FUEL MIXING ROD OR A MULTI-PORT (AKA GATLING GUN) PRIMARY MIXER. LIMIT FUEL GAS SULFUR CONTENT TO 5 GR-S/100 SCF OR REDUCE SOX BY 85% VIA SCRUBBING OR TO AN OUTLET CONCENTRATION NOT EXCEEDING 9 PPMVD @ 3% O2 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 NSR Rule] Federally Enforceable Through Title V Permit
2. 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. This Authority to Construct shall be implemented according to the date proposed in the District-approved Rule 4320 Emission Control Plan. [District Rule 4320]
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 County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] 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-1141-31-35, Jul 22 2010 9:01AM - GOUQHD : Joint Inspection NOT Required